

## Poster Session I - On display Monday September 12th

Topic Area B : Structural Materials

- B11 Intermetallics**
- B11-P-1-01** Structural stability of ternary C22-Zr6CoX2 (X=Al, Ga, Sn, As, Sb, Bi, Te) compounds  
(1232)  
*C. Colinet (SIMAP, Saint Martin D'Hères, France), J.-C. Tedenac*
- B11-P-1-02** In-situ preparation of Al3V/Al2O3 nanocomposite powder through mechanochemical synthesis  
(2955)  
*F. Karimzadeh (Isfahan University of Technology, Isfahan, Iran), Y. Nima, E. Mohammad H.*
- B11-P-1-03** Effect of TiC addition on microstructure formation of Mo-Si-B alloys  
(1201)  
*S.-H. Ha (Tohoku University, Sendai, Japan), T. Sato, K. Yoshimi, K. Maruyama*
- B11-P-1-04** Investigation of CoAl-Al2O3 intermetallic matrix nanocomposite prepared by mechanical alloying  
(2953)  
*F. Karimzadeh (Isfahan University of Technology, Isfahan, Iran), E. Mohammad H., H. Seyyede Narjes, M. Tayyebbeh*
- B11-P-1-05** Creep Mechanisms in a L1\_2 hardened Co-Base Superalloy  
(1065)  
*F. Pyczak (Helmholtz-Zentrum Geesthacht, Geesthacht, Germany), A. Bauer, M. Göken, S. Neumeier, M. Oehring, J. Paul, N. Schell, A. Stark*
- B11-P-1-06** Synthesis, crystal structure and properties of ScTrAu (Tr = Al, Ga and In)  
(2408)  
*Y. Prots (MPI Chemische Physik fester Stoffe, Dresden, Germany), A. Fedorchuk, S. Hoffmann, W. Schnelle, Y. Grin*
- B11-P-1-07** Compression of micropillars of stoichiometric Ni3Al  
(1190)  
*T. Nishimura (Kyoto University, Kyoto, Japan), K. Kishida, H. Inui, M. Demura*
- B11-P-1-08** Effect of hydrogen as interstitial element on the magnetic properties of some iron rich intermetallic compounds  
(2885)  
*O. Isnard (Institut Néel, CNRS/Université Joseph Fourier, Grenoble, France), F. Grandjean, G. Long, V. Paul-Boncour, V. Pop*
- B11-P-1-09** Dry sliding tribological behavior of Zr-based bulk metallic glass  
(0704)  
*I. Baker (Dartmouth College, Hanover, USA), H. Wu*
- B11-P-1-10** Deformation of micropillars of Fe-Zn intermetallic phases formed on galvanized steels  
(1025)  
*D. Kashioka (Kyoto University, Kyoto, Japan), K. Nishimura, N. Okamoto, H. Inui*
- B11-P-1-11** A positron annihilation study of defects in a quenched and deformed Ti-26at.%Al alloy  
(0952)  
*C. Gomez (Universidad Complutense, Madrid, Spain), J. Del Rio*
- B11-P-1-12** Microstructure and hardness control of a binary gamma-TiAl alloy by heat-treatment  
(0914)  
*S. Zamani (Iran University of Science and Technology, Tehran, Iran), H. Razavizadeh, M. Jahazi*
- B11-P-1-13** Development of new  $\beta$ -type Ti-Co-Cr alloys for biomedical use  
(0054)  
*T. Matkovic (Faculty of Metallurgy, Sisak, Croatia), L. Slokar, P. Matkovic*
- B11-P-1-14** Investigation of the magnetic and some structural properties of RCo12B6 intermetallic compounds  
(2834)  
*O. Isnard (Institut Néel, CNRS/Université Joseph Fourier, Grenoble, France), L. Diop*
- B11-P-1-15** Microstructural evolution in TiAl-Nb-Mo intermetallics studied by mechanical spectroscopy and TEM  
(0980)  
*J. San Juan (Universidad del Pais Vasco, Bilbao, Spain), P. Simas, T. Schmoelzer, M.L. Nó, H. Clemens*
- B11-P-1-16** Microwave sintering and magneto-optical activity in NiZn ferrites  
(2666)  
*A. Fernández (Research Center in Nanomaterials and Nanotechnology, Llanera, Spain), A. Borrell, M.D. Salvador, F.L. Peñaranda-Foix, L. Fernández, M. Suárez, J.L. Menéndez*
- B11-P-1-17** Deformation of single crystals of Pt3Al with the L12 structure  
(1034)  
*Y. Hasegawa (Kyoto University, Kyoto, Japan), W. Hashimoto, N. Okamoto, H. Inui*
- B11-P-1-18** Localized deformation in intermetallic Zr3Al during high pressure torsion  
(2627)  
*D. Geist (University of Vienna, Vienna, Austria), H.-P. Karnthaler, C. Rentenberger*
- B11-P-1-19** Deposition of MAX-phase coatings by cold-spray  
(2592)  
*S. Vezzù (CIVEN, Venezia, Italy), S. Rech, A. Trentin, A. Patelli, A. Surpi, P. Eklund, J. Frodelius, L. Hultman, J. Glor*
- B11-P-1-20** Synthesis And Characterisation Of In Situ Tic Reinforced Ni-Al Intermetallic Matrix Composite Materials  
(2570)  
*A. Karantzalis (University of Ioannina, Ioannina, Greece), A. Lekatou, E. Georgatis, K. Tsirka*
- B11-P-1-21** Strengthening in High Entropy Alloys  
(2802)  
*G. Wilks (Air Force Research Laboratory, Wright-Patterson Afb, USA), O. Senkov, D. Miracle*
- B11-P-1-22** The Melting Temperature And Enthalpy Formations Of Equiatomic Intermetallides System Lanthanide - Antimony  
(2553)  
*A. Badalov (Tajik Technical University, Dushanbe, Tajikistan)*
- B11-P-1-23** Layered metal-intermetallic composites in Ti-Al system with unconsumed second metal layers (evaluation of structure and properties)  
(1909)  
*A. Patselov (Institute of Metal Physics, Ekaterinburg, Russian Federation), V. Rybin, B. Greenberg, O. Antonova*
- B11-P-1-24** Mechano-chemical synthesis and compaction many-component alloys with nanocrystalline elements of substructure.  
(1898)  
*A. Logacheva (Kompozit, Korolev, Russian Federation)*
- B11-P-1-25** Intermixing phenomena and alloying in Hf/W(100) and Zr/W(100) adsorption systems  
(2827)  
*A. Ciszewski (University of Wrocław, Wrocław, Poland), A. Trembulowicz, Z. Szczudlo, L. Jurczyszyn*
- B11-P-1-26** Ternary derivatives of Mn6Ga29  
(2507)  
*I. Antonyshyn (Ivan Franko National University of Lviv, Lviv, Ukraine), Y. Prots, O. Zhak, S. Oryshchyn, Y. Grin*
- B11-P-1-27** The influence of heat-treatment cycles on pressure strength of a binary gamma-TiAl alloy  
(0912)  
*S. Zamani (Iran University of Science and Technology, Tehran, Iran), H. Razavizadeh, M. Jahazi*
- B11-P-1-28** Viscosity Of Liquid Copper Alloys  
(1247)  
*B. Oleksiak (TECHNICAL UNIwersITY OF TECHNOLOGY, Katowice, Poland), G. Siwiec, J. Labaj, J. Wiczorek*

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- B11-P-1-29** (2445) Compression of Micropillars of single crystalline TiAl  
*K. Fujimura (Department of Materials Science and Engineering, Kyoto University, Shiga, Japan), K. Kishida, H. Inui*
- B11-P-1-30** (0708) Phase equilibria in the Zr – CoZr – NiZr partial system  
*T. Kosorukova (G. V. Kurdyumov Institute for Metal Physics, Kiev, Ukraine), V. Ivanchenko*
- B11-P-1-31** (1250) Surface Tension Of Cu-Pb Alloys  
*G. Siwiec (SILESIA TECHNICAL UNIVERSITY OF TECHNOLOGY, Katowice, Poland), B. Oleksiak, J. Labaj, J. Wiecezorek*
- B11-P-1-32** (0646) Sub-surface characterization of dry sliding worn AA6061/MoSi<sub>2</sub>/15p composites: influence of initial reinforcing particle size and high energy mixing time  
*M. Lieblich (CENIM-CSIC, Madrid, Spain), J. Corrochano, J. Ibáñez Ulargui, V. Vadillo, A. San Román*
- B11-P-1-33** (1478) Phase relations in Al-Ge-Ni: a system relevant for brazing of nickel aluminides  
*T. Reichmann (University of Vienna, Wien, Austria), K. Richter, L. Duarte, C. Leinenbach*
- B11-P-1-34** (2398) HAADF-STEM analysis of the crystal structure of a Long Period Stacking Ordered Phase in a Mg-Al-Gd alloy  
*H. Yokobayashi (Kyoto University, Kyoto, Japan), K. Kishida, H. Inui, M. Yamasaki, Y. Kawamura*
- B11-P-1-35** (2277) Complex Intermetallic Alloy Phases in the Al-Mg-Zn System  
*R. Berthold (MPI CPFS, Dresden, Germany), G. Kreiner, H. Borrmann, U. Burkhardt, Y. Prots, S. Hoffmann, W. Carrillo-Cabrera*
- B11-P-1-36** (2153) Formation of Al and Ni powder compacts using Ultrasonic Consolidation  
*A. Hadjiafxenti (Univeristy of Cyprus, Nicosia, Cyprus), I.E. Gunduz, D. Erdeniz, T. Ando, C. Doumanidis, C. Rebholz*
- B11-P-1-37** (2407) Influence Of Complex Alloying On High-Temperature Properties Of Titanium Aluminides Based Alloys  
*V. Goltvyanytsya (Zaporizhzhya National Technical University, Zaporizhzhya, Ukraine), I. Gorna, S. Goltvyanytsya, N. Poryadchenko, Y. Yevich, S. Firstov*
- B11-P-1-38** (2376) Effect of heat treatment on structure and phase composition of quasicrystalline alloy Al-Cu-Fe  
*M. Elizarova (National University of Science and Technology "MISIS", Moscow, Russian Federation), P. Bryantsev, T. Sagalova, M. Samoshina*
- B11-P-1-39** (0402) Core structures of dislocations in B2 alloys  
*V. Paidar (Instiute of Physics, Praha, Czech Republic), Y.-S. Lin, M. Cak, V. Vitek*
- B11-P-1-40** (1167) Reconstruction of Multivalley Dislocation Potential Relief  
*B. Greenberg (Institute of Metal Physics, Ekaterinburg, Russian Federation), M. Ivanov, A. Plotnikov*
- B11-P-1-41** (1313) The research of process of the cooper evaporation out of liquid iron  
*J. Labaj (SILESIA TECHNICAL UNIVERSITY OF TECHNOLOGY, Katowice, Poland), G. Siwiec, B. Oleksiak, J. Wiecezorek*
- B11-P-1-42** (0693) The analysis of the magnetic properties in the intermetallic YxGd<sub>1-x</sub>Ni<sub>3</sub> compounds  
*G. Chelkowska (University of Silesia, Katowice, Poland), A. Bajorek, A. Chrobak, M. Kwiecien - Grudziecka*
- B11-P-1-43** (1870) Formation and structure of Zr<sub>59</sub>Ta<sub>5</sub>Cu<sub>18</sub>Ni<sub>8</sub> Al<sub>10</sub> bulk metallic glasses  
*B. Bendjemil (Univ. Badji-Mokhtar Annaba, Annaba, Algeria), A. Hafs, A. Bouchareb, N. Seghairi, J. Bougdira, N.-E. Chakri, M. Baricco*
- B11-P-1-44** (0674) Magnetism and electronic structure of selected Gd<sub>1-x</sub>Sm<sub>x</sub>In<sub>3</sub> compounds  
*A. Bajorek (A. Che&#322;kowski Institute of Physics, University of Silesia, Katowice, Poland), G. Chelkowska, A. Chrobak, M. Kwiecien-Grudziecka*
- B11-P-1-45** (0226) The Melting Temperture and Thermodynamics Features  
*Z. Obidov (Tajik Technical University, Dushanbe, Tajikistan)*
- B11-P-1-47** (2007) Electrochemical and surface characterization of Fe<sub>3</sub>Al-base ternary intermetallics  
*M. Zamanzade (Saarland University, Saarbruecken, Germany), A. Barnoush, H. Vehoff*
- B11-P-1-48** (0290) SHS-Based Fabrication of Ti-Al-Nb-C with Desired Structure and Porosity  
*O. Boyarchenko (Institute of Structural Macrokinetics and Materials Science, Chernogolovka, Russian Federation), S. Vadchenko, A. Sytshev*
- B11-P-1-49** (1600) Structural and magnetic study of disordering by mechanical deformation in Fe<sub>75</sub>(Al,Si)<sub>25</sub> intermetallic alloy system  
*E. Legarra (UPV/EHU, Leioa, Spain), E. Apiñaniz, F. Plazaola*
- B11-P-1-50** (1445) Diffusion welding of intermetallic foils  
*O. Oleneva (Ural Federal University, Yekaterinburg, Russian Federation), S. Demakov, O. Khadzhieva*
- B11-P-1-51** (0277) Anelasticity of Fe-C-Me (Me=Al,Ga,Ge) ordered alloys  
*I.S. Golovin (National Research Technological University MISiS, Moscow, Russian Federation)*
- B11-P-1-52** (0224) Thermal Property and Enthalpy of Formation  
*A. Badalov (Tajik Technical University, Dushanbe, Tajikistan)*
- B11-P-1-53** (2957) Substitutions, vacancies or stacking defaults: disordered crystal structures of novel phases in the U Ru-Si ternary phase diagram  
*O. Tougait (Université of Rennes1, Rennes, France), M. Pasturel, V. Dorcet, P. Boullay, T. Roisnel, V. Demange, M. Potel, H. Noël*
- B11-P-1-54** (3067) Effect Of Pre-Oxidation Treatments On The Mechanical Properties Of (Ni,Pt)Al Systems Measured By Nanoindentation  
*J.M. Alvarado-Orozco (Cinvestav, Queretaro, Mexico), A.G. Mora-García, H. Ruiz-Luna, L.A. Caceres-Diaz, J.E. Garcia-Herrera, E. Samaniego-Benitez, J.M. Muñoz-Saldaña, J.L. Ortiz-Merino, G. Trapaga-Martinez, D.G. Konitzer*
- B11-P-1-55** (0793) Textures in spark plasma sintering processed TiAl base alloys  
*J. Guyon (Université de Metz, Metz, France), E. Bouzy, J.-J. Fundenberger, A. Hazotte*

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Topic Area B : Structural Materials

- B12 Nickel-Based Superalloys**
- B12-P-1-01** (1956) Microstructure and phase stability of different gamma prime strengthened Co-base superalloy variants.  
*A. Bauer (WW1, Erlangen, Germany), S. Neumeier, F. Pyczak, M. Göken*
- B12-P-1-03** (1658) Effects of delta phase and grain size on stress corrosion cracking resistance of Inconel 718  
*L. Valle (UFRJ, Rio De Janeiro, Brazil), S. Gabriel, J. Dille, L.H. De Almeida, A.I. Santana*
- B12-P-1-04** (2042) Al-L12 equilibria in the Co-Al-W-Ti quaternary system  
*C. Zenk (University of Erlangen-Nürnberg, Erlangen, Germany), S. Neumeier, H.J. Stone, M. Göken*
- B12-P-1-05** (1614) Intermediate temperature embrittlement in high purity nickel and binary nickel-bismuth alloy  
*L. Zheng (Institute of Materials physics, University of Muenster, Muesnter, Germany), R. Chellali, R. Schlesiger, D. Baither, G. Schmitz*
- B12-P-1-06** (0965) Recrystallisation on indented nickel-based single crystal superalloys of various compositions  
*H. Mathur (University of Cambridge, Cambridge, United Kingdom), C. Rae, C.N. Jones*
- B12-P-1-07** (0960) Investigating of gamma prime morphology in as cast and homogenized IN738LC  
*R. Rahimi (University of Tehran, Tehran, Iran), M. Nili Ahmadabadi*
- B12-P-1-08** (2877) Feasibility of the electrodeposition of Ni/SiC continuous fibre composites over superalloys  
*E.P. Ambrosio (IIT, Torino, Italy), A.K. Muhammad Ramzan, P. Matteo, F. Paolo, M. Diego, B. Sara, B. Claudio*
- B12-P-1-09** (2255) Thickness dependency of the creep properties of nickel-base superalloys  
*R. Völkl (University Bayreuth, Bayreuth, Germany), M. Brunner, M. Bensch, E. Affeldt, J. Gabel, U. Glatzel*
- B12-P-1-11** (1677) Gamma prime crystal lattice orientation of turbine blades of the single crystal nickel based CMSX-4 superalloy  
*A. Onyszko (Rzeszow University of Technology, Rzeszow, Poland), W. Bogdanowicz, J. Sieniawski, H. Berger*
- B12-P-1-12** (2775) Study of oxidation and roughness in the Inconel 718 superalloy  
*D. Reis (ITA, São José Dos Campos, Brazil), T. Sugahara, J.P. Machado, C. Moura Neto, A. Couto, F. Piorino Neto*
- B12-P-1-13** (1215) Obtaining Ni-based Superalloy Metallic Foams  
*E. Bruj (Technical University of Cluj-Napoca, Cluj-Napoca, Romania), I. Vida-Simiti, N. Jumate, G. Thalmaier, D. Nemes, V. Moldovan*
- B12-P-1-14** (0805) Thermodynamic Stability Of Exogenous Nanophases In Liquid Metals  
*Y. Minaev (National Research Technology University-MISIS, Moscow, Russian Federation)*
- B12-P-1-15** (0660) The effect of ruthenium on the solidification behaviour of nickel-base superalloys: A phase-field study  
*L. Mushongera (University of Bayreuth, Bayreuth, Germany), M. Fleck, H. Emmerich*
- B12-P-1-16** (0617) Why Neutron Scattering Technique to study Nickel-Based Superalloys ?  
*R. Gilles (TU Muenchen, Garching, Germany), P. Strunz, D. Mukherji, M. Hofmann*
- B12-P-1-17** (0360) Analysis of Thermo-Mechanical Effects during Investment Casting of Nickel-Based Single Crystal Superalloys  
*C. Panwisawas (The University of Birmingham, Birmingham, United Kingdom), J.-C. Gebelin, N. Warnken, R.W. Broomfield, R.C. Reed*
- B12-P-1-18** (1822) Multi-objective computer aided optimization of nickel-based superalloys coupled to CALPHAD models  
*R. Rettig (University of Erlangen, Erlangen, Germany), R.F. Singer*
- B12-P-1-19** (2152) Intergranular residual stresses in IN718 by neutron diffraction  
*J. Repper (TU Muenchen, Garching, Germany), M. Hofmann, K. Christian, P. Winfried, W. Ewald*
- B12-P-1-20** (0191) Fabrication, Mechanical and Thermal properties of Al-alloy reinforced with NiTi Shape Memory Alloy Composites (SMACs)  
*H. Joel (Rajiv Gandhi Institute of Technology, Bangalore, Karnataka, India)*
- B12-P-1-21** (0178) Effect of Compressive Stress and Aging Time on the Evolution of Precipitate Microstructure in the Superalloy IN738LC  
*A. Altınçekiç (BOGAZICI UNIVERSITY, Istanbul, Turkey), E. Balıkcı*
- B12-P-1-22** (1449) X-ray topography and mapping of single crystalline turbine blade  
*R. Albrecht (Univeristy of Silesia, Katowice, Poland), W. Bogdanowicz, J. Sieniawski, K. Kubiak, A. Onyszko*
- B12-P-1-23** (0136) Effect Of Temperature-Strain Parameters Through The Use Of Torsion Simulation On The Dynamic Recrystallization Of Nickel- Based Alloy Uns No6617  
*G. Kodzhaspirov (St.Petersburg State Polytechnical University, St.Petersburg, Russian Federation), A. Borowikow, A. Rudskoy, M. Terentiev*
- B12-P-1-24** (1432) Influence of Gamma Prime Size on Creep Behaviour of Single Crystal Ni-based Superalloys  
*N. Tabrizi (Cambridge University, Cambridge, United Kingdom), L. Zhang, C. Rae*
- B12-P-1-25** (1481) Nanoindentation and microstructural characterization of thermally cycled Ni-Al-Cr bond coats on Ni-base superalloys  
*R. Webler (University Erlangen-Nuremberg, Erlangen, Germany), E.E. Affeldt, M. Göken*

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Topic Area B : Structural Materials

- B13** **Novel steels and steel matrix composites**
- B13-P-1-01** (2359) Ebsd Study Of Lattice Rotation In Expanded Austenite  
*A. Bastos Fanta (DTU- Technical University of Denmark, Kgs. Lyngby, Denmark), T. L. Christiansen, M. A.J. Somers*
- B13-P-1-02** (1093) Unconventional short- term, low-temperature ion nitriding of AISI 316 austenitic stainless steel  
*T. Fraczek (Czestochowa University of Technology, Czestochowa, Poland), M. Olejnik, J. Jasinski*
- B13-P-1-03** (1768) Deformability of the metastable austenitic steel 03Kh14N11K5M2YT  
*N. Ozerets (Ural Federal University named after First President of Russia B.N.Yeltsin, Yekaterinburg, Russian Federation), L.A. Maltseva, T.V. Maltseva*
- B13-P-1-05** (1204) Mechanical properties, fracture toughness and microstructure of metastable steels and alloys with different chemical and phase composition  
*S. Gladkovsky (Institute of Engineering Science of Russian Academy of Sciences, Yekaterinburg, Russian Federation)*
- B13-P-1-06** (0469) Quantification of Banding in Microstructures Using an Absolute and Bounded [0,1] Scale  
*K. McGarrity (Delft University of Technology, Delft, Netherlands), J. Sietsma, G. Jongbloed*
- B13-P-1-07** (1400) Structure and properties of austenitic-ferritic steel after laser treatment  
*V. Sharapova («Ural Federal University named after First President of Russia B.N.Yeltsin» , Yekaterinburg, Russian Federation), L.A. Maltseva , T.V. Maltseva*
- B13-P-1-08** (0020) The Study of Mechanical and fracture Behavior of CrMo4 Steel with Dual-phase Microstructure  
*A. Salemi (University, Karaj, Iran), A. Golestane, E. Moosavi Khoonsari*
- B13-P-1-09** (0441) The effect of dynamic strain aging on mechanical properties and work hardening behavior of high martensite dual phase (HMDP) steels  
*M.S. Shahriary (Sharif University of Technology, Tehran, Iran), A.A. Ekrami*
- B13-P-1-10** (0705) An original way for producing a 2.5 GPa strength ductile steel by rolling of martensite  
*J.-P. Masse (ArcelorMittal, Maizières-Lès-Metz, France), B. Chéhab, D. Embury, H. Zurob, X. Wang, O. Bouaziz*
- B13-P-1-11** (2074) Microstructure – properties relationships in carbide free bainitic steels  
*J.C. Hell (Université Paul Verlaine - Metz, Metz, France), M. Dehmas, S. Allain, A. Hazotte, J.P. Chateau, N. Gey*
- B13-P-1-12** (0135) The mechanical effect of emery powder reinforcement in 316L PM compacts for wear resistant parts  
*O. Ertugrul (Dokuz Eylul University, Izmir, Turkey), I.M. Kusoglu, K. Onel*
- B13-P-1-13** (1329) Two-Body Abrasion Wear Behavior of Two-Step Austempered Ductile Iron  
*P. Silawong (Suranaree University of Technology, Nakhon Ratchasima, Thailand), A. Panichakul, S. Inthidech, N. Akkarapattanaagoon, U. Kitkamthorn*
- B13-P-1-14** (1417) Study on weldability of high strength steel for structural applications  
*G.R. Gomez (Tenaris, Campana, Argentine Republic), N. Kotlar, R. Mazzina, T. Perez*
- B13-P-1-15** (0130) Wettability and mechanical properties assessment of nano TiO<sub>2</sub> and Armco Iron system  
*A. Zuriñe (Tecnalia Research and Innovation, Derio, Bizkaia, Spain), A. Jose Luis, K. Leiv*
- B13-P-1-16** (1356) Aqueous Quenchant Containing Polyethylene Glycol (PEG-3000) and its Application in Quenching Steel: Assessment of the Cooling Characteristics  
*R. Ikkene (Centre de Recherche Scientifique et Technique en Analyses Physico-Chimiques (CRAPC), Alger, Algérie., Alger, Algeria), Z. Koudil, M. Mouzali*
- B13-P-1-17** (2873) Amount of Bulk Carbides and Grain Boundary Segregation in Severely Deformed Fe–C Alloys  
*S. Protasova (Institute of Solid State Physics RAS, Chernogolovka, Russian Federation), A. Rodin, A. Petelin, B. Baretzky, B. Straumal, S. Dobatkin, J. Dutta Majumdar, I. Manna*
- B13-P-1-18** (2357) Correlation of electrochemical characteristics and microstructure evaluation of long-term creep tests of cast CB2 steel  
*D. Jandová (ŠKODA VÝZKUM s.r.o., Plzen, Czech Republic), J. Strejcius, J. Kasl, V. Kanta*
- B13-P-1-19** (0852) Hydrogen Diffusivity In Trip Steel Sheet  
*J. Malina (University of Zagreb Faculty of Metallurgy, Sisak, Croatia), A. Begic Hadzipasic, M. Malina*
- B13-P-1-20** (0967) Influence of microstructural defects on hydrogen trapping and embrittlement in 34CrMo4 martensitic steels  
*L. Moli Sanchez (CEA Saclay, Gif-Sur-Yvette Cédex, France), F. Martin, E. Leunis, M. Wery, J. Chêne*
- B13-P-1-21** (1672) Properties of hot pressed MgO-PSZ / TRIP-steel composite  
*A. Yanina (TU BAF, Freiberg, Germany), S. Guk, R. Kawalla*
- B13-P-1-22** (2694) Towards lighter steel sheets: a novel composite concept based on silicon nitride nanoprecipitation in a ferrite matrix  
*H. Van Landeghem (Institut Jean Lamour, Nancy, France), M. Gouné, A. Redjaïmia*
- B13-P-1-23** (0328) Infiltration Processing and Characterization of Steel-Magnesium Alloy Laminates  
*A. Cetin (Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland), J. Krebs, A. Durussel, A. Rossoll, J. Inoue, S. Nambu, T. Koseki, A. Mortensen*
- B13-P-1-24** (0745) Steel-based multi laminated composites designed by thermo-mechanical forming technology  
*N. Barbakadze (University of Kassel, Kassel, Germany), S. Wagner, U. Weidig, K. Steinhoff*
- B13-P-1-25** (2172) Microstructure - properties relationship in linepipe steels  
*N. Van Steenberge (OCAS NV / Arcelormittal RD Gent, Zelzate, Belgium), P. Thibaux, M. Liebeherr, D. Van Hoecke, N. Bernier*
- B13-P-1-26** (2053) High Strength Steels application for High Pressure/Large Diameter Gas Pipelines  
*C.M. Soinelli (--, --, France), G. Demofonti*

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### Topic Area B : Structural Materials

- B13-P-1-27** Control of ductile fracture propagation in High Strength/Large Diameter gas linepipe  
(2052)  
*G. Demofonti (-, -, France), G. Mannucci*
- B13-P-1-28** API X70 HTS (Helical-Two-Step) pipes for sour service application  
(1348)  
*D. Mirkovic (SZMF GmbH, Salzgitter, Germany), V. Flaxa, F.M. Knoop*
- B13-P-1-29** Microstructure-Related Aspects of Running Ductile Fracture Arrest in Modern High Strength Line Pipes  
(1638)  
*I. Pyshmintsev (RosNITI, Chelyabinsk, Russian Federation), A. Gervasyev, A. Arabey*
- B13-P-1-30** Composite layers formed in situ in iron and steel castings  
(3065)  
*G. Beta (AGH University of Science and Technology, Krakow, Poland), O. Ewa, J. Andrzej*
- B14 Magnesium alloys**
- B14-P-1-01** Influence of surface condition on the structure of interlayer formed between magnesium alloy core and aluminium alloy cover.  
(1910)  
*S. Boczkal (Institute of Non-Ferrous Metals, Skawina, Poland), M. Nowak*
- B14-P-1-02** Extrusion behaviour and microstructural evolution of magnesium alloys  
(1988)  
*M. Vedani (Politecnico di Milano, Milano, Italy), Q. Ge*
- B14-P-1-03** Influence of Ca on the Creep Properties of AZ91 Magnesium Alloy  
(1414)  
*D. Amberger (University Erlangen-Nürnberg, Erlangen, Germany), P. Eisenlohr, M. Göken*
- B14-P-1-04** Microstructure evaluation in a magnesium alloy processed by ECAP in elevated temperature  
(0722)  
*J. Mizera (Warsaw University of Technology, Warsaw, Poland), B. Adamczyk Cieslak, T. Rzychon, A. Kielbus*
- B14-P-1-05** Effect of silicon addition on the microstructure, mechanical properties and hot tearing susceptibility of AZ91E magnesium alloys  
(2835)  
*C. Ravindran (Ryerson University, Toronto, Canada), S. Lun Sin, A. Elsayed*
- B14-P-1-06** Microstructure and Properties of Particulate Reinforced Cast Magnesium Matrix Composites.  
(2215)  
*M. Sazonov (A.A. Baikov Institute of Metallurgy and Material Science (IMET RAS), Moscow, Russian Federation), T. Chernishova, L. Rokhlin*
- B14-P-1-07** Effect Of Heat Treatment On The Wear And Corrosion Resistance Of Electroless Nip And Duplex Nip-Nib Coatings On The Magnesium Alloy Az91  
(2363)  
*N. Öztürk Körpe (Eskişehir Osmangazi University, Eskişehir, Turkey), E. Körpe, M. Anik*
- B14-P-1-08** Investigation on grain refinement by carbon addition on AZ91D magnesium alloy  
(2525)  
*M. Dabalà (Università di Padova, Padova, Italy), K. Brunelli, S. Ferraro*
- B14-P-1-09** The Effect Of Ni Diffusion On Microstructure And Hardness Of Az91 Alloy  
(2410)  
*M. Dabalà (Università di Padova, Padova, Italy), K. Brunelli*
- B14-P-1-10** Compressive creep study of creep resistant magnesium alloys at 200°C  
(2207)  
*H. Dieringa (HZG, Geesthacht, Germany)*
- B14-P-1-11** Corrosion behaviour of alloy AZ91 in terms of heat-transfer  
(1160)  
*B. Dytkowicz (Motor Transport Institute, Warsaw, Poland), E. Rostek, M. Grobelny, D. Rudnik, A. Wojciechowski*
- B14-P-1-12** Friction stir welding of AZ31 magnesium alloys  
(0060)  
*M. Regev (Ort Braude College of Engineering, Karmiel, Israel), S. Spigarelli, M. Cabibbo*
- B14-P-1-13** Structure and texture analysis of drawn wires of AZ31 magnesium alloy  
(2448)  
*M. Perek (AGH University of Science and Technology, Krakow, Poland), T. Bajor*
- B14-P-1-14** High strength Mg-Zn-Y alloys reinforced by quasicrystals produced by powder metallurgy.  
(2023)  
*G. Garces (CENIM-CSIC, Madrid, Spain), E. Oñorbe, P. Perez, P. Adeva, F. D'Errico*
- B14-P-1-15** Microstructure and Mechanical Props of Mg-10wt. %RE (RE=Dy+Gd) alloys  
(2366)  
*L. Yang (HZG, Geesthacht, Germany), Y. Huang, F. Feyerabend, K.U. Kainer, R. Willumeit, N. Hort*
- B14-P-1-16** Technological process map for Accumulative Roll-bonding of Mg-Sheet  
(2157)  
*S. Reichelt (TU Bergakademie Freiberg, Freiberg, Germany), R. Kawalla*
- B14-P-1-17** A positron annihilation study of precipitation in magnesium alloy WE54  
(0953)  
*J. Del Rio (Universidad Complutense, Madrid, Spain), C. Gomez*

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Topic Area B : Structural Materials

- B15** **Ultrafine-grained Materials processed by Severe Plastic Deformation**
- B15-P-1-01** (0906) Corrosion properties of AZ31 magnesium alloy processed by extrusion and ECAP in 0.1M NaCl  
*P. Minárik (University of Žilina, Žilina, Slovak Republic), B. Hadzima, J. Vrátná, L. Bukovinová, M. Janecek*
- B15-P-1-02** (2729) Grain Size Reduction by Heating in Bulk Nanocrystalline FeAl  
*H.-P. Karnthaler (University of Vienna, Physics of Nanostructured Materials, Vienna, Austria), C. Gammer, C. Mangler, C. Rentenberger*
- B15-P-1-03** (2832) Investigation of Nanostructure and Mechanical Properties of the ARB-Processed Purity Aluminium  
*F. Qods (Semnan University, Semnan, Iran), M. Dehghan, M. Gerdooei*
- B15-P-1-04** (2707) Warm severe plastic deformation of building steel: structure and properties  
*A. Zavdoveev (Donetsk Institute for Physics and Engineering NAS of Ukraine, Donetsk, Ukraine), E. Pashinska, S. Dobatkin, V. Varyukhiv, Y. Beygelzimer*
- B15-P-1-05** (0783) Recrystallization microstructure and microtexture in an ultrafine-grained AlMgSi alloy  
*A. Loucif (Univrsity of Badji Mokhtar Annaba, Annaba, Algeria), T. Baudin, F. Brisset, R.B. Figueiredo, R. Chemam, T.G. Langdon*
- B15-P-1-06** (2706) NanoPeening, a new nanostructuration technique for high performance metallic surfaces  
*T. Muller (Wheelabrator Allevard, Le Cheylas, France), T. Prézeau, J. Samuel*
- B15-P-1-07** (0719) The Effect of Severe Plastic Deformation on the Fatigue Behavior of an Austenitic Stainless Steel  
*O. Renk (Erich Schmid Institute of Materials Science, Leoben, Austria), A. Hohenwarter, S. Scheriau, S. Kleber, R. Pippan*
- B15-P-1-08** (2693) Characterization of an Ultra Fine Grain Texture in Low Carbon Steel Produced by Multi-axes Forging Technology  
*J. Csizmadia (College of Dunaújváros, Dunaújváros, Hungary), Z. Csepeli, P.J. Szabó, B. Vero*
- B15-P-1-09** (0688) The Effects Of Grain Refinement By Equal Channel Angular Extrusion In Stainless Shape Memory Alloy  
*H.H. Bernardi (Instituto Tecnológico de Aeronáutica, Sao Jose Dos Campos, Brazil), K.A. Käfer, J. Otubo*
- B15-P-1-10** (1986) Mechanical spectroscopy and microstructure evolution of ultra-fine grained 6082 Al alloy subjected to severe plastic deformation  
*S. Amadori (Politecnico di Milano, Milano, Italy), E. Bonetti, S. Farè, R. Montanari, M. Vedani*
- B15-P-1-11** (0632) The electron microstructure of the Ni-W solid solution prepared by levitation, rapid crystallization and after high pressure torsion severe deformation  
*T. Czeppe (Polish Academy of Sciences, Cracow, Poland), A. Sypien, J. Morgiel, G. Korznikova*
- B15-P-1-12** (0378) High-Tech And High-Strength Austenitic Aging Steels Fe-Cr-Ni-Based With Nanostructured State  
*L.A. Maltseva (UrFU, Yekaterinburg, Russian Federation), V. Sharapova, T. Maltseva, N. Ozerets, A. Levina*
- B15-P-1-13** (0332) Metal forming simulation of ultrafine-grained commercial pure aluminum  
*R. Radev (University of Ruse, Ruse, Bulgaria), V. Gagov, D. Gospodinov, E. Yankov*
- B15-P-1-14** (0983) Annealing behaviors of severely deformed IF steel via differential speed shear rolling  
*J. Suharto (Yeungnam University, Gyeongsan, Korea - south), D.H. Shin, Y.G. Ko*
- B15-P-1-15** (1153) Fabrication of nanostructured multilayered sheets by ball impact cladding  
*S. Romankov (Chonbuk National University, Jeonju, Korea - south), Y. Hayasaka, I. Shchetinin, J.-M. Yoon*
- B15-P-1-16** (2465) Mechanical properties and thermal stability of nanocrystal layer on friction surfaces of medium and high-carbon steels  
*K. Miyata (Sumitomo Metal Industries, Ltd., Hyogo, Japan)*
- B15-P-1-17** (1240) Tribocorrosion of Nanostructured Titanium Substrates Processed by  
*S. Faghihi (National Institute for Genetic Engineering and Biotechnology, Tehran, Iran), M. Novin, D. Li, J. Szpunar*
- B15-P-1-18** (0159) Optimization of strength and ductility of a Cu-Cr-Zr alloy by combination of severe plastic deformation and precipitation  
*K. Valdés León (CENIM, Madrid, Spain), M.A. Muñoz-Morris, D.G. Morris*
- B15-P-1-19** (2949) Post-welding heat treatments of double-lap Friction Stir Welded joints  
*E. Cerri (University of Salento, Lecce, Italy)*
- B15-P-1-20** (1227) Optimization of strength and ductility in ultra fine-grained materials processed by severe plastic deformation processes  
*R. M (Indian Institute of Chemical Technology(IICT), Hyderabad, India), A.K. S, M. Dvr*
- B15-P-1-21** (2261) Developement Of Ultrafine Ferrite-Cementite Structures By Deformation Of Undercooled Austenite In A Eutectoid Steel  
*M. Caruso (Université Libre de Bruxelles, Bruxelles, Belgium), S. Godet*
- B15-P-1-22** (0077) Experimental study on the mechanical effects of a nano-crystallization treatment during high temperature oxidation of ZrO<sub>2</sub> oxide films growing on Zr alloy  
*B. Panicaud (UTT, Troyes, France), J.-L. Grosseau-Poussard, D. Reira, M. Guérain*
- B15-P-1-23** (2194) Microstructure and Mechanical Properties of Accumulative Roll Bonded AA6014/AA5754 Laminate  
*T. Hausöl (University of Erlangen-Nürnberg, Erlangen, Germany), H.W. Höppel, M. Göken*
- B15-P-1-24** (2948) An investigation of stability of fine grains in FSW butt joints  
*E. Cerri (University of Salento, Lecce, Italy)*

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- B31 Composites containing Nanoparticles and Nano-fibres**
- B31-P-1-01** (0085) Stress intensity factor for repaired crack with bonded composite patch under thermo-mechanical loading  
*R. Mhamdia (University of Sidi Bel Abbes, Algeria, Algeria)*
- B31-P-1-02** (0036) Mechanical properties of MWNT/epoxy polysulfide resin nanocomposite  
*K. Mahdavi Javid (institute for color science and technology, Tehran, Iran), B. Shirkavand Hadavand, G. Mehrmaz*
- B31-P-1-03** (1567) Nanocomposite with high wear and corrosion resistance obtained by electrodeposition  
*I. Marginean (politehnica university, Bucuresti, Romania), B. Florea*
- B31-P-1-04** (0016) Proton conductivity in boron nanotubes  
*I. Zaporotskova (Volgograd State University, Volgograd, Saint Lucia), E. Perevalova, N. Zaporotskova, S. Boroznin*
- B31-P-1-05** (1552) Effect of annealing time on structure of carbon-metal nanocomposites  
*K. Bagdasarova (A.V. Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russian Federation), E. Dzidziguri, G. Karpacheva*
- B31-P-1-06** (2952) Finite element modeling of Nano-Indentation test on Al based nanocomposite prepared by FSP  
*F. Karimzadeh (Isfahan University of Technology, Isfahan, Iran), R. Saeed Ziaee, M. Yadollah Pour*
- B31-P-1-07** (2887) The effect of chitosan on the clay-nanofiber hybrid films  
*L. Andong (Royal Institute of Technology, Stockholm, Sweden), B. Lars*
- B31-P-1-08** (2744) Starch/Epoxy Composites  
*A. Circiumaru ("Dunarea de Jos" University, Galati, Romania), I.-G. Birsan, V. Bria, D. Dima, G. Andrei*
- B31-P-1-09** (1479) Hybrid composite aeronautical materials: CNT doped resin or PVA-CNT fibers?  
*N. Alexopoulos (University of the Aegean, Xios, Greece), P. Poulin, S. Kourkoulis, Z. Marioli-Riga*
- B31-P-1-10** (2704) Development of polymer/nanoceramic composite material with potencial application in biomedical engineering  
*D. Vieira Dos Santos (Federal University of Santa Catarina, Florianopolis, Brazil), A.P. Marzagão Casadei, P.R. Alves Bernardo, E.A. Rezende Duek, A. Aragones, L.A. Pessan, M.C. Fredel*
- B31-P-1-11** (1458) In situ SAXS/XRD studies of cement paste  
*L. Chitu (Materials Center Leoben Forschung GmbH, Leoben, Austria), G. Maier*
- B31-P-1-12** (1017) Silver nanoparticle-coated silica beads: A promising antibacterial material for water disinfection  
*H.T. Kim (Hanyang University, Seoul, Korea - south), V.Q. Dang, Y.H. Shim, J.-K. Kim, Y.G. Chai, Y.-H. Choa*
- B31-P-1-13** (2664) Pressure Assisted Fast Electric Sintering of pure Al and MWCNTs  
*D. Manfredi (IIT@Polito, Torino, Italy), S. Marchisio, M. Pavese, S. Biamino, F. Deorsola, P. Fino*
- B31-P-1-14** (2650) Development of high performance cement mortar composites reinforced with cellulose nanofibres  
*R. Arevalo (Universitat Politècnica de Catalunya, Terrassa, Spain), J. Claramunt, M. Ardanuy, E. Aracri, J. Garcia-Ubassat*
- B31-P-1-15** (2628) Theoretical approach for analysis of multi-stage densification of fibrous reinforced porous media by carbon and ceramics  
*V. Kulik (Baltic State Technical University, Saint-Petersburg, Russian Federation), A. Kulik, M. Ramm*
- B31-P-1-16** (1170) Fire and thermal properties of poly(methyl methacrylate) nanocomposites using PMMA/clay nanohybrid based-masterbatch  
*D. Lerari (Université des Sciences et de la Technologie Houari Boumediene, Algiers, Algeria), A. Benaboura*
- B31-P-1-17** (1287) Influence of Reinforcing Nanoparticles on Properties of Binders for Diamond Cutting Tools.  
*D. Sidorenko (National University of Science and Technology «MISIS», Moscow, Russian Federation), E. Levashov, V. Kurbatkina, A. Zaitsev, S. Rupasov*
- B31-P-1-18** (2941) Influence Of Nanostructured Alumina Filler On The Structure And Properties Of Polymer Composites  
*T. Ulyanova (Institute of General and Inorganic Chemistry of NAS Of Belarus, Minsk, Belarus), A. Okhlopkova, N. Krutko, A. Parnikova, O. Kalmychkova*
- B31-P-1-19** (2298) Optical properties of CNT/Pr:YSZ/PDMS Nanocomposites  
*J.D. Fidelus (Institute of High Pressure Physics of the Polish Academy of Sciences, Warsaw, Poland), S.A. Yatsunencko, K. Anders, R. Piramidowicz*
- B31-P-1-20** (2245) Nanoeutectic Ti-Zr-Si Alloys: Structure And Mechanical Properties  
*I. Gornaya (Frantsevich Institute for Problems of Materials Science of NAS of Ukraine, Kiev, Ukraine), K. Valuiska, V. Gorban, S. Firstov*
- B31-P-1-21** (2965) Quasi-static Energy Absorption Of Pultruded Composite Tubes E-Glass/Polyester Under Oblique Loading with Different Cross-section  
*A.A. Arifin (Polytechnic Port Dickson, Port Dickson, Malaysia), A.B. Sulong*
- B31-P-1-22** (2917) A Stability Of Diamond Phase In Nanodiamond-Copper Composites Synthesized At Hphd Conditions  
*F. Shakhov (Ioffe Physical-Technical Institute of the Russian Academy of Sciences, Saint-Petersburg, Russian Federation), V. Osipov, S. Kidalov, K. Takai, T. Enoki, A. Vul'*
- B31-P-1-23** (1123) Synthesis of nanometric aluminum phosphates.  
*E. Palacios (Instituto de Cerámica y Vidrio (CSIC), Madrid, Spain), P. Leret, J.F. Fernández, A.H. De Aza, M.Á. Rodríguez*
- B31-P-1-26** (1738) Control of silver-polymer aggregation mechanism by primary particle spatial correlations in dynamic fractal-like geometry  
*G. Campi (Consiglio Nazionale delle Ricerche, Monterotondo Stazione, Italy), L. Suber*
- B31-P-1-27** (2016) Effect Of Nano Crystal Heat Treatment On Mechanical Properties And Micro Structure Of Amorphous Alloys Of Cu48Zr42Al7Nb3  
*M. Hosseini (industry and mines university, Tehran, Iran), R. Gholamipour, F. Shahri*

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- B31-P-1-28** Tribological behaviour at high temperature metal matrix composites produced by SPS  
(1740) *K. Delbé (École Nationale d'Ingénieurs de Tarbes, Tarbes, France), S. Orozco Gomez, A. Benitez, J.-Y. Paris, J. Denape, J.-P. Monchoux, A. Couret*
- B31-P-1-29** Zirconia toughened ceramic composite  
(1584) *S. Stoleriu (University POLITEHNICA of Bucharest, Bucharest, Romania), A.L. Carabat, C. Netoiu, I. Oprea*
- B31-P-1-30** In Situ Formation Process of Ultrafine SiC Fiber with Radial Gradient ZrO<sub>2</sub> Compositions by Pyrolysis of Electrospun Pre-ceramic Polymers  
(2140) *Y. Wang (National University of Defense Technology, Hunan, China), D. Zheng, X. Lan, H. Wang, W. Zhong*
- B31-P-1-31** Porous Ti<sub>13</sub>Nb<sub>13</sub>Zr alloy for enhanced bone-implant bonding and bioactivity  
(0879) *S. Sobieszczyk (Gdansk University of Technology, Gdansk, Poland), A. Zielinski, T. Seramak, W. Serbinski, A. Ossowska*
- B31-P-1-32** Effect of two different surfactants on the properties of PET nanocomposites  
(1894) *I. Leite (UFCEG, Campina Grande, Brazil), A.P. Soares, O.L. Malta, S.M. Silva*
- B31-P-1-33** Biological evaluation of a novel nanocomposite of Hydroxyapatite/Layered Double Hydroxides/Gelatin  
(1678) *F. Fayyazbakhsh (Amirkabir University of Technology, Tehran, Iran), S.H. Mehran, N.L. Mohamad Ali, M. Navid, G. Yasaman, A.A. Soheila, S.D. Ehsan*
- B31-P-1-34** Properties of Ti-based biocomposites processed with micrometric and nanometric hydroxyapatite powders  
(2056) *E. Gemelli (State University of Santa Catarina, Joinville, Brazil), P. Balbinotti, G. Buerger, N.H. Almeida Camargo, S.A. De Lima, V.A. Henriques, G.D. De Almeida Soares, J. De Jesus*
- B31-P-1-35** Functionalization of Cotton and strengthening its structure by the insertion of montmorillonite nanofillers  
(1881) *Y. Koriche (CUKM, Khemis Miliana, Algeria)*
- B31-P-1-36** Elaboration et caractérisation du matériau Sn-Attapulgite : Application  
(2190) *L.S. Belaroui (université d'Oran, Oran, Algeria), J.-M. Millet, F. Figueras, A. Bengueddach*
- B31-P-1-37** Laminated polymeric composites with nanoadditivated matrix  
(0279) *A. Stan (INCAS, Bucharest, Romania), D. Donescu, I. Dinca, L. Gavrila-Florescu, A. Stefan, Z. Vuluga, L. Dumitrache, C. Purdel*
- B31-P-1-38** Integrating single walled carbon nanotubes in ultra high molecular weight polyethylene  
(0559) *J. Guan (SIMS/NRC, Ottawa, Canada)*
- B31-P-1-39** Dielectric And Microwave Behaviors Of Hybrid Conducting Epoxy Resin Composites  
(0305) *B. Belaabed (EMP, Bordj El Bahri, Algeria), J.L. Wojkiewicz, S. Lamouri, N. El Kamchi, N. Redon*
- B31-P-1-40** Mechanical properties and deformation behavior of load-bearing parts from the exoskeleton of the crab Cancer pagurus  
(1582) *E.S. Karsten (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), H. Fabritius, D. Raabe*
- B31-P-1-41** Peculiar features of fabricating MMC with reinforcing nanodiamond particles  
(0511) *V. Popov (MISIS, Moscow, Russian Federation)*
- B31-P-1-42** Bovine Serum Albumin-Hydroxyapatite Nano Composite Synthesis (HA-BSA)  
(2109) *Z. Bagheri Fard (Amirkabir University of Technology, Tehran, Iran), F. Moztarzadeh, S.M. Rabiee*
- B31-P-1-43** Synthesis of Mg/Y<sub>2</sub>O<sub>3</sub> nanocomposite for enhanced tensile behaviour at elevated temperatures  
(0268) *A. Mallick (North Eastern Regional Institute of Science & Technology, India, India)*
- B31-P-1-44** The influence of nanofibres in composite materials  
(0400) *B. De Schoenmaker (Ghent University, Zwijnaarde, Belgium), K. De Clerck*
- B31-P-1-45** The Effect Of Al<sub>2</sub>O<sub>3</sub> Content On The Formation Mechanism And Properties Of Niti-Al<sub>2</sub>O<sub>3</sub> Nanocomposite Synthesized By Mechanical Alloying  
(0204) *T. Mousavi (Isfahan University of Technology, Oxford, United Kingdom), F. Karimzadeh, M.H. Abbasi*
- B31-P-1-46** Molecular And Nanosized Composites Obtained By Polymerization Of Methylmethacrylate Or E-Caprolactam In Situ In The Presence Of Different Additives\*  
(2547) *D.A. Sapozhnikov (INEOS RAS, Moscow, Russian Federation), Y.S. Vygodskii, O.N. Zabegaeva, A.A. Sakharova, T.V. Volkova, A.O. Terent'Ev, D.A. Borisov, V.Y. Voytekunas, M.J. Abadie*
- B31-P-1-47** Modeling of nanocomposites structure by finite element method (FEM)  
(2537) *D. Grzesiak (West Pomeranian University of Technology, Szczecin, Poland), P. Figiel, W. Biedunkiewicz*
- B31-P-1-48** Impact of synergy between carbon nanotubes and carbon black on the rheological and electrical properties of an EPDM rubber  
(0181) *M. Charman (EMAC, Mauleon, France), F. Leonardi, C. Bissuel, C. Derail*
- B31-P-1-49** Production of the Al-based composite materials with complex re-enforcement of micro - and nano-scale components by microgranules method  
(3072) *V. Shcheretskyi (PTIMA of NASU, Kiev, Ukraine), O. Shcheretskyi, A. Zatulovskiy*



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Topic Area B : Structural Materials

