

Topic: B1 - Advanced Structural Ceramics

Advanced Nanostructures

- B11-56** **A Novel Approach for Synthesis of Nanocrystalline MgAl₂O₄ Powders by Co-Precipitation with Organic Regents**
M.M. Rashad (Sp), Central Metallurgical R&D Institute, Cairo (Egypt); H. El-Shall, University of Florida, Gainesville, FL (USA)
- B11-558** **Synthesis of Hydroxyapatite Film Nanostructures by the Method of HF-Magnetron Sputtering**
A. Kostyuchenko (Sp), V.M. Levlev, Voronezh State Technical University (Russian Federation); S.M. Barinov, V.V. Smirnov, I.V. Fadeeva, RAS, Moscow (Russian Federation) et al.
- B11-748** **Synthesis of Nanopowder Precursors for Beta-Al₂TiO₅ Ceramics by Cogelification of Metal Alkoxides**
E. Otterstein (Sp), G. Karapetyan, R. Nicola, M. Stir, C. Schick, E. Burkel, University of Rostock (Germany)
- B11-756** **Properties of the Particles in the Si-Al-O-N System after High Energy Milling**
M. Tancula (Sp), M. Sopicka-Lizer, Silesian University of Technology, Katowice (Poland)
- B11-779** **BN as Sintering Aid for Dense Oxygen-Selective Perovskite Membranes**
M. Arnold (Sp), J. Martynczuk, K. Efimov, Leibniz Universität Hannover (Germany); H. Wang, South China University of Technology, Guangzhou (China); A. Feldhoff, Leibniz Universität Hannover (Germany)
- B11-792** **Synthesis and Characterization of (CSH₁₄ON) [La_{1-y}Bi_yX₄] (X = Cl, I) Layered Perovskites for Potential Optoelectronic Applications**
L.C. Chioaru, I. Jitaru, M. Alexandru (Sp), C. Covaliu, F. Mandea, University "Politehnica" Bucharest (Romania)
- B11-807** **The Structure Transformations in Zirconia-Based Nanopowders**
S. Kulkov, Russian Academy of Science, Tomsk (Russian Federation)
- B11-875** **Dye-Sensitized Solar Cells Using a Novel TiO₂ Nanostructure**
H. Tao (Sp), J. Tao, Z. Bao, L. Wang, Nanjing University of Aeronautics and Astronautics, Nanning, Jiangsu (China)
- B11-1114** **Colloidal Processing of Ceramics via Coagulation of Suspensions with Submicron- and Nano-Particles**
A.F. Cetinel (Sp), R.A. Simon, University of Bayreuth (Germany)

- B11-1184** **SANS Investigation of Y-TZP Ceramics in Yielding Period of Tensile Superplastic Deformation**
V. Ryukhtin (Sp), J. Aroun, Academy of Sciences of the Czech Republic, Prague (Czech Republic); M. Kammel, Hahn-Meitner-Institute, Berlin (Germany); Y. Motohashi, Ibaraki University (Japan)
- B11-1193** **Small-Angle Neutron Scattering by Highly Ordered Nanopores in Anodic Alumina**
V. Ryukhtin (Sp), Academy of Sciences of the Czech Republic, Prague (Czech Republic); I. Turkevych, S. Kato, T. Takamasu, K. Koguchi, Quantum Dot Research Center, Ibaraki (Japan) et al.
- B11-1386** **Assessment of High-Temperature Corrosion Resistance of Ti-Si-C-N Nanocomposite in Dry Air**
A. Strzelczak (Sp), A. Biedunkiewicz, Szczecin University of Technology (Poland); G. Mozdzen, Austrian Research Center – ARC GmbH, Seibersdorf (Austria)
- B11-1454** **New High Thermal Conductivity Alumina Nanocomposites**
A. Borrell (Sp), L.A. Diaz, R. Torrecillas, Instituto nacional del carbón, Oviedo (Spain)
- B11-1497** **Self-Doping of Al₂O₃ for Ceramic Optical Applications**
M.J. Suarez (Sp), A. Fernández, J.L. Menéndez, R. Torrecillas, Instituto Nacional del Carbón, Oviedo (Spain)
- B11-1506** **Surfactant-Mediated Synthesis of Polymer-Derived (Metal-)Ceramic Nanocomposites**
V. Bakumov (Sp), M. Schwarz, E. Kroke, Technical University of Freiberg (Germany)
- B11-1514** **Surface Morphology and Porosity of Composite Ceramics Prepared from Hydroxyapatite Nanopowders and Sol-Gel Derived Compositions**
G. Mezinskis (Sp), I. Pavlovska, D. Lazdina, A. Pludons, Riga Technical University (Latvia)
- B11-1541** **Obtention of Alumina-Zirconia Nanocomposites-by Colloidal Processing Route for Biomedical Applications**
A. Fernandez (Sp), R. Torrecillas, Instituto Nacional del Carbon, Oviedo (Spain); V. Garnier, J. Chevalier, G. Fantozzi, Institute Nationale des Sciences, Villeurbanne (France)
- B11-1673** **On Controlled Mechanical Properties of Carbides by Nanocarbon Doping**
I. Savvatimova (Sp), V.M. Repnikov, Federal State Unitary Enterprise Research Institute Luch, Podolsk (Russian Federation); G. Dubitsky, G. Pivovarov, TISNCM, Moscow (Russian Federation)