- B32 Hybrid and Metal-Organic Framework Materials**
- B32-P-1-01** Surface Functionalization of ZnO Nanorods for Application in Field Effect Transistors (1609)  
*M. Klaumuenzer (Institute of Particle Technology, Erlangen, Germany), A. Ebel, F. Werner, M. Voigt, G. Yang, E. Spiecker, A. Hirsch, D. Guldi, W. Peukert*
- B32-P-1-02** STUDY On POST IMPACT FATIGUE IN HYBRID COMPOSITE MATERIALS (2978)  
*E. Randjbaran (UNIVERSITY OF PUTRA MALAYSIA (UPM), Serdang, Malaysia)*
- B32-P-1-03** Effects of agglomeration on the optical and raman properties of nanoparticles (0276)  
*R. Juan J (Instituto de Ceramica y Vidrio, CSIC, Madrid, Spain), L. Israel, D.C. Adolfo, F. Jose F*
- B32-P-1-04** Double layered materials (2747)  
*I.-G. Birsan ("Dunarea de Jos" University, Galati, Romania), A. Circiumaru, V. Bria, V. Ungureanu, I. Roman*
- B32-P-1-05** Biophotonic Device Fabrication by Layer-by-Layer Self-Assembly Method Using Retinoic Acid and Chitosan (0574)  
*S. Mitachi (Tokyo Univ. of Technology, Tokyo, Japan), K. Nishimura, S. Shunsuke, T. Yousuke, H. Akira*
- B32-P-1-06** Evolution of aluminium-glass composites structure during controlled rolling (2717)  
*A. Anghelus ( Université Lille 1, Villeneuve D'Ascq, France)*
- B32-P-1-07** Shape modulation and phase selective oriented aggregation of InxOyHz nanoparticles by hydrothermal crystallization (1627)  
*M. Klaumuenzer (Institute of Particle Technology, Erlangen, Germany), M. Voigt, M. Mackovic, E. Spiecker, W. Peukert*
- B32-P-1-08** Failure Behaviour Of Advanced Frp-Aluminium Compounds (1254)  
*K. Schimanski (Stiftung Institut für Werkstofftechnik, Bremen, Germany), J. Schumacher, A. Von Hehl, H. Bomas*
- B32-P-1-09** Three-Dimensional Numerical Analysis Of The Distribution Of Thermal Residual Stresses In An Uni-Directional Composite. (2089)  
*M. Khaldi (faculté de génie mécanique, Oran, Algeria), Z. Sereir , A. Aïd, K. Hadjazi , H. Errouane*
- B32-P-1-11** Investigating the structure of layered organic-inorganic materials by a combination of X-ray Diffraction, Computational Modelling and NMR Crystallography (0943)  
*D. Laurencin (Institut Charles Gerhardt de Montpellier, Montpellier, France), A. Van Der Lee, C. Gervais, L. Di Carlo, M. Reinholdt, C. Bonhomme, M. Smith, W. El Malti, G. Guerrero, H. Mutin*
- B32-P-1-12** Nanosized CoFe2O4 particles coated with PVP or PEG based hybrid: synthesis, characterization and biologic activity (2958)  
*C.I. Covaliu (University Politehnica of Bucharest, Bucharest, Romania), I. Jitaru, E. Vasile, L. Diamandescu, O. Oprea, V. Ionita, C. Cristea, H. Iovu*
- B32-P-1-13** Development Of Nanocomposite Films With Antibacterial Properties (2714)  
*A. Attanasio (Italian Institute of Technology (IIT), Arnesano (Le), Italy), B. Sorce , I. Bayer, M. Kalyva, D. Fragouli, S. Sabella, P.P. Pompa, A. Athanassiou*
- B32-P-1-14** Synthesis and modification of the transition metal / C60 composites (2818)  
*J. Vacik (Nuclear Physics Institute ASCR, Rez, Czech Republic), V. Lavrentiev, P. Horak*
- B32-P-1-15** Luminescent Inorganic Liquid Crystals (1471)  
*J. Kim (LPMC - Ecole Polytechnique, Palaiseau, France), T. Gacoin, J.-P. Boilot, K. Lahlil*
- B32-P-1-16** Synthesis and characterization of new porous iron MOFs based on mixed carboxylate linkers (2752)  
*H. Chevreau (CNRS UMR 8180. Université de Versailles, Versailles, France), P. Horcajada, T. Devic, S. Miller, C. Serre*
- B32-P-1-17** Induced organization of silver nanoparticles grown on prepatterned thin films with tunable plasmonic dichroism (0318)  
*E. Vandenhecke (Institut P', Chasseneuil, France), S. Camelio, D. Babonneau, S. Rousselet, L. Simonot*
- B32-P-1-18** Synthesis optimization and scale-up of MOFs (2695)  
*F. Ragon (Institut Lavoisier, Versailles , France), H. Chevreau, T. Devic, P. Horcajada, C. Serre*
- B32-P-1-19** Electrical Properties of Inorganic-Organic Hybrid Framework Materials (2614)  
*R. Burwood (University of Cambridge, Cambridge, United Kingdom)*
- B32-P-1-20** Mr (0861)  
*S. Cao (University of Cambridge, Cambridge, United Kingdom)*
- B32-P-1-21** Growth and luminescence properties characterization of Zn calchogenides nanostructures (0844)  
*P. Fernández (University Complutense, Madrid, Spain), B. Sotillo, A. Urbierta, J. Piqueras*
- B32-P-1-22** Microwave Synthesis of Zirconium Carboxylates (2440)  
*H. Young Kyu (Korea Research Institute of Chemical Technology, Daejeon, Korea - south), S. Kyu-Eun, L. Ji Sun, L. U-Hwang, C. Jong-San*
- B32-P-1-23** in situ TEM observations during the crystallization of Co1-xCx amorphous films (1689)  
*E. Bauer-Grosse (Institut Jean Lamour, Nancy, France), A. Aouni, L.R. De Araujo Pontes*
- B32-P-1-24** Thermal Expansion Behavior of Cu/ZnOp Metal Matrix Composite (2429)  
*M. Khosrovi (University of Sistan and Baluchestan, Zahedan, Iran), G. Roudini*
- B32-P-1-25** Optical properties of silicon nanowire arrays for photovoltaic applications (1704)  
*J. Davenas (Université de Lyon, Villeurbanne, France), A. Rybak, D. Cornu, G. Bremond*
- B32-P-1-26** Injection Moulding of Carbon Short-Fibre Filled Pre ceramic Polymers (2353)  
*A. Müller (Fraunhofer Institut of Ceramic Technologies and Systems, Dresden, Germany), J. Kaufhold, H. Klemm, T. Moritz*
- B32-P-1-27** Sol-gel synthesis and investigation of un-doped and lanthanide doped different strontium aluminates (0078)  
*O. Scit (Vilnius University, Vilnius, Lithuania), G. Degutis, I. Grigoraviciute-Puroniene, R. Ramanauskas, A. Kareiva*

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Topic Area B : Structural Materials

- B32-P-1-28** Study of Silver adsorption on semiconductor surfaces  
(2351) *Y. Dai (Shandong University, Jinan, China), Y. Ma, B. Huang*
- B32-P-1-29** Heterogeneous allylic oxidation of alkenes over Cr- and Fe-MIL-101 coordination polymers  
(0569) *N. Maksimchuk (Boreskov Institute of Catalysis, Novosibirsk, Russian Federation), I. Skobelev, K. Kovalenko, V. Fedin, O. Kholdeeva*
- B32-P-1-30** Elaboration of photoactive crystalline highly porous titanium (IV) dicarboxylate  
(2324) *L. Rozes (Université Pierre et Marie Curie, Paris, France), L. D'Arras, C. Sassoze, T. Devic, C. Serre, C. Sanchez*
- B32-P-1-31** Hybrid titania- acrylic acid films; growth, characterization and bifunctional EBL structures.  
(0532) *M. Manso Silvan (Universidad Autónoma de Madrid, Madrid, Spain), M.J. Pérez Roldán, E. Punzón-Quijorna, V. Sánchez-Vaquero, D. Gallach Pérez, A. Valsesia, A. Climent Font, G. Ceccone, J.P. García Ruiz, F. Rossi*
- B32-P-1-32** Theoretical study of structural and electronic properties of the chalcogenides of transition metals  
(2911) *S. Meziane (Laboratory of Materials Discovery (LEPM) – Unit of Research Materials and Renewable Energies (URMER) Abou Bekr Belkaid University – Tlemcen (Algeria), Tlemcen, Algeria), H.-I. Faraoun*
- B32-P-1-33** Encapsulation of Pharmaceutical materials in the Nanodroplets created by a simple, unique and Green technique, Ultrasonic Cavitation  
(2389) *S. Manickam (UNIVERSITY OF NOTTINGHAM, Semenyih, Kuala Lumpur, Malaysia), K.W. Tan, S.Y. Tang*
- B32-P-1-35** Structure and geometric behaviours of dynameric membranes  
(1580) *T. Macron (European Membrane Institut, Montpellier, France), G. Nasr, S. Condom, M. Barboiu*
- B32-P-1-36** Cu(I)-containing room temperature ionic liquids as selective and reversible absorbents for propyne  
(2181) *J. Kim (Kyung Hee University, Seoul, Korea - south)*
- B32-P-1-37** Supported Gold Catalyst With Size And Loading Control Produced Using Multilamellar Vesicles  
(1652) *B. Damien (CRPP-CNRS, Pessac, France), F. Chrystel*
- B32-P-1-38** Design and Synthesis of Porous MOFs with rht topology: From Molecular Building Blocks (MBBs) to Supermolecular Building Blocks (SBBs)  
(2083) *F. Nouar (Institut Lavoisier de Versailles, Versailles, France), J. Eubank, T. Bousquet, L. Wojtas, M. Zaworotko, M. Eddaoudi*
- B32-P-1-39** Gas selective silicon carbonitride membranes  
(2185) *V. Rouessac (Institut Européen des Membranes ENSCM/UM2/CNRS UMR5635, Montpellier, France), M. Drobek, R. Coustel, J. Motuzas, J. Durand, A. Julbe*
- B32-P-1-41** Structure and properties of new actinide oxalates, precursors of transmutation fuel materials  
(0216) *C. Tamain (CEA Marcoule, Bagnols Sur Cèze, France), B. Arab-Chapelet, M. Rivenet, F. Abraham, S. Grandjean*
- B32-P-1-42** Topologies and Selective Gas-Sorption Properties of Metal-Organic Frameworks Based on Pyrimidine-5-carboxylate  
(3061) *N. Chin (Hanyang University, Ansan, Korea - south), J. Seo, K. Hong, H. Chun*
- B32-P-1-43** The Structure and Properties of Amorphous Metal-Organic Frameworks  
(3040) *T. Bennett (University of Cambridge, Cambridge, United Kingdom), J.-C. Tan, A. Cheetham, S. Moggach, D. Keen, E. Bithell*
- B41 Bioinspired materials**
- B41-P-1-01** Production and characterization of recombinant spider silk protein fibers  
(1161) *G. Lang (University of Bayreuth, Germany, Bayreuth, Germany), T. Scheibel*
- B41-P-1-02** Hierarchically structured porous ceramics and composites from nanocasting of plant cell walls  
(0613) *D. Van Opdenbosch (Friedrich-Alexander-University of Erlangen-Nuernberg, Erlangen, Germany), G. Fritz-Popovski, O. Paris, C. Zollfrank*
- B41-P-1-03** Effect of Anion Exchange in Self-Assembling of Polymeric Ionic Liquid Block Copolymers  
(0690) *I. Garcia (CIDETEC, San Sebastian, Spain), P.M. Carrasco, A. Ruiz De Luzuriaga, M. Constantinou, S. Rangou, P. Georgopoulos, A. Avgeropoulos, N. Zafeiropoulos, H.J. Grande, G. Cabañero*
- B41-P-1-04** Study and characterization of the cellulose in Alfa “Stippa -Tenacissima”  
(0870) *K. Messaoud-Bouregghda (Faculté des sciences de l'ingénieur, U.M.B.Boumerdes, Boumerdes, Algeria), F. Halouane*
- B41-P-1-05** Impact protection – what can be learned from the pomelo (Citrus maxima) peel?  
(0930) *M. Thielen (Botanical Garden University of Freiburg, Freiburg, Germany), T. Speck, R. Seidel*
- B41-P-1-06** Flow in multi helical micro-channel  
(1292) *S.R. Ganneboyina (Indian Institute of Technology Kanpur, Kanpur, India), A. Ghatak*
- B41-P-1-07** Modelling ice plant seed capsule opening with a swellable biphasic cellular solid  
(2635) *L. Guiducci (Max-Planck-Institut für Kolloid- und Grenzflächenforschung, Potsdam, Germany), K. Razghandi, L. Bertinetti, M.J. Harrington, C. Neinhuis, I. Burgert, P. Fratzl, J.W. Dunlop*
- B41-P-1-08** Bioinspired reinforcement of polyurethane elastomers  
(1780) *R. Libanori (ETH Zürich, Zürich, Switzerland), D.M. Montenegro, F. Muench, A.R. Studart*
- B41-P-1-10** The use of Water Retainers in Lime-Hemp Biocomposites  
(1889) *S. Pavia (Trinity College, Dublin, Ireland), R. Walker*

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Topic Area B : Structural Materials

- B41-P-1-11** Deer antler growth: an example of tissue scaffolding in nature  
(2400) *S. Krauss (Max Planck institute of colloids and interfaces, Potsdam, Germany), W. Wagermaier, J.D. Currey, P. Fratzl*
- B45** **Self healing, self cleaning materials**
- B45-P-1-01** Durable hydrophobic sol-gel finishes on textiles  
(1133) *M. Karabulut (IFTH, Ecully, France), H. Blas, I. Ferreira*
- B45-P-1-02** Crack self-healing in glass: the effect of composition  
(1530) *R. Girard (CNRS - Université Montpellier 2, Montpellier, France), A. Faivre, F. Despétis*
- B45-P-1-03** Self Cleaning and AR Surface  
(0343) *K.C. Camargo (UFRGS, Porto Alegre, Brazil), A.F. Michels, F. Rodembusch, F. Horowitz*
- B45-P-1-04** Emulsion route in fabrication of micro- and nanocontainers for self-healing and self-protecting functional coatings  
(0944) *D. Grigoriev (Max Planck Institute of Colloids and Interfaces, Potsdam, Germany), M. Haase, A. Latnikova, H. Möhwald, D. Shchukin*
- B45-P-1-05** A quantitative description of the surface healing of ionomers  
(2995) *S. Garcia (Delft University of Technology, Delft, Netherlands), R. Varley, S. Van Der Zwaag*
- B45-P-1-06** Solvothermal preparation of mesoporous titania photocatalyst for water treatment under visible light  
(1216) *X. Wang (CSIRO, Melbourne, Australia), P. Hartley, D. Mitchell, R. Caruso*
- B45-P-1-07** Using Shape Memory Alloy Fasteners in Steel Connection  
(0042) *M. Farzaneh (University of Tehran, Tehran, Iran), M. Ghassemieh*
- B45-P-1-08** Modification of paper using polyhydroxybutyrate to obtain biomimetic superhydrophobic substrates  
(2580) *J. F. Mano (University of Minho, Guimarães, Portugal), S. Weilong, M.A. Rodriguez Perez, C. Gonzalez Obeso*
- B45-P-1-09** Antibacterial properties of nanocomposite TiO<sub>2</sub>-M (M = Ag, Cu) thin films grown by DLI-CVD on various surfaces.  
(2526) *F. Maury (CNRS, Toulouse, France), L. Bedel, J. Mungkalasiri, F. Emieux, A. Vettese, F. Renaud*
- B45-P-1-10** Kinetics of photocatalyzed and photosensitized oxidation of organic dye deposits on porous and non-porous titania-containing self-cleaning films and powders  
(0553) *D. Ollis (North Carolina State University, Raleigh, USA)*
- B45-P-1-11** Combined electrochemical and surface analytical studies of self-healing protective layers on Magnesium alloys  
(0474) *M. Wiesener (University Paderborn, Paderborn, Germany), G. Prof. Grundmeier*
- B45-P-1-12** Roughness Parameters of Titania Coatings on Ceramic Surfaces  
(1518) *M. Piispanen (Åbo Akademi University, Turku, Finland), L. Hupa*
- B45-P-1-13** Functionalization of ceramic tile surfaces: durability under different environmental condition  
(0210) *F. Bondioli (University of Modena and Reggio Emilia, Modena, Italy)*

## Poster Session I - On display Monday September 12th

Topic Area C : Processing

- C13** **Metallic glasses and related composites: new routes for functional and strong materials**
- C13-P-1-01** (2006) Structural changes of Pd<sub>40</sub>Cu<sub>30</sub>Ni<sub>10</sub>P<sub>20</sub> bulk metallic glass at elevated temperatures  
*N. Mattern (IFW Dresden, Dresden, Germany), M. Stoica, G. Vaughan, J. Eckert*
- C13-P-1-02** (0347) laser solid forming bulk metallic glass  
*G. Yang (northwestern polytechnical university, Xi'an, China)*
- C13-P-1-03** (2659) Effect of Hydrogenation on the Structural, Thermal and Mechanical Properties Ni<sub>45-x</sub>CoxNb<sub>30</sub>Zr<sub>25</sub> (x = 0, 7.5, 15 and 22.5) Amorphous Alloys  
*A.J. Kailath (National Metallurgical Laboratory, Jamshedpur, India), M. Kim, J.-Y. Suh, E. Fleury*
- C13-P-1-04** (0435) Metallic glass particle preparations by RF thermal plasma process  
*H. Choi (KITECH, Incheon, Korea - south), H. Joo*
- C13-P-1-05** (2910) Temperature dependence of thermal embrittlement of Fe<sub>83</sub>B<sub>17</sub>  
*Y. Guo (Beihang University and SIMaP-INPG, St Martin D'Hères, France), K. Georgarakis, M. Aljerf, A.R. Yavari, T. Zhang*
- C13-P-1-06** (0627) The influence of the Nb and Al content on the crystallization of Ni<sub>58</sub>Nb<sub>x</sub>(ZrTi)<sub>1-x</sub>Al<sub>y</sub> metallic glasses  
*T. Czeppe (Polish Academy of Sciences, Cracow, Poland), A. Sypien, Z. Swiatek*
- C13-P-1-07** (0663) Glassformation in the GeSe<sub>2</sub>-Sb<sub>2</sub>Te<sub>3</sub>-PbSb<sub>2</sub>Te<sub>4</sub> system  
*L. Aljihmani (University of Chemical Technology and Metallurgy, Sofia, Bulgaria), V. Vassilev, T. Hristova-Vasileva*
- C13-P-1-08** (0667) New chalcogenide glasses in the GeSe<sub>2</sub>-Sb<sub>2</sub>Te<sub>3</sub>-CdTe system  
*T. Hristova-Vasileva (University of Chemical Technology and Metallurgy, Sofia, Bulgaria), V. Vassilev, L. Aljihmani*
- C13-P-1-09** (0700) A New Cu-Hf-Al-Be Bulk Amorphous Alloy with High Glass Forming Ability  
*S.S. Shin (KITECH, Ulsan, Korea - south), K.-M. Lim, E.-S. Kim*
- C13-P-1-10** (0709) Magnetic properties of Fe<sub>90</sub>Sc<sub>10</sub> nanoglass  
*R. Witte (Karlsruhe Institute of Technology, Eggenstein, Germany), J. Fang, M. Ghafari, R. Kruk, R.A. Brand, H. Hahn, H. Gleiter*
- C13-P-1-11** (2339) Naoporous structure deduced from a Ti-based metallic glass by dealloying  
*F. Qin (Tohoku University, Sendai, Japan), X. Wang, G. Xie, S. Zhu, A. Inoue*
- C13-P-1-12** (2232) Workability of Mg-Cu-Gd Bulk Metallic Glasses Synthesized by the Spray Forming Process  
*C. Tsao (National Cheng Kung University, Tainan/Taiwan, China), K.P. Lin*
- C13-P-1-13** (0764) Processing influence on the structure and thermal behaviour of a Co<sub>66</sub>Fe<sub>4</sub>Ni<sub>1</sub>Si<sub>12</sub>B<sub>17</sub> metallic glass  
*J. Bonastre (University of Girona, Girona, Spain), J. Suñol, L. Escoda, M. Sánchez, J. Santos, B. Hernando*
- C13-P-1-14** (2209) Deformation And Failure Regularities Of Amorphous Metallic Alloys And Ultrafine Grained Crystalline Materials Comparison At Cryogenic Temperatures  
*E. Tabachnikova (B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, Kharkov, Ukraine)*
- C13-P-1-15** (2014) Fine grained copper based alloys for biomedical applications  
*C.-L. Camber lordache (Dunarea de Jos University, Galati, Romania)*
- C13-P-1-16** (0835) Isothermal Crystallization Behaviour of Fe<sub>50-x</sub>Cr<sub>15</sub>Mo<sub>14</sub>C<sub>15</sub>B<sub>6</sub>M<sub>x</sub> (x = 0, 2 and M=Y, Gd) Bulk Metallic Glasses and Ribbons by in situ High temperature X-rays diffraction  
*B. Bendjemil (Univ. Badji-Mokhtar Annaba, Annaba, Algeria), A. Bouchareb, J. Bougdira, M. Baricco, N.-E. Chakri*
- C13-P-1-17** (1683) Metallic glasses and nanocomposites in Co<sub>1-x</sub>C<sub>x</sub> sputtered films  
*E. Bauer-Grosse (Institut Jean Lamour, Nancy, France), A. Aouni, L.R. De Araujo Pontes*
- C13-P-1-19** (1941) Characterisation of a Ti-based amorphous alloy in view of biomedical applications  
*G. Dalla Fontana (Università of Torino, Torino, Italy), P. Rizzi, F. Scaglione, L. Battezzati, K. Werniewicz, A. Gebert, M. Calin*
- C13-P-1-20** (1902) Crystallization and structural approaches of rare earths aluminosilicate glasses (Ln = La, Y, Sc)  
*N. Sadiki (CNRS, Perpignan, France), L. Hennet, P. Florian, Y. Vaills, M. Leydier, D. Massiot, J.-P. Coutures, A.-M. Flank, P. Lagarde*
- C13-P-1-21** (0996) Effect of Nb addition on mechanical properties of a Cu-based bulk metallic glass  
*M. Abbasi (Iran University of Industrial & Mines, Tehran, Iran), R. Gholamipour, F. Shahri*
- C13-P-1-22** (1885) Hydrogen permeation properties of Pd-coated Ni<sub>37.5</sub>Nb<sub>30</sub>Zr<sub>25</sub>Co<sub>7.5</sub> alloy: a comparison between amorphous and crystalline membranes  
*H. Chin (Korea Institute of Science and Technology(KIST) / Yonsei University, Seoul, Korea - south), J.-Y. Suh, Y.-C. Kim, W. Lee, E. Fleury*
- C13-P-1-23** (1028) Crystallization and high temperature deformation behaviours of a Cu<sub>36</sub>Zr<sub>48</sub>Al<sub>8</sub>Ag<sub>8</sub> bulk metallic glass  
*K.S. Lee (Korea Institute of Materials Science, Changwon, Korea - south), S.E. Lee, Y.S. Lee*
- C13-P-1-24** (1760) Effect of 0.1wt% of Al<sub>2</sub>O<sub>3</sub> Nanopowder Addition on the Magnetic and Electrical Properties of Fe-Si-B Amorphous Ribbon  
*M. Nazari Khorramabadi (Semnan University, Semnan, Iran), A. Habibollahzadeh, F. Qods*
- C13-P-1-25** (1087) Icosahedral Symmetry, Fragility and Stability of Supercooled Liquid State of Metallic Glasses  
*M. Shimono (National Institute for Materials Science, Tsukuba, Japan), H. Onodera*
- C13-P-1-26** (1332) Forming of a Zr-based bulk metallic glass by electrochemical micromachining using a micro-tool electrode technique  
*R. Sueptitz (IFW Dresden, Dresden, Germany), J.A. Koza, M. Uhlemann, L. Schultz, A. Gebert*

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### Topic Area C : Processing

- C13-P-1-27** (1440) Mechanisms of shear band recovery under thermal annealing in a pre-deformed metallic glass studied by MD simulation  
*Y. Ritter (Technische Universitaet Darmstadt, Darmstadt, Germany), K. Albe*
- C13-P-1-28** (2797) Thermodynamics of Isolated Bi-Atomic Clusters  
*G. Wilks (Air Force Research Laboratory, Wright-Patterson Afb, USA), U. Reveles, D. Miracle, S. Khanna*
- C13-P-1-29** (1467) Metallic glassy films as templates for selective growth of functionalized oxides  
*G. Evangelakis (University of Ioannina, Ioannina, Greece), N. Panagiotopoulos, J. Kovac, P. Patsalas, M. Mozetic*
- C13-P-1-30** (1750) Directional solidification and characterization of a composite with quasicrystalline phase fraction of Al<sub>73.5</sub>Cu<sub>17.5</sub>Co<sub>9</sub> alloy  
*W. Bogdanowicz (Institute of Materials Science, University of Silesia, Katowice, Poland), J. Krawczyk, R. Albrecht*
- C13-P-1-31** (1730) Experimental studies of Al-Co-R (R=Ce, Dy) alloys in crystal, liquid and amorphous states  
*V. Sidorov (Ural State Pedagogical University, Ekaterinburg, Russian Federation), S. Uporov, N. Uporova, V. Bykov, P. Svec, D. Janickovic*
- C13-P-1-32** (1539) Chiral Rearrangements and Electronic properties of Y-centered Cu<sub>8</sub>Zr<sub>4</sub>Y (Y=Be,Al,Nb) from Density Functional Theory Computations  
*G. Bokas (University of Ioannina, Ioannina, Greece), G. Evangelakis, C. Lekka*
- C31 Powder Synthesis and Processing**
- C31-P-1-01** (1456) Hard templating method for oxide nanoceramics synthesis: Characterizations and pyrotechnic applications  
*P. Gibot (Institut franco-allemand de recherches de Saint Louis (ISL), Saint Louis, France), M. Comet, L. Vidal, F. Lacroix, O. Muller, A. Eichhorn*
- C31-P-1-02** (0062) Synthesis of nanocrystalline zirconia powder  
*N. Hassine (Alfateh University, Tripoli, Lebanon), A. Bakeer, R. Abo-Shrenta*
- C31-P-1-03** (1494) Synthesis and visible-light photocatalytic performance of BiVO<sub>4</sub> nanostructures obtained by hydrothermal method  
*V. Mendonça (Unesp, Araraquara, Brazil), W. Avansi, C. Ribeiro, E. Longo*
- C31-P-1-04** (1174) Atmosphere Effect On Sintering Of Alumix Grades Powders  
*T. Pieczonka (Cracow University of Technology, Kraków, Poland), J. Kazior, M. Hebda, A. Szewczyk-Nykiel*
- C31-P-1-05** (0320) Photocatalytic activity of ZnWO<sub>4</sub> nanoparticles prepared by combustion synthesis  
*J. Grabis (RTU Institute of Inorganic Chemistry, Salaspils, Latvia), D. Jankovica, K. Maris, R. Dzintra*
- C31-P-1-06** (0345) Characteristic of core-shell structured Ni-Fe alloy nanopowder synthesized by electrical wire explosion method  
*G.-Y. Lee (Korea Institute of Industrial Technology, Incheon, Korea - south), J.-S. Kim, D.-H. Kim, M.-H. Lee*
- C31-P-1-07** (2899) Influence of milling conditions on the properties of ferrites sintered by reactive sintering using the Spark Plasma Sintering process  
*K. Zehani (SATIE laboratory - ENS Cachan, Cachan, France), V. Loyau, F. Mazaleyrat, E. Labouré*
- C31-P-1-08** (0382) Defects in detonation nanodiamonds  
*V. Popov (MISIS, Moscow, Russian Federation), A. Egorov, S. Savilov, V. Lunin, D. Kirilenko, M. Kovalchuk, I. Khodos*
- C31-P-1-09** (0423) Equipment for organic/inorganic particle design using supercritical fluids  
*J.Y. Clavier (Separex, Champagneulles, France), M. Perrut*
- C31-P-1-10** (0455) Ultrasonic Production Of Nano-Size Dispersions And Emulsions  
*T. Hielscher (Hielscher Ultrasonics GmbH, Teltow, Germany)*
- C31-P-1-11** (0465) Effect of Sr<sup>+2</sup> substitution on the crystal structure, microstructure and properties of BST nanopowders  
*M. Rashad (Central Metallurgical Research and Development Institute, Cairo, Egypt), A. Omar, A.-H. Kandil*
- C31-P-1-12** (2851) Solvent Extraction: A Practical Way To Synthesise High Quality Metal And Semiconductor Nanoparticles  
*G. Sánchez (UASLP, San Luis Potosí, Mexico), J. Aguilera, R.L. Tovar, A. Gaona, O. Domínguez*
- C31-P-1-13** (0556) Synthesis and Characterization of BCP Nanocomposites Using Microwave Irradiation  
*A. Farzadi (Amirkabir University of Technology, Tehran, Iran), S.-H. Mehran, H.V. Amirhossein, K. Mahgol*
- C31-P-1-14** (0616) Transformation Kinetics Of Silica For Crn Process  
*N. Karakus (SAKARYA UNIVERSITY, Sakarya, Turkey), H.Ö. Toplan*
- C31-P-1-15** (0670) Dynamic compaction of copper powder submitted to high strain rates using a Split Hopkinson Pressure Bar (SHPB) device  
*P. Acquier (Institut franco-allemand de recherches de Saint-Louis, Saint-Louis, France), S. Lemonnier, C. Ternier, N. Allain-Bonasso, J. Capelle, E. Barraud, A. Rusinek, T. Grosdidier*
- C31-P-1-16** (0695) The Synthesizing Of Cordierite Powders From Talc, Basalt, Quartz, Kaolinite And Alumina Mixture By Mechanical Activation  
*N. Karakus (SAKARYA UNIVERSITY, Sakarya, Turkey), K. Yildiz, N. Toplan, H.Ö. Toplan*
- C31-P-1-17** (0812) Synthesis and Processing of High Density Bulk Metallic Glass Alloys  
*T. Zahrah (MATSYS, Inc., Sterling, USA), D. Kapoor, R. Carpenter, L. Kecskes*
- C31-P-1-18** (0814) Time-resolved X-ray diffraction study of TiC-Ni composites obtained by SHS  
*H. Boutefnouchet (university of Annaba, Annaba, Algeria), C. Curfs, D. Vrel*

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- C31-P-1-19** (0815) Some Properties Of Cu-Sic Composite Produced By Powder Metallurgy Method  
*G. Celebi Efe (Sakarya University, Sakarya, Turkey), I. Altinsoy, T. Yener, M. Ipek, S. Zeytin, C. Bindal*
- C31-P-1-20** (0845) Transformation of Copper Nanowires to Copper Sulfide (Cu<sub>2</sub>S) Nanotubes  
*Y.-I. Lee (Hanyang university, Ansan, Korea - south), S.-I. Kim, D.-B. Jung, L. Kun-Jae, M. Nosang V., C. Yong-Ho*
- C31-P-1-21** (0661) Production And Characterization Of Conductive Cu-Sic Composite  
*G. Celebi Efe (Sakarya University, Sakarya, Turkey), M. Ipek, S. Zeytin, C. Bindal*
- C31-P-1-22** (2782) Precipitation of magnetite nanoparticles for environmental applications  
*H. Muhr (--, --, France), W. Li, E. Plasari*
- C31-P-1-23** (2667) PVD-coated powders as feedstock material for cold spray technique  
*A. Patelli (CIVEN, Marghera-Venezia, Italy), S. Vezzù, A. Surpi, S. Rech, L. Zottarel, A. Trentin, M. Colasuonno, M. Mazzuccato*
- C31-P-1-24** (0976) Structural investigations on Y<sub>2</sub>O<sub>3</sub> doped [ZrO<sub>2</sub> - a - Al<sub>2</sub>O<sub>3</sub>] nanopowders obtained by different methods and used like SOFC electrolyte  
*M. Ionel (National Institute of Materials Physics, Magurele, Romania), V. Bogdan, N. Petru, C. Nicolae, C. Serban, M. Ion, A. Ecaterina, P.-P. Nicollette*
- C31-P-1-25** (1016) Evaluation of the precursor and hydrothermal conditions to obtain titanate structures applied to the photodegradation of rhodamine B  
*H.A. Mourão (UFSCar/Embrapa CNPDIA, São Carlos, Brazil), C. Ribeiro*
- C31-P-1-26** (1072) Er:YAG transparent ceramics for laser applications : co-precipitation synthesis and spark plasma sintering  
*C. Marlot (ISL, Saint-Louis, France), E. Barraud, S. Le Gallet, M. Eichhorn, F. Bernard, C. Ternier*
- C31-P-1-27** (1139) Powder Compaction In The Axisymmetric Case  
*E. Kraus (ITAM SB RAS, Novosibirsk, Russian Federation), A. Buzurkin*
- C31-P-1-28** (1795) Hydrothermal synthesis of Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-ZrO<sub>2</sub>(Y<sub>2</sub>O<sub>3</sub>) powder and their application for high – temperature ceramics  
*A. Hmelov (Riga Technical university, Riga, Latvia), G. Sedmale, J. Grabis*
- C31-P-1-29** (2625) Synthesis of a biocide doped glass by sol- gel technique for biomedical composite application  
*M. Moura (Universidade Federal de Santa Catarina, Florianópolis, Brazil), M. Fredel, C. Volpato*
- C31-P-1-30** (2531) Metal matrix composite reinforced nanocrystalline TiC synthesized by selective laser melting  
*A. Biedunkiewicz (West Pomeranian University of Technology, Szczecin, Poland), P. Figiel, D. Grzesiak*
- C31-P-1-31** (1289) The Synthesis of Molybdenum from Molybdenite by Mechanical activation  
*B. Ghasemi (ministry of science, Semnan, Iran)*
- C31-P-1-33** (1355) Synthesis of concentrated Ni nanoparticle suspensions by an environmental friendly MW-polyol-catalytic method  
*J. Motuzas (Institut Européen des Membranes, Montpellier, France), M. Drobek, J. Anne*
- C31-P-1-34** (1379) Manufacturing of large sized SiC pellets exhibiting dense and nanostructured characteristics, by Spark Plasma Sintering technique  
*J.-D. Lulewicz (CEA, La Ferté Bernard, France), B. Rufino, N. Lochet, H. Maskrot, P. Bonnaille, L. Chaffron*
- C31-P-1-35** (1403) Production of CuAlMn nanocrystalline alloy by mechanical alloying  
*H. Keyvanlou Shahrestanaki (University of Tehran, Tehran, Iran), H. Abdizadeh, S. Raygan*
- C31-P-1-36** (2506) Bonding ability of Fe-alloy and WC-Co hard metal  
*C. Han (Korea institute of industrial technology, Incheon, Korea - south), H. Choi*
- C31-P-1-37** (2438) Effect of sintering temperature and axial pressure on structural and electric properties of granular Bi 2223 superconductors  
*D. Girbovan (Babes-Bolyai University, Cluj-Napoca, Romania), M. Pop, R. Redac, R. Coldea, A. Pop*
- C31-P-1-39** (0049) Sol-gel synthesis and dielectric characterisation properties of lead-free (1-x)Na<sub>0.5</sub>Bi<sub>0.5</sub>TiO<sub>3</sub>-xBaTiO<sub>3</sub> based ceramics  
*A. Chaouchi (Laboratoire de Chimie Appliquée et Génie Chimique de l'Université Mouloud Mammeri de Tizi-Ouzou, Algérie., Tizi-Ouzou, Algeria), S. Kennour, S. Astorg, M. Rguiti, C. Courtois, S. Marinel, M. Aliouat*
- C31-P-1-40** (2223) Solvothermal synthesis of oil-dispersible ultrathin nanosheets of Gd<sub>2</sub>O<sub>3</sub>:Eu  
*A. Vanetsev (Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russian Federation), A. Shaporev, M. Sokolov*
- C31-P-1-41** (1509) Synthesis of core-shell TiO<sub>2</sub>/V<sub>2</sub>O<sub>5</sub> nanowires and their photocatalytic property  
*W. Avansi (Unesp, Araraquara, Brazil), V. Mendonça, C. Ribeiro, E. Longo*
- C31-P-1-43** (2127) Synthesis of luminescent YV<sub>1-x</sub>PxO<sub>4</sub>:Eu nanopowders via microwave-assisted hydrothermal crystallization of gels  
*A. Vanetsev (Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russian Federation), O. Gaitko, I. Chuvashova, V. Makhov*
- C31-P-1-44** (1598) Design of mesostructured (Co)MoP/SiO<sub>2</sub>(-Al<sub>2</sub>O<sub>3</sub>) catalysts via incorporation of heteropolyacids by spray drying processing.  
*F. Colbeau-Justin (Laboratoire de Chimie de la Matière Condensée de Paris (LCMCP), Paris, France), C. Boissière, A. Chaumonnot, A. Bonduelle, C. Sanchez*
- C31-P-1-45** (2114) A Study On Sem Investigation Of Atomized Powders  
*R. Yamanoglu (KOCAELI UNIVERSITY, Kocaeli, Turkey), M. Zeren*
- C31-P-1-46** (1641) Effect of Milling Speed and Duration on the Particle Size of Hydroxyapatite Obtained from Animal Bone  
*I. Ozden (Bogaziçi University, Istanbul, Turkey), M. Ipekoglu, S. Altintas*
- C31-P-1-47** (1643) Liquid route synthesis of ionic conductors  
*S. Coste (Université du Maine, Le Mans, France), M. Barré, H. Sellemi, A. Abramova, G. Corbel, P. Lacorre, O. Bohnké*

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- C31-P-1-48** (1665) Synthesis and characterization of a hydroxyapatite intended to carry out bone implant  
*H. Chemani (University of Boumerdès, Boumerdès, Algeria)*
- C31-P-1-49** (1998) Structure features of nano-dispersed powders of rare earth oxides and fluorides produced from amorphous precursors  
*I. Shmytko (Institute of Solid state Physics, Chernogolovka, Russian Federation), G. Strukova*
- C31-P-1-50** (1908) Organosoluble and reactive oxide nanoparticles ready for nanocomposite  
*B. Boury (Université Montpellier 2, Montpellier, France), A. Aboulaich, H. Mutin*
- C31-P-1-51** (1769) The Effect of Process Control Agent Content on Mechanical Alloying of a Premixed Al-Zn-Mg-Cu Alloy  
*M.A. Jabbari Taleghani (Universidad Carlos III de Madrid, Leganes (Madrid), Spain), E.M. Ruiz Navas, M. Salehi, J.M. Torralba*
- C31-P-1-53** (3064) Influence of milling parameters on vanadium particles size distribution in Al<sub>2</sub>O<sub>3</sub>-V composites synthesis process  
*K. Broniszewski (Warsaw University of Technology, Warsaw, Poland), A. Olszyna*
- C31-P-1-54** (3047) Solid-state reaction in mechanically alloyed and spark plasma sintered Al-MgB<sub>2</sub> composite materials  
*M. Kubota (Nihon University, Narashino, Japan)*
- C31-P-1-55** (3077) Production of composite materials copper-alumina from mechanically alloyed powders  
*J. Kaczmar (Politechnika Wroclawska, Wroclaw, Poland), K. Granat, M. Wojtkowiak, M. Stachowicz, D. Nowak*
- C31-P-1-56** (3093) The effect of nitrogen flow rate on flame synthesis of boric acid nano/micro particles  
*M. Isik (Istanbul Technical University, Istanbul, Turkey), S. Timur*
- C31-P-1-57** (3098) Surface versus volume effects in luminescent nano-ceria  
*C. Tiseanu (INCDFLPR, Bucharest, Romania), V. Parvulescu, M. Boutonnet, B. Cojocaru, P. Primus, C. Teodorescu, C. Solans, M. Sanchez-Dominguez*
- C32**
- C32-P-1-01** (1670) Microstructural and dielectric properties of BaTi<sub>0.85</sub>W<sub>0.15</sub>O<sub>3</sub> nanocrystalline ferroelectric ceramics synthesized by high-energy ball milling  
*N. Neelam Maikhuri (Delhi Technological University, Delhi, India), S. Sheela Devi, A.K. A. K. Jha*
- C32-P-1-02** (1097) Fabrication of UGd<sub>6</sub>O<sub>12</sub> for nuclear fuel optimization  
*D. Pieck (CEA, St. Paul-Les-Durance, France), Y. Potillon, P. Matheron, L. Desgranges*
- C32-P-1-03** (1253) Microstructure and properties of aluminum alloy composites produced by KOBO method  
*J. Wozniak (Warsaw University of Technology, Warsaw, Poland), K. Marek, B. Włodzimierz, O. Andrzej*
- C32-P-1-04** (1804) DOE analysis of the effect of powder mixture on the geometrical characteristics of PM copper steel parts  
*I. Cristofolini (University of Trento, Trento, Italy), M. Pilla, A. Molinari, M. Larsson*
- C32-P-1-05** (1812) Fully dense products produced via the Scanpac MMS process  
*C. Aslund (Metec Powder Metal AB, Karlskoga, Sweden)*
- C32-P-1-06** (2740) Rheological and physico-chemical behaviour of colloidal suspensions  
*H. Gouchene (University of Annaba, Annaba, Algeria)*
- C32-P-1-08** (0490) Perfection Of Manufacturing Technique Of Consumable Electrodes From Powder Of Refractory Metals  
*S. Burkin (Ural federal university, Ekaterinburg, Russian Federation), J. Brynskikh, A. Babaylova*
- C32-P-1-09** (2578) ZnFe<sub>2</sub>O<sub>4</sub>/a-Fe nanocomposite compacts obtained by mechanical milling and sintering by SPS technique  
*I. Chicinas (Technical University of Cluj-Napoca, Cluj-Napoca, Romania), V.F. Tarta, I. Ciascai, T.F. Marinca, F. Popa, B.V. Neamtu, O. Isnard, V. Pop*
- C32-P-1-10** (0711) Utilization Of Ceramic Processing Waste For The Production Of Porous Ceramic Bodies  
*S. Koc (SAKARYA UNIVERSITY, Sakarya, Turkey), N. Karakus, N. Toplan, H.Ö. Toplan*
- C32-P-1-11** (2529) Stability of structures formation from powder mixture of Fe, Al and Al<sub>2</sub>O<sub>3</sub> processing in semi-solid state  
*B. Mašek (West University of Bohemia, Pilsen, Czech Republic), J. Svoboda, I. Eliášová, M. Kusý, H. Jirková*
- C32-P-1-12** (0873) Rapid Synthesis of Nanoporous Silica for Green Tire using Inexpensive Precursors  
*H. Kim (Hanyang University, Seoul, Korea - south), A. Hilonga, J.-K. Kim, P.B. Sarawade*
- C32-P-1-14** (1767) Heating rate effect on Spark Plasma Sintering of nanostructured Fe-Mo powders  
*A. Molinari (-, -, France), C. Menapace*
- C32-P-1-15** (2886) Research on the properties of Fe-base friction composite material  
*V.V. Merie (Technical University of Cluj-Napoca, Cluj-Napoca, Romania), C.O. Popa, V.C. Candea*
- C32-P-1-16** (1857) Development Of Micro Hot Embossing On 316L/Polymer Mixtures  
*E. W. Sequeiros (CEMUC - FEUP, Porto, Portugal), M.T. Vieira, M.F. Vieira*
- C32-P-1-17** (1319) Sinterability of Cordierite Powders Synthesized by Sol-gel Methods  
*N.M. El-Buaishi (Faculty of Technology and Metallurgy, Belgrade, Serbia), I. Jankovic-Castvan, B. Jokic, D. Veljovic, D. Janackovic, R. Petrovic*
- C32-P-1-18** (1364) Processing Of Ti Scaffolds By Sintering With Different Spacers  
*D.J. Busquets Mateix (UPV VALENCIA, Valencia, Spain), C. Tojal Domenech, M. Torró Vidal, V. Amigó Borrás*
- C32-P-1-19** (2419) OBTAINING NiTi BY CONVENTIONAL POWDER METALLURGY  
*E. Kerstner (UFRGS, Porto Alegre, Brazil), P. Ferrandini, V. Martins, L. Schaeffer*
- C32-P-1-20** (1829) The role of microstructure on the strength of aggregated ceramic powder compacts  
*C.L. Martin (CNRS, Saint-Martin D'Hères, France), P. Pizette, G. Delette, F. Sans, P. Sornay*
- C32-P-1-22** (2705) Effect of sintering temperature on microstructure and optical properties of Eu<sup>3+</sup>-doped nanostructured yttria-stabilized zirconia ceramics  
*J.D. Fidelus (Institute of High Pressure Physics of the Polish Academy of Sciences, Warsaw, Poland), L. Zych, K. Anders, R. Piramidowicz*

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- C32-P-1-23** Al<sub>2</sub>O<sub>3</sub>-Mo composites synthesis in application for cutting tools edges (3082)  
*M. Kostecki (Warsaw University of Technology, Warsaw, Poland), K. Broniszewski, A. Olszyna*
- C51** **Sustainable Processes in Ionic Liquids and Molten Salts for Materials**
- C51-P-1-01** Study of the Use of Phosphonium Ionic Liquid as Potential Extractant of Zn(II) (0134)  
*H. Leticia E. (Universidad Autónoma del Estado de Hidalgo, Pachuca, Hidalgo, Mexico), H. Liliana, Á. Mario, L. Felipe*
- C51-P-1-02** Spectroscopy and Electrochemistry of Niobium in Ionic Liquids (0173)  
*E.O. Lomako (CEST Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria), O.B. Babushkina*
- C51-P-1-03** Morphology of Aluminium Deposits Electroplated from Ionic Liquids (0174)  
*O. Babushkina (CEST Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria), E. Lomako, J. Wehr, O. Rohr*
- C51-P-1-04** Ionic Liquids Supported on Silica-Based Monolithic Foams: Synthesis, Characterizations and Catalytic Properties (0413)  
*R. Backov (CRPP, Pessac, France), N. Brun, P. Hesemann, M.-F. Achard*
- C51-P-1-05** Self-assembly of 1-alkyl-3-Methyl-Imidazolium Ibuprofenate for drug controlled release from silica Ionogels (1378)  
*C. Tourne-Peteilh (ICGM, Montpellier, France), P. Judeinstein, T. Cacciaguera, A. Vioux, J.-M. Devoisselle, L. Viau*
- C51-P-1-06** Silica supported Ionic Liquid Phases: Materials at the interface of ionic liquids and nanostructured silica (1810)  
*P. Hesemann (Institut Charles Gerhardt, Montpellier, France), T.P. Nguyen, S. El Hankari, B. Motos-Pérez, J.J. Moreau*
- C51-P-1-07** Electrodeposition of metallic copper and copper alloys using (2214)  
*A.M. Popescu ("Ilie Murgulescu" Institute of Physical Chemistry, Bucharest, Romania), V. Constantin, L. Anicai, A. Cojocaru, S. Costovici*
- C51-P-1-08** Corrosion properties of Zn-Ni-P thin films in aqua and ionic liquid media (2217)  
*V. Constantin (1Romanian Academy, "Ilie Murgulescu" Institute of Physical Chemistry, Bucharest, Romania), A.M. Popescu, V. Soare, M. Burada, M. Tarcolea*
- C51-P-1-09** Molybdenum Carbide Electrodeposition onto Semiconducting Materials Surface in Ionic Melts (2256)  
*D. Shakhnin (V.I. Vernadskii Institute of General and Inorganic Chemistry, NAS of Ukraine, Kyiv, Ukraine), A. Gab, V. Malyshev, M. Gaune-Escard*
- C51-P-1-10** Density, Excess Molar Volume, Conductivity and Viscosity of 1-Butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide + Propylene Carbonate Mixtures (2515)  
*S. Gadzuric (Faculty of Science, Novi Sad, Serbia), V. Milan, D. Sanja*
- C51-P-1-11** Ionic Liquids In (Co)Polymer Synthesis And Composite Materials Formulation (2556)  
*D.A. Sapozhnikov (INEOS RAS, Moscow, Russian Federation), Y.S. Vygodskii, E.I. Lozinskaya, A.S. Shaplov, L.V. Erokhina, K.A. Kuznetsov, N.V. Ignat'Ev, M. Schulte, I.A. Malyskina*
- C51-P-1-12** Syntheses transition metal complex functionalized ionic liquids and their catalysis (2849)  
*J. Zhang (East China Normal University, Shanghai, China), Y. Liu*
- C51-P-1-13** A green TiF<sub>6</sub><sup>2-</sup> containing ionic liquid for homogenous selective sulfoxidation of sulfides to sulfoxides (2855)  
*S.-S. Wang (East China Normal University, Shanghai, China), Y. Liu*
- C51-P-1-14** Electrochemical study of cement reactions in molten NaCl (1316)  
*R. Sheikh (University College London, London, United Kingdom), S. Simons, D. Inman*
- C51-P-1-15** Nanomaterials from electrolysis of solid oxide precursors in molten salts (1844)  
*G. Chen (University of Nottingham, Nottingham, United Kingdom), X. Jin*
- C51-P-1-16** Synthesis of rare-earth metal borides in molten salts (2121)  
*S. Kuznetsov (Institute of Chemistry, Kola Science Centre RAS, Apatity, Russian Federation), G. Bukatova, M. Gaune-Escard*
- C51-P-1-17** Thermodynamic investigation of the BaF<sub>2</sub>-LiF-NdF<sub>3</sub> system (2610)  
*M. Berkani (Faculté des Sciences Exactes, Béjaïa, Algeria), M. Gaune-Escard*



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Topic Area C : Processing

- C51-P-1-18** An Alumina Membrane Ag/AgCl Reference Electrode for Molten Salts  
(2671) *H. Wang (University of Nottingham, - Nottingham, United Kingdom), N. Siambun, G. Chen*
- C52 Sustainable high temperature metallurgical processes and engineering materials recycling techniques**
- C52-P-1-01** Refining of Si by directional solidification from Si-Sn melts  
(0626) *X. Ma (The university of tokyo, Tokyo, Japan), T. Yoshikawa, K. Morita*
- C52-P-1-02** simulation of molten metal flow through ceramic foam filter  
(0591) *A. Googajelou (puladir investment casting company, Seyed Jamaledin, Nazaraba, Iran), A. Bahmani, N. Varahraam, P. Davami*
- C52-P-1-04** Influence of Fe Oxidation on Selective Oxidation Behavior of Si and Mn Added in High Strength Sheet Steel  
(0121) *Y. Fushiwaki (JFE, Fukuyama, Japan), Y. Nagataki, Y. Sugimoto*
- C52-P-1-05** Printed circuit boards: review the recycling of non-metallic fractions  
(2809) *A. Canal Marques (Universitat Politècnica de Catalunya, Barcelona, Spain), J.M. Cabrera Marrero, C. Malfatti, M.L. MasPOCH Ruldua*
- C52-P-1-06** A novel technology for vanadium extraction by reduction of olivine in vanadium slag with coke  
(0160) *H.-Y. Li (Chongqing University, Chongqing, China), X. Li, S.-Y. Wang, B. Xie*
- C52-P-1-07** Problems and new technologies in technogenic formation recycling in Russian metallurgical industry  
(0232) *V. Dyubanov (A.A. Baikov Institute of Metallurgy and Materials Science Russian Academy of Sciences (IMET RAN), Moscow, Russian Federation)*
- C52-P-1-08** Tool steels fluidized bed atmospheric diffusion treatment (F-A/D-T) modeling  
(1114) *J. Jasinski (Czestochowa University of Technology, Czestochowa, Poland)*
- C52-P-1-09** Valorization of Automotive Shredder Residues  
(0337) *N.-E. Menad (BRGM, Orléans, France), M. Save, F. Bodenan, S. Guignot, P. Russo, J. Kleihauer, N. Kanari, E. Silvente, >. Fabien*
- C52-P-1-10** Microstructure and morphology of spherical graphite in ductile cast iron with ferritic matrix by light and electron microscopy  
(0007) *A.-R. Kiani-Rashid (Ferdowsi Univ. of Mashhad, Mashhad, Iran), A. Salehi, S. Sefidmoo*
- C52-P-1-11** Interaction of mercury with metals and alloys, development of the new methods of cleaning of mercury affected objects and physico-chemical analyses of solutions after works on cleaning from mercury  
(1713) *S. Shapiev (Complex Science Research Institute of RSA, Grozny, Chechen Republic, Russia, Grozny, Russian Federation), R. Uspajiev, A. Kashezhev, N. Litvinenko, N. Mokaeva, T. Shapiev*
- C52-P-1-12** Wear behavior of Directly Reused WC-Co based Cemented carbide by High velocity oxy-fuel(HVOF)  
(1118) *H.W. Na (KOREA / KITECH, Seoul, Korea - south), Y.H. Kim, H.S. Choi, Y.S. Cho*
- C52-P-1-13** Integrated Modelling and Control between Steel Casting and Rolling for Production of High Quality Long Products  
(1256) *A. Mukhopadhyay (Danieli Automation, Buttrio, Udine, Italy), L. Galasso, M. Ometto*
- C52-P-1-14** Production of Continuous Casting Rod and Pipe Using Semisolid Slurry of Magnesium Alloy  
(2078) *R. Yoshida (Chiba Institute of Technology, Narashino-Shi, Japan), T. Motegi*
- C52-P-1-15** Recycling physically sorted steelworks slag for the metallurgical and cement industries: conclusions of the ORLA research project  
(1124) *N. Menad (BRGM, Orleans, France), F. Bodenan, G. Francechini, J. Poirier, N. Rafai, I. Moulin, P. Chaurand, C. Bourgel, F. Hanrot, J. Rose*
- C52-P-1-16** Product Service System approach applied to products design  
(2937) *K. Ben Jemaa (Arts et Métiers Paritech, Le Bourget Du Lac, France)*