- B11-1797** **The Characterization of Micro- and Nanostructured Multifunctional Oxide Systems Based on a Complex Thermodynamic Approach**
F.V. Maxim (Sp), University of Aveiro, CICECO (Portugal); S. Tanasescu, F. Teodorescu, Romanian Academy, Bucharest (Romania)
- B11-1959** **Production and Microstructural Characterization of Al₂O₃-Al Cermets**
E. Rocha (Sp), R. Navarro-Montijo, A. Altamirano-Torres, Autonomous Metropolitan University, Mexico, D. F. (Mexico)
- B11-2211** **Development of Well-Dispersed Carbon Nanotube-Reinforced Al₂O₃ Nanocomposites**
I. Ahmad (Sp), Y. Zhu, Y. Li, Y. Zhao, A. Kennedy, D.G. McCartney, The University of Nottingham (UK)
- Ceramic Composite Concepts**
- B12-116** **Synthesis, Characterization and Dissolution of Biomorphic Ceramics. Determination of Metal Ions**
C. Bosch Ojeda, F. Sánchez Rojas, J.M. Cano Pavón (Sp), University of Málaga (Spain)
- B12-119** *oral poster* **Microstructure and Properties of Ceramic Composites Based on Basaltic-Andesite**
E. Albert (Sp), University of Medicine and Pharmacy, Tirgu Mures (Romania); M. Muntean, A. Ianculescu, Politehnica University, Bucharest (Romania)
- B12-263** **Effect of the Addition of High Calcium Fly Ash and Short Carbon Fibres on Strength of Cement**
A.D. Papargyris (Sp), S. Papargyri, D. Kasidakis, A. Zaxaroulis, Technological & Educational Institute of Larissa (Greece)
- B12-475** **Biomimetic Synthesis of Nanolaminates by Solution Deposition of Zirconium Oxide on LbL Organic Layers**
I. Zlotnikov (Sp), I. Gotman, E.Y. Gutmanas, Technion, Haifa (Israel); J. Bill, Z. Burghard, Max Planck Institute for Metals Research, Stuttgart (Germany)
- B12-567** *oral poster* **Anisotropy Development during Sintering of a Glass-Ceramic Composite Used in the LTCC Technology**
J.-B. Ollagnier (Sp), O. Guillon, Technical University of Darmstadt (Germany); M. Rauscher, University of Erlangen-Nuremberg (Germany); A. Wonisch, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany) et al.