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Topic Area D : Characterization and Modelling

- D21 Macro/meso-mechanical characterization of materials and microstructural effects**
- D21-P-1-01** (0391) Examine the Effect of TiN Particles and Grain Size on the Charpy Impact Transition Temperature in Steels  
*J. Du (University of Birmingham, Birmingham, United Kingdom), M. Strangwood, C. Davis*
- D21-P-1-02** (0535) Effect of strain rate on fracture surfaces of Zr65Cu12.5Ni10Al7.5V5 bulk metallic glasses  
*E. Aghamiry (Islamic Azad University, Islamshahr branch, Tehran, Iran), R. Gholamipour, N. Khademian*
- D21-P-1-03** (0637) Changing Laws of the Phase Composition and Functional-Mechanical Properties of Ti-Ni Shape Memory Alloys  
*V. Andreev (Yaroslav the Wise Novgorod State University, Veliky Novgorod, Russian Federation), M. Khusainov, A. Bondarev, Y. Titovets*
- D21-P-1-04** (0218) Nondestructive laser optoacoustic method of local porosity measurement of particles reinforced isotropic composites  
*N. Podymova (M.V. Lomonosov Moscow State University, Moscow, Russian Federation), A. Karabutov, L. Kobeleva, T. Chernyshova*
- D21-P-1-05** (0635) The Force Parameters Relaxation of Ti-Ni Shape Memory Alloy Spherical Segments  
*M. Khusainov (Yaroslav the Wise Novgorod State University, Veliky Novgorod, Russian Federation), A. Bondarev, V. Andreev, N. Petrov*
- D21-P-1-06** (0702) Characterisation of the cyclic deformation behaviour of nodular cast irons at different testing frequencies  
*P. Starke (Institute of Materials Science and Engineering, Kaiserslautern, Germany), H. Germann, D. Eifler*
- D21-P-1-07** (0730) Low – Carbon Quenched and Partitioned steel: structural and mechanical characterization  
*E. Pastore (University of Genoa, Genoa, Italy), M.G. Ienco, M.R. Pinasco, S. De Negri, O. Holovenko*
- D21-P-1-08** (0219) Quantitative evaluation of porosity influence on local elastic moduli of SiC reinforced metal-matrix composites with the laser optoacoustic method  
*N. Podymova (M.V. Lomonosov Moscow State University, Moscow, Russian Federation), A. Karabutov, L. Kobeleva, T. Chernyshova*
- D21-P-1-09** (0380) Damage and fracture characterization of a welded structure of Al-Zn-Mg alloys – micro-mechanisms and modelling  
*Q. Puydt (CEA, Is-Sur-Tille, France)*
- D21-P-1-10** (0102) Tribological and Electrochemical Characterizations Of Biomedical Alloys For Surgical Implants In Simulated Body Fluids used by SS AISI 316  
*M. Fella (ANNABA university, Sidi Ammar, Algeria), M. Labaiz, O. Assala, I. Hidous, A.E. Hidous*
- D21-P-1-11** (0088) Nondestructive Detection of Spall Damage under Low-velocity Repeated Impact  
*N. Nishimura (Meijo University, Nagoya, Japan), K. Murase, T. Watanabe, K. Tsutsui, T. Ito*
- D21-P-1-12** (0083) Influence of the size effect on the strengthening behaviour of copper: temperature influence  
*P.-A. Dubos (Crismat, Caen, France), E. Hug*
- D21-P-1-13** (0041) The influence of temperature on the tensile anisotropy of a forged 7XXX aluminum alloy  
*S. Agouti (CEMEF, Sophia-Antipolis, France), N. Bozzolo, P.-O. Bouchard, P. Le Brun, M. Piellard*
- D21-P-1-14** (0604) Hot deformation and processing maps of a  $\beta$ -Ti alloy  
*M. Dikovits (TU Graz, Graz, Austria), C. Poletti, F. Warchomicka*
- D21-P-1-15** (1317) Static recrystallization of polycrystalline tantalum  
*C. Kerisit (CEA Valduc, Is-Sur-Tille, France), N. Bozzolo, W. Geslin, V. Lorca, R. Besnard, R. Logé*
- D21-P-1-16** (1762) Cyclic deformation behavior and crack growth on lean duplex stainless steels fatigued  
*R. Strubbia (IFIR, Rosario, Argentine Republic), S. Hereñú, I. Alvarez-Armas*
- D21-P-1-17** (1766) Technological characterization and valorisation of Eucalyptus globulus for wood of construction  
*I. Loulidi (Ecole Nationale Supérieure d'Electricité et de Mécanique de Casablanca, Casablanca, Morocco), M. Chergui, A. Famiri, M. Elghorba, M. Ziani*
- D21-P-1-18** (1542) Study on the influence of a post heat treatment on the mechanical properties of friction stir welding of an aluminium alloy 2050.  
*W.L. Reis Santos (INPG / SIMAP, Grenoble, France), B. Malard, F. De Geuser, A. Deschamps*
- D21-P-1-19** (1410) Influence of the microstructure evolution on ferritic/martensitic steels during fatigue tests  
*M.F. Giordana (IFIR- Conicet, Rosario, Argentine Republic), P.-F. Giroux, I. Alvarez-Armas, M. Sauzay, A. Armas*
- D21-P-1-20** (1793) Testing Nitinol near adiabatic and isothermal conditions for its application on cables as a State Switched Inducer.  
*D. Tirelli (European Commission, Ispra (Va), Italy)*
- D21-P-1-21** (1294) Microstructural Evolution Of Semi-Crystalline Thermoplastics Under Temperature And Pressure  
*M. Dasriaux (Institut PPRIME, Futuroscope Chasseneuil C, France), S. Castagnet, L. Chocinski, L. Thilly*
- D21-P-1-22** (0018) Hydroforming of thin sheet metal using pressured steam  
*N. Walid (Ecole Supérieure des Sciences et Techniques de Tunis, Tunis, Tunisia), R. Mohamed Ali, A. Mahfoudh, C. Abel, Z. Ali*
- D21-P-1-23** (1935) Effects of initial surface roughness on the wear and corrosion resistance of nitrided and post-oxidized 41CrAlMo7 steel  
*R. Sola (University of Modena and Reggio Emilia, Modena, Italy), R. Giovanardi, P. Veronesi, S. Mamei, G. Poli*
- D21-P-1-24** (2829) Fatigue damage analysis in a duplex stainless steel: Microstructure and Microcracks Initiation analysis with TEM and EBSD  
*I. Alvarez-Armas (Instituto de Física Rosario, Rosario, Argentine Republic), M.G. Moscato, M.C. Marinelli, M.F. Giordana*

## Poster Session I - On display Monday September 12th

Topic Area D : Characterization and Modelling

- D21-P-1-25** (2788) Conformation Structure and Super-Molecular Dimensions Influence on Deformation Molecular Mechanics of a Flexible Chain Crystalline Polymer  
*U. Gafurov (Institute of Nuclear Physics, Tashkent, Uzbekistan)*
- D21-P-1-26** (2993) Strain mapping in virtual clothing subject to materials mechanical properties  
*A. Kristina (Kaunas University of Technology, Kaunas, Lithuania), S. Eugenija*
- D21-P-1-28** (1893) FE modelling of magnetic fields in the context of passive NDT of industrial ferromagnetic objects  
*M. Augustyniak (DES ART Ltd., Gdynia, Poland), B. Augustyniak*
- D21-P-1-29** (0256) Influence Of Aging On Arcan Shears For Soldered Mechatronic Assemblies  
*M. Le (LNE, Trappes, France), J. Idrac, A. Duclerget-Baudequin, E. Dargent, A. Guillet*
- D21-P-1-31** (2673) Microstructural evaluation of Ti-6Al-4V with Widmanstätten structure and thermal barrier coating after creep test  
*D. Reis (Instituto Tecnológico de Aeronáutica, São José Dos Campos, Brazil), L. Briguento, C. Moura Neto, M. Barboza*
- D21-P-1-33** (2619) Creep Evaluation At 500 And 600°C Of Ti-6Al-4V Alloy With Laser Treatment  
*D.A. Reis (ITA, São Jose Dos Campos - Sp, Brazil), A.G. Reis, C. Moura Neto, J. Onôro, M.J. Barboza, F. Piorino Neto*
- D21-P-1-34** (2303) Study of the influence of cryogenic treatment in AISI H13 steels  
*S. Dos Santos Vales (Universidade de São Paulo, São Carlos, Brazil), L. Campos F. Canale, H. Pinto*
- D21-P-1-35** (2647) Evaluation of creep behavior of superalloy Inconel 718 after double aging  
*K.C. Candioto (USP, Lorena, Brazil), F. Caliari, D.A. Reis, A.A. Couto, C. Moura-Neto, C.A. Nunes*
- D21-P-1-36** (1126) Application of imaging-Raman spectroscopy for the analysis of thin tribological layers on hot-dip galvanized steel sheets  
*C. Müller (ThyssenKrupp Steel Europe AG, Dortmund, Germany), K.-D. Flechtner, G. Grundmeier*
- D21-P-1-37** (0565) Evaluation of sliding behavior of simple structure for oblique collision  
*T. Watanabe (meijo university, Nagoyashi, Japan), K. Murase, N. Nishimura, K. Tsutsui*
- D21-P-1-38** (2455) Permissible Strain Limit Determined In Low-Cycle Fatigue Test As A Fatigue Life Indicator  
*M. Maj (AGH University of Science and Technology, Kraków, Poland)*
- D21-P-1-39** (0911) Effect of the pH on the consolidation of sand with alkali silicate solutions  
*T.M. Tognonvi (GEMH-ENSCI, Limoges, France), J. Soro, S. Rossignol*
- D21-P-1-40** (2081) The quantification of thermo-diffusion-chemo-mechanical parameters of polymers submitted to a fluid sorption by dynamic pendulum  
*S.A. Boyer (PPRIME-P' INSTITUTE, Futuroscope Chasseneuil, France), A. Riviere, S. Castagnet, J.-P. Grollier, J.-C. Granddier*
- D21-P-1-41** (1979) Experimental and numerical study of drilling on mechanical behaviour  
*M. Benachour (University of Tlemcen, Tlemcen, Algeria), N. Benachour*
- D21-P-1-42** (2954) Etude Numerique De La Concentration De Contrainte Dans Une Eprouvette De Traction Avec Double Entailles En Acier E36  
*A. Hachim (faculté des sciences ain chock, Casablanca, Morocco), M. El Ghorba, A. Akef, M. Chergui*
- D21-P-1-43** (3039) Image Processing Inspection Of Defective Porcelain Tiles  
*S. Kurama (Anadolu University, Eskisehir, Turkey), E. Eren, S. Gorgulu*
- D21-P-1-44** (3097) Measuring Creep Parameters Using Nanoindentation and Finite Element Modelling  
*A. Bradbury (Cambridge University, Cambridge, United Kingdom), J. Dean, B. Clyne*
- D21-P-1-45** (3080) A new look at nucleating agents in polymer crystallization through an original mechanical testing under high pressure and thermal annealing  
*S.A. Boyer (PPRIME-P' INSTITUTE, Futuroscope Chasseneuil, France), K. Zapala, J.-M. Haudin, E. Piorkowska*
- D22**
- D22-P-1-01** (1490) In-situ tensile testing and residual stress characterization of NiAl bond coats used on nickel based superalloys  
*M. Krottenthaler (University Erlangen-Nuremberg, Erlangen, Germany), J. Schaufler, F. Ahmed, K. Durst, E. Affeldt, M. Göken*
- D22-P-1-02** (0897) Dynamic effects on interphase boundary of the alloy's two-dimensional model  
*N. Medvedev (The Altay state Academy of Education, Biysk, Russian Federation), M. Starostenkov, P. Zacharov*
- D22-P-1-03** (0188) Use of nano-indentation for the characterization of the effect the mechanical properties of ion irradiated Eurofer'97 steel  
*P. Fernadez (CIEMAT, Madrid, Spain), A.J. López, D. Jimenez, J. Rams, M. Roldán*
- D22-P-1-04** (0961) Mechanical properties evaluation using small punch test and micro-tensile test samples  
*P. Konopik (COMTES FHT Inc., Dobruany, Czech Republic), J. Dzugan*
- D22-P-1-05** (2968) Probing nanomechanical structure-property relationships of self-assembled soft matter fibers by AFM bending experiments  
*D. Kluge (University of Bayreuth, Bayreuth, Germany), A. Fery*
- D22-P-1-07** (0301) In situ study of structure evolution of smectite clay films under tensile tests with optical microscopy  
*M. Zabat (UMBB university, Boumerdes, Algeria), H. Van Damme*
- D22-P-1-08** (0308) Residual Stresses in Sputtered ZnO Films on (100) Si Substrates by XRD and Synchrotron radiation  
*E. Le Bourhis (CNRS - Université de Poitiers – ENSMA, Futuroscope Chasseneuil, France), C. Krauss, P.-O. Renault, G. Geandier, N. Brun, A. Benedetto, S. Grachev, E. Barthel*

## Poster Session I - On display Monday September 12th

Topic Area D : Characterization and Modelling

- D22-P-1-09** (2041) Numerical modeling of open-cell aluminum foam structures for energy absorption aims  
*T. Niezgoda (Military University of Technology, Warsaw, Poland), D. Miedzinska*
- D22-P-1-10** (2202) Nanocrystalline Ni-18%Fe Alloy Thermally Activated Plasticity In The Temperature Range Of 4.2-350 K  
*E. Tabachnikova (B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, Kharkov, Ukraine), A. Podolskiy, S. Smirnov, V. Bengus, I. Psaruk, P. Liaw*
- D22-P-1-11** (1659) Elevated temperature nanomechanical testing performed in environmental/vacuum chamber  
*K. Rzepiejewska-Malyska (Empa, Thun, Switzerland), R. Consiglio, D. Ciani, B. Bellaton*
- D22-P-1-12** (0456) 2-Dimensional and 3-Dimensional Nanostructures Created by Self-Organization under Constrained Plastic Deformation  
*Y. Gordienko (G.V.Kurdyumov Institute for Metal Physics, Kiev, Ukraine), O. Baskova, O. Gatsenko, O. Lodygensky, G. Fedak, E. Zasimchuk, R. Gontareva*
- D22-P-1-13** (0554) Study of the mechanical properties of two systems : GPTMS/Colloidal silica and GPTMS/TEOS  
*P. Etienne (Université Montpellier 2, Montpellier, France), S. Yaacoub, R. Courson, S. Calas, J. Jabbour, M. Abdallah, A. Khoury*
- D22-P-1-14** (2956) The interpretation of spherical indentation through multiscale material modeling: from polycrystalline to single-crystal micro and nano-indentations  
*J. Alcalá (Universitat Politècnica de Catalunya, Barcelona, Spain), D. Esque-De Los Ojos, R. Dalmau, O. Jan*
- D22-P-1-15** (0572) Cyclic Plasticity in Copper Micro Bending Beams studied by in-situ SEM  
*W. Grosinger (University of Leoben, Leoben, Austria), D. Kiener, Z. Zhang, C. Motz, R. Pippan*
- D22-P-1-16** (0681) Crack propagation at BCB-Si patterned interface: mechanical characterization and modeling.  
*C. Cuminatto (SIMaP, St Martin D Heres, France), G. Schelcher, G. Parry, F. Parrain, M. Braccini*
- D22-P-1-17** (2750) Evaluation Of The Aging To Inconel 718 In Creep Test  
*A.C. Hirschmann (ITA, Sao Jose Dos Campos, Brazil), R. Felix, C. Moura Neto, M. Barboza, D. Reis, E. Carvalho*
- D22-P-1-18** (0710) Tensile strength of ideal nano-fibre reinforced composites  
*M. Cerny (Brno University of Technology, Brno, Czech Republic), J. Pokluda*
- D22-P-1-19** (0714) Fracture toughness of SPD deformed rail steels  
*C. Kammerhofer (ÖAW, Leoben, Austria), A. Hohenwarter, R. Pippan*
- D22-P-1-20** (2634) AlPO<sub>4</sub>-54: the H<sub>2</sub>O Influence in the Pressure-Induced Amorphization  
*F. Alabarse (Institut Charles Gerhardt Montpellier, Montpellier, France), J. Haines, O. Cambon, C. Levelut, D. Bourgogne, A. Haidoux*
- D22-P-1-21** (2480) High throughput lab-on-chip for testing the mechanical properties of thin films  
*S. Ryelandt (Université catholique de Louvain, Louvain-La-Neuve, Belgium), P. Carbonnelle, M. Coulombier, M.-S. Colla, S. Houry, G. Zeb, A. Zulfiqar, U. Bhaskar, J.-P. Raskin, T. Pardoën*
- D22-P-1-22** (2422) Nanocrystalline Pd-10%Au Alloy Low Temperature Peculiarities Of Mechanical Properties  
*E. Tabachnikova (B.Verkin Institute for Low Temperature Physics and Engineering of the National Academy of Sciences of Ukraine, Kharkov, Ukraine), I. Psaruk, A. Podolskiy, S. Smirnov, V. Bengus, Y. Ivanisenko*
- D22-P-1-23** (2446) Indentation response of Al<sub>2</sub>O<sub>3</sub>/ZnO mono- and multilayers deposited by atomic layer deposition  
*R. Koodakal (EMPA, Thun, Switzerland), M. Bechelany, D. Frey, S. Schmitt, J. Whitby, F. Oestlund, J. Michler, I. Utke*
- D22-P-1-24** (1657) Analysis of the attenuation of elastomers with micro and nanoparticles using ultrasound technique  
*J. Berasategui (Mondragon Unibertsitatea, Faculty of Engineering, Arrasate-Mondragón, Spain), T.E. Gómez Álvarez-Arenas, M.M. Bou-Ali, M.J. Elejabarrieta*
- D22-P-1-25** (1281) Multi-scale bridging model of nanocomposites fracture toughness  
*M. Perelmuter (Institute for Problems in Mechanics, Moscow, Russian Federation)*
- D22-P-1-26** (1015) Viscoelastic indentation contact tests using instrumented indentation microscope  
*N. Hakiri (Toyohashi University of Technology, Toyohashi, Japan), G. Kawamura, H. Muto, A. Matsuda, M. Sakai*
- D22-P-1-27** (1067) Thermo-Mechanical Properties Of  $\mu$ m-Sized Connections In A Insb Based Ir Detector  
*A. Le Priol (Institut P<sup>2</sup>, Futuroscope Chasseneuil C, France), P.-O. Renault, E. Le Bourhis, D. Eyidi, P. Muller, H. Sik*
- D22-P-1-28** (2505) Plasticity size effects in different geometries  
*D.J. Dunstan (Queen Mary University of London, London, United Kingdom), A.J. Bushby, N. Schmitt, O. Kraft*
- D22-P-1-29** (1346) Characterisation of interfacial residual stresses in the substrate of cold worked and plasma electrolytically oxidised (PEO) aluminium  
*D. Asquith (Sheffield Hallam University, Sheffield, United Kingdom), A. Yerokhin, A. Evans, N. James, A. Matthews*
- D22-P-1-30** (2443) Study of ceramic nanoparticles behavior by in situ nanoindentation in TEM  
*E. Calvié (MATEIS INSA-Lyon, Villeurbanne, France), L. Joly-Pottuz, A. Malchère, J. Chevalier, Y. Jorand, V. Garnier, C. Esnouf, K. Masenelli-Varlot*
- D22-P-1-31** (1306) Characterisation of Novel Ceramic Coatings for Steels derived from Polysilazane Precursors with Glass Filler Particles  
*A. Schuetz (Metallische Werkstoffe / University of Bayreuth, Bayreuth, Germany), M. Guenther, G. Motz, U. Glatzel*
- D22-P-1-32** (2449) Processing by CGP and characterization of refined structure in pure Silver  
*A. Zambon (University of Padova, Padova, Italy), E. Della Rovere, P. Ferro, A. Tiziani*
- D22-P-1-34** (1640) Determination of mechanical properties of a Duplex stainless steel using nanoindentation tests performed with two different sharp indenters.  
*J. Breuils (INSA Strasbourg, Strasbourg, France), H. Pelletier, J. Krier, V. Vignal*

## Poster Session I - On display Monday September 12th

Topic Area D : Characterization and Modelling

- D22-P-1-35** Alumina-Mullite Refractories obtained by Recycling of Ceramic Wastes: Thermomechanical Behaviour  
(0737) *F. Mazzanti (ENEA, Faenza (Ra), Italy), A. Brentari, E. Burresti, C. Mingazzini, M. Villa, A. Ricci, S. Martelli, D. Olevano*
- D22-P-1-36** Mechanical characterization of a SMATed 316L stainless steel: use of cyclic nanoindentation  
(3030) *L. Waltz (LMGC, Montpellier, France), P. Kanoute, D. Reirant*
- D31** **Ab-initio based modelling, designing new materials with electronic structure calculations**
- D31-P-1-01** Interaction of W and Mo with vacancy defects in bcc Fe studied by ab initio techniques  
(0311) *D. Terentyev (SCK-CEN, Mol, Belgium), A. Bakaev, G. Bonny, D. Van Neck, V. Van Speybroeck*
- D31-P-1-03** Ab initio study of the shear properties of aluminum with different methods  
(0176) *X. Pang (Interdisciplinary Centre for Advanced Materials Simulation, Bochum, Germany), A. Naveed, R. Janisch, A. Hartmaier*
- D31-P-1-04** Ab-initio Theoretical Study of Photoswitchable Self-Assembled Monolayers (SAMs) on Gold Surface  
(2552) *S. Osella (University of Mons, Mons, Belgium), C. Van Dyck, D. Cornil, D. Beljonne, J. Cornil*
- D31-P-1-05** Strength of covalent crystals under multiaxial loading  
(1132) *P. Rehak (Brno University of Technology/Faculty of Mechanical Engineering, Brno, Czech Republic), M. Cerny, J. Pokluda*
- D31-P-1-06** First-principal calculations of the bulk properties of ductile rare earth intermetallic compounds  
(0819) *A. Sekkal (Laboratoire d'Etude et Prédiction de Matériaux, Unité de Recherche Matériaux et Energies Renouvelables, Tlemcen, Algeria), A. Benzair*
- D31-P-1-07** Solubility Products in Steels from First-Principles Calculations  
(0644) *T. Klymko (Materials innovation institute (M2i) / Delft University of Technology, Delft, Netherlands), C.K. Ande, M. Sluiter*
- D31-P-1-08** Effect of N content on structure and optical and electrical properties of SiBCN materials  
(0247) *J. Houska (University of West Bohemia, Plzen, Czech Republic), V. Petrman, S. Kos, P. Calta, J. Vlcek*
- D31-P-1-09** Elasticity and Electronic Structure of Binary and Ternary Transition Metal Aluminium Nitrides  
(0560) *D. Holec (University of Leoben, Leoben, Austria), P. Wagner, P. Mayrhofer*
- D31-P-1-10** EPR parameters of the dangling bond defect in crystalline and amorphous silicon: A DFT-study  
(0080) *G. Pfanner (Max-Planck Institute for Iron Research, Duesseldorf, Germany), C. Freysoldt, J. Neugebauer*
- D31-P-1-11** Effects of sulfur and nitrogen impurities on the properties of the solid oxide fuel cell anode materials  
(2360) *O. Malyi (Nanyang Technological University, Singapore, Singapore), Z. Chen, P. Wu*
- D31-P-1-12** Transferability of numerical atomic orbitals in first-principles modelling of silicon nanowires  
(2385) *D. Sharma (Tyndall National Institute, Cork, Ireland), G. Fagas*
- D31-P-1-13** Ti alloys under pressure from first principles.  
(1217) *B. Tegner (The University of Edinburgh, Edinburgh, United Kingdom), G. Ackland*
- D31-P-1-14** Optoelectronic properties of Al:ZnO: critical dosage for an optimal transparent conductive oxide  
(2669) *A. Catellani (CNR-IMEM, Parma, Italy), M. Bazzani, A. Neroni, A. Calzolari*
- D31-P-1-15** Ab initio molecular dynamic study of the structural stabilities and site preference of transition metal impurities in D03-Fe3Al: The effect of temperature  
(0995) *S. Chentouf (LEM3, CNRS UMR 7239, Metz, France), J.-M. Raulot, H. Aourag, T. Grosdidier*
- D31-P-1-16** Ab initio calculation of the optical properties of gold alloys  
(1639) *D. Kecik (Paul Scherrer Institut, Villigen Psi, Switzerland), H. Van Swygenhoven, G.-M. Rignanese*
- D31-P-1-17** Theoretical Studies Of Glycidyl Benzoate  
(1877) *K. Allaberdiev (1. Ukraine State Scientific Research Institute for Plastics, 2. Company "Water of Donbass", Donetsk, Ukraine)*
- D31-P-1-18** Interaction of hydrogen with (001) and (110) surfaces and sub-surfaces of FeAl alloys: Ab initio study  
(2335) *A. Kellou (University of USTHB, Algiers, Algeria), M. Gallouze, T. Grosdidier, M. Drir*

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Topic Area D : Characterization and Modelling

- D31-P-1-19** (0129) Understanding cationic substitutions in hydroxyapatite phases: a combined experimental-computational approach  
*D. Laurencin (Institut Charles Gerhardt de Montpellier, Montpellier, France), N. Almora-Barrios, N. De Leeuw, C. Gervais, C. Bonhomme, A. Wong, F. Fayon, B. Newport, J. Knowles, M. Smith*
- D31-P-1-20** (3033) DFT and Phonon Calculations to Understand the Hydrogenation Products of Cu-Li-Mg  
*M. Braga (FEUP-LNEG-CEMUP, Porto, Portugal), M. Sá, J. Ferreira*
- D31-P-1-21** (3096) Role of energy level alignment in solar cells sensitized with a metal-free organic dye: A combined experimental and theoretical approach  
*C.I. Oprea (Ovidius University of Constanta, Constanta, Romania), A. Dumbrava, I. Enache, J. Lungu, A. Georgescu, F. Moscalu, C. Oprea, M. Girtu*
- D32**  
**Modelling of Materials Properties at the nano and microscales**
- D32-P-1-01** (0034) Thermodynamic description of the Ga\_Ce binary system  
*M. Idbenali (IBNO ZOHR UNIVERSITY, Agadir, Morocco), C. Servant*
- D32-P-1-02** (0260) Cluster Nature of Single-Wall Carbon Nanocones and Nanohorns  
*F. Torrens (Universitat de Valencia, Valencia, Spain), G. Castellano*
- D32-P-1-03** (0379) Spatial Arrangements Of Fragmented Phases In Nanostructured Alloys And Tm Metal Single Clusters. Md Simulation  
*V. Polukhin (Institute of Metallurgy, Yekaterinburg, Russian Federation), R. Belyakova, L. Rigmant*
- D32-P-1-04** (0463) Cellular automata modeling of Si nanocrystals formation for flash memory element  
*O. Orlov (Mikron JSC, Moscow, France), I. Matyushkin, G. Krasnikov*
- D32-P-1-05** (0476) Atomic mechanism of diffusion over twist grain boundaries in FCC metals  
*G. Poletaev (Altai State Technical University, Barnaul, Russian Federation), A. Martynov, M. Starostenkov, N. Kulabuhova*
- D32-P-1-06** (0499) Modeling mechanical properties of cellulose nanofibrils  
*M. Bergenstrahle (KTH, Stockholm, Sweden)*
- D32-P-1-07** (0689) Computing linear properties of random materials with finite element algorithms: performance of parallel multi-core and GPGPU-based applications  
*G. Scocchi (iCIMSISUPSI, Manno, Switzerland), T. Leidi, L. Grossi, S. Pusterla, C. D'Angelo, A. Ortona*
- D32-P-1-08** (0877) Interstitial clusters in Zr: a comparison for two potential models  
*N. De Diego (Universidad Complutense de Madrid, Madrid, Spain), A. Serra, D.J. Bacon, Y.N. Osetsky*
- D32-P-1-09** (0942) Micromechanics of Non-commutative Fatigue Damage Evolution  
*E. Rejovitzky (Technion IIT, Haifa, Israel), E. Altus*
- D32-P-1-10** (1009) Molecular dynamics simulation of AgI - AgBr binary system in carbon nanotubes  
*I. Gotlib (St.Petersburg State University, St.Petersburg, Russian Federation), A. Ivanov-Schitz, I. Murin, A. Petrov, R. Zakalyukin*
- D32-P-1-11** (1156) Electrical Properties of 2-D Carbon Nanotubes Films: Characterization and Modeling  
*G. Sassine (Institut d'Electronique du Sud, Montpellier, France), F. Martinez, F. Pascal, A. Hoffmann*
- D32-P-1-12** (1267) Molecular dynamics simulation of metal nanocluster spraying processes  
*A. Utkin (Institute of Theoretical and Applied Mechanics SBRAS, Novosibirsk, Russian Federation)*
- D32-P-1-13** (1282) Termscale Effects And Stability Of Cvd G/Tme Heterostructures And 2D-Spacers Of Tme Clusters On G Substrates. Md Simulation  
*V. Polukhin (Institute of Metallurgy, Yekaterinburg, Russian Federation), E. Kurbanova, T. Grigor'Eva, L. Rigmant*
- D32-P-1-14** (1396) Solubility of gas mixtures in polyethylene at high pressure by molecular simulation  
*F. Sarrasin (IFPEN, Rueil-Malmaison, France), M.-H. Klopffer, V. Lachet, C. Taravel-Condât, E. Espuche*
- D32-P-1-15** (1433) Simulations of Normal and Abnormal Grain Growth using Two-dimensional Stochastic Cellular Automata  
*Q. Zhang (University of Sheffield, Sheffield, United Kingdom), X. Xu, S.P. Banks, M. Mahfouf*
- D32-P-1-16** (1645) Computer simulations of the condensation of Cu and Au nanoparticles from the gas phase  
*M. Starostenkov (Altai State Technical University, Barnaul, Russian Federation), V. Myasnichenko*
- D32-P-1-17** (1703) Modelling Deformation Behavior of Glassy Polymers using Molecular Dynamics  
*D.K. Mahajan (ICAMS, Bochum, Germany), S. Brinckmann, A. Hartmaier*
- D32-P-1-18** (1875) Molecular Dynamics simulation of dislocation motion in Fe-Ni-Cr alloys  
*J.-B. Baudouin (EDF, Moret Sur Loing, France), G. Monnet, C. Domain, M. Perez*

## Poster Session I - On display Monday September 12th

Topic Area D : Characterization and Modelling

- D32-P-1-19** (1918) Interaction of carbon atoms with self-interstitial atom clusters and dislocations in  $\alpha$ -Fe  
*N. Anento (Universitat Politècnica de Catalunya, Barcelona, Spain), H. Khater, A. Serra*
- D32-P-1-20** (2151) The research of the influence of longitudinal deformation wave on crowdions  
*M. Starostenkov (Altai State Technical University, Barnaul, Russian Federation), A. Markidonov, N. Medvedev*
- D32-P-1-21** (2383) Magnetic Properties Of Ordered Co-Nanodot Arrays  
*K. Nefedev (Far Eastern National University, Vladivostok, Russian Federation), V. Belokon, O. Tkach*
- D32-P-1-22** (2447) Hybrid Method to Calculate the Magnetic Field in Bird Cage Coil With and without Metallic Implants for an MRI System  
*N. Benyahia (university of biskra, algeria, Biskra, Algeria), M.E. Latreche*
- D32-P-1-23** (2689) Al and U interstitial migration in Al/U interface  
*V.P. Ramunni (CONICET, Buenos Aires, Argentine Republic), M.I. Pascuet, J.R. Fernández*
- D32-P-1-24** (2721) Experimental and numerical study of ceramic/metal FGMs: effect of architectural phases on thermal conductivity  
*M. Outirite (LMCPA, Maubeuge, France), N. Ferguen, C. Pelegrís, C. Cogné, O. Rigo, S. Hocquet, C. Courtois, A. Leriche*
- D32-P-1-25** (2779) A 3D sub-granular solid state model - Validation step: comparison with a 2D model  
*J. Lechelle (CEA, Saint Paul Lez Durance, France), R. Boyer, K. Saikouk*
- D32-P-1-26** (2991) Path-Integral Evaluation of Hydrogen Diffusion at Grain Boundaries in Iron  
*H. Kimizuka (Osaka University, Osaka, Japan), S. Ogata*
- D32-P-1-27** (2878) Models of diamond and graphene based on moment and multybody interactions  
*I. Berinskiy (St. Petersburg State Polytechnical University, St. Petersburg, Russian Federation), A. Krivtsov*
- D33 Multiscale Modelling of Materials**
- D33-P-1-01** (0206) Mechanical strength of silicon-based joints using elementary and structural experiments  
*G. Roux (CEA de Grenoble, Grenoble, France), N. Le Minh, O. Gilia, V. Chaumat*
- D33-P-1-02** (0316) Modelling of radiation damage recovery in concentrated Fe-Cr alloys: a multi-scale modeling approach  
*D. Terentyev (SCK-CEN, Mol, Belgium), N. Castin, C. Ortiz*
- D33-P-1-04** (1428) Silica-modified titania photocatalysts: a multi-scale computational investigation  
*N. Seriani (The Abdus Salam ICTP, Trieste, Italy)*
- D33-P-1-05** (1690) Complex Composite Engineering Architectures for Extreme Environments  
*R. Vaidya (Los Alamos National Laboratory, Los Alamos, USA), D. Kornreich, C. Ammerman*
- D33-P-1-07** (1293) Plastic flow modelling at high temperature through a modified one-parameter model of strain hardening  
*G. Angella (Consiglio Nazionale delle Ricerche, Milano, Italy)*
- D33-P-1-08** (0544) Investigation of the effect of crystallographic texture on AMR  
*A. Bartok (Laboratoire de génie électrique de Paris, Gif Sur Yvette, France), L. Daniel, T. Baudin, A. Razek*
- D33-P-1-09** (0809) Optimization of sheet metal forming process with finite element simulation and first-order shear deformation theory  
*J. Hassani (Islamic Azad University, Islamshahr branch, Tehran, Iran), M. Dashti, N. Khademian, M. Salehi*
- D33-P-1-10** (2309) Multiscale modeling of thermochemical and thermophysical properties of molten slags  
*P. Masset (TU Bergakademie Freiberg, Freiberg, Germany), A. Bronsch, A. Jacob, C. Schmetterer, L. Zhang*
- D33-P-1-11** (2864) Molecular Dynamics Simulations of Bimetallic Nanostructured Materials.  
*H. Barron (University of Texas at San Antonio, San Antonio, Texas, USA), D. Sandhu, M. Mariscal, M. Jose-Yacaman*
- D33-P-1-12** (2984) Technology Development for Advanced Calculation of Plate Rolling  
*S. Jang (POSCO, Dusseldorf, Korea - south)*
- D33-P-1-13** (0891) High Contrast Tomography of Soft Materials, Membranes and Porous Composites beyond submicron resolution  
*S.H. Lau (Xradia Inc, Pleasanton, USA), J. Mccutcheon, L. Hunter, T. Fong, A. Gu, J. Gelb, W. Yun*
- D33-P-1-14** (0892) Bridging the Macroscopic and Microscopic Lengthscale Gap in Electron Tomography for Hard to Soft Materials  
*L. S. H. (Xradia Inc, Pleasanton, USA), J. Timonen, J. Mccutcheon, L. Hunter, T. Fong, A. Gu, J. Gelb, M. Feser, M. Myllys*

## Poster Session I - On display Monday September 12th

Topic Area E : Energy and Related Applications

- E11 Materials for Nuclear applications**
- E11-P-1-01** (1453) The incorporation of iodine in phosphate based glasses  
*T. Lemesle (CEA Marcoule, Bagnols Sur Ceze , France), F. Mear, L. Campayo, A. Ledieu, L. Montagne*
- E11-P-1-02** (0928) Microstructural Examination And High Temperature Creep Properties Of Grade 92 Welds  
*C. Kalck (Commissariat à l'Energie Atomique, Gif-Sur-Yvette , France), B. Fournier, F. Barcelo, F. Dalle, .L. Forest, I. Tounié, A.-F. Gourgues-Lorenzon*
- E11-P-1-03** (0298) Densification of ceramic matrix composites by film boiling process  
*A. Serre (CEA, Monts, France), F. Audubert, S. Bonnamy, J. Blein , P. David*
- E11-P-1-04** (0196) Impact of ultrasounds on glass leaching kinetics  
*T. Chave (CEA, Bagnols Sur Cèze, France), G. Garaix, D. Rebiscoul, S. Gin*
- E11-P-1-05** (0297) Thermophysical properties of liquid PbAu eutectic alloy  
*Y. Plevachuk (Ivan Franko National University, Lviv, Ukraine), V. Sklyarchuk, A. Yakymovych, G. Gerbeth, S. Eckert*
- E11-P-1-06** (2982) A combined computer simulation and NMR structural study of simplified nuclear glasses  
*O. Villain (CEA, Gif-Sur-Yvette, France), T. Charpentier, F. Angeli, S. Schuller, S. Ispas*
- E11-P-1-07** (0452) Kinetic oxidation of Uranium Dicarbide under isothermal controlled oxidizing atmosphere. Development of a stabilization process for the future UCx targets for the new heavy-ions accelerator SPIRAL2.  
*M. Marchand (CEA CADARACHE, Saint Paul Lez Durance, France), O. Fiquet, M. Brothier*
- E11-P-1-08** (0487) Experimental Study Of The Er-Zr-H Ternary System At 350°C  
*A. Mascaro (CEA Saclay, Gif Sur Yvette, France), C. Toffolon-Masclat, J.-M. Joubert, C. Raepsaet*
- E11-P-1-09** (0497) Structural study and dissolution tests of (MIV,LnIII)O<sub>2</sub> x mixed oxides (MIV = Ce,Th)  
*D. Horlait (Institut de Chimie Séparative de Marcoule, Bagnols-Sur-Ceze, France), N. Clavier, N. Dacheux, S. Szenknect, J. Ravaux, R. Podor*
- E11-P-1-10** (1900) Microstructural evolution of a dissimilar joint between a low-alloy steel and a nickel-based alloy : numerical and experimental results  
*F. Mas (Laboratoire SIMAP, Saint Martin D'Hères, France)*
- E11-P-1-11** (1930) Thin sections of uranium alloys powder particles for transmission electron microscopy characterizations  
*G. Champion (CEA/université de Rennes 1, Rennes, France), V. Demange, M. Pasturel, P. Castany, V. Dorcet, F. Gouttefangeas, O. Tougait, X. Ittis, F. Charollais, M.-C. Anselmet*
- E11-P-1-12** (1961) Alumina Scale Formation on FeCrAl-alloys exposed to 400-600°C in oxygen containing liquid lead  
*A. Jianu (Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen, Germany), A. Weisenburger, A. Heinzl, R. Fetzer, M. Delgiacco, W. An, G. Mueller, I. Voiculescu, V. Geanta*
- E11-P-1-13** (2799) Precipitation in irradiated W alloys  
*E.A. Marquis (University of Michigan, Ann Arbor, USA), C. English, S. Humphry-Baker*
- E11-P-1-14** (0539) Influence of microstructural parameters on the dissolution of (CeIV,NdIII)O<sub>2</sub>, (ThIV,CeIV)O<sub>2</sub> and (ThIV,UIV)O<sub>2</sub> mixed oxides.  
*L. Claparede (ICSM, Bagnols-Sur-Cèze , France), N. Clavier, N. Dacheux, S. Szenknect, P. Moisy*
- E11-P-1-15** (0163) Modeling of the thermal decomposition of some lanthanide hydrazinium oxalates  
*L. De Almeida (CEA, Bagnols-Sur-Cèze , France), S. Grandjean, J. Dauby, M. Rivenet, F. Abraham, O. Devisme, F. Patisson*
- E11-P-1-16** (0582) FeCrAl surface alloyed layers exposed to liquid lead  
*R. Fetzer (Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany), A. Weisenburger, G. Müller*
- E11-P-1-17** (1931) Microstructure evolution under neutron irradiation in Conventional and Reduced Activation Fe9%Cr Martensitic Steels  
*J. Henry (CEA, Gif Sur Yvette, France), M.-H. Mathon, Y. De Carlan*
- E11-P-1-18** (2702) Accelerated Creep Test of Repair Welds on P22 Grade Steels Used in Nuclear Power Generation  
*J. Csizmadia (College of Dunaújváros, Dunaújváros, Hungary), D. Jandova, J. Kasl, S.T. Mandzeij*
- E11-P-1-19** (3099) Laser heating and melting experiments of stoichiometric NpO<sub>2</sub>  
*B. Robert (Institute for Transuranium Elements , Karlsruhe, Germany), M. Dario, D.B. Frank*
- E11-P-1-20** (2670) Investigating the mechanisms of formation of nanoscale oxide particles in oxide-dispersion-strengthened steels  
*C. Williams (Oxford University, Oxford, United Kingdom), N. Baluc, P. Unifantowicz, Z. Oksiuta, G. Smith, E. Marquis*
- E11-P-1-21** (1052) Comparison of zirconolite and monazite in terms of structural changes induced by alpha-decays  
*X. Deschanel (ICSM/CEA, Bagnols Sur Cèze, France), V. Magnien, S. Peugeot, A.-M. Seydoux-Guillaume, R. Caraballo, C. Jegou, B. Glorieux*
- E11-P-1-22** (1070) Radiation induced and enhanced precipitation in neutron irradiated Fe-Cr model alloys of low purity  
*C. Pareige (Université de Rouen, Saint Etienne Du Rouvray, France), V. Kuksenko, P. Pareige*
- E11-P-1-23** (1320) Effect of deuterium plasma irradiation on the local mechanical properties of single crystal tungsten  
*W. Yao (Max-Planck-Institute of Plasma Physics , Garching, Germany), J.-H. You*
- E11-P-1-24** (2148) Thermo mechanical properties of advanced SiC fiber under irradiation  
*A. Jankowiak (CEA, Gif Sur Yvette, France), J.M. Costantini, C. Colin , L. Portier*
- E11-P-1-25** (1166) Fracture mechanics of steels in contact with liquid sodium: preliminary results  
*S. Hemery (CNRS, Chatenay-Malabry, France), T. Auger, J.-L. Courouau, F. Balbaud*



## Poster Session I - On display Monday September 12th

### Topic Area E : Energy and Related Applications

- E11-P-1-26** He implanted 4H-SiC: swelling and stacking fault formation (1208)  
*M.-F. Beaufort (Prime - Institute - UPR 3346, Futuroscope - , France), M. Texier, C. Tromas, A. Declémy, J.F. Barbot*
- E11-P-1-27** Effects of the chemical precursors on the physico-chemical properties of sintered uranium carbide (1959)  
*L. Guillaume (CEA, Bagnols-Sur-Cèze, France), X. Deschanel, S. Szenknect, C. Genre, O. Fiquet, M. Brothier*
- E11-P-1-28** Study distribution of Th atoms in plastic foil "state solidified" (2168)  
*E. Iliescu (National Institute of R&D for Physics and Nuclear Engineering "Horia Hulubei", Magurele, Romania)*
- E11-P-1-29** Zirconia and titania films as inert barriers regarding glass alteration (1406)  
*E. Gasnier (CEA Marcoule, Avignon, France), D. Rebiscoul, S. Gin*
- E11-P-1-30** Investigations of radiation damage effects on fusion structural and plasma facing materials. (2118)  
*A. Ryazanov (National Research Centre "Kurchatov Institute", Moscow, Russian Federation), V. Koidan, O. Chugunov, B. Khripunov, S. Latushkin, V. Petrov, E. Semenov, V. Unezhev*
- E11-P-1-31** Microstructure and texture evolution in a Ni-Cr-W alloy after cold rolling (1679)  
*I. Drouelle (Université Paris Sud 11, Orsay, France), W. Wang, T. Auger, T. Baudin*
- E11-P-1-32** On the corrosion mechanism of f.c.c Fe-Ni-Cr alloys in supercritical water (2848)  
*M. Payet (Conservatoire National des Arts et Métiers, Paris - , France), L. Marchetti, J.-P. Chevalier*
- E21 Materials for Photovoltaics**
- E21-P-1-01** CZTSe Nanoparticles for Solution-Processed Ptotovoltaics (0361)  
*A. Shavel (Universitat de Barcelona, Barcelona, Spain), A. Cabot*
- E21-P-1-02** Temperature dependence of conductivity in Cu<sub>2</sub>ZnSnS<sub>4</sub> bulk crystals (0329)  
*M. Guc (Academy of Sciences of Moldova, Chisinau, Moldova), K. Lisunov, A. Nateprov, S. Levcenko, V. Tezlevan, E. Arushanov*
- E21-P-1-03** The spectroscopic ellipsometry study of Cu<sub>2</sub>Zn(Ge,Si)Se<sub>4</sub> crystals (0231)  
*S. Levcenko ( Institute of Applied Physics, Academy of Sciences of Moldova, Chisinau, Moldova), M. Leon, R. Serna, A. Nateprov, G. Gurieva, J. Merino, E. Friedrich, E. Arushanov*
- E21-P-1-04** Characterisation of sustainable chalcogenides for photovoltaic applications (1207)  
*D. Colombara (University of Bath, Bath, United Kingdom), P. Laurence*
- E21-P-1-05** Binary CuxS and SnxSy semiconductors on Ag(111) by Electrochemical Atomic Layer Epitaxy (ECAL) (0323)  
*B. Ilaria (University of Florence, Sesto Fiorentino, Italy), F. Maria Luisa, L. Elisa, L. Alessandro, I. Massimo, D.B. Francesco, M. Giordano, P. Luca A., R. Maurizio, V. Francesco*
- E21-P-1-06** Photoluminescence study of FeIn<sub>2</sub>S<sub>4</sub> and MnIn<sub>2</sub>S<sub>4</sub> single crystals (0294)  
*M. Guc (Academy of Sciences of Moldova, Chisinau, Moldova), C. Merschjann, I. Bodnar, T. Tyborski, T. Schedel-Niedrig, M. Lux-Steiner, E. Arushanov*
- E21-P-1-07** Impurity distributions in Cu(In,Ga)Se<sub>2</sub> thin-film solar cells studied by Atom Probe Tomography (0491)  
*O. Cojocaru-Mirédin (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), P.-P. Choi, R. Würz, D. Abou-Ras, D. Raabe*
- E21-P-1-08** Large Area CuInSe<sub>2</sub> Formation Using Rocking Disc Electrodeposition of Metallic Precursors (1333)  
*C. Cummings (Univeristy of Bath, Bath, United Kingdom), F. Marken*
- E21-P-1-09** Magnetic properties investigations of CuGaS<sub>2</sub> – CuFeS<sub>2</sub>- d alloys (1528)  
*S. Schorr (Free University Berlin, Berlin, Germany), B. Korzun, . Lobanovski, . Zhaludkevich, . Zheludkevich, . Matuchin*
- E21-P-1-10** Preparation and Peculiarities of Crystallization of the CuGaS<sub>2</sub> Ternary Semiconducting Compound (1554)  
*S. Schorr (Free University Berlin, Berlin, Germany), B. Korzun, . Zhaludkevich, C. Stephan*
- E21-P-1-11** Investigation of interactions in the Ag-Ga-Se system and determination of formation conditions of AgGaSe<sub>2</sub> (1576)  
*S. Schorr (Free University Berlin, Berlin, Germany), B. Korzun, A. Fadzeyeva, Y. Tamm, S. Fiechter, M. Rusu, C. Merschjann, C. Stephan, T. Schedel-Niedrig, M. Lux-Steiner*
- E21-P-1-12** SYNTHESIS OF CuInSe<sub>2</sub> NANOSTRUCTURES BY MICROWAVE METHOD FOR LOW-COST SOLAR CELLS (2638)  
*F. Pulgarín (UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO, Temixco, Mexico), R. Valderrama, S. Pathiyamattom*
- E21-P-1-13** Characterisation of individual and array ordered Bi<sub>2</sub>S<sub>3</sub> nanowire FET (2719)  
*G. Kunakova (University of Latvia, Riga, Latvia), P. Birjukovs, J. Prikulis, J.D. Holmes, D. Erts*
- E21-P-1-14** Photoconductive Properties Of V-Vi Group Semiconductors Nanowire Arrays (2713)  
*P. Birjukovs (University of Latvia, Riga, Latvia), G. Kunakova, P. Prikulis, J.D. Holmes, D. Erts*
- E21-P-1-15** Growth evolution of intrinsic ZnO films deposited by rf-sputtering technique (0850)  
*J.R. Bortoleto (UNESP, Sorocaba, Brazil), E.P. Da Silva, E. Amorim, M. Chaves, E. Martins, S.F. Durrant, P.N. Lisboa-Filho*
- E21-P-1-16** The influence of Al doping on structural, microstructural, optical and electrical properties of ZnO thin films (2432)  
*D. Girbovan (Babes-Bolyai University, Cluj-Napoca, Romania), D. Marconi, A. Pop*
- E21-P-1-17** ZnO:Al thin films prepared at low temperatures as potential window layers for solar cells (1721)  
*E. López-Mena (Cinvestav-IPN, Querétaro, Mexico), S. Jiménez-Sandoval, O. Jiménez-Sandoval*

## Poster Session I - On display Monday September 12th

Topic Area E : Energy and Related Applications

- E21-P-1-18** (1628) Electrical and structural characterization of tin and zinc oxides used as transparent electrodes in solar cells  
*D. Bellet (LMGP, Grenoble, France), G. Rey, V. Consoni, A. Muthukumar, E. Puyoo, E. Appert-Botzung, B. Doisneau, H. Rousselet*
- E21-P-1-19** (2973) Transparent and conductive aluminum and fluorine-codoped ZnO thin films prepared by sol-gel  
*M.D. Olvera (CINVESTAV-IPN, Mexico, Mexico), T. Salvador, C. J.M., M. Arturo*
- E21-P-1-20** (2972) Physical properties of chemically sprayed aluminum-doped zinc oxide thin films. Effect of the milling time of the precursors  
*M.D. Olvera (CINVESTAV-IPN, Mexico, Mexico), A. Maldonado, R. Trinath*
- E21-P-1-21** (2138) Elaboration of Nanostructured ZnO Films by Wet Chemical Processes for Use in Dye-Sensitized Solar Cells  
*S. Fujihara (Keio University, Yokohama, Japan), M. Hosokawa, H. Utsunomiya, S. Ueno*
- E21-P-1-22** (1270) Synthesis of Titanium Oxide Nanomaterials at Near Ambient Conditions for Use in Dye Sensitized Solar cells.  
*M. Ainikalkannath Lazar (Monash University, Vic, Australia), W. Daoud*
- E21-P-1-23** (1947) Effect of Electrolyte pH on Characteristics of DC PEO Titania Coatings, for Dye Sensitized Solar Cell Applications  
*P.-J. Chu (University of Sheffield, Sheffield, United Kingdom), A. Yerokhin, H.-J. Chu, C.-H. Chen, J.-L. He, A. Matthews*
- E21-P-1-24** (1616) Solid-state Dye-sensitized Solar Cells Based on TiO<sub>2</sub> Nanocrystals Synthesized by Laser Pyrolysis.  
*P. Simon (CEA Saclay, Gif Sur Yvette, France), H. Melhem, Y. Leconte, C. Di Bin, B. Ratier, N. Herlin-Boime, J. Bouclé*
- E21-P-1-25** (1211) Importance of the colloidal state on the TiO<sub>2</sub>-based photocatalysis  
*V. Mendonça (Universidade Federal de São Carlos, São Carlos, Brazil), H. Mourão, C. Ribeiro, A. Malagutti*
- E21-P-1-26** (1965) Optical properties of CdS:O thin films with nanocrystals  
*K. Wakita (Chiba Institute of Technology, Narashino, Japan), A. Suzuki, Y. Shim, N. Mamedov, A. Bayramov, E. Huseynov, I. Hasanov*
- E21-P-1-27** (1047) Optical parameters of CdS:O window layers for solar cells  
*Y. Shim (Osaka Prefecture University, Sakai, Japan), K. Wakita, N. Mamedov, A. Bayramov, E. Huseynov, K. Khalilova, I. Hasanov*
- E21-P-1-28** (2534) Effect of H<sub>2</sub> Annealing on Structural, Optical and Electrical Properties of CBD CdS  
*H. Jaan (Tallinn University of Technology, Tallinn, Estonia), M. Natalia, V. Vello, L. Vanni, P. Tamara*
- E21-P-1-29** (1495) Sintering of silicon powders for photovoltaic applications  
*J.-M. Lebrun (SIMaP, Saint Martin D'Hères, France), J.-M. Missiaen, C. Pascal, F. Servant, G. Bonnefont, G. Fantozzi, J.-P. Garandet*
- E21-P-1-30** (2607) Luminescence of Transition Metal Dichalcogenide Single Crystals  
*L. Kulyuk (Academy of Sciences of Moldova, Chisinau, Moldova), A. Colev, C. Gherman, A. Nateprov*
- E21-P-1-31** (2916) Photosensitive thin-film In/p-SnS Schottky barriers for PV-applications  
*V. Gremenok (State Scientific and Production Association «Scientific-Practical Materials Research Centre of the National Academy of Sciences of Belarus», Minsk, Belarus), V. Ivanov, S. Bashkirov, V. Rud, Y. Rud, V. Lasenka, K. Bente*
- E21-P-1-32** (1649) Effect of H<sub>2</sub> Annealing on Structural, Optical and Electrical Properties of CBD CdS  
*M. Natalia (Tallinn University of Technology, Tallinn, Estonia), H. Jaan, V. Vello, L. Vanni*
- E21-P-1-33** (3053) Native point defects in Cu(In,Ga)Se<sub>2</sub> and the formation of the Cu(In,Ga)<sub>3</sub>Se<sub>5</sub> vacancy phase  
*H.-W. Schock (Helmholtz-Zentrum Berlin fuer Materialien und Energie, Berlin, Germany), C. Stephan, S. Schorr*
- E21-P-1-34** (3045) SER(R)S and SEF characterization of N-N'-dialkylquinacridones used as co-dopants in high performance organic light-emitting devices (OLEDs)  
*C. Domingo (Instituto de Estructura de la Materia, CSIC, Madrid, Spain), E. Del Puerto, S. Sanchez-Cortes, J.V. Garcia-Ramos*
- E21-P-1-35** (3104) Atomic-scale structure of Cu(In,Ga)Se<sub>2</sub> as a function of stoichiometry  
*C. Schnohr (Friedrich-Schiller-Universitaet Jena, Jena, Germany), H. Kämmer, T. Steinbach, M. Gnauck, C. Stephan, S. Schorr, C.A. Kaufmann, R. Caballero, T. Rissom, H.-W. Schock*
- E21-P-1-36** (3108) Phonon spectra of Cu<sub>2</sub>ZnGeS<sub>4</sub>  
*S. Schorr (Free University Berlin, Berlin, Germany), R. Bacewicz, W. Gebicki, C. Jastrzebski*

## Poster Session I - On display Monday September 12th

Topic Area E : Energy and Related Applications

- E22** **Materials for energy storage and conversion (fuel cells, hydrogen production, batteries, etc)**
- E22-P-1-01** (0090) Study on the influence of multiwalled carbon nanotubes addition on the corrosion behaviour of PPS-graphite composite bipolar plates  
*R. Antunes (Federal University of ABC (UFABC), Santo André, Brazil), M. Oliveira, G. Ett, V. Ett*
- E22-P-1-03** (0229) Evaluation of hydrogen generation test using redox reaction of iron oxide packed bed  
*S. Hayashi (Nagoya Institute of Technology, Nagoya, Japan)*
- E22-P-1-05** (0694) Sol-gel process to prepare an anode supported SOFC  
*E. Courtin (CEA DAM Le Ripault, Monts, France), P. Boy, N. Poirot, C. Laberty-Robert*
- E22-P-1-06** (0931) Cfrp Shield Against Debris By Oblique Collision  
*I. Shiota (Salesian Polytechnic, Tokyo, Japan), H. Kohri, K. Tanaka, M. Kato, A. Yumoto, S. Sasaki*
- E22-P-1-07** (0972) IT-SOFC electrolyte behavior subjected to the laser beam irradiation  
*I. Ana Maria (National Institute of Materials Physics, Magurele, Romania), M. Ionel, D. Liviu, M. Ion, N. Petru V., P.-P. Nicollette*
- E22-P-1-08** (1135) Hydrogen storage properties of transition metal-doped lithium alanate  
*J. Fu (Fraunhofer Institute for Manufacturing Technology and Advanced Materials, Dresden, Germany), L. Röntzsch, T. Schmidt, T. Weißgärber, B. Kieback*
- E22-P-1-09** (1193) Hydrogen desorption properties of MgH<sub>2</sub>-TiCr<sub>1.2</sub>Fe<sub>0.6</sub> Nanocomposite prepared by Vacuum Arc Re-melting (VAR)  
*A. Kafrou (IROST, Tehran, Iran), N. Mahmoudi, A. Simchi*
- E22-P-1-10** (1220) Preparation of Pt-based electrocatalysts by spontaneous deposition of Pt on Sn, Ni and SnNi nanoparticles supported on carbon for ethanol electro-oxidation  
*E. Spinace (IPEN-CNEN/SP, Sao Paulo - Sp, Brazil), V. Ribeiro, M. Linardi, A. Oliveira Neto*
- E22-P-1-11** (1259) Silicon dispersion in SiOC ceramic: High-capacity material for Li-Ion batteries  
*J. Kaspar (Technische Universität Darmstadt, Darmstadt, Germany), M. Graczyk-Zajac, R. Riedel*
- E22-P-1-12** (1296) Microscopic analysis of lithium intercalation in different electrode materials  
*F. Berkemeier (University of Münster, Münster, Germany), F. Wunde, T. Gallasch, M. Köhler, T. Stockhoff, G. Schmitz*
- E22-P-1-13** (1383) Fluoride Transfer Systems as Liquid or Gel Electrolytes in Novel Li-free Batteries  
*S. Büschel (Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany), M. Anji Reddy, M. Fichtner*
- E22-P-1-14** (1444) Sealing solutions for High Temperature Steam Electrolysis  
*A. Béziat (CEA, Bagnols Sur Cèze, France), L. Bruguière, H. Nonnet, H. Kedhim, M. Reytièr, M. Lefrançois*
- E22-P-1-15** (1545) Direct Growth of Ultra-long Platinum Nanolawns on a Semiconductor Photocatalyst  
*J.-M. Song (National Dong Hwa University, Hualien, Japan), Y.-L. Shen, S.-Y. Chen, I.-G. Chen*
- E22-P-1-16** (1771) Combined positron-annihilation and structural studies of hydrothermally grown zirconia  
*J.D. Fidelus (Institute of High Pressure Physics of the Polish Academy of Sciences, Warsaw, Poland), A. Karbowski, S. Mariuzzi, R.S. Brusa, W. Zhou, G.P. Karwasz*
- E22-P-1-17** (1923) Surface and bulk defects characterization in nanosize YSZ: evidence from EPR  
*A. Artemenko (ICMCB, Pessac, France), I. Bykov, L. Jastrabik, J.-M. Bassat, J.-C. Grenier*
- E22-P-1-18** (1942) Structural, Optical and Photocatalytic Properties of Pure ZnO and La-Doped ZnO Quantum Dots Synthesized by Simple Precipitation Route  
*C. Sakthi Veedu (Loyola College, Chennai, India)*
- E22-P-1-19** (2291) Rare earth effect on conductivity and stability properties of BAIN<sub>0.6</sub>Ti<sub>0.2</sub>LN<sub>0.2</sub>O<sub>2.6</sub> as potential Proton-Conducting Fuel Cell Electrolyte  
*A. Jarry (IMN, Nantes, France), E. Quarez, O. Joubert*
- E22-P-1-20** (2504) Computer modeling and experimental study of electrolytically produced graphane-like materials  
*A. Ilyin (university, Almaty, Kazakhstan), N. Guseinov, R. Nemkaeva*
- E22-P-1-21** (2585) A new light on dehydrogenation process of Metal-hydrogen system: Nano Hydrides as negative electrode for Li-ion batteries.  
*J.-P. Bonnet (Université de Picardie Jules Verne, Amiens, France), Y. Oumellal, W. Zaidi, J. Zhang, C. Zlotea, F. Cuevas, M. Latroche, J.-L. Bobet, M. Kirikova, L. Aymard*
- E22-P-1-22** (2618) TiSnSb a new efficient negative electrode for Li-ion batteries: performance and mechanism investigations by operando techniques  
*L. Monconduit (CNRS, Montpellier, France), M. Cyril, S. Moulay Tahar, F. Julien, B. Fraisse, B. Lestriez, J.C. Jumas*
- E22-P-1-23** (2626) Plasma-modified hydroxyl-exchange membranes for Solid Alkaline Membrane Fuel Cell  
*S. Roualdes (University of Montpellier, Montpellier, France), M. Reinholdt, J. Frugier, N. Follain*
- E22-P-1-24** (2654) Impedance spectroscopy analysis of the influence of the MPL in PEMFC  
*G. Dotelli (Politecnico di Milano, Milano, Italy), P. Gallo Stampino, S. Latorrata, D. Briivio*
- E22-P-1-25** (2716) Thin films of transition metal disulfide RuS<sub>2</sub> for the light induced oxygen evolution reaction from water  
*S. Fiechter (Helmholtz-Centre Berlin for Materials and Energy, Berlin, Germany)*
- E22-P-1-26** (2743) Direct Power Control Of Permanent-Magnet Generators Applied To Variable-Speed Wind-Energy Systems Connected To The Grid  
*H. Chennoufi (university of constantine, algeria, Constantin, Algeria), A. Khezzar, L. Louze, A. Nemmour*

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Topic Area E : Energy and Related Applications

- E22-P-1-27** Control Of A Permanent Magnet Synchronous Generator With Direct Torque Control Based On Neural Networks Dedicated To The Conversion Wind Energy  
(2745) *H. Chennoufi (university of constantine, algeria, Constantin, Algeria), A. Khezzar, L. Louze , A. Nemmour*
- E22-P-1-28** Nanostructure Evaluation Of Ysz And Gdc Thin Films Sintered By The Aqueous Sol-Gel Citrate-Precursor Method  
(2753) *S. Tamulevicius (Kaunas University of Technology, Kaunas, Lithuania), B. Abakeviciene, A. Zalga, A. Beganskiene, A. Kareiva*
- E22-P-1-31** Activated-phosphorus as new electrode material for Li-ion batteries  
(2608) *L. Monconduit (CNRS, Montpellier, France), C. Marino, F. Favier, B. Fraisse*
- E22-P-1-32** Synthesis and characterisation of superionic conductors based on the AgPO<sub>3</sub> glass network. Creating a synthetic route with practical applications.  
(2830) *N. Tsapatsaris (Helmholtz-Zentrum Berlin, Berlin, Germany), S. Qayyum, M. Russina*
- E22-P-1-33** Urchin-like ZnO thin films an example of 3D nanostructure  
(2842) *C. Levy-Clement (CNRS, Thiais, France), J. Elias, L. Philippe, J. Michler*
- E22-P-1-34** Experimental study of carbon composite extracted from Tore Supra  
(2918) *C. Martin (CNRS-Univ. de Provence, Marseille , France), R. Ruffe, C. Pardanaud, G. Giacommetti, P. Languille, B. Pegourie, P. Roubin*
- E22-P-1-35** Schottky-barrier regulated DC conduction in polycrystalline CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub>  
(2924) *C. Cheballah (CNRS, Toulouse , France), Z. Valdez-Nava, L. Laudebat, T. Lebey, P. Bidan, S. Guillemet-Fritsch*
- E22-P-1-36** Facile preparation of microporous polycarbosilane fibers as potential hydrogen storage materials  
(2930) *Z. Chu (National University of Defence Technology, Changsha, China), R. He, H. Cheng, Y. Si*
- E22-P-1-37** High temperature resisting materials. Experience on fabrication (forming, bending, welding) properties of welded joints and steels applications for boiler with supercritical parameters  
(2960) *J. Pasternak (RAFAKO S. A., Raciborz, Poland), J. Dobrzanski, A. Hernas*
- E22-P-1-38** Method of reliability and safety of the power equipment assessments in respect of properties evaluation of welded joints made from new generation creep-resisting steels  
(2961) *J. Pasternak (RAFAKO S. A., Raciborz, Poland), J. Dobrzanski , A. Hernas*
- E22-P-1-39** A primary study on a long-term vision and strategy for the realisation and the development of the Sahara Solar Breeder project in Algeria  
(0021) *A. Boudghene Stambouli (University of Sciences and Technology of Oran, Oran, Algeria), H. Koinuma*
- E22-P-1-41** Plasmonic resonances of metal nanoparticles under focused illumination  
(2474) *S. Bosch (Rudjer Boskovic Institute, Zagreb, Croatia), J. Sancho Parramon*
- E22-P-1-42** Optical properties of silver containing diamond like carbon nanocomposite films deposited by pulsed-DC magnetron sputtering  
(2483) *Š. Meškiniš (Kaunas University of Technology, Kaunas, Lithuania), A. Tamuleviciene, K. Šlapikas, V. Kopustinskias, S. Tamulevicius, R. Gudaitis, A. Mindaugas*
- E22-P-1-43** Phthalocyanine Materials for Hydrogen Production from Water  
(2794) *T. Youssef (Hannover University, Hannover, Germany)*
- E22-P-1-45** Thermochromic Cobalt(II) Halide Complexes And New Materials For Solar Energy Storage And Auto-Regulated Shading Protection  
(2523) *S. Gadžuric (Faculty of Science, Novi Sad, Serbia), M. Vraneš, S. Dožic*
- E22-P-1-46** Sorption Behaviour Of Libh<sub>4</sub>/Mgh<sub>2</sub> Nanocomposites Doped With Ti-Based Additive  
(1622) *N. Boucharat (Karlsruhe Institute of Technology , Eggenstein-Leopoldshafen, Germany), R. Witter, E. Gil Bardají, D. Wang, M. Fichtner*
- E22-P-1-47** Growth of NiTiO<sub>3</sub> – TiO<sub>2</sub> eutectic using micro-pulling down method  
(3055) *K. Bienkowski (Institute of Electronic Materials Technology, Warsaw, Poland), R. Solarska, D. Pawlak*
- E22-P-1-48** Lithium Ion Electro-Insertion and spectroelectrochemical properties of Self-assembled Films from V<sub>2</sub>O<sub>5</sub>  
(3086) *R. Iost (Universidade de São Paulo, Ribeirão Preto, Brazil), F. Huguenin, N. Galiote, M. Camargo, F. Crespilho*
- E22-P-1-49** Self-Assembled Films from Chitosan and Poly(Vinyl Sulfonic Acid) on Nafion for Direct Methanol Fuel Cell  
(3089) *F. Huguenin (Universidade de São Paulo, Ribeirão Preto, Brazil), T. Facci, M. Camargo, D. De Azevedo, L. Dias*

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Topic Area E : Energy and Related Applications

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|-----------------------------|--|-------------------|---|-----------------------------|---|
| <b>E23</b>                  | <b>Thermoelectrics</b>   | <b>E23-P-1-10</b> | Thermoelectric properties of Ag <sub>3.6</sub> Cu <sub>x</sub> Mo <sub>9</sub> Se <sub>11</sub><br>(3049)<br><i>M. Colin (Institut Jean Lamour, Nancy, France), T. Zhou, B. Lenoir, A. Dauscher, P. Gougeon, M. Potel</i> | <b>E31</b>                  | <b>Advanced materials for transportation</b>  |
| <b>E23-P-1-01</b><br>(2269) | Microwave assisted sintering - new approach from raw metals (Zn, Sb) to nanophase Zinc antimonides<br><i>J.-C. Tédénac (Institut Charles Gerhardt, Montpellier, France), F. Rouessac, J. Motuzas, A. Denoix, R.-M. Ayrat, A. Julbe</i>   |                   |   | <b>E31-P-1-01</b><br>(2183) | Manganese oxide/zirconia systems for decomposition of hydrogen peroxide in aerospace propulsive applications<br><i>A. Nastro (UNIVERSITY OF CALABRIA, Rende (Cs), Italy), M. Turco</i>  |
| <b>E23-P-1-02</b><br>(1596) | Nanostructured Nb substituted CaMnO <sub>3</sub> n-type thermoelectric Material prepared by Ultrasonic Spray Combustion<br><i>M. Trottmann (Empa, Duebendorf, Switzerland), S. Populoh, M. Aguire, A. Weidenkaff</i>   |                   |   | <b>E31-P-1-02</b><br>(0310) | Strengthening mechanism of high strength spring steel<br><i>S. Choi (POSCO Technical Research Laboratories, Pohang, Korea - south), S. Forsik, S. Van Der Zwaag</i>   |
| <b>E23-P-1-03</b><br>(2427) | Vibrational dynamics and material properties of thermoelectric materials<br><i>M.M. Koza (institut laue langevin, Grenoble, France), A. Leithe-Jasper, Y. Grin, M. Rotter, R. Viennois, J.C. Tedenac, P.F. Rogl, H. Mutka, M.R. Johnson</i>  |                   |   | <b>E31-P-1-03</b><br>(0399) | Enhancing the high temperature capability of Ti-alloys<br><i>A. Donchev (Dechema e.V., Frankfurt, Germany), M. Schütze, A. Kolitsch, R. Yankov</i>  |
| <b>E23-P-1-04</b><br>(2312) | High-temperature thermoelectric properties of silicon nanopillars<br><i>A. Stranz (TU Braunschweig, Braunschweig, Germany), J. Kaehler, A. Waag, E. Peiner</i>   |                   |   | <b>E31-P-1-04</b><br>(2762) | Functionalization Of Multiwall Carbon Nanotubes With Amino Groups And Production Of Epoxy Matrix Composites<br><i>S. Pezzin (UDESC, Joinville, Brazil), B. Mariana</i>  |
| <b>E23-P-1-05</b><br>(1994) | A new phase in Si – Ge system via redox reaction<br><i>I. Veremchuk (MPI CPfS, Dresden, Germany), M. Baitinger, Y. Grin</i>  |                   |   | <b>E31-P-1-05</b><br>(2942) | Effects of tin on microstructure and creep property of Ca and Sr containing AZ91 alloy<br><i>S.M. Miresmaeili (Rajae University, Tehran, Iran), S. Rashno, B. Nami</i>  |
| <b>E23-P-1-06</b><br>(2364) | Tunable nanoscaled microstructure through alloy engineering and its influence on thermoelectric properties for lead tellurides materials<br><i>P. Bellanger (ICMCB, Pessac, France), S. Gorsse, Y. Bréchet, A.M. Umarji, U. Ail</i>  |                   |   | <b>E31-P-1-06</b><br>(2879) | The vane wearing and galling of the Double Axel VNT Turbocharger GT 42<br><i>P. Olaru (IMNR Bucarest, Bucarest, Romania), I. Hutchings</i>  |
| <b>E23-P-1-07</b><br>(2510) | The effect of Microstructure on the Thermoelectric properties of beta-FeSi <sub>2</sub> having homogeneous Si dispersions formed by the Eutectoid decomposition of alpha-FeSi <sub>2</sub><br><i>U. Ail (ICMCB-CNRS, Pessac, France), S. Gorsse, A.M. Umarji, S. P, P. Bellanger</i> |                   |   | <b>E31-P-1-08</b><br>(2684) | Aluminium metal matrix composites shaping by the centrifugal casting process<br><i>M. Dyzia (Silesian University of Technology, Katowice, Poland), A. Dolata-Grosz</i>  |
| <b>E23-P-1-09</b><br>(3051) | Low temperature transport properties of ZnO-CoSb <sub>3</sub> thermoelectric materials<br><i>B. Lenoir (Institut Jean Lamour, Nancy, France), C. Chubilleau, P. Masschelein, A. Dauscher, C. Godart</i>  |                   |   | <b>E31-P-1-09</b><br>(0926) | Air and Nitrogen Dielectric Barrier Discharge Treatment of Carbon Fibers for Enhancing the Thermoplastic Composites Interface<br><i>L. Silva (Technological Faculty of Pindamonhangaba, Pindamonhangaba, Brazil), A. Santos, P. Nascente, E. Botelho, K. Kostov</i> |
|                             |  |                   |   | <b>E31-P-1-10</b><br>(1035) | Development of Thermal Fatigue Resistant Austenitic Cast Steel for Turbine Housing of Gasoline Engine Automobile<br><i>H. Takabayashi (Daido Steel Co.,Ltd., Nagoya, Japan), U. Shigeki</i>   |

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Topic Area E : Energy and Related Applications

- E31-P-1-11** High Temperature Oxidation Resistance Of AISI 304 Stainless Steel at 800°C by acid phosphoric surface treatment  
(1056) *S. Perrier (LVEEM, Le Puy En Velay, France), F. Riffard, H. Buscail*
- E31-P-1-12** Effect of alloying elements on mechanical properties and formability in newly developed alpha/beta titanium alloy  
(1158) *Y.-T. Hyun (Korea Institute of Materials Science, Changwon, Korea - south), J.-T. Yeom, J.-H. Kim*
- E31-P-1-13** High efficiency lightweight thermal insulation systems based on aerogels  
(2773) *R. Nuno (Active Space Technologies SA, Coimbra, Portugal), H. Jessica, O. Marta, D. Luisa, P. António, D. Néilson, D. João*
- E31-P-1-14** Impact fracture characteristics of aircraft A357 cast aluminum alloy  
(1389) *N. Alexopoulos (University of the Aegean, Xios, Greece), A. Stylianos*
- E31-P-1-15** Wearing process of brake pads – numerical and experimental testing of pad material characteristics  
(2189) *J. Malachowski (Military University of Technology, Warsaw, Poland), K. Damaziak, P. Baranowski*
- E31-P-1-16** Lightweight Cruise Vessel Design – Assessing Fire Risk  
(1577) *F. Evegren (SP Technical Research Institute of Sweden, Borås, Sweden), R. Michael, T. Hertzberg, B. Hanno*
- E31-P-1-17** Analysis of deformation mechanisms in the Ti-6Al-4V Titanium alloy during notch toughness tests  
(2050) *G. Khelifati (CIRIMAT ENSIACET, Toulouse, France), C. Buirette, N. Gey, J. Huez, E. Andrieu*
- E31-P-1-18** Comparison Of Hydrogen Embrittlement Resistance Of High Strength Aeronautic Steels  
(2640) *G. Lovicu (Università di Pisa, Pisa, Italy), C. Colombo, A. Dimatteo, M. De Sanctis, R. Ishak, R. Valentini*
- E31-P-1-19** Microstructural study of novel steel matrix composites Fe- TiB<sub>2</sub>  
(1996) *L. Cha (ICMPE-CNRS, Thiais, France), S. Lartigue-Korinek, L. Mazerolles*
- E31-P-1-21** Magnesium Billet Continuous Casting with Combined Grain Refinement  
(2545) *M. Kim (RIST, Pohang, Korea - south), J. Kim, J. Park*
- E31-P-1-22** Materials For Antiwear Protection  
(2288) *H. Binchiciu (SC SUDOTIM AS SRL, Timisoara, Romania), V. Geanta, E. Binchiciu, P. Berchi*
- E31-P-1-23** In situ non destructive evaluation of applied stress in prestressed bars  
(2283) *W. Toumi Ajimi (University of technology of Troyes / ULTRARS, Troyes, France), F. Belahcene, J. Hoblos, D. Retraint, G. Montay*
- E31-P-1-24** Effect of Zr addition and plastic deformation on the structure of 2024 alloy after heat treatment.  
(2233) *W. Szymanski (Institute of Non-Ferrous Metals, Skawina, Poland), S. Boczkal, M. Lech-Grega, Z. Zamkotowich*

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Topic Area X : Miscellaneous

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|-----------------------------|--|-----------------------------|--|-----------------------------|---|
| <b>X12</b>                  | <b>Miscellaneous</b>   | <b>X12-P-1-11</b>           | Scanning Low Energy Electron Microscopy (Sleem) As A Powerful Tool To Study Microstructure Of Advanced Materials<br><i>S. Míkmekova (Institute of Scientific Instruments of the ASCR, Brno, Czech Republic), I. Mullerova, L. Frank, K. Matsuda, K. Watanabe</i> | <b>X12-P-1-21</b>           | Diagnosis of deterioration of insulation used in high power transformers by means of PDC analysis<br><i>D. - Gavrila (University "Politehnica", Bucharest, Bucharest, Romania), C. Ilies</i>  |
| <b>X12-P-1-01</b><br>(0039) | stray current control in DC mass Transit system with Cathodic Protection<br><i>S. Medhat Bojnurd (Science &amp; Research Campus, Bojnurd, Iran), A. Honarmand, M. Kebriaei</i>   | (1050)                      |  | (1892)                      |   |
| <b>X12-P-1-02</b><br>(0063) | The Impact Of Pb Substitution On The Structure And Electrical Properties Of Bi <sub>2</sub> -Xpbxsr <sub>2</sub> Ca <sub>2</sub> Cu <sub>3</sub> O <sub>y</sub> 0.4 Superconducting Ceramics<br><i>A. Saouadel (Jijel University, Jijel, Algeria), A. Amira, Y. Boudjadja, N. Mahamdioua, L. Amirouche, A. Varilci, M. Akdogan, C. Terzioglu</i> | <b>X12-P-1-12</b><br>(2971) | Estimation of carbon fibre composites as ITER divertor armour<br><i>A. Goodarzi (Amirkabir University of Tech., Tehran, Iran), H. Taylor</i>   | <b>X12-P-1-22</b><br>(1919) | KNN-based lead free piezoceramic thick films prepared by screen printing<br><i>M.A. De La Rubia (Instituto de Cerámica y Vidrio, Madrid, Spain), F. Rubio-Marcos, J. De Frutos, J.F. Fernandez</i>  |
| <b>X12-P-1-03</b><br>(0180) | Analysis of deformation inhomogeneity in the angular accumulative drawing<br><i>J. Majta (AGH University of Science and Technology, Krakow, Poland), K. Muszka, M. Stefanska-Kadziela, K. Doniec, D. Dominik</i>   | <b>X12-P-1-13</b><br>(1922) | Advanced Materials Characterization by Electron Paramagnetic Resonance<br><i>A. Artemenko (ICMCB, Pessac, France), C. Elissalde, D. Michau, U.-C. Chung, C. Estournès, M. Maglione</i>   | <b>X12-P-1-23</b><br>(2593) | Creep Of Alloy 718 After Plasma Immersion Ion Implantation Iiip<br><i>A.C. Hirschmann (ITA, Sao Jose Dos Campos, Brazil), C. Moura Neto, R. Felix, M. Ueda, D. Reis, M. Barboza</i>   |
| <b>X12-P-1-04</b><br>(0221) | Effect of autofrettage on the impact resistance of CFRP composite vessels with a metallic liner<br><i>S. Kobayashi (Tokyo Metropolitan University, Tokyo, Japan), O. Shinji</i>  | <b>X12-P-1-14</b><br>(1962) | Coupled DMA/Macro Calorimetry for liquid to solid composite characterization<br><i>F. Cara (01DB-METRAVIB, Limonest, France), H. Baurier</i>   | <b>X12-P-1-24</b><br>(0486) | Rational choice of manufacturing technology of shaped profiles<br><i>G. Shimov (Ural federal university, Ekaterinburg, Russian Federation), S. Burkin, V. Aksenov, J. Brynskikh</i>   |
| <b>X12-P-1-06</b><br>(0642) | Numerical modelling of a novel auxetic component for high-performance textiles and composites<br><i>J. Wright (University of Exeter, Exeter, United Kingdom), M. Sloan, K. Evans</i>   | <b>X12-P-1-15</b><br>(2935) | Experimental Researches On The Obtainment Of A New Metal Matrix For The Crushing Installations Retention Sill<br><i>V. Geanta (UNIVERSITY POLITEHNICA OF BUCHAREST, Bucharest, Romania), I. Voiculescu, R. Stefanoiu, H. Binchiciu, R.M. Negriu</i>              | <b>X12-P-1-25</b><br>(3031) | Microstructure and mechanical properties of the Ni(1-x)-Tix-Wx system<br><i>M. Sá (FEUP-LNEG-CEMUP, Porto, Portugal), I. Isomäki, J. Ferreira, M. Hämäläinen, M. Braga</i>  |
| <b>X12-P-1-07</b><br>(0699) | The Helical Auxetic Yarn: Manufacture and characterisation – Static and dynamic properties<br><i>M. Sloan (University of Exeter, Exeter, United Kingdom), J. Wright, K. Evans</i>  | <b>X12-P-1-17</b><br>(2686) | Influence of Cryogenic Treatment on Wear Resistance of Tool Steels<br><i>M. Duchek (COMTES FHT, Dobruany, Czech Republic), P. Suchmann, J. Fajt, A. Ciski</i>  | <b>X12-P-1-26</b><br>(3063) | Advantages and disadvantages of aluminates in basic and high alumina refractories<br><i>J. Szczerba (AGH - University of Science and Technology, Kraków, Poland), D. Madej</i>  |
| <b>X12-P-1-08</b><br>(0706) | Industrial NiW alloys substrates for YBCO coated conductors<br><i>M. Mikolajczyk (CNRS Grenoble, Grenoble, France), R. Batonnet, P. Matera, P. Odier, S. Pairis, S. Petit, J.-L. Soubeyroux, T. Waeckerle</i>  | <b>X12-P-1-18</b><br>(1805) | Manufacture Of Cf/Al-Mmc Via Gas Pressure Infiltration<br><i>A. Czulak (TU Dresden, Institute of Lightweight Engineering and Polymer Technology, Dresden, Germany), W. Hufenbach, M. Gude, F. Engelmann, K.J. Kurzydowski, J. Sleziona</i>                       | <b>X12-P-1-27</b><br>(3071) | Semi-Empiric Mathematical Modeling Of The Kinetics Of Manganese Removal From Leaching Solutions<br><i>J. Martínez-Jiménez (CINVESTAV Research Center of Advanced Studies, Ramos Arizpe, Mexico), R. Pérez-Garibay, A. Uribe-Salas</i>       |
| <b>X12-P-1-09</b><br>(0752) | Thermal treatment of hydrated ferrous sulfate under different atmospheres<br><i>N. Kanari (BRGM, Orléans, France), N.-E. Menad, L. Filippov, F. Thomas, J. Yvon</i>  | <b>X12-P-1-19</b><br>(2683) | Novel Process for Accelerated Soft Annealing of RSt37-2 Steel<br><i>D. Hauserova (COMTES FHT, Dobruany, Czech Republic), J. Dlouhy, Z. Novy, J. Zrník</i>  | <b>X12-P-1-28</b><br>(3066) | Reduction of the ecological footprint applying genetic algorithms in thermomechanical treatments<br><i>I. Marquez (TECNALIA R &amp; I, Derio, Spain), M. Arribas, A.R. Carrillo, J.L. Arana</i>   |
| <b>X12-P-1-10</b><br>(1001) | Study Of The Environmental Embrittlement Of Adi<br><i>R. Martínez (División Metalurgia - INTEMA, Mar Del Plata, Argentine Republic), R. Boeri</i>  | <b>X12-P-1-20</b><br>(1859) | Creep of Al under the action of the weak electric potential: evolution of dislocation substructure<br><i>V. Gromov (Siberian State University of Industry, Novokuznetsk, Russian Federation), S. Kononov, Y. Ivanov, O. Stolboushkina</i>                        | <b>X12-P-1-29</b><br>(3079) | Infrared spectroscopy investigation of metallic nanoparticles based on copper, cobalt, and nickel synthesized through borohydride reduction method<br><i>I. Markova (University of Chemical technology and Metallurgy, Sofia, Bulgaria)</i> |

## Poster Session II - On display Wednesday September 14th

Topic Area A : Functional Materials

- A21** **Hard and Soft Magnetic Materials**
- A21-P-2-01** (1376) Magnetic properties of rapidly quenched amorphous nanowires  
*H. Chiriac (National Institute of R&D for Technical Physics, Iasi, Romania), S. Corodeanu, N. Lupu, T.-A. Ovari*
- A21-P-2-02** (2097) Effects of layer thickness on the structural and magnetic properties of Co/Pd epitaxial multilayer films grown on Pd underlayers with different crystallographic orientations  
*K. Tobar (Chuo University, Tokyo, Japan), M. Ohtake, M. Futamoto*
- A21-P-2-03** (2029) Lightly Filled Nd-Fe-B Magnetic Composite Materials with Polymer Matrix  
*A. Grujic (Institute of Chemistry, Technology and Metallurgy, Belgrade, Serbia), J. Stajic-Trosic, M. Stijepovic, A. Stajic, J. Stevanovic, N. Lazic, R. Aleksic*
- A21-P-2-04** (1369) Magnetic behavior of as-cast nanocrystalline glass-coated microwires  
*H. Chiriac (National Institute of R&D for Technical Physics, Iasi, Romania), S. Corodeanu, T.-A. Ovari, N. Lupu*
- A21-P-2-05** (0991) Improved Magnetic field induced anisotropy in nanocrystalline FeCuNbSiB core  
*R. Madugundo (Grenoble Electrical Engineering Laboratory, Grenoble, France, Grenoble, France), B. Frincu, O. Geoffroy, S. Rivoirard, T. Waeckerle*
- A21-P-2-06** (2568) Structural, magnetic and electric properties of ZnFe<sub>2</sub>O<sub>4</sub>/a-Fe soft magnetic nanocomposite obtained by mechanical milling  
*I. Chicinas (Technical University of Cluj-Napoca, Cluj-Napoca, Romania), T.F. Marinca, O. Isnard, V. Pop*
- A21-P-2-07** (1149) Magnetic and magnetorheological characterization of biopolymer suspensions of nanoscale iron particles for ground water remediation  
*D. Xue (Politecnico di Torino, Torino, Italy), R. Sethi, P. Allia, M. Coisson*
- A21-P-2-08** (2551) Nanocrystalline soft magnetic ferrites synthesized by reactive milling route  
*I. Chicinas (Technical University of Cluj-Napoca, Cluj-Napoca, Romania), T.F. Marinca, O. Isnard, V. Pop*
- A21-P-2-09** (2191) Co thin film growth on fcc noble-metal underlayers with facet structures  
*K. Kobayashi (Chuo University, Tokyo, Japan), M. Ohtake, M. Futamoto*
- A21-P-2-10** (1239) Hysteresis Modelling in nanocrystalline Sm<sub>2</sub>Co<sub>17</sub> NdFeB and barium ferrite magnets  
*M. De Campos (Universidade Federal Fluminense, Volta Redonda Rj, Brazil), S. Romero, S. Janasi*
- A21-P-2-11** (2898) Influence of reactive sintering on properties of NiZnCu spinel ferrite by Spark Plasma Sintering  
*K. Zehani (SATIE laboratory - ENS Cachan, Cachan, France), V. Loyau, F. Mazaleyrat, S. Nenez-Tusseau, E. Labouré*
- A21-P-2-12** (2392) Structure characterization of Sm-Co thin films prepared on bcc underlayers by molecular beam epitaxy  
*Y. Nonaka (Chuo University, Tokyo, Japan), M. Ohtake, F. Kirino, M. Futamoto*
- A21-P-2-13** (2723) Magnetic properties of Dy nanoparticles doped Nd-Fe-B sintered permanent magnet  
*M. Gjoka (NCSR "Demokritos", Athens, Greece), D. Niarchos*
- A21-P-2-14** (1171) Origin of Texture in Magnetically Annealed CoPt films and Co/Pt multilayers.  
*I. Panagiotopoulos (University of Ioannina, Ioannina, Greece), A. Markou, T. Bakas, G. Sáfrán, W. Li, G. Hadjipanayis*
- A21-P-2-15** (0936) Structural and magnetic properties of SmCo<sub>5</sub>/Fe<sub>65</sub>Co<sub>35</sub> nanocomposites synthesized by surfactant-assisted ball milling\*  
*E. Dorolti (Babes-Bolyai University, Cluj-Napoca, Romania), O. Isnard, A.F. Takacs, P. Gosuly, I. Chicinas, V. Pop*
- A21-P-2-16** (2735) Effect of Particle Size on the Coercivity of Nd-Fe-B and Sm-Co Nanoparticles Prepared by Surfactant-Assisted Ball Milling  
*N. Akdogan (University of Delaware, Newark, De, USA), W. Li, G. Hadjipanayis*
- A21-P-2-17** (2155) Microstructural and Soft Magnetic Properties Correlation in Modified FINEMET Alloy Composition Fe<sub>68.5</sub>Nb<sub>3</sub>Si<sub>18.5</sub>B<sub>9</sub>Cu<sub>1</sub> using Positron Annihilation Spectroscopy  
*A. Srivastava (Bhabha Atomic Research Centre, Mumbai, Mumbai, India), D. Srivastava, S. Sharma, P.K. Pujari, K.G. Suresh, G.K. Dey*
- A21-P-2-18** (1119) Improvement of magnetic force microscope resolution by employing sharp tips coated with Co films  
*K. Soneta (Chuo University, Tokyo, Japan), K. Nagano, M. Ohtake, M. Futamoto*
- A21-P-2-19** (1115) Dynamic observation of magnetic domains of hydrogenation disproportionation desorption recombination (HDDR)-processed Nd-Fe-B magnets compacted by hot pressing with a high-resolution Kerr microscope using ultraviolet light  
*T. Masaaki (Kyushu Institute of Technology, Kiakyushu, Japan), T. Naomi, N. Yuki, M. Yuji, Y. Jiro, N. Noriyuki, N. Takeshi, H. Satoshi*
- A21-P-2-20** (0874) Thermal processes kinetics in flash annealed amorphous ribbons  
*C. Moron (E.U. Arquitectura Técnica (U.P.M.), Madrid, Spain), A. Garcia, E. Tremps*
- A21-P-2-21** (2738) Novel GdCo<sub>5</sub> nanoparticles by Cluster Beam Deposition  
*O. Akdogan (University of Delaware, Newark, De, USA), W. Li, G. Hadjipanayis, D. Sellmyer*
- A21-P-2-22** (0937) Magnetic and Structural Properties of Nd<sub>2</sub>Fe<sub>14</sub>B/Fe Nanocomposites Obtained by Mechanical Milling and Annealing\*  
*E. Dorolti (Babes-Bolyai University, Cluj-Napoca, Romania), S. Gutoiu, O. Isnard, I. Chicinas, V. Pop*
- A21-P-2-23** (0871) Giant magnetoimpedance in laser and joule heated Co-based amorphous ribbons  
*C. Moron (E.U. Arquitectura Técnica (U.P.M.), Madrid, Spain), A. Garcia, E. Tremps*



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Topic Area A : Functional Materials

- A21-P-2-24** (2902) Comparative Studies On The Magnetic Properties And Thermal Stability Of Ndfeb Films With Mo And Mo-Cu Additions  
*M. Urse (National Institute of R & D for Technical Physics, Iasi, Romania), M. Grigoras, N. Lupu, H. Chiriac*
- A21-P-2-25** (0932) In-depth anisotropy control in FePt films with perpendicular anisotropy by ion irradiation  
*A. Di Bona (CNR - Istituto Nanoscienze, Modena, Italy), P. Luches, F. Albertini, F. Casoli, P. Lupo, S. Valeri*
- A21-P-2-26** (1019) Synthesis and Electromagnetic Characterization of BaTiO<sub>3</sub> coated Fe Nanowires in GHz Frequency  
*D.-H. Jang (Hanyang University, Ansan, Korea - south), Y.-I. Lee, S.-G. Cho, K.H. Kim, S.-T. Oh, S.-K. Lee, J. Kim, H.-T. Kim, Y.-H. Choa*
- A21-P-2-27** (2098) Structural and magnetic characterization of FePd-alloy and Fe/Pd multilayer films grown on MgO(001) single-crystal substrates  
*S. Ouchi (Chuo University, Tokyo, Japan), M. Ohtake, O. Yabuhara, F. Kirino, M. Futamoto*
- A21-P-2-28** (0464) Effect of Sn-Zn doping on the structural and magnetic properties of Barium Z-Type hexaferrite nanoparticles  
*M. Rashad (Central Metallurgical Research and Development Institute, Cairo, Egypt), M. Rasly, E.-S. Hesham, A.-S. Adel, A. Ibrahim*
- A21-P-2-29** (2804) On Chip Differential Planar Hall Effect Sensors for Characterisation of Magnetic Beads  
*M. Volmer (Transilvania University of Brasov, Brasov, Romania), M. Avram*
- A21-P-2-30** (2348) Effects of modified hydrogen treatment on magnetic properties of  
*J.-H. Yu (Korea Institute of Materials Science, Changwon, Korea - south), D.-H. Kim, S.-H. Lee, Y.-D. Kim*
- A21-P-2-31** (0821) Controllable nanocrystallization in Pr-lean Fe<sub>3</sub>B/Pr<sub>2</sub>Fe<sub>14</sub>B nanocomposites via thermal annealing  
*Z. Pengyue (China Jiliang university, Hangzhou, China), H. Robert, A. Martin, G. Hongliang*
- A21-P-2-32** (0401) Effect of sintering temperature and time on the magnetic hysteretic properties of hard magnetic Fe-Cr-15Co alloys  
*V. Yusupov (A.A.Baikov Institute of Metallurgy, Moscow, Russian Federation), M. Alymov, I. Milyaev, V. Zelenskii, A. Ankudinov*
- A21-P-2-33** (1845) Synthesis, nanostructure and magnetic properties of Mo-doped Finemets  
*J.M. Silveyra (Lab. de Sólidos Amorfos, INTECIN, UBA-CONICET, Ciudad Autónoma De Buenos, Argentine Republic), V.J. Cremaschi*
- A21-P-2-34** (1059) Solution-Phase Iron Coating onto Nd-Fe-B Powder for Hard/Soft Magnetic Composites  
*S. Yamamuro (Ehime University, Matsuyama, Japan), M. Okano, T. Tanaka, T. Uchida, S. Kenji, N. Nozawa, T. Nishiuchi, H. Satoshi, T. Ohkubo*
- A21-P-2-35** (2417) Microstructural change of Strip Cast Alloy by Homogenization Treatment  
*D. Kim (Korea Institute of Materials Science, Changwon-City, Gyungsangn, Korea - south)*
- A21-P-2-36** (0427) Element specific contribution to the magnetic anisotropy in practical antiferromagnetic alloys..  
*S. Khmelevskiy (Vienna University of Technology, Vienna, Austria), A.B. Shick, P. Mohn*
- A21-P-2-37** (0351) Characterization of silica glass covered microwires by selective indentation and estimation of internal stresses  
*E. Kostitsyna (National University of Science and Technology "MISIS", Moscow, Russian Federation), M. Petrzhiik, M. Filonov*
- A21-P-2-38** (0369) Microstructural analysis of the core-shell structures in grain-boundary diffusion processed Nd-Fe-B magnets  
*P. McGuinness (IJS, Ljubljana, Slovenia), M. Soderžnik, S. Zoran, K. Spomenka*
- A21-P-2-39** (2311) Study of magnetization reversal in NdFeB thick films  
*G. Ciuta (CNRS, Grenoble, France), Y. Zhang, M. Kustov, O. Fruchart, N. Dempsey, D. Givord*
- A21-P-2-40** (0350) Magnetic properties of Fe(Mn)In<sub>2</sub>S<sub>4</sub> and FeGa<sub>2</sub>Se<sub>4</sub> single crystals  
*I. Bodnar (Belarusian State University of Informatics and Radioelectronics, Minsk, Belarus), S. Pauliukavets, S. Trukhanov, E. Arushanov*
- A21-P-2-41** (2346) Structural and magnetic study of amorphous and gradually devitrified Fe-Si-B-Cu based nanocrystalline alloys  
*S. Kane (Devi Ahilya University, Indore, India), S. Tripathi, M. Coisson, P. Tiberto, F. Vinai, L. Varga, M. Baricco*
- A21-P-2-42** (1801) Electromagnetic Behavior Of Y-Type Barium Hexaferrites Produced By Citrate Sol-Gel Self-Combustion Method  
*R. Lima (Brazilian Navy Research Institute, Rio De Janeiro, Brazil), M. Pinho, T. Ogasawara*
- A21-P-2-43** (2334) Phase stability, magnetic and thermal properties of Fe<sub>2</sub>(Zr<sub>1-x</sub>Nb<sub>x</sub>) Laves Phase by first-principles calculations  
*A. Kellou (University of USTHB, Algiers, Algeria), L. Rabahi, D. Bradai, T. Grosdidier*
- A21-P-2-44** (1883) Giant Magnetoimpedance In Cop Electrodeposited Films  
*C. Moron (E.U. Arquitectura Técnica (U.P.M.), Madrid, Spain), A. Garcia*
- A21-P-2-45** (1808) Time-temperature dependence of structural and magnetic properties of (Fe<sub>100-x</sub>Cox) 84.5Nb<sub>5</sub>B<sub>8.5</sub>P<sub>2</sub> alloys  
*S. Kane (Devi Ahilya University, Indore, India), S. Tripathi, M. Coisson, E. Olivetti, P. Tiberto, F. Vinai, M. Baricco, J.P. Araujo, L. Varga*
- A21-P-2-46** (2143) Epitaxial growth of Fe, Co, and Ni thin films on Ru underlayers with different orientations  
*K. Shimamoto (Chuo University, Tokyo, Japan), S. Sakaguchi, M. Ohtake, M. Futamoto*
- A21-P-2-47** (1413) Effect of small dysprosium-compound additions on the magnetic properties of high performance Nd-Fe-B sintered magnets  
*S. Namkung (Sunmoon University, Choongnam, Korea - south), T. Jang*
- A21-P-2-49** (0095) Internal stresses distribution analysis in 3%SiFe Goss textured materials by means of magnetic domain observations  
*I. Hervas (Crismat, Caen, France), N. Bellido, E. Hug*
- A21-P-2-50** (0270) Magnetic nanomaterials based on the rare-earth oxides: synthesis and properties  
*N. Steblevskaya (Institute of Chemistry FEBRAS, Vladivostok, Russian Federation), M. Medkov, R. Belobeletskaya*

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### Topic Area A : Functional Materials

- A21-P-2-51** (1579) Effect of Al addition on microstructure and magnetic properties of a high Bs Iron-based melt spun ribbon  
*F. Shahri (university of industries and mines, Tehran, Iran), A. Beyrami, R. Gholamipour*
- A21-P-2-52** (2296) Mössbauer Studies of Some Aurivillius Phases in the Bi<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub> – BiFeO<sub>3</sub> System  
*M. Bucko (AGH University of Science and Technology, Krakow, Poland), P. Stoch, P. Zachariasz*
- A21-P-2-53** (0139) Magnetization processes and magnetoelectric effect in exchange-coupled ferromagnetic film  
*Z. Gareeva (Institute of Molecular and Crystal Physics, Ufa, Russian Federation), R. Doroshenko*
- A21-P-2-54** (0107) Novel Architectural Ceramics Putty With Electromagnetic Absorber Properties  
*B. Mušič (Helios Domžale, d.d., Domžale, Slovenia), A. Žnidaršič, B. Bregar, P. Venturini, N. Rajnar*
- A21-P-2-55** (2406) Experimental improvements of the technologies for bonded magnets production in the field of small electrical machines  
*L. Ferraris (Politecnico di Torino, Alessandria, Italy), P. Ferraris, E. Ghisolfi, E. Poskovic, A. Tenconi*
- A21-P-2-56** (3010) The Performance and Endurance of Nd-Fe-B Sintered Magnets under Real Application Conditions  
*M. Mohr (IFW Dresden, Institute for Metallic Materials, Dresden, Germany), M. Lehmann, R. Sueptitz, M. Uhlemann, A. Gebert, O. Gutfleisch*
- A23** **Magnetocalorics**
- A23-P-2-01** (1505) Compact Halbach-like Magnetic System for Magnetic Cooling Application  
*S. Taskaev (Chelyabinsk State University, Chelyabinsk, Russian Federation), V. Buchelnikov, V. Beketov, D. Taranov, A. Ogurtsov, M. Drobosyuk, A. Andreevskikh*
- A23-P-2-02** (1434) Fast synthesis of LaMnO<sub>3</sub> by spark plasma sintering  
*L. Sicard (ITODYS, Paris, France), S. Ammar-Merah, Y. Regaieg, G. Delaizir, F. Herbst, J. Monnier, B. Villeroy, M. Koubaa, A. Cheikhrouhou, C. Godart*
- A23-P-2-03** (2485) Magnetocaloric properties of the A-site ordered manganite NdBaMn<sub>2</sub>O<sub>6</sub>  
*A. Aliev (Amirkhanov Institute of Physics of DSC RAS, Makahchkala, Russian Federation), A. Gamzatov, A. Batdalov, V. Kalitka*
- A23-P-2-05** (1188) Direct measurements of the magnetocaloric effect in lanthanum manganites  
*V. Buchelnikov (Chelyabinsk State University, Chelyabinsk, Russian Federation), O. Pavlukhina*
- A23-P-2-06** (1785) Direct determination of the magnetocaloric effect in compounds containing the Fe<sub>14</sub> molecular cluster  
*E. Palacios (University of Zaragoza, Zaragoza, Spain), M. Evangelisti, L. Tocado, S. Elkatalawy, R. Burriel, E.J. Mc Innes*
- A23-P-2-07** (1184) Magnetocaloric properties in Dy<sub>1-x</sub>Er<sub>x</sub>Co<sub>2</sub> intermetallic compounds with two magnetic phase transitions.  
*J. Cwik (International Laboratory of High Magnetic Fields and Low Temperatures, Gajowicka 95, 53-421 Wrocław, Poland., Wrocław, Poland), T. Palewski, K. Nenkov, O. Gutfleisch, J. Klamut*
- A23-P-2-08** (1744) Bonded magnetocaloric powder for magnetic refrigeration  
*B. Podmiljsak (Jozef Stefan Institute, Ljubljana, Slovenia), P. McGuinness, S. Kobe*
- A23-P-2-09** (1162) Designed Metamagnetism in CoMnGe<sub>1-x</sub>P<sub>x</sub>  
*Z. Gercsi (Imperial College London, London, United Kingdom), K.G. Sandeman, K. Hono*
- A23-P-2-10** (1550) Magnetocaloric materials with first-order transition: a comprehensive study of thermal and magnetic hystereses  
*K. Skokov (Leibniz Institute for Solid State and Materials Research, Dresden, Germany), J. Moore, J. Liu, V. Khovaylo, K. Müller, O. Gutfleisch*
- A23-P-2-11** (1157) Magnetotransport and magnetocaloric effect of Ni-Fe-Ga alloys  
*K. Mandal (S. N. Bose National Centre for Basic Sciences, Kolkata, India), D. Pal*
- A23-P-2-12** (0968) Direct measurement of magnetocaloric effect in Co-doped Mn-rich Ni<sub>2</sub>MnGa alloys  
*J. Kaštil (Faculty of Mathematics and Physics, Charles University, Praha 2, Czech Republic), J. Kamarad, S. Fabbri, F. Albertini, A. Paoluzi, Z. Arnold*
- A23-P-2-13** (1915) Routes to controlling the thermal management in Magnetocaloric Manganites  
*J. Turcaud (Imperial College, London, United Kingdom), K. Morrison, A. Berenov, K. Sandeman, L. Cohen*
- A23-P-2-14** (1266) Control Phase Synthesis of Gd<sub>5</sub>Si<sub>2</sub>Ge<sub>2</sub>, Er<sub>5</sub>Si<sub>4</sub> and Tb<sub>5</sub>Si<sub>2</sub>Ge<sub>2</sub> magnetocaloric compounds  
*J.F. Horta Belo Da Silva (IFIMUP - IN, Porto, Portugal), A. M. Pereira, J.P. Araújo, J. Ventura, J. B. Sousa, P.B. Tavares, C. Magen, M. Ibarra, L. Morellon, P. Algarabel*
- A23-P-2-15** (1912) Asymmetry in the heat capacity of the itinerant metamagnet La(Fe,Si)<sub>13</sub> close to T<sub>c</sub>  
*K. Morrison (Imperial College, London, United Kingdom), O. Gutfleisch, J. Lyubina, D. Caplin, L. Cohen*
- A23-P-2-16** (1520) Magnetocaloric Effect in Ni<sub>2+x</sub>Mn<sub>1-x</sub>Ga Heusler Alloys  
*T. Sergey (Chelyabinsk State University, Chelyabinsk, Russian Federation), M. Drobosyuk, F. Rafael*
- A23-P-2-17** (2516) Connection of Magnetocaloric Effect with Magnetic Heterogeneous state in Sm<sub>0.55</sub>Sr<sub>0.45</sub>MnO<sub>3</sub> manganite  
*L. Koroleva (Moscow state university, Moscow, Russian Federation), A. Morozov, D. Zashchirinskii, R. Szymczak, A. Balbashov*