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| <p>B12-604
<i>oral poster</i></p> | <p>Novel Metal Matrix Composites from Freeze-Cast Ceramic Preforms: Colony Structure and Mechanical Behaviour
S. Roy (Sp), A. Wanner, University of Karlsruhe (Germany)</p> | <p>B12-1802</p> | <p>Calcium Zirconate as Artificial Pinning Center in High Tc Superconductor Bi2212
E. Cursino (Sp), D.S. Schmoal, D. Rodrigues Jr., EEL-USP, Taubaté (Brazil)</p> | <p>B13-539</p> | <p>Numerical Modelling of Heat and Mass Transport in CVI Production of SiC-Matrix Composite from Methylsilane
V.I. Kulik (Sp), Y.V. Zagashvili, N.L. Vetkina, Baltic State Technical University, Saint-Petersburg (Russian Federation); V.I. Kulik, Ceracom Ltd., St. Petersburg (Russian Federation) et al.</p> | |
| <p>B12-606
<i>oral poster</i></p> | <p>Ceramic Preforms with Directional Pore Channels for Local Reinforcement of Al Die Casting Components
R. Oberacker (Sp), T. Waschkies, M.J. Hoffmann, University of Karlsruhe (Germany)</p> | <p>B12-1947</p> | <p>Peculiarities of Formation and Structure Nanocrystalline ZrO₂ - Y₂O₃ - Al₂O₃ Fibers
T.M. Ulyanova (Sp), P. Vityoz, N. Krutko, L. Triva, S. Medichenko, National Academy of Sciences of Belarus, Minsk (Belarus)</p> | <p>B13-578</p> | <p>Bioinspired Microstructure Design of Fluorophlogopite Based Machinable Composites for the Structural Applications
S.-Y. Park (Sp), S.-J. Kim, J.-H. Song, Kangnung National University, Kangwondo, Kangnung (Korea, Republic)</p> | |
| <p>B12-914</p> | <p>Recycling of Fly Ashes Obtained from Vibo Valentia's Incinerator in Ceramic Tiles
M. Guzzo (Sp), D. Vuono, A. Nastro, University of Calabria, Arcavacata di Rende (CS) (Italy)</p> | <p>B12-2151</p> | <p>Corrosion Behavior of Oxide Eutectic Ceramics in Water Vapor Environments
Y. Harada (Sp), T. Suzuki, K. Hirano, National Institute of Advanced Industrial Science and Technology, Tsukuba (Japan); R. Shirakawa, T. Teramoto, University of Tsukuba (Japan)</p> | <p>B13-1089</p> | <p>Thermal Shock Resistance of Zirconia Foam Ceramics
G. Bula (Sp), V. Svinka, R. Svinka, Riga Technical University (Latvia)</p> | |
| <p>B12-916</p> | <p>Study on the Chemical-Physical and Mechanical Properties of Bricks with Plastic Waste
R. Sanosti, D. Vuono, P. De Luca, A. Nastro (Sp), University of Calabria, Arcavacata di Rende (Italy)</p> | <p>Modelling and Reliability of Ceramic Materials and Components</p> | | | <p>B13-1130
<i>oral poster</i></p> | <p>Surface Engineering for Improved Reliability of Ceramic Components under Tribological Loading
M. Wöppermann (Sp), M. Mathieu, University of Karlsruhe (Germany)</p> |
| <p>B12-1358</p> | <p>Al₂O₃-Si₃N₄ Nanocomposites
A. Zawada (Sp), A. Kunicki, W. Ziemkowska, A. Pietrzykowski, A. Olszyna, Warsaw University of Technology (Poland)</p> | <p>B13-14
<i>oral poster</i></p> | <p>Development of the Theoretical Thermal Stress Resistance Ideas
A.G. Lanin (Sp), I.I. Fedik, Scientific Institute „LUCH“, Podolsk (Russian Federation)</p> | <p>B13-1360</p> | <p>Modelling Processing by Pressing and Sintering of TiO₂ Powder Cathode Used to Obtain Titanium
C. Roman (Sp), I. Carcea, R. Chelariu, Technical University Gh. Asachi Iasi (Romania); V. Soare, National R&D Institute for Nonferrous and Rare Metals, Bucharest (Romania); M. Tarcolea, Politehnica University, Bucharest (Romania)</p> | |
| <p>B12-1387</p> | <p>Coating and Squeeze Casting of Ceramic Preforms for the Production of Interpenetrating Metal Matrix Composites
A. Müller (Sp), O. Lott, A. Nagel, Aalen University (Germany)</p> | <p>B13-160</p> | <p>Quantitative Determination of Silicon Carbide in New Ceramic Materials
E.I. Vereda Alonso, A. García de Torres, M.T. Siles Cordero, J.M. Cano Pavón (Sp), University of Málaga (Spain)</p> | <p>B13-1465
<i>oral poster</i></p> | <p>Frotting Fatigue of Engineering Ceramics
T. Schalk (Sp), K.-H. Lang, D. Löhe, University of Karlsruhe (Germany)</p> | |
| <p>B12-1422</p> | <p>Mechanical Behavior of Diamond Composites with Carbide Bonding Phase
M. Szutkowska (Sp), L. Jaworska, The Institute of Advanced Manufacturing Technology, Cracow (Poland); M. Boniecki, The Institute of Electronic Materials Technology, Warsaw (Poland)</p> | <p>B13-253
<i>oral poster</i></p> | <p>Microscopically Motivated Modelling of Ferroelectric Ceramics and its Finite-Element-Implementation Based on a Radial Return Mapping Algorithm
B. Laskewitz (Sp), M. Kamlah, D. Zhou, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)</p> | <p>B13-1729</p> | <p>Automated Optical and Scanning Electron Microscopy Combined with Image Analytical Procedures for Microstructural Defect Characterization of Ceramics
V. Pusch (Sp), T. Barth, T. Bernthaler, A. Nagel, G. Schneider, Aalen University (Germany)</p> | |
| <p>B12-1477</p> | <p>Ceramic Matrix Composites with Gradient Concentration of Metal Particles Obtained by Slip and Tape Casting Method
H. Garbacz (Sp), M. Szafran, K. Konopka, Warsaw University of Technology (Poland)</p> | <p>B13-310</p> | <p>Receiving and Properties of Ca-alpha/beta Sialon Ceramics by the Carbothermal Reduction from Flay Ashes
T. Pawlik (Sp), M. Sopiccka-Lizer, T. Wlodek, Silesian University of Technology, Katowice (Poland)</p> | <p>B13-1806</p> | <p>Preparation of Microstructures of Granulates and Green Bodies by Ionic Beam Technique
M. Herrmann (Sp), Fraunhofer Institute for Ceramic Technologies and Systems, Dresden (Germany); S. Hoehn, K. Sempf, Fraunhofer-Institute for Ceramic Technologies and Systems, Dresden (Germany)</p> | |
| <p>B12-1624</p> | <p>Synthesis of Carbon, Silica and Titania Containing Ceramics by the Biotemplating Technique
G. Mezinskis (Sp), I. Juhnevica, I. Klavina, Riga Technical University (Latvia)</p> | <p>B13-393</p> | <p>Alkali- and Earth Alkali-Silicate Glasses: Insight into Transport and Elastic Properties by Computational Simulations
U. Segre, M.C. Menziani, A. Pedone, G. Malavasi (Sp), University of Modena and Reggio Emilia (Italy)</p> | <p>B13-1827</p> | <p>Thermodynamic and Transport Properties of Nanocrystalline and Microcrystalline Calcium-Doped Cobalt Oxide
L. Cieniek (Sp), J. Kusinski, University of Mining and Metallurgy, Krakow (Poland); G. Baldinozzi, C. Petot, G. Petot-Ervas, Ecole Centrale Paris, Châtenay-Malabry (France)</p> | |
| <p>B12-1689</p> | <p>Effect of SiC Nanoparticles on the Thermal Behaviour and Microstructure of Refractory Materials for Reducing Atmosphere
A. Ciocan (Sp), V. Musat, M. Bordei, F. Potecasu, P. Budrugaec, University of Galati "Dunarea de jos", Galatzi (Romania)</p> | | | | | |