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Topic Area A : Functional Materials

- A23-P-2-18** (2932) High-temperature phase transition and magnetic properties of LaFe<sub>13-x</sub>Si<sub>6</sub> compounds  
*X. Chen (Sichuan University, Chengdu, China), Y. Chen, Y. Tang*
- A23-P-2-19** (0924) Theoretical and Experimental Investigations of Magnetocaloric Properties in Heusler Ni<sub>2</sub>+xMn<sub>1-x</sub>Ga Alloys (x = 0.33, 0.36, and 0.39) at the Room-Temperature  
*V. Sokolovskiy (Chelyabinsk State University, Chelyabinsk, Russian Federation), V. Buchelnikov, I. Taranenko, M. Drobosyuk, S. Taskaev, P. Entel*
- A23-P-2-20** (3054) The Effects of Magnetoplastic Properties on Magnetostriction and Magnetocaloric Effects on (Ni-Cu)-Mn-Z (Z:In and Sn)  
*I. Dincer (Ankara University, Ankara, Turkey), E. Yüzüak, Y. Elerman*
- A23-P-2-21** (3078) Rare-earth based alloys for room temperature magnetic refrigeration  
*M. Nagesh (GE India Technology center, Bangalore, India), R. Hanumantha, A. Saha, K. Kalaga, J. Barve, J. Francis, S. Reddy*
- A24** **Magnetic Nanostructures and Particles**
- A24-P-2-01** (1578) Origin of the room temperature ferromagnetism in Fe<sub>3+</sub>/Cr<sub>3+</sub> doped CeO<sub>2</sub> nanoparticles  
*S.-Y. Chen (National Taiwan University of Science and Technology, Taipei, France), A. Gloter, T.-T. Peng, Y.-Y. Peng, C.-L. Dong*
- A24-P-2-02** (0073) Effect of Rapid Thermal Annealing on Structure and Magnetic Properties of Nanostructured Finemet Alloy  
*F. Javaherian (Iran University of Science and Technology, Tehran, Iran), A. Beitollahi, F. Shahri*
- A24-P-2-03** (1086) Wet-chemistry methods for the synthesis of anisotropic nanoparticles with different magnetic order  
*V. Salgueirino (Universidad de Vigo, Vigo, Spain), N. Fontaina-Troitino, M. Farle*
- A24-P-2-04** (1536) Soft UV Nanoimprint Lithography for bit-patterned media at 1 Tbit/in<sup>2</sup>  
*A. Cattoni (CNRS, Marcoussis, France), C. Brombacher, G. Luo, D. Decanini, T. Eriksson, M. Albrecht, A.-M. Haghiri-Gosnet*
- A24-P-2-05** (1098) Optimising nanoparticles for magnetic hyperthermia: Experimental and theoretical study  
*B. Mehdaoui (LPCNO-INSA, Toulouse, France), A. Meffre, J. Carrey, S. Lachaize, L.M. Lacroix, B. Chaudret, M. Respaud*
- A24-P-2-06** (1195) Defect-induced d<sub>0</sub> Ferromagnetism and Photoluminescence in K-Doped ZnO Nanowires  
*K. Mandal (S. N. Bose National Centre for Basic Sciences, Kolkata, India), S. Ghosh, G.G. Khan*
- A24-P-2-07** (1526) Magnetic properties of CoFe<sub>2</sub>O<sub>4</sub> Nanoparticles  
*I. Alfonso (Instituto de Nanociencia de Aragón - Universidad de Zaragoza, Zaragoza, Spain), T. Teobaldo, M. Cesár, M. Clara, I. Ricardo, G. Gerardo*
- A24-P-2-08** (1099) Synthesis of iron(0) nanoparticles for magnetic hyperthermia: How to address the questions of size control and air stability  
*A. Meffre (INSA, Toulouse, France), B. Medhaoui, S. Lachaize, J. Carrey, M. Respaud, B. Chaudret*
- A24-P-2-10** (1921) A Challenge in Magnetic Recording: Patterned Magnetic Media  
*H. Gavrila (University "Politehnica" of Bucharest, Bucharest, Romania)*
- A24-P-2-11** (1498) SEM/EDS study on magnetic nanolayers based on Cu Ni Fe  
*F. Miculescu (University Politehnica from Bucharest, Bucharest, Romania), I. Jepu, C. Lungu, M. Miculescu, D. Bojin, I. Antoniac, M. Branzei*
- A24-P-2-12** (1435) Tailoring the spin-wave resonance spectra in multilayered nanograins  
*S. Mamica (A. Mickiewicz University, Poznan, Poland), M. Krawczyk, J.W. Klos, J. Romero-Vivas, M. Mruczkiewicz, P. Manchanda, A. Kashyap, A. Barman*
- A24-P-2-13** (1421) Magnetic properties of ferrite nanoparticles synthesized by soft chemistry route  
*C. Vichery (Ecole Polytechnique/CNRS, Palaiseau, France), I. Maurin, J.-P. Boilot, T. Gacoin*
- A24-P-2-14** (2990) Manipulating the crystallographic texture in nanocrystalline nickel films by pulse reverse electrodeposition  
*F. Nasirpouri (Sahand University of Technology, Tabriz, Iran), H. Mahdizadeh, A. Akbari*
- A24-P-2-15** (1420) Dipolar interactions in arrays of dendronized iron oxides nanoparticles with spherical and cubic shapes and tuned interparticle distances  
*S. Fleutot (IPCMS UMR 7504, Strasbourg, France), G. Nealon, W. Baaziz, B.P. Pichon, D. Guillon, B. Donnio, S. Bégin-Colin*
- A24-P-2-16** (1008) Nanostructured Magnetic Colloid Functionalized with Essential Oil of Piper Hispidum  
*A. F. R. Rodriguez (Universidade Federal do Acre, Rio Branco, Brazil), F. S. E. D. V. De Faria, L. B. Silveira, W. S. Pertenele, J. Gonçalves Dos Santos*
- A24-P-2-18** (2502) Microscopic, Structural and Magnetic Investigation of Polymer-Encapsulated Iron Oxide Nanoparticles  
*A. Rodriguez (Universidade Federal do Acre, Rio Branco, Brazil), F. Faria, J. Santos, L. Batista, M. Novak, J. Coaquira, R. Azevedo, M. Morales, P. Morais*

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### Topic Area A : Functional Materials

- A24-P-2-20** (2501) Elaboration and characterization of Cu<sub>20</sub>nm/Co<sub>20</sub>nm multilayered nanowires  
*J. Bran (groupe de physique des matériaux, St Etienne Du Rouvray, France), M. Jean, R. Lardé, J.M. Le Breton, A. Pautrat*
- A24-P-2-21** (1323) Crystal structure and magnetic properties of RE-doped CoFe<sub>2</sub>O<sub>4</sub> nanoparticles (RE = Y, Ce, Pm, Sm, Gd, Tb, Er, Nd)  
*S. Burianova (Institute of Physics AS CR, v.v.i., Prague, Czech Republic), J. Poltirova Vejpravova, P. Holec, J. Plocek, D. Niznansky*
- A24-P-2-22** (1005) Surface Functionalization Magnetic Nanoparticle with Copalic Acid  
*L. Batista Da Silveira (Fundação Universidade Federal de Rondônia, Porto Velho, Brazil), T. A. S. Beleza, W. S. Peternele, A. Carlos De Oliveira, A. F. R. Rodriguez, J. Gonçalves Dos Santos*
- A24-P-2-23** (1278) Order and phase stability in CoPt: the role of magnetism.  
*S. Karoui (ONERA-CNRS, Chatillon, France), H. Amara, F. Ducastelle, B. Legrand*
- A24-P-2-24** (1053) The influence of thickness and annealing on the structural and magnetic behavior of hard magnetic Sm-Cox thin films  
*A. Takacs (Babes-Bolyai University, Cluj Napoca, Romania), C. Prahoveanu, E. Dorolti, C. Brombacher, M. Albrecht, V. Pop*
- A24-P-2-26** (2936) Magnetic Properties of ferromagnetic iron nanoparticles embedded in antiferromagnetic chromium matrix  
*S. Laureti (CNR, Roma, Italy), D. Peddis, D. Fiorani, G. Varvaro, M. Hudlb, P. Nordblad, R. Mathieu, M. Qureshi, C. Binns*
- A24-P-2-27** (2212) Magnetic Properties Of The Clustered Ultrathin Atomic Level Films On Nonmagnetic Substrate. Numerical Simulation  
*K. Nefedev (Far Eastern National University, Vladivostok, Russian Federation), V. Belokon*
- A24-P-2-28** (2201) Self-assembly processes in manganite thin films  
*B. Martinez (ICMAB - CSIC, Bellaterra, Spain), Z. Konstantinovic, J. Santiso, F. Sandiumenge, A. Pomar, L. Balcells*
- A24-P-2-29** (1228) Giant Magneto-Impedance behaviour of a Nanostructured material for Application in a NDE based sensing device  
*P. Sarkar (National Metallurgical Laboratory, Jamshedpur, India), S. Pal, R.K. Roy, A.K. Panda, M. Amitava*
- A24-P-2-30** (1039) Arrays of iron oxide nanoparticles for magnetic and spintronic applications  
*B. Pichon (IPCMS, Strasbourg, France), S. Begin-Colin, M. Pauly*
- A24-P-2-31** (1224) Stabilization of in-plane vortex state in magnetic nanodots  
*S. Mamica (A. Mickiewicz University, Poznan, Poland), J.-C. Lévy, M. Krawczyk, P. Depondt*
- A24-P-2-32** (2142) Optium Cu buffer layer for epitaxial growth of Co on Si(111)7x7.  
*Y. Ivanov (Far Eastern Federal University, Vladivostok, Russian Federation), A. Iljin, A. Zotov*
- A24-P-2-33** (1733) Direct Evidence For The Key Role Of Deformation In  
*V. Kisel (Institute of Solid State Physics, Chernogolovka, Russian Federation)*
- A24-P-2-34** (2237) Grain boundaries in ZnO: A ferromagnetic nano-foam  
*A. Mazilkin (Institute of Solid State Physics RAS, Chernogolovka, Russian Federation), B. Straumal, B. Baretzky, S. Protasova, E. Goering, T. Tietze, P. Straumal, A. Myatiev*
- A24-P-2-35** (0777) Entropy change linked to the magnetic field induced Morin transition in hematite nanoparticles  
*J. Pastor (Public University of Navarra, Pamplona, Spain), J. Pérez De Landazábal, C. Gómez-Polo, V. Recarte, S. Larumbe, M. Silva, E. Pineda, A. Hechenleitner*
- A24-P-2-36** (1854) Magnetic core-shell nanoparticles (CoFe<sub>2</sub>O<sub>4</sub>/CoO) with exchange bias coupling properties  
*N. Yaacoub (LPEC, Le Mans, France), Z. Ktaya, F. Mammeri, N. Menguy, J.M. Grenèche, S. Ammar*
- A24-P-2-37** (1003) Nanoceramics Thin Films Based in Organic Resin  
*M. P. Oliveira (Universidade Federal de Rondonia, Porto Velho, Brazil), L. B. Da Silveira, W. S. Peternele, A. F. R. Rodriguez, A. C. De Oliveira, J. Gonçalves Dos Santos*
- A24-P-2-38** (2759) Low temperature Magnetic Properties of nanostructured Ba<sub>6</sub>Mn<sub>24</sub>O<sub>48</sub>  
*E. Khatsko (Institute for Low Temperature Physics, Kharkov, Ukraine), A. Cherny, V. Eremenko, A. Rykova*
- A24-P-2-40** (2758) Magnetism of nano-structured CeO<sub>2</sub>  
*K. Ackland (Trinity College Dublin, Dublin, Ireland), L. M.A. Monzon, J. Coey*
- A24-P-2-41** (0974) Y<sub>3</sub>Fe<sub>5</sub>O<sub>12</sub> prepared by mechanosynthesis from different iron sources  
*R. Valenzuela (National Autonomous University of Mexico, Mexico City, Mexico), F. Sanchez De Jesus, A.M. Bolarin-Miro, C.A. Cortes-Escobedo, S. Ammar*
- A24-P-2-43** (0860) Metamagnetic Behavior Of Yba<sub>2</sub>Cu<sub>3</sub>O<sub>7-D</sub> Bulk Sample At 4.2 K  
*S. Khene (Badji Mokhtar University of Annaba, Annaba, Algeria), M. Gasmi, G. Fillion*
- A24-P-2-44** (2199) Structural, magnetic and optical properties of (Co,Mo) co-doped titania thin films  
*S. Rout (Faculty of Sciences of the University of Lisbon (FCUL), Lisbon, Portugal), S. Dalui, L. Pereira, P. Brogueira, A. Silvestre, O. Conde*
- A24-P-2-45** (0872) Influence of matrix removing on magnetic properties of CoFe<sub>2</sub>O<sub>4</sub>/SiO<sub>2</sub> nanocomposites  
*A. Mantlikova (Charles university of Prague, Faculty of Mathematics and Physics, Prague, Czech Republic), J. Poltirova Vejpravova, D. Niznansky*
- A24-P-2-46** (2698) Enhanced ferromagnetic behavior and glassy state in low doped La<sub>0.95</sub>Sr<sub>0.05</sub>MnO<sub>3+d</sub>  
*S. Das (University of Aveiro, Aveiro, Portugal), K. De, A. Roy, P. Dhak, J.S. Amaral, M. Willinger, V.S. Amaral, S. Giri, S. Majumder, P.K. Mahapatra*
- A24-P-2-47** (1770) DNA functionalized magnetic nanoparticles  
*V. Salgueirino (university, Santiago De Compostela, Spain), A.B. Davila-Ibanez, E. Aicart, E. Junquera*

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- A24-P-2-48** (1763) Absorption and translocation to the aerial part of magnetic carbon-coated nanoparticles through the root of different crop plants  
*L. Custardoy (CSIC- Universidad de Zaragoza, Zaragoza, Spain), Z. Cifuentes, L. De Matteis, J. Martinez De La Fuente, C. Marquina, M.R. Ibarra, D. Rubiales, P.D. Alejandro*
- A24-P-2-49** (0746) Hydrothermal preparation of cobalt ferrite nanoparticles  
*A. Repko (Charles University, Faculty of Science, Prague 2, Czech Republic)*
- A24-P-2-50** (1997) Magnetic Anisotropy in Single Molecule and Single Chain Magnets Containing Ions with Unquenched Orbital Angular Momenta: Beyond Spin Model  
*S. Klokishner (Institute of Applied Physics, Chisinau, Moldova), A. Pali, S. Ostrovsky, O. Reu, P. Tregenna-Piggott, K. Dunbar, B. Tsukerblat*
- A24-P-2-51** (0946) Minimization of the topography contribution in imaging of superparamagnetic nanoparticles  
*B. Barbara (FZU, Academy of Science Czech Republic, Praha 8, Czech Republic), H. Petr, P.V. Jana*
- A24-P-2-52** (2710) Characterization of Fe-Ni alloys obtained from the reduction, by hydrogen, of co-formed Fe<sub>2</sub>O<sub>3</sub> and NiO  
*E. Brocchi (Pontifical Catholic University of Rio de Janeiro, Rio De Janeiro, Brazil), O. Avalo Cortez, F.J. Moura, R. De Souza*
- A24-P-2-53** (2036) Disk-shaped Co nanoparticles for magnetic data storage  
*D. Ciuculescu (Universität Duisburg-Essen, Duisburg, Germany), M. Farle, M. Comesaña-Hermo, C. Amiens, Z.-A. Li, S. Stienen, M. Spasova*
- A24-P-2-54** (0630) Bi-magnetic core-MnFe<sub>2</sub>O<sub>4</sub>|shell-FeMn<sub>2</sub>O<sub>4</sub> nanoparticles  
*A. López-Ortega (Centre d' investigacio en nanociència i nanotecnologia, Bellaterra, Spain), M. Estrader, G. Salazar-Alvarez, S. Estradé, J. Sort, F. Peiró, S. Suriñach, M.D. Baró, J. Nogués*
- A24-P-2-55** (0672) Electrodeposited Fe-Pd based nanostructures  
*D. Pecko (Jozef Stefan Institute, Ljubljana, Slovenia), K. Žužek-Rožman, Z. Samardžija, B. Pihlar, S. Kobe*
- A24-P-2-56** (2652) Uniaxial magnetic anisotropy in polycrystalline films patterned with ion beam sputtering  
*J.M. Colino (Universidad de Castilla-La Mancha, Toledo, Spain), M.A. Arranz*
- A24-P-2-57** (2059) Splitting of Magnetostatic spin-waves in obliquely magnetized circular nanodots  
*S.A. Bunyaev (University of Porto, Porto, Portugal), G.N. Kakazei, V.O. Golub, N. Sousa, N.A. Sobolev, E.V. Tartakovskaya, A.A. Serga, A.V. Chumak, B. Laegel, B. Hillebrands*
- A24-P-2-58** (1646) Formation and magnetic manipulation of periodically aligned wires in thin plastic membranes  
*D. Lorenzo (Italian Institute of technology, center for Bio-Molecular Nanotechnology, Arnesano (Lecce), Italy), D. Fragouli, B. Giovanni, S. Claudio, A. George C., C. Roberto, A. Athanassia*
- A24-P-2-59** (0603) Structural transition of Co nanocrystals from a polycrystalline phase to hcp single-crystalline phase : Towards the ferromagnetism at room temperature  
*I. Lisiecki (UPMC, Paris, France)*
- A24-P-2-60** (0494) Fe<sub>3</sub>O<sub>4</sub>-Polydiphenyl-2-carbonic acid Magnetic Nanoparticles with Core-Shell Structure for Ferrofluids  
*G. Karpacheva (A.V.Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russian Federation), S. Ozkan, I. Ereemeev*
- A24-P-2-61** (0810) Design of superparamagnetic MFe<sub>2</sub>O<sub>4</sub> (M = Fe, Co, Mn) nanoparticles through a novel co-precipitation route  
*C. Pereira (Faculty of Sciences, University of Porto, Porto, Portugal), A.M. Pereira, C. Fernandes, M. Rocha, R. Mendes, L.S. Fernandes, P.B. Tavares, J.P. Araújo, C. Freire*
- A24-P-2-62** (2318) The Measurement of Blocking Temperature for a Fine Particle System  
*A.G. Roca (The University of York, York, United Kingdom), G. Vallejo-Fernández, K. O'Grady*
- A24-P-2-63** (2530) Magnetic functionalization of porous silicon by infiltration of Fe<sub>3</sub>O<sub>4</sub>-nanoparticles  
*P. Granitzer (Karl-Franzens-University Graz, Graz, Austria), K. Rumpf, K. Ali, M. Reissner, G. Hilscher, L. Cabrera, P. Morales, P. Poelt, T. Uusimaeki, M. Albu*
- A24-P-2-64** (0450) Electrochemical synthesis, characterization and functionalization of Fe-Pd-based nanotubes  
*K. Zuzek Rozman (Jozef Stefan Institute, Ljubljana, Slovenia), D. Pecko, U. Maver, P. Nadrah, M. Bele, S. Kobe*
- A24-P-2-65** (0500) Synthesis and Characterization of Superparamagnetic Ferrite Nanoparticles for Functional Applications  
*K. Mazeika (SSRI Center for physical sciences and technology, Vilnius, Lithuania), A. Jagminas, V. Becyte, A. Selskiene, M. Kurtinaitiene*
- A24-P-2-66** (1604) Impact Of Particle Size And Substrate Affinity On Cobalt Nanoparticles Self-Assembly  
*M. Varón (Catalan Institute of Nanotechnology, Bellaterra, Spain), C. Frandsen, T. Kasama, M. Beleggia, R.E. Dunin-Borkowski, V. Puentes*
- A24-P-2-67** (2642) On the influence of magnetic nanostructures on Electrochemical Processes  
*L. Monzon (Trinity college dublin, Dublin, Ireland), K. Auckland, M. Coey*
- A24-P-2-68** (1663) Synthesis of superparamagnetic iron oxide nanoparticles (SPIONs) capped with lauric acid for drug delivery  
*T. S. Ribeiro (Pontifical Catholic University - Rio de Janeiro, Rio De Janeiro, Brazil), W. T. Herrera, O. C. Alves, J. Felcman, N. A. Rey*
- A24-P-2-70** (2630) Influence of Zr and N concentration on phase-structural composition and magnetic properties of nanocrystalline soft magnetic Fe-Zr-N films.  
*P. Sidorenko (Institute of Metallurgy and Material Science, RAS, Moscow, Russian Federation), E. Sheftel, G. Usmanova*
- A24-P-2-71** (2378) Soft Magnetic Film Fe-ZrN Composite  
*E. Sheftel (Institute of Metallurgy and Material Science, RAS, Moscow, Russian Federation)*
- A24-P-2-72** (2352) Electronic and magnetic properties of C-doped Nitrides: A density functional theory study  
*C. Niu (Shandong University, Jinan, China), Y. Dai, B. Huang*

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- A24-P-2-73** (0506) Development of Iron/Iron Oxide Core/Shell Nanoparticles for Magnetic Hyperthermia  
*I. Baker (Dartmouth College, Hanover, USA), Q. Zeng, G. Zhang, Y. Liao, K. Kekalo*
- A24-P-2-74** (0170) Magnetic properties of strontium hexaferrite nanoparticles prepared by co-precipitation and microemulsion method  
*A. Drmota Petric (Nanotesla Institute Ljubljana, Ljubljana, Slovenia), A. Žnidaršič, M. Drofenik*
- A24-P-2-75** (1620) Formation of mechanical anisotropic plastic films via the directed assembly of magnetic nanoparticles in polymers.  
*D. Fragouli (Italian Institute of Technology (IIT), Arnesano, Italy), G.C. Anyfantis, G. Bertoni, C. La Tegola, A. Massaro, R. Cingolani, A. Athanassiou*
- A24-P-2-76** (0168) Vortex state oscillations of ferromagnetic nanopillar excited by spin polarized current perpendicular to plane  
*K.Y. Guslienko (Materials Physics Center CSIC-UPV/EHU, San Sebastián, Spain), G. Aranda, J.M. González, J.J. Del Val*
- A24-P-2-77** (0131) Covalent functionalization of superparamagnetic nanoparticles: olefin metathesis.  
*B. Salinas (UNIVERSIDAD COMPLUTENSE DE MADRID, Madrid, Spain), J. Ruiz-Cabello, M. Desco, F. Herranz*
- A24-P-2-78** (2533) Morphology correlated tunable magnetic properties of a metal/silicon nanocomposite  
*K. Rumpf (Karl-Franzens-University Graz, Graz, Austria), P. Granitzer, K. Ali, M. Reissner, G. Hilscher, P. Poelt, M. Albu*
- A24-P-2-79** (2577) Effects of cationic distribution and spin-canting in CoFe<sub>2</sub>O<sub>4</sub> nanoparticles on saturation magnetization  
*N. Yaacoub (LPEC, Le Mans, France), M. Ferretti, A. Martinelli, G. Piccaluga, A. Musinu, C. Cannas, G. Navarra, J.M. Greneche, D. Fiorani, D. Peddis*
- A24-P-2-80** (1599) Synthesis, characterization and bioapplication of magnesium oxide-coated magnetic nanoparticles  
*L. De Matteis (Universidad de Zaragoza, Zaragoza, Spain), L. Custardoy, R. Fernandez-Pacheco, M.R. Ibarra, C. Magén, J. Martínez De La Fuente, C. Marquina*
- A24-P-2-81** (0199) 2D and 3D assembling of iron oxide nanoparticles by bottom-up strategies: A way to finely control magnetic properties  
*B. Pichon (Institut of Physics and Material Chemistry, Strasbourg, France), D. Toulemon, P. Louet, O. Felix, M. Drillon, G. Decher, S. Begin-Colin*
- A24-P-2-82** (2757) Plasmon resonant nanoshell colloids with reversible magnetic field induced optical anisotropy: synthesis, characterization and simulation  
*R. Klupp Taylor (University of Erlangen-Nuremberg, Erlangen, Germany), V. Lobaz, O. Zhuromskyy, H. Bao, U. Peschel, W. Peukert*
- A24-P-2-83** (3029) Preparation and characterization of nanocomposites based on ACr<sub>2</sub>O<sub>4</sub>/SiO<sub>2</sub> (A = Zn, Cd, Cu, ...)  
*I. Matulková (Charles University in Prague, Prague 2, Czech Republic), P. Holec, I. Nemeč, J. Poltnerová Vejpravová*
- A24-P-2-84** (3062) Magnetoresistance and Magnetic Properties of Co/Au, Cu Nanostructures.  
*C. Rizal (University of British Columbia, Vancouver, Canada)*
- A24-P-2-85** (3060) Effect of 1, 2- Hexadecadeniol and LiBEt<sub>3</sub>H Superhydride on the Size of FePt Nanoparticles  
*M. Farahmandjou (islamic azad university, Tehran, Iran)*
- A24-P-2-86** (3088) Electron Paramagnetic Resonance studies of Sn<sub>1-x</sub>MnxO<sub>2</sub> nanopowders  
*A. Popa (National Institute for R&D of Isotopic and Molecular Technologies, Cluj Napoca, Romania), O. Raita, D. Toloman, S. Manuela, G. Liviu Mihail*
- A24-P-2-87** (3087) Fe<sup>3+</sup> ions in ZnO nanoparticles as seen by magnetic resonance  
*O. Raita (National Institute for Research & Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania), A. Popa, D. Toloman, M. Stan, L. Giurgiu*
- A31** (1602) **Carbon nanotubes and graphene**  
**A31-P-2-01** (1602) Carbon nanotubes – alumina nanocomposites densified by SPS or HP: influence of the preparation route on microstructure and properties  
*A. Kasperski (CIRIMAT, Toulouse, France), A. Weibel, A. Peigney, C. Estournès, C. Laurent*
- A31-P-2-02** (1585) Investigation of electrical properties and anisotropy of graphene layers grown on the Si-face of 6H-SiC substrate  
*B. Jabakhanji (Laboratoire de Charles Coulomb, Montpellier, France), B. Jouault, N. Camara, W. Desrat, A. Tiberj, J.-R. Huntzinger, A. Caboni, P. Godignon, J. Camassel*
- A31-P-2-03** (2776) Functionalized graphene - P3HT nanocomposites  
*A.C. Obreja (IMT-Bucharest, Bucharest, Romania), D. Cristea, A. Dinescu, V. Schiopu, F. Comanescu, M. Danila*
- A31-P-2-04** (2458) Top-down Process Based on Electrospinning for Producing One-dimensional CNT Assembly  
*S. Imaizumi (Tokyo Institute of Technology, Tokyo, Japan), H. Matsumoto, Y. Konosu, K. Tsuboi, M. Minagawa, A. Tanioka, K. Koziol, A. Windle*
- A31-P-2-05** (2613) Electrical and Optical characteristics of Carbon nanotubes thin films prepared from solvent-based dispersions  
*J.-F. Brun (Universite Lille 1, Villeneuve D'Ascq, France), F. Roussel, A. Allart, C. Kasperek*
- A31-P-2-06** (2963) Sulfur assisted-carbon nanotubes growth as a function of catalyst on copper substrate for lithium ion battery anodes  
*H.-L. Dionne M. (University of Puerto Rico, Ceiba, Puerto Rico, USA), M. Frank, F. Emmanuel, M. Gerardo, W. Brad R.*
- A31-P-2-07** (2428) Aerogels based on cross-linked carbon nanotube scaffolds  
*A. Garcia-Gallastegui (Imperial College, London, United Kingdom), M. Mourad, A. Celaya Sanfiz, M. Mokhtar, A. Asiri, S.N. Basahel, S.A. Al-Thabaiti, A.O. Alyoubi, N. Skipper, M. Shaffer*

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- A31-P-2-08** (1111) The role of boundary in the migration of point defects in graphene ribbons  
*W. Zhang (Shanghai Institute of Applied Physics, Shanghai, China), Z. Xu, P. Huai, Z. Zhu*
- A31-P-2-09** (1109) Hydrogen adsorption and temperature its desorption from graphene-based carbon nanotubes  
*A. Soldatov (Topchiev Institute of Petrochemical Synthesis, Moscow, Russian Federation), O. Parenago*
- A31-P-2-10** (2828) All Around Characterization of Single Wall Carbon Nanotubes by Optical Absorption Spectroscopy  
*S. Ohmori (Japan, Tsukuba, Japan), T. Saito, Y. Asada, M. Yumura, S. Iijima*
- A31-P-2-11** (2177) Using Functional Multiwall Carbon nanotubes for H<sub>2</sub>S sorption  
*M. Ali (Research Institute of Petroleum Industry, Tehran, Iran), R. Morteza, B. Hamidreza*
- A31-P-2-12** (1527) Active iron and titanium oxides on single wall carbon nanotubes by ab-initio calculations  
*M. Gialampouki (University of Ioannina, Ioannina, Greece), C. Lekka*
- A31-P-2-13** (1427) A first principles investigation on different alkali metals of graphite intercalation compounds for hydrogen storage study  
*R. Gunawan (Mulawarman University, Samarinda, Indonesia), M. David, K. Hideaki, M. Martoprawiro, C. Radiman, H. Dipojono*
- A31-P-2-14** (1419) Synthesis of CNTs/indium composite for thermal dissipation applications  
*M. Phan Ngoc (Institute of Materials Science, Vietnam Academy of Science and Technology, Hanoi, Viet Nam), C. Nguyen Van, T. Pham Van, T. Bui Hung, T. Than Xuan, K. Phan Hong*
- A31-P-2-15** (2901) Abnormal propagation of electron wave packets near the Dirac point in graphene  
*J. Dong (Dept. of Physics, Nanjing University, Nanjing, China), Q. Liang, Y. Yan*
- A31-P-2-16** (1462) Nanocomposites based on carbon nanotubes oxidized by solar energy  
*M. Blanco (Fundación Tekniker, Eibar, Spain), M. Lopez, E. Aranzabe, A. Marcaide*
- A31-P-2-17** (2316) Raman investigation of the chemical interaction in composites between multiwalled carbon nanotubes and nanostructured TiO<sub>2</sub> or polypyrrole  
*P. Corio (University of São Paulo, São Paulo, Brazil), F. Inoue, R. Ando*
- A31-P-2-18** (0743) Functionalization Of Multi-Walled Carbon Nanotubes With Covalently Attached (Metallo)Porphyrins  
*M. Lipinska (University of Porto, Porto, Portugal), C. Laia, S. Rebelo, F. Pereira, J. Figueiredo, J. Gomes, C. Freire*
- A31-P-2-19** (2302) Graphene-Butyl rubber Nanocomposites for Sensing and Permeability application  
*K. S.K (University of sud brittany & Mahatma ghandi university, Lorient, France), R. C, J. Hanna, C. M, F. J.F, T. Sabu, G. Yves*
- A31-P-2-20** (2677) The Carbon Nanotubes Formation At Room Temperature As A Result Of The Detachment Of The Gold Nanolayer Fragment From The Glass Substrate  
*O.N. Sidelnikova (Institute if Solid State chemistry and Mechanochemistry, Novosibirsk, Russian Federation), A.N. Salanov, A.N. Serkova*
- A31-P-2-21** (1091) Peculiarities of chemical sensing by polymer-MWCNT composite  
*G. Sakale (Riga Technical University, Riga, Latvia), M. Knite, I. Aulika, V. Teteris*
- A31-P-2-22** (0449) Carbon coated Cu particles for ink-jet inks  
*J. Sarlin (VTT, Espoo, Finland), J. Forsman, K. Eiroma, P. Koskela, E.-L. Hult Mori, T. Sipiläinen-Malm, A. Auvinen, J. Jokiniemi*
- A31-P-2-23** (2811) Graphene growth on copper by CVD using liquid, gas and solid as precursors  
*M. Sijaj (UQAM, Montreal, Canada), A. Guermoune, T. Chari, S.S. Sabri, J. Guillemette, H.S. Skulason, T. Szkopek*
- A31-P-2-24** (2791) Interplay between intrinsic and contact phenomena in carbon nanotube devices: from exponential magnetoresistance to chemical sensing.  
*G. Fedorov (National Research Centre "Kurchatov Institute", Moscow, Russian Federation), Y. Yang, A. Boyd, D. Jimenez, S. Roche*
- A31-P-2-25** (1300) Investigation and optimization of Multi Walled Carbon Nanotube (MWCNT) dispersions in different solvents for high performance polymers nanofiltration membranes  
*B.P. Moller (Fraunhofer IGB, Stuttgart, Germany), A. Stemmler, J. Barz, U. Vohrer, T. Hirth*
- A31-P-2-26** (2777) Complex Nanostructures from Layered Metal Chalcogenides  
*W. Tremel (Johannes Gutenberg-Universität, Mainz, Germany), A. Yella, F. Hoshyargar, M. Panthöfer, E. Mugnaioli, U. Kolb*
- A31-P-2-27** (2162) Effects of hydrogenation on the electronic properties of graphene  
*S.H. Lim (Institute of Chemical and Engineering Sciences, Singapore, Singapore)*
- A31-P-2-28** (0376) The effects of Holstein phonon on Graphene susceptibility  
*H. Mousavi (Razi University, Kermanshah, Iran)*
- A31-P-2-29** (1716) Effect of the carbon nanotubes on the electrical and thermal properties of epoxy matrix nanocomposites  
*A. Boczkowska (Warsaw University of Technology, Warsaw, Poland), E. Ciecierska, K. Kurzydłowski*
- A31-P-2-30** (0430) Synthesis and characterisation of Inorganic Fullerene WS<sub>2</sub>@SiO<sub>2</sub> core-shell nanostructures  
*H. Chang (University of Exeter, Exeter, United Kingdom), F. Xu, Y. Xia, Y. Zhu*
- A31-P-2-31** (0248) The Use of NH<sub>3</sub> to Promote the Production of Large-Diameter Single-Walled Carbon Nanotubes with a Narrow (n,m) Distribution  
*Z. Zhen (Aalto univeristy, Espoo, Finland)*
- A31-P-2-32** (0144) Water-free, high-throughput surface functionalization of MWCNTs by atmospheric pressure plasma jet treatment  
*U. Lommatzsch (Fraunhofer IFAM, Bremen, Germany), D. Kolacyak, J. Ihde*
- A31-P-2-33** (0567) Molecular scale quantum structures with carbon nanotube/molecule heterojunctions  
*A. Hida (RIKEN, Saitama, Japan), K. Ishibashi*

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### Topic Area A : Functional Materials

- A31-P-2-34** (0973) Synthesis of carbon nanotubes by combustion: parametric studies and spectroscopic diagnostics of the reaction zone  
*B. Bendjemil (Univ. Badji-Mokhtar Annaba, Annaba, Algeria), A. Dobrowska, A. Huczko*
- A31-P-2-35** (2128) Dynamic in-situ Characterization of Carbon Nanostructures under electron irradiation  
*L. Sun (Southeast University, Nanjing, China), O. Cretu, J.A. Rodríguez-Manzo, F. Banhart*
- A31-P-2-36** (2100) Scaling up of WS<sub>2</sub> nanomaterials synthesis  
*F. Xu (University of Exeter, Exeter, United Kingdom), N. Cheval, H. Chang, A. Fahmi, R. Brooks, Y. Zhu*
- A31-P-2-37** (0186) Effect of Catalyst Preparation Method on the Growth of Carbon Nanotubes in SiC Fiber Fabrics  
*X. Zhou (National University of Defence Technology, Changsha, China)*
- A31-P-2-38** (0185) Enhancement of heat dissipation properties of functionalized carbon nanotubes in epoxy composites for electrically conductive adhesives (ECAs)  
*J. Kim (Chung-Ang University, Seoul, Korea - south), M. Kim*
- A31-P-2-39** (3091) Controlled growth of graphene for flexible and transparent conducting films by rapid heating & cooling CVD at low pressure  
*D.D. Nguyen (National Tsing-Hua University, Hsinchu, Viet Nam)*
- A32**  
**Beyond mesoporous materials**
- A32-P-2-01** (1081) X-ray absorption of ZnO nanowires: a local structure study  
*G. Martinez-Criado (ESRF, Grenoble, France), J.A. Sans, I. Minguez-Bacho, M. Hernandez-Velez, A. Labardor*
- A32-P-2-02** (2923) Thermal degradation of differently substituted Polyhedral Oligomeric Silsesquioxane (POSS) nanoparticles  
*I. Blanco (University of Catania, Catania, Italy), F.A. Bottino, P. Bottino, M.A. Chiacchio*
- A32-P-2-04** (0503) A Diels-Alder reaction based approach to graft metal complexes on porous carbons  
*S. El Mourabit (ICSM, Bagnols Sur Cèze, France), F. Goettmann, A. Grandjean, H. Kaper*
- A32-P-2-05** (0729) Porous silicon nanoparticles functionalized for photodynamic therapy  
*E. Secret (ICGM, Montpellier, France), J.O. Durand, L. Raehm, A. Morere, M. Garcia, M. Maynadier, M.J. Sailor, F. Cunin*
- A32-P-2-06** (0707) Mesoporous Titania Powders and Thin Films with Narrow Pore Size Distribution and Improved Thermal Stability: Opening the Path to Sharp Cut-off Membranes for Solvent Filtration.  
*S.J. Herregods (VITO NV, Mol, Belgium), M. Mertens, R. Kemps, M.K. Van Bael, P. Cool, A. Buekenhoudt, V. Meynen*
- A32-P-2-08** (0828) Monolithic Electrode Based on Hierarchically Porous Carbon for Supercapacitor  
*G. Hasegawa (Kyoto University, Kyoto, Japan), K. Kanamori, K. Nakanishi*
- A32-P-2-09** (2741) sasing properties of mesoporous SBA-15/In<sub>2</sub>O<sub>3</sub> nanocomposites fabricated by AC electrophoretic deposition  
*P. Sowti Khiabani (material and energy research cent, Karaj, Iran), E. Marzbanrad, C. Zamani, R. Babak*
- A32-P-2-10** (0813) Catalytic combustion of methane and NO<sub>x</sub> reduction over mesoporous silica supported palladium  
*J. Bassil (Universite Libanaise, Jdeideh, Lebanon), M. Boutros, P. Da Costa*
- A32-P-2-11** (0473) Synthesis Of Mesoporous Carbon Via Sol-Gel Process Using Resorcinol And Formaldehyde  
*Y. Moussaoui (Science faculty, Zarroug, Tunisia), S. Nouri, E. Elaloui, R. Ben Salem*
- A32-P-2-12** (0808) The Optical Properties of Cyanine Dye Embedded in a Macroscopically Ordered Set of Parallel Nanotubes  
*A. Starovoytov (St.Petersburg State University of Information Technologies, Mechanics and Optics, St.Petersburg, Russian Federation), V. Belotitskii, Y. Kumzerov, A. Syssoeva*
- A32-P-2-13** (2981) TiO<sub>2</sub> NANOPARTICLES PREPARED BY SOL-GEL PROCESS FOR USE IN LIQUID CRYSTAL AS A MULTIFUNCTIONAL SYSTEM.  
*E. Berbel Manaia (Faculdade de Ciências Farmacêuticas - UNESP, Araraquara, Brazil), R. Cristina Kiatkoski Kamins, C. Valentim Santilli, S. Helena Pulcinelli, L. Aparecida Chiavacci*
- A32-P-2-14** (0682) Ag and Au nanoparticles/mesoporous silica composites for the simultaneous recovery of CO<sub>2</sub> and CO  
*V. Hornebecq (Laboratoire Chimie Provence, Marseille, France), E. Bloch, F. Chaspoul, P. Llewellyn*
- A32-P-2-15** (2347) Probing the Phosphoproteome of HeLa Cells Using Nanocast Porous TiO<sub>2</sub> and SnO<sub>2</sub> Metal Oxide Microspheres for Phosphopeptide Enrichment  
*J.-H. Smätt (Åbo Akademi University, Turku, Finland), A.O. Leitner, M. Sturm, O. Hudecz, M. Mazanek, M. Lindén, W. Lindner, K. Mechtler*
- A32-P-2-16** (1122) Use of 1,2 pentane epoxide in the sol-gel synthesis of metallic oxide aerogels  
*M. Lemoine (CEA Le Ripault, Mont, France)*
- A32-P-2-17** (0354) Control of orientation of aminopropyl tethers in mesoporous silica toward selective adsorptions of m- and p-phthalaldehydes  
*H. Yoshitake (Yokohama National University, Yokohama, Japan), K. Teruaki*
- A32-P-2-19** (0431) Non-Hydrolytic Sol-Gel Processing of Mesoporous Mixed Oxide Catalysts  
*P.H. Mutin (CNRS, Montpellier, France), K. Bouchmella, V. Hulea, D. Debecker*



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- A32-P-2-20** (0299) A novel procedure for the preparation of mesoporous crystalline tin oxide films with large pores and fully crystalline walls  
*D. Fattakhova-Rohlfing (J. Heyrovsky Institute of Physical Chemistry, Prague 8, Czech Republic), J. Rathousky*
- A32-P-2-21** (1985) Selective Functionalization of Nanopatterned TiO<sub>2</sub>/ZnO@SiO<sub>2</sub> films  
*Q. Xu (Åbo Akademi University, Turku, Finland), J. Mikael, S. Jan-Henrik, G. David, L. Mika*
- A32-P-2-22** (1990) ZnO: morphology and growth  
*M. Bitenc (NIC, Ljubljana, Slovenia), Z. Crnjak Orel, P. Podbršček, P. Dubček, S. Bernstorff, G. Dražič*
- A32-P-2-23** (1953) Influence of electrolytes and pH on aggregation of titania nanocrystals  
*O. Pavlova-Verevkina (Karpov Institute of Physical Chemistry, Moscow, Russian Federation), L. Ozerina, N. Golubko, A. Sumbatov*
- A32-P-2-24** (1779) Wall thickness prediction in precipitated precursors of mesoporous materials  
*A. Grandjean (CEA, Bagnols Sur Ceze, France), G. Toquer, T. Zemb*
- A32-P-2-25** (1787) Solid state NMR to evidence chirality in well-ordered silicas templated by triblock copolymers  
*D. Anne (UPMC, Ivry, France), L. Guillaume*
- A32-P-2-26** (0271) Obtaining of thin films and powders of functional materials based on zirconium or europium oxides  
*N. Steblevskaya (Institute of Chemistry FEBRAS, Vladivostok, Russian Federation), M. Medkov*
- A32-P-2-28** (0193) Structural evolution of mesoporous silica-zirconia upon exposure to biological conditions  
*T. Fontecave (UPMC, Paris, France), C. Boissière, C. Sanchez*
- A32-P-2-29** (1561) A new approach to hybrid "organic-inorganic" mesoporous membranes for PEMFC  
*J. Mosa (Ceramic and Glass department, Madrid, Spain), Y. Castro, A. Duran, M. Aparicio*
- A32-P-2-30** (0274) A Novel Mesoporous Resin-supported Palladium Complexes Catalyst for a Copper- and Phosphine-Free Sonogashira Coupling Reaction  
*H. Wu (East China Normal University, Shanghai, China), Y. Li, Y. Liu, P. Wu*
- A32-P-2-31** (1503) Mesoporous TiO<sub>2</sub> -anatase films for photocatalytic oxidation of methyl ethyl ketone (MEK)  
*N. Arconada (Ceramic and glass Institute, Madrid, Spain), Y. Castro, V. Héquet, A. Durán*
- A32-P-2-32** (2888) Secondary electrons in STMX and MEB to detect Fe nanoparticles and surface deposits in Fe/SBA  
*A. Davidson (UPMC, Ivry, France), C. Cornu, P. Beaunier, J.-L. Bonnardet, J. Luning, S. Abramson*
- A32-P-2-33** (2874) Titanium oxide nano-structuration at low temperature  
*M. Richard-Plouet (Institut des Matériaux Jean Rouxel, Nantes, France), L. Brohan, M. Le Granvalet, H. Terrisse*
- A32-P-2-34** (1130) Pseudomorphic Transformation of Silica Monoliths with Hierarchical Porosity and Application in Flow Catalysis  
*A. Sachse (Institut Chrles Gerhardt Montpellier, Montpellier, France), M. Manko, A. Galarnéau, W. Makowski, B. Coq, F. Fajula*
- A32-P-2-35** (0165) Synthesis of Porous Functional Materials Using the Versatile Reactivity of the Dicyanamide Anion  
*J.P. Paraknowitsch (Berlin Technical University, Berlin, Germany), A. Thomas*
- A32-P-2-36** (0124) Effect Of Drying Processes On The Texture Of Silica Gels  
*H. Satha (University of Guelma, Algeria., Guelma, Algeria), K. Atamnia, F. Despetis*
- A32-P-2-37** (2411) Mesoporous Silica as Fluorescent Markers for Biomedical Applications  
*A. Duchanoy (Åbo Akademi, Turku, Finland), J. Rosenholm, L. Li, T. Gulin, M. Linden*
- A32-P-2-38** (0118) Mesostructured thin films as building blocks for multifunctional photonic crystals  
*N. Hidalgo Serrano (SPANISH NATIONAL RESEARCH COUNCIL, Sevilla, Spain), M. Calvo, H. Miguez*
- A32-P-2-39** (0312) Nanoperforated ceramic membrane as mask for high density magnetic data storage  
*M. Faustini (LCMCP, Paris, France)*
- A32-P-2-40** (0010) The Evolution Of The Catalytical Properties Of The Mesoporous Silica That Are Doped To Titanium In Function Of Hydrophobia Grafting On The Surface Of These Materials  
*M. Makhlof (laboratoire de chimie des matériaux, Oran, Algeria), R. Hamacha, F. Villieras, A. Bengueddach*
- A32-P-2-41** (0098) Mechanical properties of nanostructured Cu-Al-Ni shape memory alloy  
*M. Izadinia (amirkabir univ., Tehran, Iran), K. Dehghani*
- A32-P-2-42** (0074) Porous Titania Ionic Nanoparticle Networks  
*M.-A. Neouze (Vienna University of Technology, Vienna, Austria), M. Litschauer, M. Puchberger, H. Peterlik*
- A32-P-2-43** (1756) The preparation of silica coated ZnO nanoparticles  
*D. Japic (national institute of chemistry, Ljubljana, Slovenia), Z. Crnjak Orel, I. Djerdj, M. Marinšek*
- A32-P-2-44** (0011) Grafting Of Trimethylchlorosilane On The Walls Of Periodical Mesoporous Silica Of Mcm-48, Mcm-41 And Fsm-16 Type: Application To Phenol Adsorption  
*M. Makhlof (laboratoire de chimie des matériaux, Oran, Algeria), R. Hamacha, F. Villieras, A. Bengueddach*
- A32-P-2-45** (1085) Deep eutectic solvents as templates for the preparation of hierarchical porous carbon monoliths  
*D.M. Francisco (ICMM-CSIC, Madrid, Spain), C. Daniel, F. Maria L., P. Fernando, R. Jose M., G. Maria C.*
- A32-P-2-46** (1194) Au/TiO<sub>2</sub> nanostructures: Solvothermal synthesis and photocatalytic application  
*X. Wang (CSIRO, Melbourne, Australia), T. Dornom, M. Blackford, R. Caruso*
- A32-P-2-47** (0023) Nanocrystalline ZnO thin films on porous silicon/silicon substrates deposited by RF magnetron sputtering  
*C. Lee Siang (Universiti Sains Malaysia, Penang, Malaysia), H. Zainuriah*
- A32-P-2-48** (0022) Aqueous heavy metals removal on amine-functionalized Si-MCM-41 and Si-MCM-48.  
*A. Benhamou (USTMBO, Orab, Algeria), M. Baudu, Z. Derriche, J. Basley*

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- A32-P-2-49** (1482) Surface modification of mesoporous silica nanoparticles with 3-isocyanatopropyl trichlorosilane as coupling agent in mild conditions  
*W. El Malti (Institut Charles Gerhardt Montpellier, Montpellier, France), O. Mongin, M. Blanchard-Desce, L. Raehm, J.-O. Durand*
- A32-P-2-50** (3052) Fluorescence detection of the anti-tumoral drug emodin adsorbed on silver nanoparticles and loaded in nanostructured porous silicon  
*M. Hernandez (Instituto de Estructura de la Materia, CSIC, Madrid, Spain), P. Sevilla, G. Recio, C. Domingo, M. Manso-Silvan, R.J. Martin-Palma, J.V. Garcia-Ramos*
- A41**  
**Biopolymers and biocomposites**
- A41-P-2-01** (0269) Mechanical and biological properties of the polymer surgical cement modified with glassy carbon  
*A. Balin (Silesian University of Technology, Katowice, Poland), A. John, K. Sobczyk*
- A41-P-2-02** (1074) Effect Of Hydroxyapatite Addition On The Physical Properties Of Alumina-Hydroxyapatite Biocomposites  
*S. Yilmaz (Istanbul University, Istanbul, Turkey), A. Yelten, F.N. Oktar*
- A41-P-2-03** (2343) Synthesis and Characterization of a Novel Soluble Chitosan Derivative with Phosphoryl  
*P. Liu (Zhengzhou University, Zhengzhou, China), L. Ma*
- A41-P-2-04** (2467) Structure and mechanical properties of starch/clay composites prepared by solution and extrusion methods  
*J. Dlouhý (The University of West Bohemia, Plzeň, Czech Republic), P. Duchek, R. Cerstvý*
- A41-P-2-05** (0732) Treatment Of Osteomyelitis With New Antibiotic-Loaded Pmma-Based Composites: Microbiological And Pharmacological Investigations.  
*G. Gianluca (Istituto Ortopedico Rizzoli, Bologna, Italy), S. Maria, S. Francesca, F. Milena, B. Veronica, G. Paolo, S. Vittorio, B. Anna, B.M. Elisa*
- A41-P-2-06** (0736) Polymethylmethacrylate intramedullary nails in experimental osteomyelitis model (MRSA infection): bone tissue distribution of Gentamicin and Vancomycin.  
*G. Gianluca (Istituto Ortopedico Rizzoli, Bologna, Italy), B.M. Elisa, B. Anna, F. Milena, S. Maria*
- A41-P-2-07** (0883) Soil Burial Degradation Of New Bio-Based Additives  
*N. Lardjane (UMMTO, Freha, Algeria), N. Belhaneche, V. Massardier*
- A41-P-2-08** (2055) Nanocrystalline cellulose II: influence of time of hydrolysis  
*M.A. Silva Spinacé (Universidade Federal do ABC, Santo André - Sp, Brazil), D. Gonzales, C.S. Lambert*
- A41-P-2-09** (2294) Cross-linking of the composite of polyacrylic acid/carboxymethylstarch by the selected chemical and physical factors  
*B. Grabowska (AGH University of Science and Technology, Kraków, Poland), M. Holtzer, A. Bobrowski, E. Olejnik*
- A41-P-2-10** (1906) Study By Atr Ft-Ir Of Novel Cross-Linked Amino-Resins: Understanding New Organic Porous Materials  
*C. Egger (Keele University, Keele, United Kingdom), L. Meghani, D. Kaesmayr*
- A41-P-2-11** (3034) Incorporation Of Rosemary Essential Oil Into Chitosan  
*M. Rezaei (University of Sabzevar, Sabzevar, Iran), A. Farzi, M. Abdillahi*
- A41-P-2-12** (3046) Biomimetic Nanocomposites For Improving Barrier Properties Of Biopolymers  
*L. Boesel (EMPA, St. Gallen, Switzerland), M. De Geus, L. Thöny-Meyer*
- A41-P-2-13** (3037) Unraveling the Role of Acetylation in the Moisture Absorption Capacity of Cellulose  
*A.G. Cunha (Wallenberg Wood Science Center - KTH, Stockholm, Sweden), Q. Zhou, L. Berglund*
- A41-P-2-14** (3073) Layer-by-Layer Assemblies of Redox Active Polyelectrolyte-Quinone Thin Films  
*A. Viinikanoja (University of Turku, Turku, Finland), M. Räsänen, M. Kaunisto, K. Viljanen, M. Salomäki, J. Lukkari*

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Topic Area A : Functional Materials

- A42 Functional Polymeric Hybrid Materials**
- A42-P-2-01** (0030) Spectral, electrical and morphological characterization of PANI film doped with sulfanilic acid  
*N. Fodil Cherif (Macromolecular Chemistry laboratory , Algiers , Algeria)*
- A42-P-2-02** (0713) Development of 3D textiles structures for impact-related applications  
*M. Amiot (ENSAIT, Roubaix , France), A. Kolopp, M. Lewandowski, A. Perwuelz*
- A42-P-2-03** (1218) Synthesis and Structure of the Polymeric Hybrid Material Based on Polydiphenylamine and Cu Nanoparticles  
*S. Ozkan (A.V. Topchiev Institute of Petrochemical Synthesis, Moscow, Russian Federation), G. Karpacheva, E. Dzidziguri*
- A42-P-2-04** (2810) Gamma-Irradiation Crystalline Structure Stability of Polyethylene Composites  
*U. Gafurov (Institute of Nuclear Physics, Tashkent, Uzbekistan), N. Mukhtarova*
- A42-P-2-05** (1384) Magnetic ionogels for fluid handling in microfluidic devices  
*B. Ziolkowski (Dublin City University, Dublin, Ireland), R. Byrne, D. Diamond*
- A42-P-2-06** (2641) Functionalization of inorganic liquid crystals  
*V. Maurice (ecole polytechnique, Palaiseau, France), J. Kim, K. Lahilil, J.-P. Boilot, T. Gacoïn*
- A42-P-2-07** (1375) Amplified detection of carboxylic acid-containing drugs in water using chitosan/porous silicon hybrid system  
*B. Sciacca (ICGM, Montpellier, France), E. Secret, S. Pace , P. Gonzales, F. Geobaldo, F. Quignard, F. Cunin*
- A42-P-2-08** (2624) Tailoring the architecture of macroporous conducting polymers for optimized functionality  
*M. Heim (ISM / Nsysa, Pessac, France), S. Reculusa, N. Mano , S. Ravaine, A. Kuhn*
- A42-P-2-09** (2708) Magnetodeformational effect of magnetic field controlled elastomer and its possible applications  
*G. Stepanov (GNIChTEOC, Moscow, Russian Federation), E. Kramarenko , D. Semerenko*
- A42-P-2-10** (1273) Functionalization of Low Density Polyethylene (LDPE) for the development of bioactive antilisterial food packaging  
*L. Karam (University of Lille 1, Villeneuve D'Ascq , France), N.-E. Chihib , C. Jama , P. Dhulster*
- A42-P-2-11** (2218) Combinatorial Method for Processing Hybrid Organic-Inorganic Materials as Films - Effects of Thickness and Temperature  
*C. Rufier (IMP@INSA, Villeurbanne, France), Q. Flamant, G. Martignago, J.-F. Gérard*
- A42-P-2-12** (1177) Elaboration of PVDC-based composite latexes starting from epoxy-functionalized seeds for use as waterborne barrier films with improved thermal stability  
*J. Garnier (Institut Charles Gerhardt - UMR 5253, Montpellier, France), P. Lacroix-Desmazes, A. Van Herk, P.-E. Dufils, J. Vinas, Y. Vanderveken*
- A42-P-2-13** (2945) New polyether ether ketone (PEEK) with silver for implants.  
*J. Girard (Univeristy of Fribourg, Fribourg, Switzerland), K.M. Fromm*
- A42-P-2-14** (2540) Influence Of Montmorillonite Nanoparticles On Polychloroprene Adhesives Properties  
*L. Alexandrescu (1National Research & Development Institute for Textile and Leather – Division: Leather and Footwear Research Institute, Bucharest, Romania), M. Ficai, A. Luminita Florica, L. Minodora , M. Marian, I. Emil Ghiocel*
- A42-P-2-15** (2045) The Effect of Nickel on D.C Electrical Properties for (PVC-Ni) Composites  
*H. Abduljalil (Babylon University, College of Science, Babylon, Iraq), A. Hashim , A. Jewad Algidsawi*
- A42-P-2-16** (1331) Effect of layering Pattern on mechanical properties of Jute/Oil palm EFB fibre reinforced epoxy composites  
*M. Jawaid (Universiti Sains Malaysia, Georgetown, Malaysia), H. Abdul Khalil, A. Abu Bakar*
- A42-P-2-17** (1977) Functional Hybrid Nanomaterial Structures as Drug Delivery System  
*A. Zarrabi (Institute for Nanoscience and Nanotechnology, Tehran, Iran), M. Vossoughi, M. Adeli, M.A. Shokrgozar*
- A42-P-2-18** (0910) A new direct route for the preparation of stable colloids of LDH-drug hybrids using hydrophilic block copolymers  
*D. Tichit (ICG Montpellier, Montpellier, France), G. Layrac, C. Gerardin*
- A42-P-2-19** (2528) Processing and Performance of highly filled graphite/epoxy composites  
*E. Dessertenne (INSA de Lyon, Villeurbanne , France), J. Galy, J.-F. Gerard, P. Toneguzzo, B. Alexandre, G. Delacourt, D. Rocle*
- A42-P-2-20** (2484) Properties of rubber compounds containing ozone devulcanized regenerate  
*F. Egle (Kaunas University of Technology, Kaunas, Lithuania), M. Daiva , Z. Kristina*
- A42-P-2-21** (1058) Photo-degradation of luminescent YAG:Tb/PVP nanocomposites  
*A. Potdevin (Clermont University, Aubiere, France), G. Chadeyron, S. Thérias*
- A42-P-2-22** (2450) Functionalizing of high-performance polymers by thermal spraying  
*C. Rupprecht (Institute of materials science and engineering, Chemnitz, Germany), G. Paczkowski, W. Bernhard, R. Winkler*
- A42-P-2-23** (1707) Compatibilisation Studies of Immiscible Blends Based on Poly (Ethylene Glycol)  
*H. Bendaikha (University of ORAN, Oran, Algeria), S. Ould Kada*
- A42-P-2-24** (0904) Study of news PP/talc composites: Relations between Structure-Mechanical properties  
*H. Satha (University of Guelma, Algeria., Guelma, Algeria), D. Frihi, K. Masenelli-Varlot, G. Vigier, S. Gherib*
- A42-P-2-27** (1537) Photochemically induced micelles of double hydrophilic block copolymers for the synthesis of new nanostructured hybrid materials  
*D. Houssein (Ecole Nationale Supérieure de Chimie de Montpellier, Montpellier, France), C. Gerardin, N. Marcotte*
- A42-P-2-28** (2174) Properties of polymer composites reinforced of silver particles.  
*J. Wieczorek (Silesian University of Technology, Katowice, Poland), J. Labaj, G. Siwiec, B. Oleksiak*

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- A42-P-2-29** (1516) Uranyl ion transport intermediated by a liquid membrane containing p-hexasulfonic calyx[6] arene acid  
*I.-C. Popescu (R&D NATIONAL INSTITUTE FOR METALS AND RADIOACTIVE RESOURCES-ICPMRR, Bucharest, Romania), M. Mateescu, M. Stoica, G. Milu*
- A42-P-2-30** (0782) Elaboration of TiO<sub>2</sub>- Xylan based Nanocomposites via Sol-Gel Process  
*F.-Z. Belmokaddem (Institut de recherche sur la catalyse et l'environnement (RCELYON), Villeurbanne, France), C. Pinel, S. Daniele, P. Huber, M. Petit-Conil, D. Dasilva Perez*
- A42-P-2-31** (0037) Thermal and electrical characterization of conducting composite based on PANI/zeolithe  
*Z. Safidine (UER of Applied Chemistry, Algiers, Algeria)*
- A42-P-2-32** (0495) Multifunctional nanocomposite for UV and bacterial protection  
*J. Godnjavec (Center of Excellence Polymer Materials and Technologies (CO PolIMaT), Ljubljana, Slovenia), B. Znoj, B. Music, N. Veronovski, P. Venturini*
- A42-P-2-33** (1486) Silicon nanowire arrays in a polymer thin film: promising nanocomposite materials for solar energy and environmental sensors  
*J. Davenas (Université de Lyon, Villeurbanne, France), E. Beyou, A. Balloffet, D. Cornu*
- A42-P-2-34** (0485) Investigation of the efficiency against aluminium alloys corrosion of Sol-Gel coatings containing boehmite nanoparticles  
*O. Jaubert (Toulouse University, Toulouse, France), R. Bleta, M. Gressier, P. Lenormand, J.-P. Bonino, F. Ansart, M.-J. Menu*
- A42-P-2-35** (1496) Synthesis of organic-inorganic hybrid materials: proton conductivity and multifunctionality.  
*A. Cheikh Ibrahim (institut charles gerhardt, Montpellier, France), S. Devautour, D. Naoufal, A. Mehdi*
- A42-P-2-36** (0478) In-situ studies of the stability of Ag-nanoparticles in perfluorinated thin films  
*C. Ebbert (University of Paderborn, Paderborn, Germany), K. Yliniemi, G. Prof. Grundmeier*
- A42-P-2-37** (1553) Mechanical and thermodynamic characterization of hybrid PDMA hydrogels  
*C. Wable (ESPCI, Paris, France), K. Habib, J.-B. D'Espinose, D. Hourdet, N. Lequeux, R. Faure*
- A42-P-2-38** (0375) A competitive transport of copper and zinc across fixed sites membranes using crowns ethers as carriers  
*O. Arous (Faculté de Chimie, Alger, Algeria)*
- A42-P-2-39** (0521) Photo- And Thermo-Degradation Of Cellulose Fibers Reinforced Polyethylene Composites  
*R. Chollakup (CNRS, UMR 6505, Laboratoire de Photochimie Moléculaire et Macromoléculaire (LPMM), Aubière, France), F. Delor-Jestin, A. Rivaton, S. Thérias, J.-L. Gardette*
- A42-P-2-40** (2329) Environmental aging of scrap multilayer film / curaua fibers composites  
*M.-A. De Paoli (Universidade Federal do ABC, Santo André - Sp, Brazil), M. Spinacé*
- A42-P-2-41** (0358) Piezoelectric ceramic-polymer composites  
*I. Babu (Eindhoven University of Technology, Eindhoven, Netherlands), G.D. With*
- A42-P-2-42** (2304) Planar phospholipid bilayers stabilized in layered double hydroxides: physical characterization  
*S. Begu (UMR 5253, equipe MACS, Montpellier, France), A. Aubert, T. Azais, P. Bertani, D. Tichit, D. Lerner, J.M. Devoisselle*
- A42-P-2-43** (0261) Formation of silver nanoparticles onto plasma modified polymeric surfaces  
*E. Grimoldi (Università degli Studi di Milano Bicocca, Milano, Italy), S. Zanini, C. Riccardi*
- A42-P-2-44** (0208) Indentation study of potential candidates for new packaging barrier films  
*G. Berthout (CSM Instruments, Peseux, Switzerland), J. Nohava, L. Tighzert, O. Trabelsi, O. Jbara, N. Choisselle*
- A42-P-2-45** (2132) Dielectric Breakdown Of Membranes: A Feasibility Study Of Using Electric Field For Changing The Microstructure Of Membranes  
*H. Coster (University of Sydney, Sydney, Australia), T. Darestani Farahani, T. Chilcott*
- A42-P-2-46** (2032) Nanostructured high-performance biocomposites based on Tamarind seed xyloglucan  
*J. Joby Kochumalayil (Royal Institute of Technology (KTH), Stockholm, Sweden)*
- A42-P-2-47** (2276) Aging Effects Of Pvp As Solid Polymer Electrolyte In Thin Film Lithium Batteries And Supercapacitors  
*E. Navarrete (University of Malaga, Malaga, Spain), J. Rodríguez, L. Sánchez, F. Martín, E.A. Dalchiele, J.R. Ramos-Barrado*
- A42-P-2-48** (2039) Barium titanate polymeric composites: preparation and dielectrical characterization  
*M. Lombardi (Italian Institute of Technology, Torino, Italy), A. Guerriero, M. Sangermano*
- A42-P-2-49** (0257) Evolution Of The Thermo-Mechanical Properties Of Pcb Fr4 Composites During Long Aging  
*M. Le (LNE, Trappes, France), J. Idrac, A. Duclerget-Baudequin, E. Dargent, A. Guillet*

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Topic Area A : Functional Materials

- A53 MEMS, NEMS for Sensorial and actorial materials**
- A53-P-2-01** Multi-walled Carbon Nanotube- HKUST-1-Epoxy Composite Sensor for Non-Enzymatic Electrochemical Determination of Glucose  
(2088)  
*A. Remes (Politehnica University of Timisoara, Timisoara, Romania), F. Manea, A. Baciu, A. Martinez-Joaristi, J. Gascon, J. Schoonman*
- A53-P-2-02** Zinc (II) oxide-Titanium (II) oxide Nanocomposite humidity sensor  
(0070)  
*N. Pandey (University of Lucknow, Lucknow, India), K. Tiwari*
- A53-P-2-03** Improving the sensitivity of polymer-PZT particulates composites via di-electrophoresis  
(2084)  
*N. James (Technical University Delft, Delft, Netherlands), D. Van Den Ende, P. Groen, S. Van Der Zwaag*
- A53-P-2-04** Sol-Gel Derived Thin-film Semiconductor Hydrogen Gas Sensor for the automotive, fuel cells and stationary applications  
(2987)  
*V. Aroutiounian (Yerevan State University, Yerevan, Armenia)*
- A53-P-2-05** Material integrated sensor films based on photoluminescent quantum dots  
(1310)  
*J. Martin (Fraunhofer Institut for Electrical Nano Systems, Chemnitz, Germany), D. Piasta, T. Kiessling, T. Otto, T. Gessner, U. Staudinger, D. Emrah, P. Pötschke, B. Voit*
- A53-P-2-06** sensor based concept for composite moulding  
(2656)  
*Z. Ghrairi (BIBA GmbH, Bremen, Germany)*
- A53-P-2-07** Gravimetric controlled infrared drying system for thick photoresist layers  
(1989)  
*M. Schönfeld (Westfälische Hochschule Zwickau, Zwickau, Germany), J. Grimm, J. Saupe, J. Vogel, S. Lemke, B. Löchel, H. Alßmann*
- A53-P-2-08** Flow-through gas sensor based on polyaniline-functionalized polycarbonate filters  
(1695)  
*P. Kunzo (Institute of Electrical Engineering - Slovak Academy of Sciences, Bratislava, Slovak Republic), V. Šmatko, P. Lobotka*
- A53-P-2-09** Fabrication of polymer microlens by replication of ionic liquid microdroplets  
(1929)  
*J. Perera-Núñez (University of Extremadura, Badajoz, Spain), A. Méndez-Vilas, L. Labajos-Broncano, M.L. González-Martín*
- A53-P-2-10** Research on ultrafast wavelength conversion device using Tellurite glass systems  
(0575)  
*S. Mitachi (Tokyo Univ. of Technology, Tokyo, Japan), Y. Nagahara*
- A53-P-2-11** The use of ionic liquid droplets as masters in Soft lithography  
(1926)  
*J. Perera-Núñez (University of Extremadura, Badajoz, Spain), A. Méndez-Vilas, L. Labajos-Broncano, M.L. González-Martín*
- A53-P-2-12** Room temperature optical, capacitance-voltage and magnetic properties of InAsSbP-based quantum dots/nanopits devices  
(2988)  
*V. Aroutiounian (Yerevan State University, Yerevan, Armenia), K. Gambaryan, V. Harutyunyan, O. Marquardt, E. O'Reilly*
- A53-P-2-13** Development of Direct-Cu Pillar Process in Cu-low k interconnections  
(1013)  
*S.G. Pyo (Chung Ang University, Seoul, Korea - south), S.W. Kim, C.H. Kim, H. Park, D.H. Lee, D.J. Kim, S. Kim*
- A53-P-2-14** Components of optical sensors: modeling and production  
(2486)  
*I. Gražulevičute (Kaunas University of Technology, Kaunas, Lithuania), S. Tamulevičius, T. Tamulevičius, A. Jurkeviciute, R. Šeperys, V. Morkunas, M. Andrulevičius*
- A53-P-2-15** Research and development of Si sensor sensitive elements  
(0977)  
*S. Timoshenkov (Moscow institut of electronic ingenering, Moscow, Russian Federation), O. Orlov*
- A53-P-2-16** AlN as piezoelectric material on flexible substrates for sensor and actuator applications  
(0790)  
*M. Grosser (Saarland University, Saarbruecken, Germany), T. Braun, H. Seidel, D. Feili*
- A53-P-2-18** Design and Test of Ionization Gas Sensors Based on Single Metal Oxide Nanowires  
(2124)  
*H.-R. Francisco (Catalonia Institute for Energy Research (IREC), Sant Adria Del Besos, Spain), P. Juan Daniel, H. Angelika, F. Thomas, M. Gerhard, M. Sanjay, M. Joan Ramon*
- A53-P-2-19** Universal MEMS inclinometer integrated with an automated leveling system  
(1397)  
*A. Timoshenkov (MIET, Moscow, Russian Federation), S. Timoshenkov, A. Golovan, E. Morozova, S. Anchutin, A. Shalimov*
- A53-P-2-20** Chemical sensing properties of ion selective electrodes made of AgGeSe and AgCuGeSe films  
(2582)  
*J.M. Conde Garrido (University of Buenos Aires, Faculty of Engineering, Buenos Aires, Argentine Republic), M.A. Ureña, B. Arcondo*
- A53-P-2-21** Laser Processing of PMMA and Polycarbonate for the purpose of internal fabrication of microfluidic channels  
(2751)  
*A. Ben Azouz (Dublin City University, Dublin, Ireland), S. Karazi, D. Brabazon, M. Vázquez, B. Paul*
- A53-P-2-23** Development Of Micro-Structured Surfaces And Hydrogenated Amorphous Carbon (A-C:H And A-C:H:Si) Thin Films With High Electrical Resistance  
(1225)  
*H. Decho (IWT - Foundation Institute of Material Science Bremen, Bremen, Germany), C. Winkelmann, H.R. Stock, W. Lang*
- A53-P-2-24** Sensing properties of oxygen plasma-treated polyaniline thin films  
(0671)  
*P. Kunzo (Institute of Electrical Engineering - Slovak Academy of Sciences, Bratislava, Slovak Republic), P. Lobotka, J. Stejskal, M. Držik*
- A53-P-2-25** Deposition of Self-Assembled Monolayers in supercritical CO<sub>2</sub>  
(1079)  
*V. Perrut (31 Degrees, Montauban, France), L. Rabbia, P. Pons*
- A53-P-2-26** Research of specific SONOS structure peculiarities for non-volatile memory element medium  
(0641)  
*O. Orlov (JSC Mikron, Moscow, Russian Federation), N. Chelepin*
- A53-P-2-27** Remotely Actuated Micro-Diffuser Pump  
(0089)  
*K. Ajit (Simon Fraser University, Burnaby, Canada), G. B. L, L. D. B, H. J. W, M. D., C. Z.*

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### Topic Area A : Functional Materials

- A53-P-2-28** (2496) Ionic polymer metal composites with embedded NiTi textiles  
*D. Vokoun (Institute of Physics of the ASCR, Prague, Czech Republic), L. Heller, M. Anstett, J. Pilch, M.-F. Hsieh*
- A53-P-2-29** (2512) Sub-nanometer coupling effects in the plasmonic response of individual pairs of spherical gold and cubic silver nanoparticles  
*E. Cottancin (University Lyon 1, Villeurbanne, France), N. Grillet, D. Manchon, C. Bonnet, F. Bertorelle, M. Broyer, M. Hillenkamp, J. Lerme, M. Pellarin*
- A53-P-2-30** (2561) Nano/Micro-Protrusions Selectively Fabricated on Metals by Ar Ion Irradiation  
*M. Chiba (Tohoku University, Sendai, Japan), S.-I. Tanaka*
- A53-P-2-31** (0992) Sensor Network Based on Fibre Optics for Intelligent Sensorial Materials  
*B. Krieg-Brueckner (Deutsches Forschungszentrum für Künstliche Intelligenz, Bremen, Germany), C. Budelmann*
- A53-P-2-32** (0205) Fabrication of well defined, living cell arrays through inkjet printing of cell membrane anchoring molecules  
*Y. Hwa In (Hanyang University, Ansan, Korea - south), C. Young Chan, K. Beob Soo, C. Ji Suk, C. Yong Woo*
- A53-P-2-33** (0438) Paper based optical sensor devices  
*A. Gimenez (Cinvestav Unidad Queretaro, Queretaro, Mexico), J.M. Yáñez-Limón, J.M. Seminario*
- A53-P-2-35** (3027) Traveling Wave-Induced Aerodynamic Propulsive Force Using Active Control Of The Dynamic Shape Of Piezoelectrically-Deformed Plastic Substrates  
*N. Jafferis (Princeton University, Princeton, Nj, USA), H. Stone, J. Sturm*
- A54**  
**Shape Memory Alloys (SMA) – Materials and Devices**
- A54-P-2-01** (1134) Shape variations in composites based on NiTi sheets coated with polyimide layers  
*D. Vokoun (Institute of Physics of the ASCR, Prague, Czech Republic), P. Sysel*
- A54-P-2-02** (0851) Origin of Microstructural Irreversibility in Ni-Ti Based Shape Memory Alloys during Thermal Cycling  
*R. Basu (Indian Institute of Technology Bombay, Mumbai, India), L. Jain, B. Maji, M. Krishnan, K. Manikrishna, I. Samajdar, P. Pant*
- A54-P-2-03** (0820) Annealing effects on shape memory properties in Cu-Al-Ni (Ti) strips obtained by Twin Roll Casting  
*C.E. Sobrero (Instituto de Física Rosario-IFIR, Rosario, Argentine Republic)*
- A54-P-2-04** (2611) First principles study of compound twinning in NiTi martensite  
*P. Sestak (Faculty of Mechanical Engineering, Brno University of Technology, Brno, Czech Republic), M. Cerny, J. Pokluda*
- A54-P-2-05** (2550) Nanoindentation tests of NiTi based Shape Memory Alloys: modeling and experiments  
*C. Maletta (University of Calabria, Arcavacata - Rende (Cs), Italy), F. Furguele, M. Callisti, B.G. Mellor, E. Sgambitterra, R.J. Wood*
- A54-P-2-06** (0622) Design of a functional structure with NiTi shape memory strips  
*M. Merlin (University of Ferrara, Ferrara, Italy), R. Rizzoni*
- A54-P-2-07** (0678) Nitrogen Plasma Immersion Ion Implantation in round wire NiTi SMA  
*E. N. De Camargo (Instituto Tecnológico de Aeronautica, Sao Jose Dos Campos, Brazil), M.M. Silva, L. Pichon, O.D. Rigo, J. Otubo*
- A54-P-2-08** (0673) Ecae Processed Fe-Mn-Si-Cr-Ni-Co(-Ti) Stainless Sma – Effect Of Titanium Addition On The Grain Refinement And Shape Recovery  
*K.A. Käfer (Instituto Tecnológico de Aeronautica, Sao Jose Dos Campos, Sp, Brazil), H.H. Bernardi, J.P. Tosetti, J. Otubo*
- A54-P-2-09** (0954) Influence of ageing on martensitic ordering and stabilization in Cu-Al-Fe shape memory alloys  
*R. T N (IIT Madras, Chennai, India), S. Vedamanickam*
- A54-P-2-10** (0748) Aging of Ni-Ti alloys applied to form superelastic implants  
*H. Morawiec (University of Silesia, Katowice, Poland), Z. Lekston*
- A54-P-2-12** (1321) Comparison of as-deposited and freestanding coherent epitaxial Fe70Pd30 films for the application as magnetic shape memory alloys  
*A. Backen (IFW Dresden, Dresden, Germany), S. Weiss, L. Schultz, S. Fähler*
- A54-P-2-13** (0451) Electron beam melting of Ni-Ti-(X) alloys  
*I. Szurman (VSB-TU Ostrava, Ostrava - Poruba, Czech Republic), M. Kurska, J. Drápala, R. Kocich*
- A54-P-2-14** (2286) Damping properties of a SMA/GFRP composite beam  
*P. Bassani (CNR - National Reserach Council of Italy, Lecco, Italy), C.A. Biffi, N. Lecis, A. Lo Conte, B. Previtali, M. Carnevale*
- A54-P-2-15** (0765) Influence of Sn content on structure and martensitic transformation in Mn50Ni50-xSnx (x = 5, 7.5 and 10) melt-spun ribbons  
*J. Sunol (University of Girona, Girona, Spain), R. Coll, L. Escoda, L. González, W. Rosa, M. Sánchez, B. Hernando*
- A54-P-2-16** (2235) Development of post heat treatments for a hot extruded polycrystalline NiMnGa alloy  
*L. Weisheit (Fraunhofer Institute for Machine Tools and Forming Technology IWU, Dresden, Germany), R. Neugebauer, A. Böhm, I. Navarro, R. Chulist, W.-G. Drossel*
- A54-P-2-17** (0012) Thermomechanical behavior of Ni-Ti wires micro-welded by capacitor-discharge  
*C.J. De Araujo (Universidade Federal de Campina Grande (UFCG), Campina Grande - Pb, Brazil), J.G. Da Silva, E.N. Grassi*
- A54-P-2-19** (0368) Atomic structure and mobility of twin boundaries in 2H martensite  
*A. Ostapovets (Institute of Physics, Praha, Czech Republic), V. Paidar*

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Topic Area A : Functional Materials

- A54-P-2-20** (1150) A preliminary investigation on the cycling stability of snake-like NiTi wires  
*R. Casati (CNR- IENI Unità di Lecco, Lecco, Italy), A. Nespoli, E. Villa, F. Passaretti*
- A54-P-2-21** (0585) Spark plasma sintering of Ni-Al shape memory alloy  
*P. Ochin (CNRS, Thiais, France), G. Monastyrsky, A. Pasko, A. Gilchuk, V. Odnosum, V. Kolomytsev, Y. Koval*
- A54-P-2-22** (2229) Effect of Twin and Magnetic Domain Microstructure on the Magnetic Free Energy and Magnetic Driving Forces in Ni-Mn-Ga  
*A. Likhachev (Institute of Metal Physics NASU, Kiev, Ukraine)*
- A54-P-2-23** (1853) Magnetically controlled martensitic transformation in Ni-Mn-Ga-Co alloys  
*J. Pérez-Landazábal (Universidad Pública de Navarra, Pamplona, Spain), V. Sánchez-Alarcos, V. Recarte, C. Gómez-Polo*
- A54-P-2-24** (1564) Precipitate Influences on the Mechanical Behavior of Spring Smart Actuators  
*C. Gonzalez (Universidade Federal de Pernambuco, Recife, Brazil), C. Oliveira, N. Silva, S. Urtiga Filho, O. Araujo Filho, C. De Araujo*
- A54-P-2-25** (1308) The role of twinning and detwinning processes in shape memory alloys  
*O. Adiguzel (Firat University, Elazig, Turkey)*
- A54-P-2-27** (1499) Structural and thermal analysis of melt-spun alloy ribbons  
*A. Deltell (University of Girona, Girona, Spain), L. Lucas, L. Escoda, J. Sunol, J. García, V. Prida, B. Hernando*
- A54-P-2-28** (1765) Study Electro-Thermomechanical in SMA Actuators Used to Flow Control Valves  
*C. Gonzalez (Universidade Federal de Pernambuco, Recife, Brazil), C. Oliveira, N. Silva, O. Araujo Filho, S. Urtiga Filho, D. Lima, C. De Araújo*
- A54-P-2-29** (0133) Shape memory effect in melt spun Fe-15Mn-5Si-9Cr-5Ni alloys  
*A. Druker (Facultad de Cs Ex e Ingeniería. U. N. de Rosario, Rosario, Argentine Republic), P. La Roca, G. Charca Ramos, P. Vermaut, P. Ochin, J. Malarria*
- A54-P-2-30** (0013) Development of an apparatus for thermal characterization of shape memory alloy micro-actuators using Peltier module  
*C.J. De Araujo (Universidade Federal de Campina Grande (UFCG), Campina Grande - Pb, Brazil), R.P. Reis*
- A54-P-2-31** (1523) Mechanical and nanoindentation behavior of NiTi and NiTi-TiC coatings obtained by thermal spray  
*A. Isalgue (Polytechnical University Catalonia (UPC) and University of Barcelona, Barcelona, Spain), J. Fernandez, N. Cinca, M. Villa, J.M. Guilemany*
- A54-P-2-32** (2112) Transformation and magnetic behaviour of NiMnGa and NiFeGaCo thin films sputter-deposited on MgO (100)  
*I.R. Aseguinolaza (Universidad del País Vasco UPV-EHU, Bilbao, Spain), I. Orue, A.V. Svalov, V.A. Chernenko, S. Besseghini, J.M. Barandiaran*
- A54-P-2-33** (2057) Mechanomagnetic spectroscopy in Ni-Fe-Ga based single and polycrystals  
*M.L. Corro Moya (Universitat de les Illes Balears, Palma, Spain), E. Cesari, S. Kustov, Y. Chumlyakov*
- A54-P-2-34** (2129) Synchrotron radiation-based X-ray diffraction during magnetron co-sputtering of Ni-Ti films  
*R.M. Martins (Instituto Tecnológico e Nuclear (ITN), Sacavém, Portugal), N. Schell, K.K. Mahesh, R. Silva, F.M. Braz Fernandes*
- A54-P-2-35** (0017) Dynamics of twinning processes in ferromagnetic SMA and ferroelectrics  
*E. Faran (Technion, Haifa, Israel), D. Shilo*
- A54-P-2-36** (0059) Effect of titanium addition on shape memory effect of training-free cast Fe-Mn-Si-Cr-Ni shape memory alloys  
*P. Huabei (Sichuan University, Chengdu, China), W. Yuhua, W. Chaoping, S. Panpan, Y. Qinxu*
- A54-P-2-37** (0015) Characterization of a Ti44,8Ni55,2 shape memory strip produced by melting spinning technique  
*W. Benicio De Castro (Universidade Federal de Campina Grande, Campina Grande, Brazil), G. Santos Anselmo, C. José De Araújo*
- A54-P-2-38** (3028) Thermal behavior of mechanically alloyed powders used for producing an Fe-Mn-Si-Cr-Ni shape memory alloy, via sintering, hot-rolling and thermomechanical training  
*L.-G. Bujoreanu (Technical University from Iasi, Iasi, Romania), B. Pricop, U. Söyler, N.M. Lohan, B. Özkal, D. Chicet, C. Munteanu*
- A54-P-2-39** (3057) The Pars&C project: optimization, customization and clinical evaluation of pseudoelastic NiTi-based devices for the neuromuscular rehabilitation of spasticity  
*L. Garavaglia (NATIONAL RESEARCH COUNCIL OF ITALY, Lecco, Italy), S. Viscuso, E. Beretta, S. Strazzer, S. Pittaccio*

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Topic Area B : Structural Materials

- B22 Ceramic barriers: Filters, Membranes and Thermal Barrier Coatings**
- B22-P-2-01** (0066) Abrasive wear behavior of different thermal spray coatings and hard chromium electroplating on A286 super alloy  
*E.N. Atabay Durul (1st Air Maintenance Supply and Maintenance Center, Eskişehir#351;Ehir, Turkey), M. Nurbas*
- B22-P-2-02** (0273) Influence of sintering conditions on crystal structure, microstructure and oxygen permeability of perovskite-type La<sub>0.6</sub>Sr<sub>0.4</sub>Co<sub>0.2</sub>Fe<sub>0.8</sub>O<sub>3-d</sub> membranes  
*S.M. Hashim (Universiti Sains Malaysia, Nibong Tebal, Malaysia), A.R. Mohamed, S. Bhatia*
- B22-P-2-03** (0445) Preparation of O/W emulsions with controlled droplet size using tubular ZrO<sub>2</sub>/TiO<sub>2</sub> microfiltration membranes  
*M. Suarez (University of Oviedo, Oviedo, Spain), G. Gutierrez, J. Coca, C. Pazos*
- B22-P-2-04** (0538) Robust method for scaling-up MFI zeolite membrane synthesis  
*M. Drobek (Institut Européen des Membranes, Montpellier, France), J. Motuzas, M. Van Loon, R. W.J. Dirrix, R. A. Terpstra, A. Julbe*
- B22-P-2-05** (0570) Titania-based photocatalytic membranes  
*A. Ayrat (University Montpellier 2, Montpellier, France), L. Djafer, A. Ouagued*
- B22-P-2-06** (0758) Synthesis and characterization of preferentially b-oriented zeolite MFI layers  
*P. Hrabanek (J. Heyrovský Institute of Physical Chemistry, Praha, Czech Republic), A. Zikanova, J. Drahoukoupil, M. Matejkova, I. Jirka, L. Brabec, V. Fila, B. Bernauer, M. Kocirik*
- B22-P-2-07** (0767) Electrophoretic deposition (EPD) of SiO<sub>2</sub> particles on membrane supports  
*L. Brabec (J. Heyrovský Institute of Physical Chemistry, Praha, Czech Republic), P. Hrabanek, M. Kocirik*
- B22-P-2-08** (0830) Thermal Barrier Coatings on Copper substrates for Rocket Engines  
*J. Schloesser (TU Braunschweig, Braunschweig, Germany), M. Bäker, J. Rösler*
- B22-P-2-09** (0887) Impact of Interfacial Coherency Strain on the Phase Evolution of TBCs: A Comparative Study of Y- and Yb-stabilized t'-Zirconia  
*J.A. Krogstad (University of California, Santa Barbara, Santa Barbara, Ca, USA), C.G. Levi*
- B22-P-2-10** (0889) Preparation of a novel silica membrane material for gas separation  
*H. Hassan (Universitat Rovira i Virgili, Tarragona, Spain), T. Gumí*
- B22-P-2-11** (1054) Synthesis, characterization and gas permeation properties of zeolite T membrane on porous mullite supports  
*M. Mirfendereski (IUST, Tehran, Iran)*
- B22-P-2-12** (1068) Possibility of chromium recovery from concentrated salt mixture solution by nanofiltration – mixture pH and initial chromium concentration effect  
*A. Kowalik (Radom University of Technology, Radom, Poland), P. Religa, P. Gierycz, J. Rajewski*
- B22-P-2-13** (1083) Effects of Production Method and Heat Treatment on the Microstructure Behavior of HVOF and APS Coatings  
*H. Dikici (Bartın University, Bartın, Turkey), A.C. Karaoglanli, T. Grund, T. Lampe*
- B22-P-2-14** (1322) Synthesis and characterization of a solid electrolyte with an apatite structure for fuel cells ( SOFC)  
*A. Saoued (University of Jijel, Jijel, Algeria), N. Azzouz, S. Boulfrad*
- B22-P-2-15** (1430) Degradation of a platinum modified NiAl coating on a single crystal superalloy during cyclic oxidation  
*P. Sallot (Mines ParisTech, Evry, France), L. Rémy, V. Maurel*
- B22-P-2-16** (1438) Modification Of Porosity And Catalytic Properties Of Ceramic Membranes With Molecular Layering Nanotechnology  
*N. Orekhova (Topchiev Institute of Petrochemical Synthesis, Moscow, Russian Federation), M. Ermilova, A. Malygin, A. Malkov, S. Mikhailovsky*
- B22-P-2-17** (1686) Development of ceramic membranes for heavy metal and dye separation  
*A. Belouatek (University, Mostaganem, Algeria), A. Chougui, K. Zaiter*
- B22-P-2-18** (1807) Structure And Properties Of Thermal Barrier Coatings On Inconel 713C  
*R. Sitek (Warsaw University of Technology, Warsaw, Poland), J. Sobczak, W. Lisowski, H. Matysiak, K. Kurzydowski*
- B22-P-2-19** (1842) New process for high performance carbon/carbon membrane  
*I. Jedidi (Faculty of Science of Sfax, Sfax, Tunisia), A. Larbot, R. Ben Amar*
- B22-P-2-20** (2150) YSZ thermal barrier coatings behavior at high temperature  
*S. Iliina (The National Institute of Aerospace Research "ELIE CARAFOLI", Bucharest, Romania), G. Ionescu, V. Manoliu*
- B22-P-2-21** (2243) Nano-impact testing of EB-PVD TBCs for prediction of erosion performance  
*B. Beake (Micro Materials Ltd, Wrexham, United Kingdom), J. Chen, R. Wellman, J. Nicholls*
- B22-P-2-22** (2482) Deposition Of Zirconium Phosphate In A Ceramic Membrane: Effect Of The Initial Porosity Of The Support  
*M.D. Palacios (Instituto de Tecnología Cerámica, Castellón, Spain), S. Mestre, V. Pérez-Herranz, S. Sales*
- B22-P-2-23** (2881) Doped LaNbO<sub>4</sub>: effect of acceptor additives on the electrical conductivity  
*M. Ivanova (Forschungszentrum Juelich GmbH, Juelich, Germany), W.A. Meulenber, J.M. Serra, H.P. Buchkremer, D. Stöver*
- B22-P-2-24** (2913) Modification Ultrafiltration membranes by Insertion of TiO<sub>2</sub>, TiO<sub>2</sub>-PO<sub>4</sub> or ZrO<sub>2</sub>-PO<sub>4</sub> nanoparticles  
*L. Villafaña (Universidad de Guanajuato, Guanajuato, Mexico), M. Ávila, G. Rangel, P. Prádanos, L. Palacio, P. González*



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Topic Area B : Structural Materials

- B24** **Fracture and Reliability of Ceramics and Hybrid Materials**
- B24-P-2-01** (2092) Design and characterization of tridymite-based caesium-containing ceramics for medical and industrial applications  
*E. Asabina (Lobachevsky State University of Nizhni Novgorod, Nizhni Novgorod, Russian Federation), V. Petkov, I. Korchemkin, M. Boldin, N. Sakharov*
- B24-P-2-02** (1408) Microstructure And Mechanical Properties Of Hard Alloys Fabricated From Starting Nanopowder  
*L. Bodrova (Ternopil National technical University, Ternopil, Ukraine), G. Kramar, I. Koval, V. Sushynskiy, S. Marynenko, V. Bukhta*
- B24-P-2-03** (2279) Improvement of operational characteristics mullite and corundum cements by addition nanopowders SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> in vortical layer device.  
*M. Kostitsyn (The Moscow institute of steel and alloys, Moscow, Russian Federation), J. Konuhov, D. Kuznecov, D. Lysov*
- B24-P-2-04** (0750) The influence of polymer binder based on nano Al<sub>2</sub>O<sub>3</sub> dispersion on the properties of ceramic slurries used in the investment casting  
*H. Matysiak (Warsaw University of Technology, Warszawa, Poland), P. Wisniewski, K. Kwapiszewska, J. Ferenc-Dominik, J. Michalski, K.J. Kurzydowski*
- B24-P-2-05** (1944) Iron Additive Effects on Microstructure and Dielectric Properties of BaTiO<sub>3</sub> Ceramics  
*M.T. Benlahrache (Université, Constantine, Algeria), S.E. Barama, S. Achour, N. Tabet*
- B24-P-2-06** (1036) Development and characterization of glass-based seals for SOFC  
*J.C. Lee (Myongji University, Youngin, Korea - south), K. Yun-Il, C. Myung-Jea, P. Sung*
- B24-P-2-07** (0543) Behavior Of Recycled Concretes Incorporating Ceramic Aggregates  
*C. Medina Martínez (Universidad de León, León, Spain), A. Juan Valdés, M. Frías Rojas, M.I. Sánchez De Rojas, C. Thomas García, J.A. Polanco Madrazo, J.M. Morán Del Pozo, M.I. Guerra Romero*
- B24-P-2-08** (0824) Evaluation of Interfacial Failure Criterion in a Glass Fiber/Epoxy Composite: Effect of Curing Temperature  
*S. Ogihara (Tokyo University of Science, Noda, Japan), J. Koyanagi, H. Nakatani, K. Satoshi*
- B24-P-2-09** (1882) Quantification of damage in foam core sandwich materials due to indentation impact loads  
*N. Gavrilakis (Solar Cells Hellas, Athens, Greece)*
- B24-P-2-10** (1631) Fracture behaviour of 3Y-TZP/Ta composites  
*A. Smirnov (The Instituto de Ciencia de Materiales de Madrid, Madrid, Spain), T. Rodriguez-Suarez, J.F. Bartolomé*
- B24-P-2-12** (1357) The Mechanism of Structure Formation of Dispersion Hardening Ceramic SHS-materials in Ti-Zr-C system with Ni-based binder  
*O. Manakova (National University of Science and Technology «MISIS», Moscow, Russian Federation), E. Levashov, V. Kurbatkina*
- B24-P-2-13** (1297) Combined effects of fatigue damage and hydrometric ageing on the behavior of unidirectional glass-epoxy composite materials  
*B. Redjel (Badji Mokhtar University, Annaba, Algeria), Y. Menail, A. El Mahi*
- B24-P-2-14** (0614) High performance ZrO<sub>2</sub> made by pulsation reactor technology  
*L. Leidolph (IBU-tec advanced materials AG, Weimar, Germany)*
- B24-P-2-15** (2943) Formation MAX phase containing ceramic matrix composites by pressureless reactive melt infiltration (PRMI)  
*F. Lenz (University of Bayreuth, Bayreuth, Germany), N. Langhof, W. Krenkel*
- B24-P-2-16** (0103) Tribological Behavior of Friction Couple: Metal/ Ceramic, (Used for Head of Total Hip Replacement)  
*M. Fellah (ANNABA university, Sidi Ammar, Algeria), M. Labaiz, O. Assala*
- B24-P-2-17** (0395) Influence of sulphate solutions on structure and properties of high performance concrete  
*J. Setina (Riga Technical University, Riga, Latvia), G. Shakhmenko, J. Justs*
- B24-P-2-18** (0306) Thermal Shock Behaviour On Zero And Ultra Low Aluminate Cement Refractory Castables  
*D. Gomes Pinto (UBI, Covilhã, Portugal), A. Silva, A. Segadães, T. Devezas*
- B24-P-2-19** (0033) Synthesis and Characterization of Laminated Si/SiC Composites  
*S. Naga (National Research Center, Cairo, Egypt), S. Kenawy, M. Awaad, H. Abd El-Wahab, P. Greil, M. Abdir*
- B24-P-2-20** (0744) New Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> slurries for investment casting process  
*P. Wisniewski (Warsaw University of Technology, Warszawa, Poland), H. Matysiak, J. Michalski, J. Ferenc-Dominik, K.J. Kurzydowski*
- B24-P-2-21** (2807) Near atomic scale analysis of oxide structures  
*E.A. Marquis (University of Michigan, Ann Arbor, USA), Y. Noor, D.J. Larson, M.K. Miller, R.I. Todd*

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Topic Area B : Structural Materials

- B33 Highly porous metals and ceramics**
- B33-P-2-01** Finite Elements simulation on open cell ceramic foams (0111)  
*A. Ortona (ICIMSI-SUPSI, Manno, Switzerland), S. Pusterla, C. D'Angelo*
- B33-P-2-02** Fabrication of Ceramic Capsules from Pre-ceramic Polymers (0113)  
*C. Paolo (University of Padova, Padova, Italy), V. Cekadr, Y. C., M. Carlos, C. A., N. M., F. U., A. Z., S. Eleanor, E. Mohan*
- B33-P-2-05** Pore architecture optimization of Ultra Low K thin films via Finite Element homogenization (0498)  
*D. Jauffres (Grenoble-INP, St Martin D'Herès, France), R. Dendievel, M. Verdier, C. Yacou, A. Ayral*
- B33-P-2-06** Surface modification of microfiltration clay membrane Applied to seawater desalination by membrane distillation (0620)  
*S. Khemakhem (IPEIS, Sfax, Tunisia), R. Ben Amar*
- B33-P-2-07** Extrusion Foaming of a Silicone Resin as Precursor for Ceramic Foams (0747)  
*F. Wolff (University Erlangen-Nürnberg, Erlangen, Germany), B. Ceron Nicolat, T. Fey, P. Greil, D.W. Schubert, H. Münstedt*
- B33-P-2-08** Superalloy Hollow Sphere-based Foam for Applications at High Temperature (0763)  
*C. Davoine (ONERA, Chatillon, France), F. Popoff, A. Rafray*
- B33-P-2-09** Fabrication of silica fiber reinforced low dielectric nitride ceramic matrix composites (0826)  
*C. Zhang (National University of Defense Technology, Changsha, China), B. Li, F. Cao, S. Wang, J. Li*
- B33-P-2-10** Chicken eggshell as the blowing agent in Al-Fe composite foam fabrication (0970)  
*K. Sardashti (University of Erlangen - Nürnberg, Erlangen, Germany), A. Mohammadpour, M. Ghambari*
- B33-P-2-11** Graded metallic membranes obtained by sedimentation and sintering of spherical nickel particles (0834)  
*I. Vida-Simiti (Technical University of Cluj-Napoca, Cluj-Napoca, Romania), N. Jumate, V. Moldovan, G. Thalmaier, N. Sechel*
- B33-P-2-12** Preparation Of The Porous Biomaterial For Orthopaedic Implants Based On Titanium Alloy (1365)  
*T. Seramak (Gdansk University of Technology, Gdansk, Poland), W. Serbinski, A. Zielinski*
- B33-P-2-13** Surface Modification of Reticulated Vitreous Carbon by Atmospheric Plasma Treatment for Electrochemical Studies (1380)  
*L. Silva (Technological Faculty of Pindamonhangaba, Pindamonhangaba, Brazil), L. Ferreira, P. Nascente, K. Kostov*
- B33-P-2-14** Fabrication of AZ91 magnesium matrix composites with cenospheres (1517)  
*J. Kamiński (Czestochowa University of Technology, Czestochowa, Poland), K. Braszczyńska-Malik*
- B33-P-2-15** Metal foam sandwich composites: contact damage, remnant bending strength and energy absorption (1570)  
*M.I. Idris (University of Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia), T. Vodenitcharova, M. Hoffman*
- B33-P-2-16** Effect of the specific surface fraction and properties of the interphase boundaries on the mechanical properties of ceramic-metal composites (1685)  
*P. Chabera (Warsaw University of Technology, Warsaw, Poland), A. Boczkowska, R. Dobosz, J. Zych, K. Kurzydłowski*
- B33-P-2-17** Hierarchically Porous Metal and Metal Oxide Materials prepared through Nanocasting of Silica Monoliths (2144)  
*J.-H. Smått (Åbo Akademi University, Turku, Finland), F. Maddox Saylor, A. Grano, M.G. Bakker, M. Lindén*
- B33-P-2-18** Electrochemically produced black silicon with silver nanoparticles for solar cells (2736)  
*R. Jarimavičiute-Zvalioniene (Kaunas University of Technology, Kaunas, Lithuania), Z. Kaminskiene, I. Prosycevas, B. Abakeviciene, S. Lapinskas*
- B33-P-2-20** Characterization And Evaluation Of Bone Cements - Hydroxyapatite As Element Of Reinforcement Mechanical Properties. (2863)  
*O. Armando (UNAM, Mexico Df, Mexico), S. Francisco, J. Víctor H., R. Jorge A.*
- B33-P-2-21** Production and characterization of metallic low density composites (2896)  
*M.H. Robert (UNICAMP, Campinas, Brazil), A. Fonseca Jorge*
- B33-P-2-22** Ice-templating of porous ceramic, an opportunity for tailoring the anisotropy of thermal conductivity of composites parts ? (2944)  
*D. Hautcoeur (Belgian Ceramic Research Centre CRIBC, Mons, Belgium), A. Leriche, R. Moreno, M. Niéto, C. Baudin, M. Gonon, V. Sciamanna, V. Lardot, F. Cambier*
- B33-P-2-23** Topological optimisation and characterisation of auxetic cellulars produced by selective electron beam melting (0357)  
*J. Schwerdtfeger (University of Erlangen-Nuremberg, Fürth, Germany), F. Schury, M. Stingl, R.F. Singer, C. Körner*
- B33-P-2-24** Synthesis of porous ceramics with catalytic property from pre-ceramic polymers (3074)  
*A. Idesaki (Japan Atomic Energy Agency, Takasaki, Gunma, Japan), P. Colombo*
- B33-P-2-25** Evaluation of Fe Particles Stabilizing Effect in Aluminum Foams Produced by Powder Compaction Method (3094)  
*K. Sardashti (University of Erlangen - Nürnberg, Erlangen, Germany), A. Mohammadpour, M. Ghambari*

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Topic Area B : Structural Materials

### **B42 Cultural Heritage Materials**

- B42-P-2-01** Investigation On Romanian Icons –  
(2964) Chromatic Changes Following Gamma  
Irradiation  
*M. Geba (MOLDOVA NATIONAL  
COMPLEX OF MUSEUMS, Iasi,  
Romania), A.M. Vlad, .C. Ponta, C.-D.  
Negut, D. Salajan*
- B42-P-2-02** An Investigation on the Rock Art at  
(0807) Oyola Caves  
*G. Ybarra (INTI, San Martin, Argentine  
Republic), A. Poliszuk, M. Quesada, L.  
Gheco, O. Burgos*
- B42-P-2-03** Mixed grain size microstructures in  
(0194) nanocrystalline metals  
*V. Randle (Swansea University,  
Swansea, United Kingdom), M. Coleman*
- B42-P-2-04** The Energy Dispersion Effects of  
(2481) Dynamic X-ray Scattering in Elastically-  
Bent Functional Materials with Defects  
*I. Rudnytska (G.V. Kurdyumov Institute  
for Metal Physics NAS of the Ukraine,  
Kyiv, Ukraine), Y. Vasylyk, S. Lizunova,  
L. Makarenko, G. Nyzkova*
- B42-P-2-05** New strategies for employing Surface-  
(3044) Enhanced Raman Spectroscopy (SERS)  
in the detection of high performance  
synthetic organic pigments:  
Quinacridones  
*C. Domingo (Instituto de Estructura de la  
Materia, CSIC, Madrid, Spain), E. Del  
Puerto, S. Sanchez-Cortes, J.V. Garcia-  
Ramos*