Topic: B1 - Advanced Structural Ceramics

B13-1918 **Effect of Graphitization Process on Biomorphic SiC Properties**
N. Rojo-Calderon (Sp), M. Martinez-Escandell, J. Narciso, F. Rodriguez-Reinoso, University of Alicante (Spain)

B13-2075 **High Cycle Thermal Fatigue Behaviour of High-Performance-Ceramics Containing Glassy Phases**
T. Schwind (Sp), T. Beck, K.-H. Lang, D. Löhe, University of Karlsruhe (Germany)

B13-2109 **Linear and Nonlinear Viscoelasticity of Glasses**
F. Richter (Sp), Ruhr-University of Bochum (Germany); H.-J. Hoffmann, University of Technology of Berlin (Germany)

B13-2152 **Calculation of the Liquidus Curves of CaO-Al₂O₃ Phase Diagram by ESTPHAD Method**
T. Mende (Sp), A. Roósz, University of Miskolc (Hungary)

B13-2291 **Simulation and Modelling of the Kinetic of Ceramic Oxygen Sensors**
B. Hippauf (Sp), Siemens AG, München (Germany); A. Krügel, University of Applied Sciences, Karlsruhe (Germany)

B13-2347 **Porous Spinel-Enstatite Ceramic Developed from Synthetic and Mineral Raw Materials**
G.M. Sedmale (Sp), I. Apsitis, A. Actins, Riga Technical University (Latvia)

Bioinspired Materials and Processes

B14-150 **Heterogenous Polycondensation of D,Lactic Acid Using a Montmorillonite Clay as Catalyst**
A. Harrane (Sp), M.E.A. Belaouedj, M. Belbachir, University of Oran Es-Senia (Algeria)

B14-180 **Fabrication and Gas Sensitivity of Hierarchical Tin Oxide Films by an Aqueous Bioinspired Sol-Gel Technique**
H. Su (Sp), D. Zhang, Q. Dong, Shanghai Jiao Tong University (China)

B14-335 **Molecular Recognition of Artificial Receptors by the Use of the Enolizable Chromophore 1-n-Butyl-5-(4-Nitrophenyl)-Barbituric Acid in Solution**
I. Bolz (Sp), S. Spange, Chemnitz University of Technology (Germany)

B14-403 **The Optimum Viscosity for Biomimetic Odor Sensor and Their Mechanism of Response**
S. Mitachi (Sp), H. Uehara, H. Sakamoto, Tokyo University of Technology (Japan)

B14-519 **Biomimetic Model Polymers as Template for the Synthesis of Nanostructured Silica**
S. Navarro (Sp), F. Cornelius, P. Behrens, H. Menzel, Technical University of Braunschweig (Germany)

B14-531 **Structure-property Relationship in Silk of the Spider Nuctenea Sclopotaria as studied by polarized, time resolved FTIR Spectroscopy**
F. Kremer (Sp), J. Sölter, P. Papadopolus, University of Leipzig (Germany)

B14-1516 **From Natural Hierarchical Structures to Bone Substitutes**
S. Sprio (Sp), A. Ruffini, G. Celotti, A. Tampieri, CNR, Faenza (Italy)

B14-2012 **Can a Cork/Tetrapak/Wax Composite be Used as a Smart Sensor**
M. Lanca, New University of Lisbon, Caparica (Portugal); S. Peukert, Hochschule Merseburg (FH) (Germany); E. Neagu, New University of Lisbon, Caparica (Portugal); P.C. Silva, Unidade de Tecnologia da Cortiça, Lisbon (Portugal) et al.

B14-2252 **Research of the Virus Structure of the Tobacco Mosaic with the Atomic-Force Microscopy Method**
A.P. Shpak, V.L. Karbivskyy (Sp), T.A. Korniyuk, N.A. Kurgan, National Academy of Science of Ukraine, Kiev (Ukraine)

Topic: B2 - Advanced Metallic and Hybrid Materials

Complex Metallic Alloys

B21-736 **Physical Properties of Epsilon-Phases in the Al-Pd-Transition-Metal Systems**
S. Vrtnik (Sp), S. Dolinek, University of Ljubljana (Slovenia)

B21-970 **Improved Thermoelectric Properties in Skutterudites**
V. Da Ros, INPL - CNRS UMR7556, ENSMN, Nancy (France); J. Leszczynski (Sp), A. Dauscher, B. Lenoir, INPL - CNRS UMR7556, ENSMN, Nancy (France); E. Alleno, C. Godart, CMTR-ICMPE-CNRS UMR, Thiais (France)

B21-1169 **Ball Milling of Complex Metallic Alloys**
S. Scudino (Sp), M. Sakaliyska, S. Sperling, U. Kühn, Leibniz Institute for Solid State and Materials Research Dresden (Germany); M. Feuerbacher, M. Heggen, Research Centre Juelich (Germany) et al.

B21-1213 **The Effect of Alloy Elements on the c/a Ratio of Magnesium Binary Solid Solutions**
J. Park (Sp), Y.W. Chang, POSTECH, Pohang (Korea, Republic)

B21-1221 **Mechanical Milling of Single Phase Beta-Al₃Mg₂**
M. Sakaliyska (Sp), S. Scudino, S. Sperling, U. Kühn, J. Eckert, Leibniz Institute for Solid State and Materials Research Dresden (Germany); C. Thomas, M. Feuerbacher, Research Centre Juelich (Germany)

B21-1463 **Li-Containing Complex Metallic Alloys: Li-Superstructures and Possible Applications for Li-Storage**
H. Ehrenberg (Sp), Leibniz Institute for Solid State and Materials Research Dresden, Darmstadt (Germany); H. Pauly, Technical University of Darmstadt (Germany) et al.

B21-2343 **Enthalpy of Formation of Zn₂Mg Laves Phase**
A. Berche, University Aix-Marseille III (France); M.-C. Record (Sp), University Aix-Marseille III (France); J. Rogez, University Aix-Marseille III (France); C. Drescher, S. Brühne, W. Assmus, University of Frankfurt (Germany)

Topic: B2 - Advanced
Metallic and Hybrid
Materials

**High Temperature
Metallic and
Intermetallic Materials**

B22-113 **Transient Liquid Phase Bonding of
Single Crystal Superalloys with Zr and
Sc Containing Braze Alloys**

oral poster

P. Heinz (Sp), A. Volek, R.F. Singer, M. Dinkel, F. Pyczak, M. Göken, University of Erlangen-Nuremberg (Germany); M. Oit, Siemens PG, Mühlheim (Germany); E. Affeldt, MTU Aero Engines GmbH, München (Germany) et al.

B22-192 **An Analysis of the Microstructure of
Ti-6Al-4V on the Oxidation Rate and
Creep Behavior**

D.A.P. Reis (Sp), Instituto Tecnológico de Aeronáutica, São Paulo, SP (Brazil); M.J.R. Barboza, USP, Lorena (Brazil); C.R.M. Silva, IAE, São José dos Campos (Brazil); E.A.C. Perez, Faculdade Comunitária de Taubaté (Brazil) et al.

B22-275 **Influence of Alloying on the
Solidification Microstructure of
Gamma-TiAl Alloys**

oral poster

M. Oehring (Sp), V. Küstner, F. Appel, U. Lorenz, GKSS Research Center, Geesthacht (Germany)

B22-355 **Changes of Mechanical and
Microstructural Properties of Selected
Superalloys Induced by High
Temperature Air and Vacuum
Exposure**

oral poster

V. Jan (Sp), Y. Iino, Toyota Technological Institute, Nagoya (Japan)

B22-402 **Texture Transformation and Effect of
Texture on High Temperature
Deformation Behavior of Ti-6Al-4V
Alloy**

J.-E. Park (Sp), J.B. Jeon, C.E. Lee, Y.W. Chang, Pohang University of Science and Technology (Korea, Republic)

B22-408 **Oxidation and Subsurface Void
Formation in 1100 °C Gas (Laboratory
Air, H₂, N₂, O₂, Ar, Vacuum) and the
Exposed Room Temperature Tensile
Properties of Ni-Base ODS Alloy**

oral poster

Y. Iino, Toyota Technological Institute, Nagoya (Japan)

B22-659 **The Effects of Friction Force on the
Mechanical Behaviors of FeCrAl Alloy
in Compression Test**

J.H. Lee (Sp), W.-J. Jung, Korea Institute of Industrial Technology, Incheon (Korea, Republic)

B22-683 **Microstructural Stability of TiAlNb
Intermetallic Alloy during High
Temperature Exposure**

G. Moskal, Silesian University of Technology, Katowice (Poland)

B22-691 **Corrosion Resistance of Ti48Al2Cr2Nb
Alloys with TiAlSi Type of Coating in
the Atmosphere Containing HCl**

G. Moskal, Silesian University of Technology, Katowice (Poland)

B22-718 **Improvement of the Long Time
Oxidation Resistance of
Gamma-Titanium Aluminides by
Using the Fluorine Effect**

oral poster

H.-E. Zschau (Sp), M. Schütze, Dechema e.V., Frankfurt (Germany)

B22-789 **Characterisation of Deformation
Characteristics of High-Strength TiAl
Alloys Determined by Thermodynamic
Glide Parameters**

R. Hoppe (Sp), J.D.H. Paul, F. Appel, GKSS Research Center, Geesthacht (Germany)

B22-832 **Multi-Axial Creep Tests on
Ti-45Al-5Nb-0.2B-0.2C**

D. Peter (Sp), J. Pfitzing, C. Somsen, G. Eggeler, Ruhr-University Bochum (Germany); S. Brookes, B. Skrotzki, Federal Institute for Materials Research and Testing, Berlin (Germany)

B22-1058 **Influence of HCl in the Complex
Atmosphere on Corrosion Behaviour of
Fe3Al-Based Intermetallics**

B. Dytkowicz (Sp), A. Hernas, Silesian University of Technology, Katowice (Poland)

B22-1216 **Oxidation at High Temperature
(T₁=815°C and T₂=1100°C) of New
Silicide and Aluminide Coatings for
Nb-, and Mo-Alloys**