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Topic Area C : Processing

- |                             |   |                             |  |                             |   |
|-----------------------------|---|-----------------------------|--|-----------------------------|---|
| <b>C11</b>                  | <b>Solidification</b>   | <b>C11-P-2-13</b>           | Damping and Strength Properties of the Inoculated High-Zinc Al Cast Alloys<br><i>W.K. Krajewski (AGH University of Science and Technology, Krakow, Poland), J. Buras , K. Habert</i>   | <b>C11-P-2-24</b>           | Microstructural And Thermal Characterization Of Al-Si Hypoeutectic Alloys Solidified Under Electromagnetic And Ultrasonic Fields.<br><i>F. Pineda (K.U. Leuven, Leuven, Belgium), O. Bustos, L. Froyen</i>  |
| <b>C11-P-2-01</b><br>(0703) | Influence of convection on the solidification of a refined Al-3.5wt%Ni alloy: comparison between real-time X-ray observation and direct simulation<br><i>G. Reinhart (Paul Cézanne University / IM2NP, Marseille, France), N. Mangelinck-Noël, C.-A. Gandin, H. Nguyen-Thi, J.-E. Spinelli, B. Billia</i> | <b>C11-P-2-14</b><br>(0675) | Refining Effect of Rapidly Solidified Master Alloys on Primary Silicon Size in Hypereutectic Al-Si-Alloy<br><i>O. Zak (TU Clausthal, Clausthal-Zellerfeld, Germany), B. Tonn</i>   | <b>C11-P-2-25</b><br>(0525) | Multiscale modeling of dendritic solidification for multicomponent nickel-base alloys<br><i>F. Tiévant (Ecole des Mines de Paris, Nice, France), H. Ben Hamouda, C.-A. Gandin</i>   |
| <b>C11-P-2-02</b><br>(0947) | The Implications Of Melts Processed Through Vibration On Metallic Structure Finish<br><i>B.A. Verdes (University Politehnica Bucharest, Bucharest, Romania), I. Marginean</i>   | <b>C11-P-2-16</b><br>(1200) | Physical properties of Fe-C liquid and solid alloys for process modeling<br><i>F. Miani (Univ. of Udine, Udine, Italy), C. Diego, B. Paolo</i>   | <b>C11-P-2-26</b><br>(2067) | Rapidly solidified microstructures of 3D parts fabricated by selective laser melting: examples of stainless steel 316L and Ti-6Al-4V<br><i>Q. Contrepois (University of Liège, Liège, Belgium), J. Lecomte-Beckers</i>  |
| <b>C11-P-2-04</b><br>(2184) | Estimation of Cooling rates during Solidification of Al 6061-Alumina Composite by Finite Element Approach<br><i>R. C S (PES Institute of Technology, Bangalore, India), J. S K, K. R</i>  | <b>C11-P-2-17</b><br>(0989) | Structure and properties of eutectic single crystals Zn-Ti0.2-Cu0.15<br><i>G. Boczkaj (AGH University of Science and Technology, Cracow, Poland), B. Mikulowski, W. Wolczynski</i>   | <b>C11-P-2-27</b><br>(0480) | Multiscale modeling of laser sintering and solidification of ultrafine composite powders of Fe-Ni alloys<br><i>E. Abramova (Interdisciplinary Centre for Advanced Materials Simulation (ICAMS) Ruhr-Universität Bochum, Bochum, Germany), M. Krivilyov, E. Kharanzhevskiy, D. Danilov, V. Lebedev, P. Galenko</i> |
| <b>C11-P-2-05</b><br>(0727) | A theoretical analysis on the solute redistribution and morphological stability during solidification with back-diffusion in the AHP method<br><i>E. Balikci (BOGAZICI UNIVERSITY, Istanbul, Turkey), A. Dario, H.O. Sicim</i>  | <b>C11-P-2-18</b><br>(0599) | Numerical model for simulation of composite casting process: development and case studies<br><i>O. Starykov (TU Clausthal, Clausthal-Zellerfeld, Germany), B. Tonn</i>   | <b>C11-P-2-28</b><br>(1362) | Phase-field study of the fragmentation of dendritic secondary arms in Al-Cu alloys<br><i>E. Wesner (Hochschule Karlsruhe, Karlsruhe, Germany), B. Nestler, A. Choudhur, A. August</i>   |
| <b>C11-P-2-06</b><br>(0866) | Simulation of residual stress in casting<br><i>O. Ogorodnikova (Ural Federal University, Ekaterinburg, Russian Federation)</i>  | <b>C11-P-2-19</b><br>(2682) | Directional solidification of dilute binary alloys with different crystallography<br><i>O. Fornaro (Instituto de Física de Materiales Tandil, Tandil, Argentine Republic), H. Palacio</i>  | <b>C11-P-2-30</b><br>(1237) | Thermodynamics aspects of solid-liquid and solid-solid equilibrium in multi-component systems<br><i>A. Savchenko (A.A. Bochvar Institute of Inorganic Materials (VNIINM), Moscow, Russian Federation), Y. Konovalov, O. Uferov, G. Kulakov, S. Maranchak</i>  |
| <b>C11-P-2-09</b><br>(1363) | Research On The Performance Of A Fusible Model By Rapid Prototyping Technology<br><i>B. Verdes (University Politehnica Bucharest, Bucharest, Romania)</i>   | <b>C11-P-2-20</b><br>(2149) | Microstructure and microsegregation formation during directional solidification of the AM1 Nickel-based superalloy<br><i>J. Zollinger (Institut Jean Lamour, Nancy , France), D. Daloz, H. Ben Hamouda, C.-A. Gandin, F. Tievant</i>   | <b>C11-P-2-31</b><br>(1244) | Variations in temperature and melting enthalpies in eutectic alloys upon changes in mutual phase orientation<br><i>A. Savchenko (A.A. Bochvar Institute of Inorganic Materials (VNIINM), Moscow, Russian Federation), O. Uferov, N. Nogin</i>   |
| <b>C11-P-2-10</b><br>(0796) | Molecular Dynamics Study on Temperature Dependence of Homogeneous Nucleation in Undercooled Liquid Fe<br><i>J. Liu (University of Leicester, Leicester, United Kingdom), H. Dong</i>  | <b>C11-P-2-21</b><br>(0479) | Trapping and anti-trapping of solutal atoms by diffuse interface in rapid solidification of alloys<br><i>E. Abramova (Interdisciplinary Centre for Advanced Materials Simulation (ICAMS) Ruhr-Universität Bochum, Bochum, Germany), D. Medvedev, O. Shchyglo, I. Steinbach, P. Galenko</i> | <b>C11-P-2-32</b><br>(1233) | Novel interpretation of first and second laws of thermodynamics to solidification processes and phase transformations<br><i>A. Savchenko (A.A. Bochvar Institute of Inorganic Materials (VNIINM), Moscow, Russian Federation), A. Vatulin, V. Pantsyrny, A. Laushkin, T. Patrice, F. Mike</i>                     |
| <b>C11-P-2-11</b><br>(2405) | Alloys compaction by undercooling under vibrations effect<br><i>I.V. Anton (POLITEHNICA University of Bucharest, Bucharest, Romania), I. Marginean</i>  | <b>C11-P-2-22</b><br>(0982) | Direct Calculation of Surface Tension Anisotropy<br><i>E. Esenturk (University of Pittsburgh, Pittsburgh, USA)</i>   |                             |   |
| <b>C11-P-2-12</b><br>(2574) | Synthesis And Characterisation Of In Situ Tic Reinforced Co-Based Matrix Composite Materials<br><i>A. Karantzalis (University of Ioannina, Ioannina, Greece), A. Lekatou, E. Georgatis, M. Evaggelidou, D. Sioulas</i>  | <b>C11-P-2-23</b><br>(1235) | Non-equilibrium solidification of sulfide-metal melts of copper and nickel<br><i>L. Udoveva (Institute of Metallurgy Ural Division of the Russian Academy Of Sciences, Yekaterinburg, Russian Federation)</i>  |                             |   |

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Topic Area C: Processing

- C11-P-2-33** (0281) Fast spinodal decomposition in quenched and frozen Co-Cu melts  
*P. Galenko (German Aerospace Center, Cologne, Germany), D. Herlach, M. Kolbe, E. Davidov, N. Wanderka*
- C11-P-2-34** (1436) Solidification microstructure evolution of an austenitic stainless steel during multipass welding  
*J. Zollinger (Institut Jean Lamour, Nancy, France), A. Jimenez, D. Daloz, R. Vincent, G. Philippe*
- C11-P-2-35** (1454) Physical Simulation of Hot Ductility of Continuous Cast Steels with In-situ Solidified Hot Tensile Tests  
*D. Djuric (TU Graz, Graz, Austria), B. Sonderegger, S. Zamberger, C. Sommitsch*
- C11-P-2-36** (1705) Multiple phase transformations during metallic alloy solidification: Model vs. Experiments.  
*C.-A. Gandin (German Aerospace Center - DLR, Cologne, Germany), D. Tournet, T. Volkmann, D. Herlach, G. Reinhart, G. Iles, M. Calvo-Dahlborg, U. Dahlborg, C. Bao*
- C11-P-2-37** (2062) Investigation of pressure effect on the heat transfer coefficient in metal/ mould interface  
*E. Ahoonbar (Sharif University of Technology, Tehran, Iran), P. Davami, N. Varahram*
- C11-P-2-38** (2853) Investment Casting of Porous Titanium by Pressure Controlled Casting  
*B. Lee (RIST, Pohang, Korea - south), M. Kim, B. Choi, Y. Kim*
- C11-P-2-39** (0117) Air: an inexpensive insulating material for making very thin castings  
*D. Tomasevic (CTIF, Sevres, France)*
- C12 Solid state transformations**
- C12-P-2-01** (1803) Influence Of 0.02%Sn On The Precipitation Of The Al-2.6%Cu-1%Mg Alloy  
*M. Kadi-Hanifi (Université USTHB, Alger, Algeria), Z. Chaieb*
- C12-P-2-02** (0025) Introduce a new hard Al-alloyed S.G. cast iron  
*N. Haghdadi (Ferdowsi Univ. of Mashhad, Mashhad, Iran), H. Erfanian-Nazif-Toosi, A.-R. Kiani-Rashid*
- C12-P-2-03** (1797) Decomposition Processes in the Anomalous Supersaturated Solid Solution of Binary and Ternary Aluminium Alloys Doped with Sc and Zr  
*T. Monastyrska (G.V. Kurdyumov Snstitute for Metal Physics, Kyiv, Ukraine), A. Berezina, O. Molebny, A. Kotko*
- C12-P-2-04** (0609) Effect of Mn addition on the Microstructures and toughness of martensitic high manganese steel welds  
*J. Yoo (Hanyang University, Seoul, Korea - south), C. Lee, Y. Kang, Y. Park*
- C12-P-2-05** (1776) Surface Relief by Martensitic Transformation in Gold Alloys for Ornaments  
*Y. Ohkado (Chiba Institute of Technology, Narasino, Japan), K. Yuuki, H. Tamehiro*
- C12-P-2-06** (0009) Microstructural study of isothermal transformation in austempered ductile iron containing 4.88% aluminum  
*A.-R. Kiani-Rashid (Ferdowsi Univ. of Mashhad, Mashhad, Iran), E. Ghanbari*
- C12-P-2-07** (1451) Structure inhomogeneity of  $\beta$ -titanium alloy sheets  
*S. Demakov (Ural Federal University, Ykaterinburg, Russian Federation), F. Vodolazsky, O. Oleneva*
- C12-P-2-08** (1966) Precipitation sequence in a dual precipitation medium carbon martensitic steel aged at 500°C  
*F. Danoix (-, -, France), R. Danoix, J. Akre, A. Grellier, D. Delagnes*
- C12-P-2-09** (0106) Evaluation of Annealing Treatments in Deformed Cu-12.8%Fe Composites  
*E. Wang (Northeastern University, P. R. China, Shenyang, China), L. Qu, X. Zuo, L. Zhang, J. He*
- C12-P-2-10** (0913) Effect of second-phase particles size, distribution and morphology on the grain growth  
*R. Darvishi Kamachali (ICAMS, Bochum, Germany), I. Steinbach*
- C12-P-2-11** (2796) Phase field modeling of dissolution of precipitates after and during plastic shear  
*B. Appolaire (Onera, Chatillon, France), K. Ammar, G. Cailletaud, S. Forest*
- C12-P-2-12** (1834) Early stages of precipitation in the Mg-0.5at% Nd system studied by HAADF STEM  
*W. Lefebvre (GPM CNRS UMR 6634, Saint Etienne Du Rouvray, France), V. Kopp, C. Pareige*
- C12-P-2-13** (0370) atomic scale investigation of Cr precipitation in copper  
*X. Sauvage (University of Rouen - CNRS, Saint-Etienne Du Rouvray, France), A. Chbihi, D. Blavette*
- C12-P-2-14** (1928) Effects of high temperature aging on the carbides precipitation in a HP austenitic steel  
*K. Maminska (Ecole des Mines de St-Etienne, St-Etienne, France), M.A. Razzak, A. Fraczekiewicz, J. Furtado*
- C12-P-2-15** (0919) Effect of intercritical quenching on structure and properties of Cr-Ni-Mo steels alloyed  
*M. Gervasyev (Ural Federal University, Yekaterinburg, Russian Federation), J. Khudorozhkova, O. Kudrayshova, A. Kutyin*
- C12-P-2-16** (2895) Nanostructure Formation during Artificial Ageing of a Cast Al Alloy (F357)  
*G. Sha (The University of Sydney, Sydney, Australia), H. Moller, J. Xia, W. Stumpf, S. Govender*
- C12-P-2-17** (1353) Phase Transformation of Pentlandites upon Heating in Inert Atmosphere and Air  
*R. Gulyaeva (Institute of Metallurgy, Yekaterinburg, Russian Federation), E. Selivanov, A. Vershinin*
- C12-P-2-18** (1831) Effect Of Cooling Conditions On The Mechanical Properties Of Microalloyed Steel 38MnSiV5  
*M. Taca (Metav-Cercetare Dezvoltare, Bucharest 2, Romania), R. Trusca, N. Denghel, M. Papezik*

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- C12-P-2-19** (2858) Microstructural Change in the Secondary Hardening Region for Two Types of 6W-5Mo-3V-4Cr and 10V-1.5Mo-5.5Cr High Speed Steels  
*H. Kwon (Kookmin University, Seoul, Korea - south), K.-S. Cho, S.-S. Park, H.-K. Moon, K.-B. Lee, H.-R. Yang*
- C12-P-2-20** (0222) Static Recrystallization behaviour of AISI 410 martensitic stainless steel under multi-stage hot deformation Condition  
*H. Keshmiri (EICO, Esfarayen, Iran), G. Ebrahimi, M. Mohtarami*
- C12-P-2-21** (2587) Stress and strain fields calculations associated with formation of intragranular alpha phase precipitates in titanium alloys  
*A. Settefrati (JL S12M / Airbus Operations, Nancy, France), B. Appolaire, Y. Le Bouar, E. Aeby-Gautier, G. Khelifati*
- C12-P-2-22** (1855) Nanostructure phase states in plasmahardened cast iron rolls: formation and evolution  
*V. Gromov (Siberian State University of Industry, Novokuznetsk, Russian Federation), S. Kononov, Y. Ivanov, V. Kosterev, O. Efimov*
- C12-P-2-23** (1198) TRIP Steels and Austempered Ductile Irons Competition in Automotive Applications  
*L. Vassileva (Technical University of Sofia, Sofia, Bulgaria)*
- C12-P-2-24** (2692) Influence of phase separation on the crystallization behavior in the BaO-TiO<sub>2</sub>-SiO<sub>2</sub> system  
*S. Godet (Université Libre de Bruxelles, Brussels, Belgium), E. Boulay*
- C12-P-2-25** (0986) Effect of a high magnetic field on sigma phase precipitation in superduplex stainless steels  
*B. Frincu (CNRS/CRETA, Grenoble, France), S. Rivoirard, R. Bousquet, T. Waeckerle*
- C12-P-2-26** (0905) Effect of Al and Si on the bainite transformation in Cr-Ni-Mo steels  
*J. Khudorozhkova (Ural Federal University, Yekaterinburg, Russian Federation), M. Gervasyev, O. Kudrayshova, O. Utkina*
- C12-P-2-27** (0734) In-situ monitoring of phase transformation in metallic system  
*L. Zhou (UNIVERSITY OF BIRMINGHAM, Birmingham, United Kingdom), J. Liu, X. Hao, M. Strangwood, C. Davis*
- C12-P-2-28** (2258) Enhancement of M<sub>2</sub>C eutectics carbides transformation during High Temperature Heat Treatment on a HSS and a Semi-HSS Grades  
*J.T. Tchuindjang (University of Liege, Liège, Belgium), M. Sinnavee, J. Lecomte-Beckers*
- C12-P-2-29** (2524) Z-phase Characteristics in Austenitic and Martensitic Heat Resistant Steels  
*V. Vodárek (VSB-TU Ostrava, Ostrava-Poruba, Czech Republic)*
- C12-P-2-31** (2213) Phase-field simulations of the formation of protrusions/retrusions on recrystallization boundaries  
*N. Moelans (K.U. Leuven, Leuven, Belgium), A. Godfrey, Y. Zhang, D. Juul Jensen*
- C12-P-2-32** (2665) Kinetics of Phase Transformations and the Effects of Phase Precipitation on Mechanical Properties of TiMoSn and TiNbSn alloys  
*A. Cremasco (Unicamp, Campinas, Brazil), F.F. Cardoso, M. Gerardi, R. Caram*
- C12-P-2-33** (0006) Influence of austenitising temperature on microstructure of aluminum-containing ductile iron  
*A.-R. Kiani-Rashid (Ferdowsi Univ. of Mashhad, Mashhad, Iran), M. Masoumi-Khalilabad*
- C12-P-2-34** (0024) Microstructural assessment of Al-alloyed ADI with different times of austempering  
*A.-R. Kiani-Rashid (Ferdowsi Univ. of Mashhad, Mashhad, Iran), H. Erfanian-Nazif-Toosi, N. Haghdadi*
- C12-P-2-35** (3035) Improving wear properties of high chromium cast iron by manganese alloying  
*K. Bouhamla (URSM/CSC Annaba, Annaba, Algeria), A. Hadji, H. Maouche*
- C21**
- C21-P-2-01** (1502) Joining of SiC based materials for nuclear applications  
*S. Han (POLITECNICO DI TORINO, ITALY, Torino, Italy), M. Ferraris, V. Casalegno, S. Rizzo, M. Salvo, A. Ventrella*
- C21-P-2-02** (0068) Corrosion of titanium/steel dissimilar joint brazed by Cu-based filler metal  
*A. Elrefaey (LWT, TU Dortmund, Dortmund, Germany), L. Wojarski, W. Tillmann*
- C21-P-2-03** (1749) Thermophysical properties of liquid Sn-Bi-Ag and Sn-Sb-Ag alloys for high temperature soldering  
*Y. Plevachuk (Ivan Franko National University, Lviv, Ukraine), V. Sklyarchuk, A. Yakymovych, P. Svec, D. Janickovic, E. Illekova*
- C21-P-2-04** (0114) Interface formation in boron carbide/liquid metal systems  
*M. Aizenstein (NRCN, Lehavim, Israel), S. Salhov, N. Froumin, N. Frage*
- C21-P-2-05** (1751) High temperature resisting materials. Experience on fabrication (forming, bending, welding) properties of welded joints and steels applications for boiler with supercritical parameters  
*J. Pasternak (RAFAKO S. A., Raciborz, Poland), J. Dobrzanski*
- C21-P-2-06** (1182) Study of the isothermal brazing junctions of Nickel-based superalloys. Chemical quantification of Boron inside borides.  
*J. Ruiz-Vargas (Université de Metz, Metz, France), N. Siredey-Schwaller, N. Gey, P. Bocher, M. Wary, A. Hazotte*
- C21-P-2-07** (0272) Vacuum induction brazing of Ti-6Al-4V and stainless steel with Au-Ni alloy  
*C. Cossu (CEA, Is Sur Tille, France), E. Suzon, G. Paradis*
- C21-P-2-08** (0275) Development, Characterization And Optimization Of Architected Pb-Free Solders For Power Electronic Modules : Automotive Mechatronic Applications  
*M. Le (LNE, Trappes, France), J. Idrac, E. Guillaume, G. Davee, A. Kaabi, D. Ryckelynck, Y. Bienvenu*
- C21-P-2-09** (2967) Surface Properties Of Liquid Au-Si Alloys  
*D. Giuranno (CNR, Genoa, Italy), S. Curiotto, D. Chatain, R. Novakovic*

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- C21-P-2-10** (3106) Modeling of Reactive Diffusion – Mechanism and Kinetics of the Intermetallics Growth in Ag/Ag Interconnections  
*R. Filipek (AGH University of Science and Technology, Krakow, Poland), K. Szyszkiewicz, P. Dziembaj, P. Skrzyniarz, P. Ziembra*
- C21-P-2-11** (0412) Influence of brazing parameters on the microstructure, residual stresses and mechanical properties of stainless steel-SiC and stainless steel-sapphire active braze joints  
*C. Leinenbach (Empa - Swiss Federal Labs for Materials Science and Technology, Duebendorf, Switzerland), F. Vüllers, S. Buhl, H.R. Elsener, D. Eifler*
- C21-P-2-12** (0536) Interfacial interactions between a coated WN substrate and a gold-tin alloy  
*R. Voytovych (Grenoble Institute of Technology, Saint Martin D'Hères, France), P. Descours, A. Garnier, F. Greco, F. Hodaj*
- C21-P-2-13** (0552) Three dimensional microstructural characterization of as-soldered and aged near eutectic SnAgCu lead-free solder by synchrotron X-ray and FIB/SEM tomography and microstructural based modeling of plastic deformation  
*M. Maleki (EPFL, Lausanne, Switzerland), J. Cugnoni, J. Botsis*
- C21-P-2-14** (0587) Microstructural Evolutions of the Region Brazed with Additive and Filler Metal Powder of Cu-based Friction Materials  
*Y.H. Kim (Korea Institute of Industrial Technology, Incheon, Korea - south)*
- C21-P-2-15** (2868) Heat effect of the grain boundary wetting phase transition  
*B. Straumal (Institute of Solid State Physics RAS, Chernogolovka, Russian Federation), O. Kogtenkova, S. Protasov, B. Baretzky, P. Zieba, T. Czeppe, R. Valiev*
- C21-P-2-16** (2766) Microstructure and mechanical properties of duplex stainless steel UNS S32900 welds by multipass SMAW and GTAW  
*A. Zambon (University of Padova, Padova, Italy), M. Zanon*
- C21-P-2-17** (0843) 3-D Analysis of stresses of high dimension brazed joints of cermets and steel  
*J. Nowacki (West Pomeranian University of Technology, Szczecin, Szczecin,, Poland)*
- C21-P-2-18** (2703) The Use of Explosive Energy for Joining Advanced High Strength Low Alloy Steels  
*M. Urbanek (COMTES FHT, Dobruany, Czech Republic), M. Bohuslav, H. Pavel, N. Petr*
- C21-P-2-19** (0957) Welding of metallic materials using concentrated solar energy  
*A. Romero (CENIM-CSIC, Madrid, Spain), I. Garcia, M.A. Arenas, A. Vazquez*
- C21-P-2-20** (1073) Ab-initio study of Ti and In diffusion on CaF<sub>2</sub> substrate  
*S. Garnai (Ben Gurion University of the Negev, Beer Sheva, Israel), D. Fuks, S. Barzilai*
- C21-P-2-21** (1159) Joining of ultra-thin metal foils with laser remote welding  
*A. Patschger (FH Jena, Jena, Germany), M. Hild, J.P. Bergmann, J. Bliedtner*
- C21-P-2-22** (1175) Evaluate Of Braze Joint Strength & Microstructure Characterize Of Titanium-CP with Different Filler Materials  
*E. Ganjeh (K.N. Toosi university of technology, Tehran, Iran), H. Khorsand, H. Sabet, E.H. Dehkordi, M. Ghaffari*
- C21-P-2-23** (2234) Sacrificial Passivation – an engineering concept to exploit fast diffusion in nanostructures for microelectronics assembly  
*K. Sosnowska (Empa, Dübendorf, Switzerland), J. Janczak-Rusch, R. Spolenak*
- C21-P-2-24** (1370) Wetting of Cu, Al by Sn-Zn and Zn-Al eutectic alloys  
*J. Pstrus (Institute of Metallurgy and Materials Science PAS, Krakow, Poland), P. Fima, T. Gancarz*
- C21-P-2-25** (1382) Wetting properties of Zn-Al-In alloys  
*T. Gancarz (Institute of Metallurgy and Materials Science PAS, Krakow, Poland), P. Janusz, F. Przemyslaw*
- C21-P-2-26** (1404) Investigation of Mechanical Properties and Joinability of Galvanised Automotive Sheets by Gas Metal Arc Brazing Technique  
*U. Ozsarac (Sakarya University, Sakarya, Turkey), S. Aslanlar, E. Ilhan, F. Varol*
- C21-P-2-27** (0659) Wetting of Fe-Cr based ODS steels by molten Pb  
*D. Giuranno (National Research Council, Genova, Italy), S. Amore, E. Ricci*
- C21-P-2-28** (0008) Welding and characterization of 5083 Aluminum Alloy  
*M. Hakem (Centre de Recherche Scientifique et Technique en Soudage et Controle (CSC), Alger, Algeria), J. Miroud, A. Bentalleb, S. Toukali*
- C21-P-2-29** (2494) Fabrication of carbon fiber reinforced aluminum matrix composite under molten salt  
*P. Baumli (University of Miskolc, Miskolc, Hungary), K.L. Juhász, J. Sytchev, G. Kaptay*
- C21-P-2-30** (2492) Wettability of carbon surfaces by molten cesium halides and CsCl-RbCl mixtures  
*P. Baumli (University of Miskolc, Miskolc, Hungary), J. Pálkovács, G. Kaptay*
- C21-P-2-31** (2310) Interactions between Haynes 282 alloy and oxide ceramics  
*N. Sobczak (Foundry Research Institute, Krakow, Poland), R. Nowak, J. Sobczak, R. Purgert*
- C21-P-2-32** (1799) Mechanical and structural characterization of Dissimilar welds between Duplex and Martensitic stainless steel  
*B. Belkessa (CENTRE DE RECHERCHE SCIENTIFIQUE EN SOUDAGE ET CONTROLE, Algiers, Algeria), R. Badji*
- C21-P-2-33** (1927) Recrystallization Behaviour By Heat Treatment Of The 2205 Duplex Stainless Steel  
*O. Naima (Scientific Research Center in Welding and Control, Algiers, Algeria), B. Mabrouk, B. Riad*
- C21-P-2-34** (2290) Effect Of Rheological Parameters On The Characteristics Of Coated Rods For Brazing  
*H. Binchiciu (SC SUDOTIM AS SRL, Timisoara, Romania), R. Stefanoiu, A. Binchicu, E. Binchiciu*

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- C21-P-2-35** (2287) **Wrapped Brazing Rods With Flame And High Yield**  
*A. Binchiciu (SC SUDOTIM AS SRL, Timisoara, Romania), I. Voiculescu, E. Binchiciu, P. Berchi*
- C21-P-2-36** (1993) **Reactive air brazing of Ba<sub>0.5</sub>Sr<sub>0.5</sub>Co<sub>0.8</sub>Fe<sub>0.2</sub>O<sub>3-d</sub> mixed conductor**  
*H. Chen (VITO/Belgium, Mol, Belgium)*
- C21-P-2-37** (2244) **Effect of third components on the grain boundary wetting in the Zr-Nb system**  
*B. Straumal (Institute of Solid State Physics RAS, Chernogolovka, Russian Federation), A. Gornakova*
- C21-P-2-38** (2015) **Microstructural Aspects of Repair Welding of Nickel Superalloy Turbine Blades Used in Aero-engine and Power-generation Turbines**  
*M. Chaturvedi (University Of Manitoba, Winnipeg, Canada)*
- C21-P-2-39** (2242) **Grain boundary wetting phase transitions in the Al-based alloys**  
*S. Protasova (Institute of Solid State Physics RAS, Chernogolovka, Russian Federation), O. Kogtenkova, B. Straumal, P. Zieba, T. Czeppa*
- C21-P-2-40** (2203) **Influence of surface modification of alumina with thin films of Ti, Nb and Ti+Nb on the bond strength-structure relationship in Al/Al<sub>2</sub>O<sub>3</sub> joints**  
*M. Ksiazek (Foundry Research Institute, Cracow, Poland), M. Richert, A. Tchorz, L. Boron*
- C21-P-2-42** (3069) **Effects of different thicknesses of filler metal on mechanical and metallurgical properties of brazed joints of tungsten carbide and carbon steel**  
*S. Sakhaie (Tehran University, Tehran, Iran), A.M. Hadian*
- C22**  
**Diffusion bonding and characterization**
- C22-P-2-01** (2555) **Torsion tests for joined ceramics and composites**  
*A. Ventrella (Politecnico di Torino, Torino, Italy), M. Ferraris, M. Salvo, M. Avalle*
- C22-P-2-02** (1952) **An Evaluation of Laser Welded Joints for Extreme Environment Hermetic Electronic Housing Applications**  
*L. Del Castillo (Jet Propulsion Laboratory, Pasadena, Ca, USA), J.P. Hoffman, J. Mulder, R.P. Dillon, G. Birur*
- C22-P-2-03** (0280) **Effect of pH of sulfate solution on electrochemical behaviour of Pb-free solder candidate of Sn-Zn and Sn-Zn-Cu systems**  
*M. Grobelny (Motor Transport Institute, Warsaw, Poland), N. Sobczak*
- C22-P-2-04** (2933) **The effect of successive repairs on the weldment quality of API 5L X 70 steel pipes**  
*B. Maamache (Centre de recherche scientifique et technique en soudage et contrôle, Cheraga, Algeria), Y. Yahmi, M. Bouabdellah*
- C22-P-2-05** (0956) **Effects of welding parameters and consumable on microstructure and mechanical properties of dissimilar ferritic stainless steel and low carbon steel joints**  
*H. Pouraliakbar (Sharif University of Tech, Tehran, Iran), M. Sarkari Khorrami, R. Farshadnia, M.A. Mostafaei, A.H. Kokabi*
- C22-P-2-06** (0571) **Structural aspects of corrosion behaviour of selected lead-free solder candidates of Sn-Zn and Sn-Zn-Cu systems in sodium sulphate solution**  
*K. Pietrzak (Motor Transport Institute, Warsaw, Poland), M. Grobelny, K. Makowska, N. Sobczak, A. Wojciechowski, E. Sienicki*
- C22-P-2-07** (0590) **Relationship between mechanical properties of lead-free solders and their heat treatment parameters**  
*A. Klasik (Motor Transport Institute, Warsaw, Poland), K. Pietrzak, A. Wojciechowski, N. Sobczak, A. Kudyba*
- C22-P-2-08** (0596) **Effects of heat treatment and thermal shocks on microstructure of Sn-Zn and Sn-Zn-Cu alloys**  
*K. Makowska (Motor Transport Institute, Warsaw, Poland), K. Pietrzak, N. Sobczak, A. Kudyba, D. Rudnik, P. Lasota*
- C22-P-2-09** (0639) **Solder land effect on reliability of the PCB interconnections**  
*A. Sypien; (Institute of Metallurgy and Materials Science, Polish Academy of Sciences, Krakow, Poland), J. Wojewoda- Budka, P. Zieba, Z. Huber*
- C22-P-2-10** (0643) **Solder joints reliability of through hole assemblies with various land and hole design**  
*W.-B. Joanna (Polish Academy of Sciences, Cracow, Poland), S. Anna, H. Zbigniew, Z. Pawel*
- C22-P-2-11** (2205) **Mechanical properties and microstructure of the CrMo Steel Steam Pipeline Welds after long-term service**  
*Y. Yahmi (Centre de Recherche Scientifique en Soudage et Controle, Alger, Algeria), B. Maamache, B. Belkessa*
- C22-P-2-12** (0868) **Kinetics of tunnel recombination of Li-defects stimulated by their diffusion**  
*I. Ogorodnikov (Ural Federal University, Ekaterinburg, Russian Federation), M. Kiseleva, I. Sedunova*
- C22-P-2-13** (1865) **Joining Of Sintered Al<sub>2</sub>O<sub>3</sub> Ceramics Using Metallic Glass Solder**  
*I. Voiculescu (University Politehnica of Bucharest, Bucharest, Romania), V. Geanta, R. Stefanoiu, A.C. Pavalache, E.M. Stanciu, D. Daisa*
- C22-P-2-14** (1328) **Investigation of Mechanical Properties of Galvanized Automotive Sheets Joined by Resistance Spot Welding**  
*U. Ozsarac (Sakarya University, Sakarya, Turkey), S. Aslanlar, E. Ilhan, M.A. Yalcin, E. Yanikoglu*
- C22-P-2-15** (0058) **Wavelet analysis for assessing friction stir welding quality for aluminium AA5083**  
*Q. Zhang (The University of Sheffield, Sheffield, United Kingdom), M. Mahfouf, G. Panoutsos, K. Beamish, I. Norris*
- C22-P-2-16** (1129) **Investigation of the phase formation in aluminium joints during TLP brazing**  
*W. Tillmann (TU Dortmund, Dortmund, Germany), L. Wojarski, A. Elrefaey, B. Baudzus*



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- C22-P-2-17** (2522) Welding Induced Changes Of The Structure And Characteristics For A Microalloyed Steel  
*I.M. Vasile (University Politehnica of Bucharest, Bucharest, Romania), I. Voiculescu, A.C. Pavalache, E.M. Stanciu*
- C22-P-2-18** (1242) Solid Liquid Interdiffusion Bonding of a Bi<sub>0.5</sub>Sb<sub>1.5</sub>Te<sub>3</sub> Thermoelectric Material with Cu Electrode  
*T.-H. Chuang (National Taiwan University, Taipei, China), J.-D. Hwang, H.-J. Lai, C.-L. Yang, C.-C. Jain*
- C22-P-2-19** (1441) Effects of pulsed laser welding parameters on microstructure and mechanical properties of a Fe-Ni alloy joints  
*H. Pouraliakbar (Sharif University of Tech, Tehran, Iran), R. Farshadnia, H. Abbasi, J. Akbari, A.H. Kokabi*
- C22-P-2-20** (1507) Feasibility of glue laminated timber beams with neo-tropical hardwoods  
*D. Bourreau (UAG -IUFM, Cayenne, France), Y. Aimene, J. Beauchene, O. Nait-Rabah, B. Thibaut*
- C22-P-2-21** (2402) Reaction-Assisted Diffusion Bonding Of Niti  
*A.S. Ramos (Universidade de Coimbra, Coimbra, Portugal), A.J. Cavaleiro, M.T. Vieira*
- C22-P-2-22** (0649) Investigation Of Boronizing Kinetics Of Aisi 51100 Stell  
*M. Ipek (Sakarya University, Sakarya, Turkey), G. Celebi Efe, I. Ozbek, S. Zeytin, C. Bindal*
- C22-P-2-23** (3081) Non-destructive real time monitoring of the laser welding process  
*H. Sebestova (Palacky University, Olomouc, Czech Republic), H. Chmelickova, L. Nozka, J. Moudry*
- C41 Thin film coatings**
- C41-P-2-01** (1307) Development of a low friction a-C:H:Si multilayer thin film using pulsed bipolar magnetron sputtering  
*A.F. Oliveira Skonieski (Institut für Werkstofftechnik, Bremen, Germany), H. Decho, H.-R. Stock, T. Hirsch, A. Da Silva Rocha*
- C41-P-2-02** (0064) Conductive antimony-doped tin oxide (ATO) coating on clays and minerals particles from basic peroxide solutions  
*S. Sladkevich (The Hebrew University of Jerusalem, Jerusalem, Israel), A. Mikhaylov, P. Prikhodchenko, O. Lev*
- C41-P-2-03** (0076) Study of structural properties of thin films of TiO<sub>2</sub> doped Ni obtained by  
*R. Bensaha (Université de Constantine-Algerie, Constantine, Algeria), H. Dehdouh, B. Toubal, H. Bensouyad, M. Brahimi, H. Sedrati*
- C41-P-2-06** (0097) Preparation and characterization of Cu-Nb composite electrocoatings  
*A. Robin (Escola de Engenharia de Lorena - Universidade de São Paulo, Lorena, Brazil), J.L. Rosa, M.B. Silva*
- C41-P-2-07** (0141) In situ deposition of SiO<sub>2</sub> on YSZ-TBC-coated IN738LC  
*M.T. Kim (Korea Electric Power Research Inst./KEPCO, Daejeon, Korea - south), D.S. Kim, D. Seo*
- C41-P-2-08** (0250) Fe-Co-B-Ti-Nb high entropy thin film as a copper diffusion barrier  
*J.-S. Fang (National Formosa University, Yunlin, Taiwan, China), Y.-C. Li, H.-S. Chen, L.-C. Yang*
- C41-P-2-09** (0278) Morphological and structural characterizations of ZnO and Li-doped ZnO thin films deposited by different chemical deposition process  
*V. Bornand (ICGM UMR CNRS 5253 - UM2, Montpellier, France), A. Mezy*
- C41-P-2-10** (0341) The deposition of WC-Co coatings by EBPVD technique  
*M. Richert (AGH, University of Science & Technology, Kraków, Poland), A. Mazurkiewicz, J. Smolik*
- C41-P-2-11** (0373) Tin deoxidation by atmospheric pressure plasma treatment.  
*S. Gottardello (University of Padua, Padova, Italy), M. Dabalà*
- C41-P-2-12** (0388) Effect of sodium dodecyl sulphate on electroless nickel – yttria stabilized zirconia coatings  
*C. Hindle (Edinburgh Napier University, Edinburgh, United Kingdom), N. Nwosu, A. Davidson*
- C41-P-2-13** (0467) Study Of The Adhesive Strength Of Coatings Obtained By Ion-Plasma Methods  
*M. Kovaleva (Belgorod State University, Belgorod, Russian Federation), D. Kolesnikov, B. Beresnev, L. Malikov*
- C41-P-2-14** (0584) Corrosion resistance of electroless Ni-B coatings in sodium chloride, and alkaline and acid media  
*A. Sens (Umons, Mons, Belgium), A.-F. Kanta, V. Vitry, F. Delaunois*
- C41-P-2-15** (0597) Comparison Of Wear Behavior Of Modified Aisi 8620 Steel By Different Surface Techniques  
*A. Ayday (sakarya uni., Sakarya, Turkey), H. Sevik, S. Kurnaz, A. Özel, M. Durman*
- C41-P-2-17** (0629) Investigation Of Wear Resistance Of Ti-Si-N Coatings Obtained By Vacuum-Arc Method  
*M. Prozorova (Belgorod state university, Belgorod, Russian Federation), D. Kolesnikov, V. Beresnev, L. Malikov*
- C41-P-2-18** (0741) Amorphous PECVD thin carbon-based layers for gas permselective membranes  
*V. Rouessac (Institut Européen des Membranes ENSCM/UM2/CNRS UMR5635, Montpellier, France), A. Grunenwald, A. Ayrat, M. Asandulesa, N. Dumitrascu*
- C41-P-2-19** (0806) Intermolecular Energy Transfer and Stereoisomerization in Nanocomponents of Thin Cyanine Dye Films  
*A. Starovoytov (St.Petersburg State University of Information Technologies, Mechanics and Optics, St.Petersburg, Russian Federation), E. Kaliteevskaya, V. Krutyakova, T. Razumova*
- C41-P-2-20** (0816) The Mechanical Properties Of Aisi 4140 Steels Modified  
*M. Durman (sakarya university, Sakarya, Turkey), Y. Yarali Özbek*
- C41-P-2-21** (0818) The Fracture Surface Features Of Cold Work Tool Steel Modified  
*Y. Yarali Özbek (sakarya university, Sakarya, Turkey)*

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- C41-P-2-22** (0842) Rapid Growth of Transparent ZnO Films in Chemical Solutions at Low Temperatures  
*T. Tokunaga (Keio University, Yokohama, Japan), E. Hosono, S. Ueno, H. Zhou, S. Fujihara*
- C41-P-2-23** (1049) Grafffast®: Towards the control of surface properties of any type of material by the grafting of polymers  
*G. Deniau (CEA Saclay, Gif-Sur-Yvette, France), P. Simon, N. Herlin-Boime, A. Mesnage, S. Palacin*
- C41-P-2-24** (1082) Dwell Time Effect On Thermal Cycling Life Time of TBCs  
*E. Altuncu (KOCAELI UNIVERSITY, Kocaeli, Turkey), F. Ustel*
- C41-P-2-25** (1113) Localized Ligand Induced Electroless Plating (LIEP) Process for the fabrication of copper patterns onto flexible polymer substrates  
*A. Garcia (Commissariat à l'Energie Atomique, Gif Sur Yvette, France), P. Viel, T. Berthelot*
- C41-P-2-26** (1137) Investigation of mechanical properties of CrN, MoN and Mo-Cr-N hard coatings by dual RF magnetron sputtering  
*I. Rahil (Arts et Métiers ParisTech, Cluny, France), C. Nouveau, A. Fabre, L. Imhoff, G. Guillemot*
- C41-P-2-27** (1176) Process Maps for High Quality, Reproducible Thermal barrier Coatings  
*E. Altuncu (KOCAELI UNIVERSITY, Kocaeli, Turkey), F. Ustel*
- C41-P-2-29** (1214) Computer Diagnostics of the Mesoscopic Structure of Self-organized Anodic Aluminas and Titanias  
*K. Suomolaynen (Karelian state pedagogical academy, Petrozavodsk, Russian Federation), N. Yakovleva, A. Kokatev, A. Yakovlev*
- C41-P-2-30** (1248) STRUCTURAL and OPTICAL PROPERTIES of TiO<sub>2</sub> AND Ni:TiO<sub>2</sub> THIN FILMS  
*M. Mutlu Sanli (Kocaeli University, Kocaeli, Turkey), E. Akman, E. Kacar, A. Demir*
- C41-P-2-31** (1258) B2-intermetallic RuAl protective layers for high temperature applications.  
*A. Guitar (Saarland University, Saarbruecken, Germany), F. Mücklich*
- C41-P-2-32** (1288) Atomic Structure Of Nanotubular Anodic Titania  
*O. Savchenko (Karelian state pedagogical academy, Petrozavodsk, Russian Federation), N. Yakovleva, A. Yakovlev, A. Kokatev*
- C41-P-2-33** (1299) Conformal ALD deposition of TaN film using a novel mono-guanidinate precursor  
*T. Prieur (SIMaP, Saint Martin D'Herès Cede, France), V. Brizé, T. Cornier, B. Doisneau, A. Farcy, R. Boichot, A. Mantoux, S. Danièle, E. Blanquet*
- C41-P-2-34** (1343) Developments In Thin Sputtered Glass Coating As Permeation Barrier For Doped-Gdp Lmj Gaseous Target  
*S. Le Tacon (CEA - DAM, Is-Sur-Tille, France), C. Chicanne, F. Durut, M. Theobald, O. Legaie*
- C41-P-2-35** (1349) Preparation and characterization of GaP- and GaAs-semiconductors for photoelectrochemical hydrogen generation  
*D. Fertig (TU Darmstadt, Darmstadt, Germany), J. Ziegler, B. Kaiser, W. Jaegermann*
- C41-P-2-36** (1354) Effect of structure on mechanical properties of amorphous and nanocrystalline covalent thin films  
*R. Ctvrtlik (Joint Laboratory of Optics of Palacky University and Institut of Physics of AS CR, Olomouc, Czech Republic), V. Kulikovskiy, V. Vorlicek*
- C41-P-2-37** (1372) Modification of carbon fibres surface for electroless metallization process  
*R. Kozera (Warsaw University of Technology, Warszawa, Poland), J. Bielinski, A. Salacinska, A. Boczkowska, K.J. Kurzydowski*
- C41-P-2-38** (1472) Modifying of the corrosion and wear resistance of martensitic steel AISI 420F in glow discharge nitriding processes  
*T. Borowski (Warsaw University of Technology, Warsaw, Poland), A. Brojanowska, J. Rudnicki, T. Wierzchon*
- C41-P-2-39** (1549) Radiofrequency Cold Plasma Nitrided Carbon Steel: Microstructural And Electrochemical Characterizations  
*F. Bouanis (Université Paris-Sud 11, Orsay, France), C. Jama, F. Bentiss, M. Traisnel*
- C41-P-2-40** (1562) Effect of Anodizing Process on Mechanical Properties of Al-Cu Alloy  
*N.N. Regone (UNESP, Itapeva-Sp, Brazil)*
- C41-P-2-41** (1666) ZnO thin films prepared from a self-catalyzed precursor solution, at low sintering temperatures  
*O. Jiménez-Sandoval (Cinvestav-IPN, Querétaro, Mexico), E. López-Mena, S. Jiménez-Sandoval, C. Zúñiga-Romero*
- C41-P-2-42** (1731) Redistribution of Pt during the reaction of Ni(Pt) films with (111)silicon  
*K. Hoummada (IM2NP-CNRS-UPCAM, Marseille, France), D. Mangelinck*
- C41-P-2-43** (1856) Electroexplosive alloying: nanosize structure-phase states in metals surface layers  
*V. Gromov (Siberian State University of Industry, Novokuznetsk, Russian Federation), E. Budovskikh, E. Vaschuk, Y. Ivanov, S. Karpjy*
- C41-P-2-44** (1860) Evolution of dislocation substructures in fatigue loaded stainless steel processed by high-intensity electron beam  
*V. Gromov (Siberian State University of Industry, Novokuznetsk, Russian Federation), S. Konovalov, Y. Ivanov, S. Gorbunov, D. Bessonov*
- C41-P-2-45** (1872) Electrochemically synthesized polypyrrole+metallic particles films for protective coatings on carbon steel  
*M. Dominguez (IPN, Altamira, Mexico), A. Torres, A. Alanis, E. Onofre, H. Dorantes*
- C41-P-2-46** (1878) Infrared, Raman spectroscopy and MAS NMR investigations on SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> sol-gel powder  
*B.A. Sava (National Institute of R&D for Optoelectronics INOE 2000, Magurele Bucharest, Romania), M. Elisa, C. Vasiliu, I. Feraru, S. Simon*
- C41-P-2-47** (1886) Low-Velocity Impact Behavior of Vitreous-Enameled Low Carbon Stainless Steel Plate.  
*M. Ahmadi (Amirkabir university of technology, Tehran, Iran), F. Moztarzadeh*
- C41-P-2-48** (1972) Electrochemical Behaviour and Corrosion Studies of Some Aluminium-Based Coating Alternatives to Cd Plating  
*O. Fashuba (University of Sheffield, Sheffield, United Kingdom), A. Yerokhin, A. Leyland, A. Matthews*

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Topic Area C: Processing

- C41-P-2-49** (1975) Effect of plasma supporting gas additions on the process and properties of plasma electrolytically nitrocarburised AISI 316 steel  
*L.C. Kumruoglu (University of Sheffield, Sheffield, United Kingdom), A. Yerokhin, A. Özel, A. Matthews*
- C41-P-2-50** (2026) Surface modifications induced in X10CrNiCuNb18-9-3 austenitic steel by Laser Shock Processing  
*M. Rozmus-Górnikowska (AGH University of Science and Technology, Kraków, Poland), J. Kusinski, M. Blicharski*
- C41-P-2-51** (2101) The effects of coating thickness and heat treatment on adhesion resistance of vitreous enamel produced by electrophoresis deposition method  
*M. Ahmadi (Amirkabir university of technology, Tehran, Iran), F. Moztafzadeh, M. Mehdipour*
- C41-P-2-52** (2260) Effect of pulsed current electrodeposition on microstructure of copper films  
*R.F. Santos (FEUP, Porto, Portugal), S. Simões, F. Viana*
- C41-P-2-53** (2313) Microstructure study of Ni based alloy deposit on AISI 5140 steel  
*A. Pascu (Transilvania University of Brasov, Brasov, Romania), R. Iovanas, D. Iordachescu, I. Voiculescu, R. Trusca*
- C41-P-2-54** (2390) Structure and properties of Y-doped Bi<sub>2</sub>O<sub>3</sub> thin films deposited by PLD technique  
*S. Kac (AGH-University of Science and Technology, Krakow, Poland)*
- C41-P-2-55** (2421) Structure and properties of Al-Mg-Ni thin films deposited using PLD technique  
*A. Radziszewska (AGH University of Science and Technology, Cracow, Poland), T. Moskalewicz*
- C41-P-2-56** (2452) Advanced Materials For Continuous Hot Dip Metallic Coating Process  
*R. Thiounn (ArcelorMittal Maizières, Maizières-Lès-Metz, France), K. Beaujard, C. Dulcy, M. Simonnet, R. Zanfack, N. Bontems, P. Durighello, A. Lamande, H. Saint-Raymond*
- C41-P-2-57** (2466) Piezoresistive and mechanical properties of group I metal containing diamond like carbon films  
*R. Gudaitis (Kaunas University of Technology, Kaunas, Lithuania), Š. Meškiniš, A. Vasiliauskas, K. Šlapikas, S. Tamulevičius*
- C41-P-2-58** (2520) Influence of surface mechanical attrition treatment on low temperature plasma nitriding of medical grade austenitic stainless steel  
*M. Chemkhi (University of Technology of Troyes, Troyes, France), D. Reira, A. Roos, L. Waltz, C. Demangel*
- C41-P-2-59** (2620) Effect of Hydrogen and Oxygen Doping on the Properties of CN<sub>x</sub> Films  
*E. Mikmeková (Institute of Scientific Instruments of the ASCR, v.v.i., Brno, Czech Republic), J. Sobota, I. Müllerová, O. Čaha, R. Di Mundo*
- C41-P-2-60** (2639) A study on the characteristics of metalized yarns  
*A. Schwarz (Ghent University, Zwijnaarde, Belgium), L. Van Langenhove*
- C41-P-2-61** (2836) Synthesis and characterization of Pd-ZrO<sub>2</sub> films by MOCVD  
*A. Torres (Instituto Politécnico Nacional, Altamira, Tamps, Mexico), M. Dominguez, J. Ferretiz, E. Onofre, A. Hernandez*
- C41-P-2-62** (2893) Mechanical properties of nanocrystalline CoP alloy deposits by DC electrodeposition technique  
*I. Kosta (University of Barcelona, Barcelona, Spain), A. Vincenzo, M. Sarret, C. Müller*
- C41-P-2-63** (2906) Fritage Et Oxydation De L'Alliage (Ni-6%Al) En Masse  
*N. Halem (Universite Mouloud Mammeri, Tizi-Ouzou, Algeria), Z. Halem, H. Aïdrous, N. Mahiouz*
- C41-P-2-64** (2994) The Influence of Laminating on the Moisture Transfer Through Leather  
*G. Ada (Kaunas University of Technology, Kaunas, Lithuania), J. Virginija*
- C41-P-2-65** (3076) effect of different parameters on properties of Zn-nano TiO<sub>2</sub> composite coatings  
*T. Mokabber (Iran University of Science & Technology, Tehran, Iran), S. Rastegari, H. Razavi Zadeh*
- C41-P-2-66** (3092) Role of additives in electrodeposition of bright silver from high cyanide bath  
*E. Bakan (Istanbul Technical University, Istanbul, Turkey), S. Timur*
- C42** (1443) **Advances in surface treatments of light alloys**  
**C42-P-2-01** Local mechanical properties of anodic oxide layers on AA 2017 with modified pore structure  
*M. Händel (University of Technology Chemnitz, Chemnitz, Germany), S. Nehr Korn, D. Nickel, C. Rupprecht, B. Wielage, T. Lampke*
- C42-P-2-02** (2559) Electrochemical study of aluminum and aluminum- lithium alloys for the aerospace industry  
*J.A. Moreto (University of São Paulo/Universiity of Minho, Guimarães, Portugal), C.A. Vieira, F. Romagnoli, W.W. Bose Filho, L.A. Rocha*
- C42-P-2-04** (2414) Formation and Characterisation of Basalt Containing PEO Coatings on Al Alloys for Frictional Applications  
*O. Terleeva (Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russian Federation), A. Slonova, A. Yerokhin, A. Rogov, A. Matthews*
- C42-P-2-05** (2263) Time-resolved Spectroscopic Studies of PEO Discharges  
*K. Goddard (University of Southampton, Southampton, United Kingdom), I. Golosnoy, C. Dunleavy, T. Clyne*
- C42-P-2-06** (1185) Titanium Grade 2 surface modification in fluidized bed  
*J. Jasinski (Czestochowa University of Technology, Czestochowa, Poland), P. Podsiad, S. Szymanska*
- C42-P-2-07** (2435) Surface modification of hypereutectic Al-Si alloys by TIG surface melting  
*M. Salman Khaksar (Tehran university, Tehran, Iran), A. Safaei, M. Heydarzadeh Sohi, J. Rasizadeh Ghani*
- C42-P-2-08** (0563) Characterization of oxide layer developed by sulfuric anodization on 2017A alloys.  
*C. Fares (Ecole Nationale Préparatoire aux Etudes d'ingéniorat ENPEI, Alger, Algeria), M.E. Belouchrani, T. Boukharouba, A.M. Britah*
- C42-P-2-09** (2468) Development of high-velocity wire arc spray systems for coating light-alloys  
*G. Paczkowski (Chemnitz University of Technology, Chemnitz, Germany), C. Rupprecht, B. Wielage*