F. Zamoum (Sp), N. David, J.-M. Fiorani, R. Podar, M. Vilasi, University H.Poincaré, Vandoeuvre (France)

B22-1223 **Effect of the Tetragonal Zirconium
Oxide Particles Introduced into Ti-Al
Intermetallic Phases on Their Strength
Properties**

K. Biesiada (Sp), A.R. Olszyna, Warsaw University of Technology (Poland)

B22-1273 **Microstructure and Mechanical
Properties of Mechanically Alloyed
NB15Al10Ti Alloy**

M. Rozmus (Sp), M. Blicharski, S. Dymek, AGH University of Science and Technology, Krakow (Poland)

B22-1296 **Thermo-Mechanical Fatigue Behaviour
of the Gamma-TiAl Alloy TNB-V5 with
Different Microstructures**

oral poster

M. Roth (Sp), H. Biermann, Technical University of Freiberg (Germany)

B22-1323 **Oxidation Behavior of a Ni-Based
Superalloy and Ni-Cr-X Model Alloys**

M.G. Obigodi (Sp), S. Virtanen, University of Erlangen-Nuremberg (Germany)

B22-1365 **Mechanical Behaviour of the NiAl-W
Eutectic Alloys**

S. Milenkovic (Sp), G. Frommeyer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); A. Schneider, Salzgitter Mannesmann Forschung GmbH, Duisburg (Germany)

B22-1401 **Research into the High Temperature
Corrosion of Ni-Base Alloys Related to
the Application in Modern Residential
Oil Burners**

H. Ackermann (Sp), M. Kleingries, G. Teneva-Kasseva, K. Lucka, H. Köhne, Oel-Wärme-Institute gGmbH, Herzogenrath (Germany)

B22-1457 **Formation of the B2-NiAl Intermetallic
Phase from Ni/Al Multilayer Thin
Films**

A.S. Ramos, J. Noro, M.T. Vieira, Universidade de Coimbra (Portugal); S. Simões (Sp), Universidade do Porto (Portugal)

B22-1509 **Effect of a Very High Temperature
Jump on the Creep Behavior at High
Temperature of the Ni-Based Single
Crystal Superalloy MC2**

oral poster

X. Milhet (Sp), J. Cormier, J. Mendez, LMPM UMR CNRS, Chasseneuil Futuroscope (France)

B22-1585 **Influence of Homogenizing on the
Structure and Mechanical Properties of
Ni3Al (Zr, B) Intermetallic Alloy**

P. Jozwik (Sp), Z. Bojar, Military University of Technology, Warsaw (Poland)

B22-1707 **Ti/Al Nanometric Multilayers: Effect of
a Third Element on Gamma-TiAl
Diffusion Bonding**

F. Viana (Sp), University of Porto (Portugal); A.S. Ramos, University of Coimbra (Portugal); L.I. Duarte, EMPA, Dübendorf (Switzerland); S. Simões, M.F. Vieira, University of Porto (Portugal) et al.

B22-1830 **Effect of Mechanical Surface Treatments
on the Fatigue Performance of Gamma
Titanium Aluminides**

oral poster

M. Glavatskikh (Sp), J. Lindemann, C. Leyens, Brandenburg Technical University, Cottbus (Germany); M. Oehring, F. Appel, GKSS Research Center, Geesthacht (Germany)

B22-1881 **Complex Alloyed Ni3Al Obtained by
PM Routes**

M. Lucaci (Sp), R.L. Orban, V. Tsakiris, L. Leonat, National Institute for Research and development in Electrical Engineering, Bucharest (Romania)