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Topic Area C : Processing

- C42-P-2-10** (2066) Elaboration and Characterization of Multimaterials Based on Aluminum Alloys  
*A. Harichane (ecole nationale polytechnique ALGERIE, Cherif, Algeria), N. Mesrati*
- C42-P-2-11** (0242) Elaboration Of The Layers Of Alumina On Aluminum In Presence Of Additive Vegetal  
*D. Atmani (Ecole Militaire Polytechnique/ algérie, Alger, Algeria), A. Merati, F. Aiouaz*
- C42-P-2-12** (2617) Modelling AC and Pulsed Bipolar PEO Processes using In-Situ Impedance Spectroscopy Approach  
*C.-J. Liang (University of Sheffield, Sheffield, United Kingdom), A. Yerokhin, E. Parfenov, A. Matthews*
- C42-P-2-13** (2154) Development and characterization of advanced coatings for TiAl alloys  
*B. Pelic (TU Bergakademie Freiberg, Freiberg (Sachsen), Germany)*
- C42-P-2-14** (0462) Effect of boric acid on the sulphuric acid anodising of Al-Mg alloy (AG3)  
*M. Hamdadou (EMP, Algiers, Algeria), N. Stein, D.E. Akretche*
- C42-P-2-15** (0356) Surface Treatment Of Aluminium Piston Alloys By Compressed Plasma Flow  
*K. Raic (Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia), Z. Acimovic-Pavlovic, I. Belic*
- C42-P-2-16** (1405) An Investigation into the tribological performance of Plasma Electrolytic Oxidised and Hard Anodised surfaces in high temperature lubricated contact  
*L. Bashir (1School of Mechanical Engineering, University of Leeds, Leeds, United Kingdom), L. Tomasz, N. Anne, S. Suman, T. Herb*
- C42-P-2-17** (1943) Gas Evolution Studies during Pulsed Bipolar Plasma Electrolytic Oxidation  
*Y. Gao (University of Sheffield, Sheffield, United Kingdom), A. Yerokhin, L. Snizhko, A. Matthews*
- C42-P-2-18** (1895) Comparison of Micro-Mechanical Properties of Sintered and Pressed Compacts Made from Copper Coated-Iron Powder Composites  
*S. Baban (kingston College, London, United Kingdom)*
- C42-P-2-19** (1229) The Fracture Surface Fractography Of AISI 4140 Steel Modified  
*Y. Yarali Özbek (sakarya university, Sakarya, Turkey), M. Durman*
- C54** **Additive Manufacturing with advanced materials**
- C54-P-2-01** (0611) Microstructural characteristics of product modelled by rapid prototyping method  
*D. Rudnik (Motor Transport Institute, Warsaw, Poland), K. Pietrzak, K. Makowska, A. Wojciechowski*
- C54-P-2-02** (0286) Infrared thermal image segmentation using thresholding methods  
*Y. Laib Dit Leksir (Unité de recherche en siderurgie et metallurgie, Elhadjar, Algeria), M.S. Bouchrit, S. Bouhouche*
- C54-P-2-03** (0164) Ti6Al4V coaxial laser cladding process optimization.  
*V. Amigo (Universidad Politecnica Valencia, Valencia, Spain), J.J. Candel, P. Franconetti, J.M. Amado*

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Topic Area D : Characterization and Modelling

- D11 Novel Diffraction and Scattering Techniques for Materials Characterization**
- D11-P-2-01** (1590) The Use of FFT in Analysing Optical Images of Mixed Ferrite / Pearlite / Bainite Structures  
*X. Liu (THE UNIVERSITY OF BIRMINGHAM, Birmingham, United Kingdom), M. Strangwood, R. Ward*
- D11-P-2-02** (0096) Fracture Damage on Corrosion Initiation  
*V. Cihal (VSB-TU Ostrava / SVUOM Ltd. Prague, Ostrava, Czech Republic), M. Biba, M. Blahetova, M. Kadlecova, E. Kalabisova, S. Lasek*
- D11-P-2-03** (1597) Silicon drift detectors: a new future for chemical analysis on the nm-scale and below  
*M. Falke (Bruker, Berlin, Germany), R. Krömer, R. Terborg, M. Rohde*
- D11-P-2-04** (1618) In situ TEM and automated orientation mapping study of direct Copper bonding  
*M. Martinez (CEMES CNRS, Toulouse, France), M. Legros, T. Signamarcheix, L. Bally, S. Verrun, L. Di Cioccio, C. Deguet*
- D11-P-2-05** (0540) Study of relaxation phenomenons on silicate glasses  
*M. Naji (CEMHTI-CNRS, Orleans, France), Y. Vaills*
- D11-P-2-06** (2781) TEM bend contour technique for lattice orientation analysis  
*V. Kolosov (Ural State University, Ekaterinburg, Russian Federation)*
- D11-P-2-07** (2940) Recrystallization Behaviour By Heat Treatment Of The 2205 Duplex Stainless Steel  
*N. Ouali (CENTRE DE RECHERCHE SCIENTIFIQUE EN SOUDAGE ET CONTROLE, Algiers, Algeria), B. Belkessa, M. Bouabdallah, R. Badji*
- D11-P-2-08** (0665) Structure investigation of mixed silica-titania oxide materials via in-situ SAXS measurements  
*J. Akbarzadeh (University of Vienna, Vienna, Austria), S. Flaig, H. Peterlik, N. Hüsing*
- D11-P-2-09** (1726) Influence Of Thermal Treatments Upon The Microstructure And Mechanical Properties Of A Steel Cast Refractory Type Hc  
*D. Gatica (University of La Serena, La Serena, Chile), J. Garin*
- D11-P-2-10** (0966) Photoluminescence properties of undoped biomimetically derived apatite on the surface of alkaline-treated titanium alloy  
*A. Sepahvandi (Amirkabir University of Technology, Tehran, Iran), M. Ghafari, F. Moztarzadeh, M. Mozafari*
- D11-P-2-11** (2979) SEM and EDX Study of Oxidation and Recrystallization of Polycrystalline Rhodium, Palladium and Silver in Oxygen Atmosphere  
*A. Salanov (Boreskov Institute of Catalysis, Novosibirsk, Russian Federation), E. Suprun*
- D11-P-2-12** (2355) Characterization of microstructure evaluation after creep tests of CB2 steel samples  
*J. Kasl (SKODA VYZKUM s.r.o., Plzen, Czech Republic), I. Müllerová, Š. Mikmeková, D. Jandová*
- D11-P-2-14** (0029) Microstructural Study of a 30MSV6 Steel Using Image Processing Techniques and Traditional Method  
*A. Zabet (ferdowsi university, Mashhad, Iran), M. Alaei, F.S. Teimoori*
- D11-P-2-15** (1497) Temperature induced structural gradients in multilayer coatings revealed by position resolved XRR and GISAXS  
*G. Maier (Materials Center Leoben Forschung GmbH, Leoben, Austria), J. Kreith, L. Chitu, P. Sifalovic, C. Michaelsen, J. Keckes*
- D11-P-2-17** (2730) 3D Analysis by Electron Diffraction Methods of Nanocrystalline Materials  
*G. David (University of Vienna, Physics of Nanostructured Materials, Vienna, Austria), C. Gammer, C. Mangler, H.-P. Karnthaler, C. Rentenberger*
- D11-P-2-18** (0784) Materials Science in Laboratoire Léon Brillouin  
*V. Klosek (CEA, Gif-Sur-Yvette, France), S. Gautrot, M.-H. Mathon*
- D11-P-2-19** (3038) Fracture toughness KIC of WC  
*S. Doi (Oita, Oita, Japan)*
- D12 Tomographic 3D imaging with hard X-rays and neutrons**
- D12-P-2-01** (1264) Microstructural Characterization of SiC Ceramic Multilayers by X-ray Microtomography  
*K. Mergia (National Institute for Lasers, Plasma and Radiation Physics NILPRP, Bucharest-Magurele, Romania), I. Tiseanu, C. Badini, T. Craciunescu, S. Biamino*
- D12-P-2-02** (0507) Microstructural Characterization Of Dry Snow Metamorphism  
*I. Baker (Dartmouth College, Hanover, USA), S. Chen*
- D12-P-2-03** (1879) Tomography with deep submicrometer resolution and powder diffraction-based contrast to study heat-treated TiH<sub>2</sub> particles for improved aluminium foam manufacture  
*A. Rack (European Synchrotron Radiation Facility, Grenoble, France), C. Jimenez, F. Garcia-Moreno, R. Tucoulou, P. Cloetens, T. Rack, J. Banhart*
- D12-P-2-04** (2847) X-ray radiography characterisation of the Crack behaviour  
*D. Vavrik (ITAM CAS, Prague, Czech Republic), I. Jandejsek, O. Jirousek*
- D12-P-2-05** (2742) High Resolution Synchrotron Tomography and Numerical Modeling of Strongly Absorbing W-based Heterostructures  
*A. Zivelonghi (Max-Planck-Institut für Plasmaphysik, EURATOM Association, Garching By Munich, Germany), T. Weitkamp, M. Di Michiel, M. Sheel, J. Riesch, A. Larrue, S. Nawka, B. Kieback, A. Brendel, J.-H. You*
- D12-P-2-06** (2696) Tomographic investigation of damage fluctuations in creep deformed copper  
*R. Abbasi (Ecole des Mines de Saint Etienne, Saint Etienne, France), K. Dzieciol, L. Renversade, M. Di Michiel, T. Buslaps, A. Borbély*
- D12-P-2-07** (1344) The Effect Of Microstructure On The Origin And Propagation Of Splits In High Strength Low Alloy Steels  
*R. Punch (University of Birmingham, Birmingham, United Kingdom), A. Kostryzhev, M. Strangwood, C. Davis*

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Topic Area D : Characterization and Modelling

- D12-P-2-08** (2632) ANKAphase: phase retrieval software for X-ray phase contrast images taken at a single distance  
*T. Weitkamp (Synchrotron Soleil, Gif-Sur-Yvette, France), D. Haas, A. Rack*
- D12-P-2-09** (2601) Combined use of X-ray imaging and diffraction techniques for characterization of polycrystalline materials  
*L. Nervo (CNRS, Grenoble, France), W. Ludwig, A. King, P. Reischig*
- D12-P-2-10** (1061) Region of Interest Computed Tomography  
*C. Maass (University Erlangen-Nürnberg, Erlangen, Germany), M. Kachelrieß*
- D12-P-2-11** (1262) Characterization Of Vibrated Sand Packing By X-Ray Microtomography  
*L. Olmos (INP-GRENOBLE, Saint Martin D'Herès, France), J.-M. Chaix, S. Nadler, O. Bonnefois, J.-L. Gelet, G. Thomas*
- D12-P-2-12** (1711) Combined synchrotron X-ray and neutron imaging for the characterisation of fuel cells  
*J. Banhart (Helmholtz-Zentrum Berlin (HZB), Berlin, Germany), I. Manke, N. Kardjilov, T. Arlt, H. Markötter, C. Tötze, A. Hilger, F. Wieder*
- D12-P-2-13** (0283) Inspection of Metal Coated Plasma-Facing Composite Materials by X-ray Laminography  
*I. Tiseanu (National Institute for Lasers, Plasma and Radiation Physics NILPRP, Bucharest-Magurele, Romania), T. Craciunescu, C. Ruset, C. Dobrea, A. Sima*
- D12-P-2-14** (1698) Advanced characterization methods for Dual Phase steels damage investigation  
*C. Philippot (ArcelorMittal, Maizières Les Metz, France), J. Drillet, D. Bettinger, N. Valle, J.M. Hiver*
- D12-P-2-15** (2061) 100 Hz synchrotron hard-x-ray microtomography  
*K. Fezzaa (Argonne National Laboratory, Argonne, USA), W.-K. Lee, X. Xiao*
- D12-P-2-16** (1447) Characterization of pore space of anisotropic microstructures based on micro-CT images  
*O. Wirjadi (Fraunhofer ITWM, Kaiserslautern, Germany), J. Ohser, C. Ferrero, A. Rack, A. Kuznetsova, J. Düll*
- D12-P-2-17** (1534) Quantitative 3D analysis of Fe<sub>3</sub>O<sub>4</sub> nanoparticles incorporated within mesoporous silicon by electron tomography  
*T. Uusimäki (FELMI-ZFE, Graz, Austria), M. Albu, M. Sezen, P. Granitzer, P. Pölt, K. Rumpf, M. Morales, G. Kothleitner*
- D12-P-2-18** (2094) Neutron Tomography and Synchrotron-radiation based micro-computed tomography applied to the characterization of dinosaur and crocodile fossils from the Mesozoic of Portugal  
*R.M. Martins (Instituto Tecnológico e Nuclear (ITN), Sacavém, Portugal), F. Beckmann, O. Mateus, P.K. Pranzas*
- D12-P-2-19** (2073) In-Situ X-ray Micro-Tomographic Study of the Deformation Microstructure of Extruded Al-12Si-12Ti  
*B. Abbey (Melbourne University, Parkville, Australia), K. Taehoon, F. Hofmann, B. Nikolaos, M. Jiawei, P. Grant, R. Mokoso, A. Korsunsky*
- D12-P-2-20** (2087) Application of X-ray microtomography to creep-damage studies  
*A. Borbely (Ecole des Mines de Saint-Etienne, Saint-Etienne, France), K. Dzieciol, R. Abbasi, F. Sket, M. Karl, A.R. Kaysser-Pyzalla*
- D13** **Nanotomographic Techniques and 3D Material Microstructures**
- D13-P-2-01** (2508) Characterization of mechanically milled Cu-Co-O powder by 3D-FIB and Atom Probe Tomography : effect of oxidation on the magnetoresistance  
*J. Bran (groupe de physique des matériaux, St Etienne Du Rouvray, France), R. Lardé, M. Jean, J.M. Le Breton*
- D13-P-2-02** (0243) Atom Probe Analysis of Microstructure of a Ni-base Superalloy Microfer5520Co  
*T. Liu (Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), D. Tytko, P.-P. Choi, D. Raabe, J. Klöwer*
- D13-P-2-03** (0252) Characterization of Alloy 617B designed for power plant application  
*D. Tytko (Max-Planck-Institute fuer Eisenforschung, Duesseldorf, Germany), P.-P. Choi, D. Raabe, J. Kloewer*
- D13-P-2-04** (2037) Atomic-scale mechanisms of deformation-induced cementite decomposition in pearlite  
*Y. Li (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), P. Choi, C. Borchers, S. Westerkamp, S. Goto, D. Raabe, R. Kirchheim*
- D13-P-2-05** (1533) Tomographic atom probe in the accurate analysis of multilayers interfaces  
*Z. Balogh (Westfälische Wilhelms Universität Münster, Münster, Germany), R.M. Chellali, P. Stender, G. Schmitz*
- D13-P-2-06** (2661) Atom probe tomography analysis of oxide dispersion strengthened steels – Quantifying nanocluster composition  
*C.A. Williams (Oxford University, Oxford, United Kingdom), G.D. Smith, E.A. Marquis*
- D13-P-2-07** (0568) Atom probe sample preparation equipment for correlative FIB/TEM/LEAP and FIB under STEM observation  
*P. Felfer (The University of Sydney, Camperdown, Australia), J. Cairney*
- D13-P-2-08** (0698) Some aspects of field evaporation of iron oxides in laser assisted atom probe tomography (APT).  
*M. Bachhav (Universite de Rouen, Rouen, France), R. Danoix, F. Danoix, B. Hannoyer, F. Vurpillot, S. Ogale*

## Poster Session II - On display Wednesday September 14th

Topic Area D : Characterization and Modelling

- D13-P-2-10** (2563) Atom probe characterization of high-K gate stacks: a comparison with ToF-SIMS, MEIS and XPS  
*J.-P. Barnes (CEA-Leti, MINATEC, Grenoble, France), R. Boujamma, A. Grenier, F. Pierre, D. Jalabert, M. Py, M. Gros-Jean, J.-M. Fabbri, M. Veillerot, E. Martinez*
- D13-P-2-11** (1595) Atom probe tomography of solid state ion-conductive membranes  
*G.-H. Greive (WWU Münster, Münster, Germany), F. Berkemeier, G. Schmitz*
- D13-P-2-12** (2548) Thermal stability of TiAlN/CrN multilayer coatings studied by Atom Probe Tomography  
*I. Povstugar (Max Planck Institute for Iron Research, Dusseldorf, Germany), P.-P. Choi, J.-P. Ahn, D. Raabe*
- D13-P-2-13** (1512) Thermal stability of a nanocrystalline Fe/Cr multilayer system  
*P. Stender (Institute of Material Physics, Münster, Germany), G. Schmitz*
- D13-P-2-14** (0215) Atom Probe Tomography and Nanoelectronics  
*D. Blavette (Université de Rouen / CNRS, Saint Etienne Du Rouveray, France), P. Thomas, O. Cojocar-Miredin, S. Duguay*
- D13-P-2-15** (2307) Non destructive nuclear methods for coal particle analysis  
*P. Masset (TU Bergakademie Freiberg, Freiberg, Germany), A. Bhargava, N. Gordillo, C. Habchi*
- D13-P-2-16** (1594) Impurity distributions in Cu(In,Ga)Se<sub>2</sub> thin-film solar cells studied by Atom Probe Tomography  
*R. Schlesiger (University Münster, Münster, Germany), R. Würz, J. Bastek, N.A. Stolwijk, G. Schmitz*
- D13-P-2-17** (2238) X-ray Nanotomography in a Scanning Electron Microscope  
*B. Pauwels (SkyScan, Kontich, Belgium), A. Sasov*
- D13-P-2-18** (2365) Atom probe tomography of Nd-Fe-B permanent magnets  
*H. Sepehri Amin (NIMS, Tsukuba, Japan), T. Ohkubo, K. Hono*
- D13-P-2-19** (1761) Investigation of eutectic interfaces of Al-Si alloys using voltage- and laser-pulsed atom probe tomography  
*M. Timpel (Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany), N. Wanderka, R. Schlesiger, G. Schmitz, J. Banhart*
- D34**
- D34-P-2-01** (1275) Intercalation of Lithium in Tin  
*F. Berkemeier (University of Münster, Münster, Germany), M. Ibrahim, G. Schmitz*
- D34-P-2-02** (0363) Investigation of the phase relations in Cu-Li-Sn and the binary constituent systems  
*S. Fürtauer (University Vienna, Vienna, Austria), H. Flandorfer*
- D34-P-2-03** (0065) Model for predicting the interphase precipitation of VC in middle carbon steels  
*T. Senuma (Okayama university, Okayama, Japan), M. Niya, Y. Takemoto*
- D34-P-2-04** (0214) Theoretical study of thermodynamic quantities in binary transition-metal alloys  
*N. Dubinin (Institute of Metallurgy of the Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation)*
- D34-P-2-05** (1230) Segregation at interfaces and radiation defects in Fe<sub>70</sub>Cr<sub>20</sub>Ni<sub>10</sub> alloy studied by Metropolis Monte Carlo simulations.  
*E. Zhurkin (St.Petersburg State Polytechnical University, Saint-Petersburg, Russian Federation), G. Bonny, D. Terentyev, L. Malerba, B. Zhu, M. Hou*
- D34-P-2-06** (2900) Thermodynamic Modeling Of Equilibrium Composition And Characteristics Of Fe-Al-Co And Fe-Al-Co-Ti Systems  
*A. Ilinykh (Ural Technical Institute of Telecommunications and Informatics, Ekaterinburg, Russian Federation), N. Ilinykh*
- D34-P-2-07** (1422) Prediction of TTT diagrams using phase-field simulation  
*A. Giessmann (ICAMS, Bochum, Germany), O. Shchyglo, I. Steinbach*
- D34-P-2-08** (2156) Phase-field modelling of microstructure evolution during processing of cold-rolled Dual Phase steels  
*J. Rudnizki (RWTH Aachen University, Aachen, Germany), U. Prael, W. Bleck*
- D34-P-2-09** (1568) Modelling hydrogen redistribution and deep trapping, and considerations on a new method for hydrogen reduction.  
*D. Gaude-Fugarolas (Independent Research and Consultancy in Physical Metallurgy and Engineering, Vilassar De Mar, Spain)*
- D34-P-2-10** (1103) Simulation of Sintering process by combined Phase-Field and Lattice-Boltzmann simulation  
*A. Rios (ICAMS, Bochum, Germany), M. Gross, F. Varnik, I. Steinbach*
- D34-P-2-11** (0147) A quantitative phase-field approach to athermal beta-to-omega transformation  
*Y. Cui (Madrid Institute for Advanced Studies of Materials, Madrid, Spain), B. Tang, J. Li*
- D34-P-2-12** (0619) Thermodynamics Of Structural Transformations Within The Stripes Localized Cyclically In The Zn - Hexagonal Single Crystal  
*W. Wolczynski (Institute of Metallurgy and Materials Science, Kraków, Poland), P. Musielak, G. Sibiga, G. Boczekal, B. Mikulowski*
- D34-P-2-13** (2356) Convex Hull Algorithms For Minimization Of Gibbs Energy In Multicomponent Alloys  
*N. Pervoshchikova (Institut Jean Lamour / Ecole des Mines, Nancy, France), A. Benoît, T. Julien, D. Sabin*
- D34-P-2-14** (1968) Investigations of the influence of elastic effects on binary alloys phase diagrams using Monte Carlo simulations  
*M. Fèvre (ONERA, Chatillon, France), A. Finel, Y. Le Bouar*
- D34-P-2-15** (1973) Combined ab-initio and experimental study of the Tantalum-Germanium binary phase diagram using CALPHAD approach  
*K. Favier (ICGM, Université Montpellier 2 et CNRS, Montpellier, France), R. Viennois, J.-C. Tedenac, D. Ravot*
- D34-P-2-16** (2814) Thermodynamic properties and phase stabilities of magnetic materials derived from first principles  
*T. Hickel (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), F. Körmann, A. Al-Zubi, B. Grabowski, A. Dick, J. Neugebauer*
- D34-P-2-17** (2854) Gibbs: Symbolic Computation of Thermodynamic Properties and Phase Equilibria.  
*E. Garcia (Purdue University, West Lafayette, USA)*

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Topic Area D : Characterization and Modelling

- D34-P-2-18** Experimental investigation and thermodynamic modelling of the Au-Ge-X (X=Cu, Ni, Ti) ternary systems  
(1701) *S. Jin (EMPA, Swiss Federal Laboratories for Materials Science and Technology, Duebendorf, Switzerland), C. Leinenbach, J. Wang, L. Duarte, A. Watson, A. Scott*
- D34-P-2-19** TCAL1: A new thermodynamic database for Aluminium alloys  
(2562) *A. Jansson (Thermo-Calc Software AB, Stockholm, Sweden), Y. Du, S. Liu, L. Zhang, L. Kjellqvist, A. Engström, A. Markström*
- D34-P-2-20** Some Regularities Of Behaviour Of Thermochemical Properties Of Intermetallic Compounds And Characteristics Of Melts Of Binary Ni – (Ti, Zr, P, B) Systems  
(2903) *N. Ilinykh (Ural Technical Institute of Telecommunications and Informatics, Ekaterinburg, Russian Federation), T. Kulikova*
- D34-P-2-21** Interfacial Reactions Between TRIP-Steel and Zirconia Ceramics  
(2976) *P. Franke (Technische Universität Bergakademie Freiberg, Freiberg, Germany), M. Ksyta, H.J. Seifert*
- D34-P-2-22** Thermodynamic modelling of the Fe-Ti-V system  
(0151) *J.-M. Joubert (CNRS, Thiais, France)*
- D34-P-2-23** Thermodynamic modeling of the Al–C–O–N system  
(2975) *D. Pavlyuchkov (TU Bergakademie Freiberg, Institut für Werkstoffwissenschaft, Freiberg, Germany), O. Fabrichnaya, H.-J. Seifert*
- D34-P-2-24** Thermodynamics of Reactive Hydride Composites  
(2369) *E.R. Pinatel (Università di Torino, Torino, Italy), D. Pottmaier, A. El Kharbachi, I. Nuta, M. Baricco*
- D34-P-2-25** Optimization Of ZrO<sub>2</sub>-Nb<sub>2</sub>O<sub>5</sub> System To Thermocalc Database  
(2192) *N. Guimarães (ITA, Cachoeira Paulista, Brazil), D. Reis, C.D. Moura Neto, G. Coelho, D. Almeida, F. Piorino Neto*
- D34-P-2-26** Simulation of laser heating and melting experiments on nuclear fuels  
(1500) *B. Robert (Institute for Transuranium Elements, Karlsruhe, Germany), W. Micheal, B. Kostantinos, D.B. Franck, M. Dario*
- D34-P-2-27** Activity coefficients, Redlich-Kister polynomials, and ternary interaction parameters  
(3085) *L. Eleno (University of São Paulo, São Paulo, Brazil), C.G. Schön*
- D34-P-2-28** Experimental investigation and thermodynamic modelling of the Fe-Cr-Mo-C system  
(3090) *L. Eleno (University of São Paulo, São Paulo, Brazil), M.G. Cuppari, C.G. Schön*



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Topic Area E : Energy and Related Applications

- E13**      **Materials for Thermal Management (Heat Sinks materials)**
- E13-P-2-01**      Variation of heat dissipation of LED module consisting of Alumina-coated metal layer  
(2454)      *B. Jae-Oh (KITECH, Incheon, Korea - south), L. Hyo-Soo, J. Seung-Boo*
- E13-P-2-02**      The effect of heat sink design and materials on thermal dissipation of a through-hole type light emitting diode package  
(1026)      *K.S. Lee (Korea Institute of Materials Science, Changwon, Korea - south), D.H. Yoon, Y.-N. Kwon*
- E13-P-2-03**      effects of flow mode transition on heat transfer enhancement with nanofluids in rectangular cavity  
(2985)      *F. Belaid (Guelma University, Guelma, Algeria), M. Benhamza, L. Khezzar*
- E13-P-2-04**      Sigma fibre reinforced copper for heat sink application  
(2554)      *S. Kimmig (Max-Planck-Institut für Plasma Physik, Garching, Germany), A. Brendel*
- E13-P-2-05**      Thermal behaviour of co-continuous metal/ceramic composites obtained by reactive infiltration  
(2845)      *D. Manfredi (Politecnico di Torino, Torino, Italy), M. Pavese, C. Xiang, F. Paolo, B. Sara, B. Claudio*
- E13-P-2-06**      On The Processing Conditions Of Metal/Diamond Composites Manufactured By Pressure-Assisted Liquid Infiltration  
(2761)      *J.M. Molina (Universidad de Alicante, San Vicente Del Raspeig. , Spain), I. Monje, J. Narciso, E. Louis*
- E13-P-2-07**      In-Situ Process of Alumina layer on Aluminum for LED module  
(2342)      *S. Hyeong Won (Korea Institute of Industrial Technology, Incheon, Korea - south), L. Hyo Soo, J. Seung Boo*
- E13-P-2-08**      New Carbon-Based Composite Materials For Thermal Management  
(2884)      *J.M. Molina (Universidad de Alicante, San Vicente Del Raspeig. , Spain), R. Prieto, I. Monje, J. Narciso, E. Louis*

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Topic Area F : Healthcare Applications

- F11 Bioactive Coatings and Material-Tissue Interfaces**
- F11-P-2-01** Facile Surface Modification For Covalent Immobilization Of Enzymes On Different Geometries (1140)  
A. Cifuentes (Institut Químic de Sarrià, Barcelona, Spain), L. Masramon, A. Planas, S. Borrós
- F11-P-2-02** The Effect of Alkaline Treatment on Biomimetic Apatite Formation and Adhesive Strength (0035)  
K. Fatehi (Tehran Polytechnic Univ, Tehran, Iran), F. Moztarzadeh, M. Solati Hashtjin, M. Tahriri
- F11-P-2-03** Nanomaterial as microbial agent to paints (0052)  
W. Claudio Da Silva (University of São Paulo, São Paulo - Sp, Brazil), A.P. Oliveira Filho, A. Paschoalin, F. Valenzuela-Diaz
- F11-P-2-04** Biocidal And Fungicidal Coatings Containing Cupper Nanoparticles Supported On Kaolin/Diatom (0149)  
B. Cabal (ICMM-CSIC, Madrid, Spain), M. Miranda, M. Suárez, F. Rojo, F. Malpartida, R. Torrecillas, J.S. Moya
- F11-P-2-05** Antibacterial And Protein-Selective, -Repellent Plasma Nanofilm For Different Materials Commonly Used In Medical Applications (0594)  
M. Bergmann (Albert-Ludwigs-University Freiburg, Freiburg, Germany), G. Dame, F. Olcaytug, G. Urban
- F11-P-2-06** Cu-based alloys on its corrosion behaviour (1637)  
C. Iordache (Dunarea de Jos University, Galati, Romania)
- F11-P-2-07** Glass-(nAg, Cu) biocide coating on ceramic substrates (0338)  
L. Esteban (CSIC, Madrid, Spain), F. Rojo, J.S. Moya
- F11-P-2-08** Development and characterization of a novel in situ antibiotic delivery system to prevent titanium implant-related infections (2259)  
D. Cafagna (University of Bari, Bari, Italy)
- F11-P-2-09** Controlled Crystallization of Macromolecules using Patterned Substrates in a Sandwiched Plate Geometry (0822)  
A. Ghatak (Indian Institute of Technology Kanpur, Kanpur, India)
- F11-P-2-10** Development of an injectable calcium phosphate delivery system with gentamicin sulfate for treatment of bone diseases (1841)  
A. Ansari Hamedani (Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran), M. Haghbin-Nazarpak, F. Moztarzadeh, M. Tahriri, M. Ashuri, D. Bizari
- F11-P-2-11** Surface Functionalization Of Biomaterials With Alkaline Phosphatase (1836)  
S. Ferraris (Politecnico di Torino, Turin, Italy), E. Vernè, S. Spriano, C. Vitale-Brovvarone, G. Pan, C. Cassinelli, L. Rimondini, E. Battistella, C.L. Bianchi
- F11-P-2-12** Magnetron Enhanced Plasma-Polymerized Nanofilms as Antimicrobial Coatings for Rigid Gas Permeable Contact Lenses (0593)  
A. Marx (University Freiburg, Freiburg, Germany), M. Bergmann, L. Ledernez, G. Dame, F. Olcaytug, G. Urban
- F11-P-2-13** An in vitro assessment of the antibacterial properties and cytotoxicity of Al<sub>2</sub>O<sub>3</sub>-Ag nanopowders (1271)  
A. Jastrzebska (Warsaw University of Technology, Warsaw, Poland), E. Radziun, M. Roslon, A. Kunicki, A. Olszyna, J. Dudkiewicz-Wilczynska, E. Anuszevska, E. Karwowska
- F11-P-2-14** Study of the interaction mechanisms between actinides and a bone-like matrix (1301)  
G. Chatelain (ICSM, Bagnols Sur Ceze, France), D. Bourgeois, O. Averseng, C. Vidaud, G. Boivin, D. Meyer
- F11-P-2-15** The effect of grain size on the materials-cell interfaces and biocompatibility of microwave sintered HAP bioceramics (0864)  
D. Veljovic (Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia), M. Colic, Z. Kojic, A. Banjac, E. Palcevskis, R. Petrovic, D. Janackovic
- F11-P-2-16** Thermal treatment optimization of electrodeposited hydroxyapatite coatings on Ti6Al4V (1603)  
R. Drevet (INSERM/URCA, Reims, France), J. Faure, H. Benhayoune
- F11-P-2-17** Bioactive Titanium Wire Ball as Vertebra Substitute (0945)  
M. Iwasaki (Kinki University, Osaka, Japan), S. Akira, S. Riki, H. Hiroshi, M. Kohji, H. Chiaki
- F11-P-2-18** A calcium silicate cement (Biodentine™) as dentin substitute. (0993)  
B. Grosogeat (LMI Lyon 1 UMR 5615; Faculté de chirurgie Dentaire Paris 7, Paris, France), N. Pradelle, P. Colon, R. Al Hity, C. Villat
- F11-P-2-19** Gel Oxidation Of Titanium And Effect Of UV Irradiation On Precipitation Of Hydroxyapatite From Simulated Body Fluid (1492)  
H.Z. Abdullah (Universiti Tun Hussein Onn Malaysia, Johor, Malaysia), C.C. Sorrell
- F11-P-2-20** Corrosion behavior of AZ31 Magnesium alloy having nano hydroxyapatite coating (3068)  
E. Mirtaheri (University of Tehran, Qazvin, Iran), M. Saremi

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Topic Area F : Healthcare Applications

- F12** **Smart and biomimetic materials for biomedical applications and tissue engineering**
- F12-P-2-01** (1573) The Effects of Sintering Temperature and Cellular Response to Tricalcium Phosphate  
*M. Tucci (University of Mississippi Med Center, Jackson, USA), H. Benghuzzi*
- F12-P-2-02** (1298) Functionalization of PLA films used in tissue engineering by antioxidants  
*A.T. Elmira (ENSAIA, Vandoeuvre Lès Nancy, France), J. Majid, P. Marc, C. Franck*
- F12-P-2-03** (2844) Bio-active porous Nitinol implant surfaces for improved cellular proliferation  
*C. Pulletikurthi (Florida International University, Miami, USA), N. Munroe, P.K. Gill*
- F12-P-2-04** (1551) Scaffolds prepared by polymer sponge method using narrow size silicon substituted hydroxyapatite particles  
*B. Jokic (Faculty of Technology and Metallurgy, Belgrade, Serbia), D. Veljovic, Z. Radovanovic, I. Jankovic-Castvan, R. Petrovic, D. Janackovic*
- F12-P-2-05** (1311) In Vitro Degradation Of Btcp Under Dynamic Condition  
*H. Silva (UFRJ, Rio De Janeiro, Brazil), G. Peregrino, G. Soares*
- F12-P-2-06** (2374) Prospective of optical fiber sensors for healthcare and life sciences  
*T. Elsarnagawy ( King saud university, Riyadh, Saudi Arabia), M.-T. Wakad*
- F12-P-2-08** (0858) Modelling and realisation of smart graded hydrogel scaffolds  
*A. Tirella (University of Pisa - Faculty of Engineering, Pisa, Italy), G. Mattei, F. Montemurro, G. Vozzi, A. Ahluwalia*
- F12-P-2-09** (1386) Characterisation of the PLA–Al<sub>2</sub>O<sub>3</sub> nanocomposite fibrous scaffolds for bone tissue engineering produced by the electrospinning  
*P. Czarnecka (Warsaw University of Technology, Warsaw, Poland), T. Ciach, A. Olszyna, A. Kunicki, M. Kucharska*
- F12-P-2-10** (2880) Integration of biocompatible ion-selective electrode into a wearable artificial kidney device for the monitoring of blood electrolytes  
*F. Mittler (CEA-Grenoble, Grenoble, France), J. Fils, F. Navarro, G. Marchand*
- F12-P-2-11** (2819) Poly(3-hydroxybutyric acid) (PHB) and poly(3-hydroxybutyric-co-3-hydroxyvaleric acid) (PHBV) porous three-dimensional scaffolds with an improved thickness as cell growth supporting materials  
*S. Zubairi (Imperial College London, London, United Kingdom), A. Mantalaris, A. Bismarck, N. Panoskaltzis, A. Koutinas*
- F12-P-2-12** (1318) Poly(3-hydroxy butyrate)/silicate clays nanocomposites: Thermal behavior and biocompatibility  
*E. Panayotidou (TEI of Western Macedonia, Kozani, Greece), A. Kroustalli, A. Baklavaridis, I. Zuburtikudis, D. Achilias, D. Deligianni*
- F12-P-2-13** (1869) Multifunctional Bioactive Scaffolds for Bone Tissue Engineering Therapeutics Based on Bioglass® Foams and Poly(3-hydroxybutyrate) Microspheres as Drug Carriers  
*A. Boccaccini (University of Erlangen-Nuremberg, Erlangen, Germany), D. Meng, I. Roy, A. Amtmann, H. Huebner, B. Fabry, L. Francis, C.T. Mierke*
- F12-P-2-14** (1112) Polymer Nano-Blends for Biomedical Applications  
*A. Baklavaridis (TEI of Western Macedonia, Kozani, Greece), I. Zuburtikudis, C. Panayiotou*
- F12-P-2-16** (2615) Design and characterization of an innovative blood-calcium phosphate cement composite for bone substitution  
*C. Mellier (Université de Nantes, CNRS, Nantes, France), B.H. Fella, O. Gautier, N. Rochet, B. Bujoli, P. Janvier, J.-M. Bouler*
- F12-P-2-17** (1934) Nanostructured multilayers for biomedical applications – a combinatorial analysis using biomimetic elastin-like recombinamers and polysaccharides  
*R. Costa (3B's Research Group - University of Minho, Guimarães, Portugal), F. Arias, J.C. Rodríguez-Cabello, J. Mano*
- F12-P-2-18** (1880) The reactions occurring on Ti alloy implants caused by the biofilm  
*B. Swieczko-Zurek (Gdansk University of Technology, Gdansk, Poland), A. Palubicka, A. Zielinski*
- F12-P-2-19** (1002) Synthesis and bio-mechano-materialestic assessment of a novel HAp/Gelatine bone void filler: An in-vivo study in rat  
*E. Sadeghian Dehkord (Amir Kabir University, 9126958295, Iran), M. Solati-Hashjin, S.A. Hooshier Ahmedi, M.M. Dehghan*
- F12-P-2-20** (2280) Photoactivated surfaces to control protein attachment and cell recruitment  
*C. Custódio (3B's Research Group, Caldas Das Taipas, Portugal)*
- F12-P-2-21** (2381) Strontium-substituted nanocrystalline apatites  
*A. Ait Chaou (CIRIMAT Toulouse, Castres, France), S. Sarda, C. Charvillat, C. Rey*
- F12-P-2-22** (0307) Plasma deposited multilayers for the development of controlled releasing surfaces  
*S. Zanini (Università di Milano-Bicocca, Milano, Italy), E. Grimaldi, C. Riccardi*
- F12-P-2-23** (2517) Poly(hydroxyalkanoates) Based Biocomposites for Bone Tissue Engineering  
*J.M. García García (Institute for Polymer Science and Technology, Madrid, Spain), I. Quijada Garrido, L. Garrido Fernández, J. Kaschta, A.R. Boccaccini*
- F12-P-2-24** (2122) Surface-modified hydroxyapatite porous scaffolds for bone tissue engineering  
*V.M. Sglavo (university of trento, Trento, Italy), A. Madinelli, M. Piccinini, F. Bucciotti*
- F12-P-2-25** (2368) smart fiber optic sensors for healthcare monitoring and diagnostic systems  
*T. Elsarnagawy ( King saud university, Riyadh, Saudi Arabia)*
- F12-P-2-26** (0223) Preparation of Hydroxyapatite Scaffold by Starch- Freeze Casting  
*K. Fatehi (Tehran Polytechnic Univ, Tehran, Iran)*
- F12-P-2-27** (2558) Monitorization of biomineralization using real-time dynamic mechanical analysis experiments on chitosan/ Bioglass® composite membranes  
*S. Caridade (3B's Research Group\_University of Minho, Guimarães, Portugal), E. Merino, N. Alves, J. Mano*

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Topic Area F : Healthcare Applications

- F12-P-2-28** (2479) Effects of adding Al and Ca in mixed Na/K phosphate glasses on the thermal properties and water degradation  
*A. Faivre (Université Montpellier 2, Montpellier, France), F. Despetis, M. Cardiola, L. Duffours, P. Colombel*
- F12-P-2-29** (2222) Emulsion-based preparation of collagen microsphere carriers for MSC differentiation  
*E. Belamie (Ecole Pratique des Hautes Etudes, Montpellier, France), S. Vigier, M. Mathieu*
- F12-P-2-30** (1976) Controlled release and antimicrobial study of zinc(II)-ion from zinc/poly(2-hydroxyethyl acrylate/itaconic acid) hybrid hydrogels  
*S. Tomic (Faculty of Technology and Metallurgy, Belgrade, Serbia), A. Peric-Grujic, S. Dimitrijevic, J. Filipovic, J. Jovasevic*
- F12-P-2-31** (0217) Ion release behavior and in vitro bioactivity of sol-gel-derived bioactive glasses containing magnesium and zinc  
*A. Ansari Hamedani (Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran), F. Moztarzadeh, D. Bizari, M. Ashuri, M. Tahriri*
- F12-P-2-32** (0195) Novel Zn-doped bioactive glasses developed by ion-exchange  
*A. Hoppe (Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany), M. Miola, E. Verné, A. Boccaccini*
- F14**
- F14-P-2-01** (1276) AFM-based Nanohandling of Biological Material  
*F. Niewiera (University Oldenburg / AMiR, Oldenburg, Germany), M. Weigel-Jech, F. Krohs, S. Fatikow*
- F14-P-2-02** (2843) Two-Dimensional Trabecular Bone Modeling To Predict Bone Diseases Effect By Finite Element Software Considering Viscoelastic Behavior  
*O. Armando (UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO, Mexico, Mexico), R. Osvaldo, R. Edgar I., J. Víctor H*
- F14-P-2-04** (0863) Probabilistic FE simulations to predict AA rupture risk: integration with mechanical and histological thrombus characterization  
*S. Celi (Institute of Clinical Physiology National Research Council, IFC-CNR, Massa, Italy), P. Losi, S. Berti*
- F14-P-2-05** (0240) A study of heat distribution in human skin: use of Infrared Thermography, Doppler measurements and numerical models.  
*D. Ratovoson (University of science Montpellier 2, Montpellier, France), F. Jourdan, V. Huon, V. Costalat*
- F14-P-2-06** (0407) Spike transitions in FitzHugh Nagumo model  
*C. Lelli (Politecnico di Milano, Milan, Italy)*
- F14-P-2-08** (1107) A mechanical model of neuronal growth  
*J. García (IMDEA Materials Institute, Madrid, Spain), J.M. Peña, A. Jerusalem*
- F14-P-2-09** (0997) Effect of Hydrolysis and Strain Rates on the Compressive Properties of Tricalcium Phosphate/Poly-L-Lactic Acid Composites  
*S. Kobayashi (Tokyo Metropolitan University, Tokyo, Japan), S. Yamaji*
- F14-P-2-10** (0760) Design strategy and alloy performance of biodegradable Fe-based alloys for medical applications  
*M. Schinhammer (ETH Zurich, Zurich, Switzerland), F. Moszner, A.S. Sologubenko, J.F. Löffler, P.J. Uggowitzer*
- Mechanical characterization and modeling of tissues and biomedical materials at all length scales**
- F14-P-2-11** (2028) Role of damage mechanics in multiple length scale nanoindentation of lamellar bone: experiments and numerical model  
*P. Vena (Politecnico di Milano, Milano, Italy), L. Riccardo, C. Davide*
- F14-P-2-12** (1632) Evaluation of the fibrous tissue formed at the tissue-implant interface of TCP bioceramic implanted SC and IP  
*H. Benghuzzi (University of Mississippi Med Center, Jackson, USA), M. Tucci*
- F14-P-2-13** (3041) A comparison between the mechanical strength of disinfected type III and IV dental stone casts  
*E. Moslehifard (Sahand University of Technology, Tabriz, Iran), F. Nasirpouri*
- F14-P-2-14** (3058) Yttrium-containing bioglass: a potential new material for in situ radiotherapy  
*J. Christie (University College London, London, United Kingdom), J. Malik, A. Tilocca*

## Poster Session II - On display Wednesday September 14th

Topic Area G : Education

- G11**            **Material Science and  
Engineering Education for  
2020s**
- G11-P-2-01**    Glass and Ceramic Composites for High  
(1746)            Technology Applications (GlaCERCo),  
Marie Curie Initial Training Network  
(ITN)  
*M. Salvo (Politecnico di torino, Torino,  
Italy), M. Ferraris, C. Contardi, T.  
Glacervo*
- G11-P-2-02**    Teach of Materials Science and  
(2813)            Materials Selection in a design course: a  
Brazilian experience with a focus on  
sustainability  
*A. Canal Marques (Universitat  
Politécnica de Catalunya, Barcelona,  
Spain), C. Malfatti, J.M. Cabrera Marrero*

## Poster Session II - On display Wednesday September 14th

Topic Area X : General and Miscellaneous

- |                             |  |                             |   |
|-----------------------------|--|-----------------------------|---|
| <b>X12</b>                  | <b>Miscellaneous</b>   | <b>X12-P-2-12</b>           | Interference between electric and magnetic dipoles in dielectric spheres: Scattering anisotropy and optical forces. <i>G.M. Raquel (Universidad Autonoma de Madrid, Madrid, Spain), G.C. Braulio, S.L. Inés, G. Francisco, M. Fernando, N.V. Manuel, S. Juan José</i>                     |
| <b>X12-P-2-01</b><br>(0014) | Properties of iron substituted manganese La <sub>0.67</sub> Sr <sub>0.33</sub> FexMn <sub>1-x</sub> O <sub>3</sub> nano-manganites oxide<br><i>M. Ellouze (FSS, Sfax, Tunisia), W. Cherif, F. Elhalouani, A. Lehlooh</i>                               | (2715)                      |   |
| <b>X12-P-2-02</b><br>(0028) | Improving surface properties of 316L stainless steel for biomedical applications using 45S5 bioactive-glass produced by melting and sol-gel techniques<br><i>A. Pedram (Amirkabir University of Technology, Tehran, Iran), S.M. Naghib</i>             | <b>X12-P-2-13</b><br>(2063) | Investigation of natural strain aging of micro alloyed steel (E390D) and recovery of initial properties<br><i>E. Ahoonbar (Sharif University of Technology, Tehran, Iran), M. Ketabchi, M.R. Nourani</i>  |
| <b>X12-P-2-03</b><br>(0031) | Materials For Antiwear Protection<br><i>H. Binchiciu (SC SUDOTIM AS SRL, Timisoara, Romania), E. Binchiciu, P. Berchi</i>  | <b>X12-P-2-15</b><br>(1412) | Theoretical Study on Gain Suppression in Semiconductor Quantum-Wire Laser<br><i>P. Huai (Shanghai Institute of Applied Physics, Shanghai, China), M. Yoshita, H. Akiyama, K. Kamide, K. Asano, T. Ogawa, T. Wang, C. Cheng, W. Zhang, Z. Zhu</i>  |
| <b>X12-P-2-04</b><br>(0061) | Influence of Nd <sub>2</sub> O <sub>3</sub> and Y <sub>2</sub> O <sub>3</sub> on the Synthesis of Ba <sub>2</sub> Ti <sub>9</sub> O <sub>20</sub> Microwave Dielectric Ceramic Bodies<br><i>D. Abdel Aziz (National Research Centre, Cairo, Egypt)</i> | <b>X12-P-2-16</b><br>(1470) | Resonators built in one dimensional photonic crystals for modification of the optical properties of nanoparticles.<br><i>O. Sánchez-Sobrado (CSIC, Seville, Spain), M. Calvo, G. Lozano, N. Núñez, M. Ocaña, A. Sánchez-Iglesias, L. Liz-Marzán, H. Míguez</i>                            |
| <b>X12-P-2-05</b><br>(2166) | The Fracture Surface Features Of Hot Work Tool Steels Modified<br><i>Y. Yarali Özbek (sakarya university, Sakarya, Turkey)</i>   | <b>X12-P-2-17</b><br>(1813) | Correlation between grain boundary structure and properties in CaCu <sub>3</sub> Ti <sub>4</sub> O <sub>12</sub> ceramics.<br><i>P. Leret (Instituto de Cerámica y Vidrio (CSIC), Madrid, Spain), M.A. De La Rubia, J.J. Romero, J.F. Fernández</i>                                       |
| <b>X12-P-2-07</b><br>(2289) | Characterization of the interface between vitreous enamel metal substrate<br><i>C. Siligardi (University of Modena and Reggio Emilia, Modena, Italy), M. Dignatici, A. Zucchelli, R. Carlotti</i>  | <b>X12-P-2-18</b><br>(0859) | Electron nanodiffraction study of transformation of nanodiamonds into carbon onions<br><i>V. Popov (MISIS, Moscow, Russian Federation), A. Egorov, S. Savilov, V. Lunin, I. Khodos</i>  |
| <b>X12-P-2-09</b><br>(1045) | Pyroceram On The Basis Of Cordierite Glass, Synthesized On The Solar Furnace<br><i>N. Kulagina (Materials Science Institute, Tashkent, Uzbekistan), M. Rumi, E. Mansurova, G. Voronov, M. Zufarov, S. Fayziev</i>                                      | <b>X12-P-2-20</b><br>(3059) | Large area, low temperature, low pressure nanodiamond films growth by high frequency pulsed microwave linear antennas plasma reactor<br><i>F. Fendrych (Institute of Physics, Academy of Sciences CR, Prague 8, Czech Republic), A. Taylor, L. Peksa, J. Vitek, M. Nesládek, M. Liehr</i> |
| <b>X12-P-2-10</b><br>(1226) | Study of the interactions emodin-bovine serum albumin-silver nanoparticles on a colloidal system<br><i>P. Sevilla (Universidad Complutense Madrid, Madrid, Spain), S. Sanchez-Cortés, C. Domingo, J.V. García-Ramos</i>                                |                             |   |
| <b>X12-P-2-11</b><br>(1212) | Characterization of iron-zinc phases in hot dip galvanized steels<br><i>C. Costa (Federal University of Minas Gerais, Belo Horizonte, Brazil), R. Paranhos, W. Macedo, V. Buono, V. Lins</i>   |                             |   |