Topic: B2 - Advanced
Metallic and Hybrid
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- B22-1883** **Microstructure and Residual Stress Formation in Oxide Layers Grown on the Gamma-Ti-45Al-5Nb Alloy**
oral poster
P.A. Silva, H. Pinto (Sp), A. Kostka, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); H.F. Chladil, H. Clemens, University of Leoben (Austria); A. Pyszalla, Vienna University of Technology (Austria)
- B22-2034** **Fourth Generation Ni-Base Superalloys - Influence of Composition on Alloy Properties**
oral poster
S. Neumeier (Sp), F. Pyczak, M. Göken, University of Erlangen-Nuremberg (Germany)
- B22-2245** **Study of the Phase Transformation Temperatures of IN 738LC Nickel - Base Superalloy in High Temperature Region by Means of DTA - Method**
S. Docekalová (Sp), J. Dobrovska, B. Smetana, VSB – Technical University of Ostrava, Ostrava - Poruba (Czech Republic)
- Shape Memory and Amorphous Alloys**
- B23-6** **Shape Memory Effect Induced by Cryogenic Procedure in a Smart Brass**
I. Ciupitu, D. Daisa, E. Alexandrescu, METAV CD, Bucharest (Romania); D. Raducanu, University POLITEHNICA Bucharest (Romania); A. Buzaiianu (Sp), S.C. METAV CD S.A., Bucharest (Romania)
- B23-168** **Factors Influencing the Bonding Reproducible Behavior of Shape Memory Electrical Actuators**
L.G. Bujoreanu (Sp), M. Temneanu, R. Ardeleanu, M. Susan, „Gh.Asachi” Technical University of Iasi (Romania)
- B23-359** **Crystallisation Kinetics of Amorphous Zr-Based Alloy for Sporting Applications**
H. Widmann (Sp), A. Davis, University of Birmingham (UK); S.R. Otto, R & A Rules Ltd, St Andrews (UK); M. Strangwood, University of Birmingham (UK)
- B23-401** **The Laser Heating Effect on Soft Magnetic Properties of Amorphous Iron and Cobalt Based Ribbons**
V.V. Girzhon, O. Smolyakov (Sp), Zaporozhye National University (Ukraine)
- B23-434** **The Aspects of the Micro Structural Investigation Concerning the Shape Memory Alloy Ti Ni Nb**
M. Corban, E. Vasile, S.C. METAV CD S.A., Bucharest (Romania); M. Braic, INOE 2000, Bucharest (Romania); A. Buzaiianu (Sp), S.C. METAV CD S.A., Bucharest (Romania)
- B23-592** **Corrosion Behaviour of the Bulk Glassy (Fe44.3Cr5Co5Mo12.8Mn11.2C15.8B5.9)98.5Y1.5 Alloy**
P.F. Gostin (Sp), U. Siegel, A. Gebert, U. Kühn, J. Eckert, L. Schultz, Leibniz Institute for Solid State and Materials Research, Dresden (Germany)
- B23-698** **Synchrotron x-Ray Diffraction Experiments and Positron Annihilation Spectroscopy of Glassy Mg65Cu25Y10 Ribbons**
D. Uhlenhaut (Sp), A. Castellero, F. Dalla Torre, ETH Zurich (Switzerland); C. Palacio, N. Djourelou, Ghent University (Belgium); B. Schmitt, B. Patterson, PSI, Villigen (Switzerland); J.F. Löffler, ETH Zurich (Switzerland)
- B23-1236** **Cu-12.88Al-4Ni (wt %) Polycrystalline Shape Memory Alloy - Transformation Characteristics**
C. Gurau, University Dunarea de Jos, Galati (Romania); K.K. Mahesh, J. Canejo (Sp), R.J.C. Silva, F.M. Braz Fernandes, CENIMAT, Caparica (Portugal); G. Gurau, D. Tanase, University Dunarea de Jos, Galati (Romania)
- B23-1355** **Procedure of Identification of a Constitutive Law for Homogeneous Deformation of a Bulk Metallic Glass**
M. Bletry (Sp), ENSMP, Evry (France); P. Guyot, J.J. Blandin, INPG, Grenoble (France); J.L. Soubeyroux, CNRS, Grenoble (France)
- B23-1447** **Molecular Structure Study of SiO2-CdO-PbO Glasses by Solid State NMR**
E. Callone (Sp), University of Trento (Italy); K. Müller, University of Stuttgart (Germany); R. Dal Maschio, G. Carturan, University of Trento (Italy)
- B23-1550** **Flow and Fracture Studies on Bulk Metallic Glasses**
J.J. Lewandowski (Sp), G. Sunny, Case Western Reserve University, Cleveland, OH (USA)
- B23-1632** **Thermal Cycling of Cu-Al-Ni Alloys Containing Nb And V Additions**
A.C.R. Veloso, T.A.A. Melo, S.J.G. Lima, R. Gomes (Sp), Federal University of Paraíba, Joao Pessoa (Brazil)
- B23-1655** **In Situ Synchrotron X-Ray Diffraction Study during Annealing of Conventional and Bulk-Forming Metallic Glasses**
E. Pineda (Sp), I. Hidalgo, P. Bruna, T. Pradell, Universitat Politècnica de Catalunya, Castelldefels (Spain); A. Labrador, BM16-LLS, ESRF, Grenoble (France); D. Crespo, Universitat Politècnica de Catalunya, Castelldefels (Spain)
- B23-1697** **Micromemory Effect due to the Incomplete Stress Induced Phase Transformations in NiTi Alloys**
K.K. Mahesh (Sp), J.P.H.G. Canejo, R.J.C. Silva, F.M. Braz Fernandes, New University of Lisbon, Caparica (Portugal)
- B23-1809** **Cu-12.88Al 4Ni (wt %) Polycrystalline Shape Memory Alloy- Elaboration and Characterization**
C. Gurau, G. Gurau, D. Tanase, University Dunarea de Jos, Galati (Romania); K.K. Mahesh, R.J.C. Silva, F.M. Braz Fernandes, J. Canejo (Sp), CENIMAT, Caparica (Portugal)
- B23-2026** **Effect of Minor Alloying Additions on Glass Formation and Thermal Stability in Cu-Based Bulk Metallic Glasses**
I.A. Figueroa-Vargas (Sp), H.A. Davies, I. Todd, University of Sheffield (UK)
- B23-2167** **Time Effect of the Heat Treatment on the Functional Properties of TiNi Wire for Intrauterine Contraceptives**
V.G. Dorodeiko, Medical Enterprise "Simurg", Vitebsk (Belarus); V.V. Rubanik, V.V. Rubanik Jr., S. Miliukina (Sp), Vitebsk State Technological University (Belarus)
- B23-2184** **Relating the Viscous Deformation of Bulk Metallic Glasses with the Nabarro-Herring Creep Model**
Y.-S. Na (Sp), K.S. Cho, J.H. Lee, Korea Institute of Machinery and Materials, Changwon, Kyungnam (Korea, Republic)
- B23-2297** **Electrical Resistance and Acoustic Wave Propagation in NiTi Wires**
P. Sittner, M. Landa, J. Pilch, L. Heller, V. Novak, Institute of Physics ASCR, Prague, Czech Republic
- B23-2311** **TEM Investigation of Microstructure Changes during Shape Setting of NiTi Shape Memory Micro-Wires**
V. Gärtnerova (Sp), ASCR, Prague (Czech Republic); J. Pilch, A. Kujawa, P. Sittner, Academy of Sciences of the Czech Republic, Prague (Czech Republic)
- B23-2350** **Shape setting and mechanical behavior of helical TiNi microsprings**
D. Vokoun (Sp), P. Sittner, J. Pilch, A. Kujawa, P. Sedláč, Academy of Sciences of Czech Republic, Prague (Czech Republic)

Topic: B2 - Advanced
Metallic and Hybrid
Materials

Metal Matrix Composites					
B24-33	The Composite Materials Filled with Radiation-Protective Powders V. Gulbin (Sp), M. Lifshits, R&D Institute of Construction Technology, Moscow (Russian Federation); N. Stepareva, Moscow Institute of Steel and Alloys (Russian Federation)	B24-1061	Development of Nanocomposites on the Basis of Copper Matrix for Coatings Production by Friction Cladding Method V. Popov (Sp), Moscow State Institute of Steel and Alloys (Russian Federation); K.Y. Zhizhin, N.T. Kuznetsov, Kurnakov Institute of General and Inorganic Chemistry, Moscow (Russian Federation) et al.	B24-1588	Physical and Mechanical Properties of Silver Alloys Matrix Composites Reinforced with Ceramic Particles J. Wiecek (Sp), J. Sleziona, A. Dolata-Grosz, M. Dyzia, J. Mysalski, Silesian University of Technology, Katowice (Poland)
B24-258	Structure and Properties of Mechanically Alloyed Composite Materials from Scrap of Aluminium Alloys M. Samoshina (Sp), A.A. Aksenov, Technical University, Moscow (Russian Federation)	B24-1081	Technical High Strength Nanostructured Composite Cu-Nb Wires V. Pansymy (Sp), A. Shikov, A. Vorobieva, N. Khlebova, N. Kozlenkova, N. Beliakov, I. Potapenko, M. Polikarpova, V. Drobishev, Bochvar Institute of Inorganic Materials, Moscow (Russian Federation)	B24-1633	Wear Behaviour and Friction Dynamics of A356/SiC Particles Composites M. Duarte Guigou (Sp), J.M. Molina, E. Louis, J. Narciso, I. Vragovic, Universidad de Alicante (Spain)
B24-382	Manufacturing Technology of Aluminum Base Composites Powder for Cold Spray by Mechanical Alloying M.-G. Kim (Sp), S.W. Kim, G.C. Lee, Research Institute of Industrial Science and Technology, Pohang (Korea, Republic)	B24-1206	Microstructure and Properties of the Cu/Al2O3 Composites Produced by Plastic Treatment Using the KOB0 Method M. Kostecki (Sp), Warsaw University of Technology (Poland); W. Bochniak, AGH University of Science and Technology, Krakow (Poland); A. Olszyna, Warsaw University of Technology (Poland)	B24-1740	Principles of Metallization of Native Polymer Cellulose by Reduction of Polymer-Incorporated Metal Ions N.E. Kotelnikova (Sp), Russian Academy of Sciences, St.Petersburg (Russian Federation); R. Serimaa, U. Vainio, K. Pirrkalainen, K. Leppanen, University of Helsinki (Finland) et al.
B24-656	Characterization of Thermal and Mechanical Properties of Fiber Reinforced Al Matrix Composite Tube J.H. Lee (Sp), W.-J. Jung, Korea Institute of Industrial Technology, Incheon (Korea, Republic)	B24-1305	Copper-Based Clad Materials with Ultrafine-Grained Structure of a Core L. Ciura, W. Kazana, W. Malec (Sp), J. Stobrowa, Institute of Non-Ferrous Metals, Gliwice (Poland)	B24-1803	Sintering Behaviour and Properties of Titanium Metal Matrix Composites I. Montealegre (Sp), E. Neubauer, Austrian Research Centers GmbH-ARC, Seibersdorf (Austria); P. Angerer, EChem GmbH, Wr. Neustadt (Austria)
B24-680	Titanium – Ceramic Nanocomposites: Preparation and Characterization K. Niespodziana (Sp), Poznan University of Technology (Poland); K. Jurczyk, Poznan University of Medical Sciences (Poland); L. Kepinski, Polish Academy of Sciences, Wroclaw (Poland) et al.	B24-1321	The Influence of Mechanical Alloying of Al-Based Nanopowders on the Properties of the mmc Formed by Magnetic Pulsed Compaction S. Zayats (Sp), V. Ivanov, A. Kaygorodov, O. Ivanova, Russian Academy of Science, Ekaterinburg (Russian Federation)	B24-1847	Wear Behaviour of Al7075–50vol% SiCp Composites H. Mindivan, H. Cimenoglu, E.S. Kayali (Sp), Istanbul Technical University (Turkey)
B24-738	The Hybrid Composites Al/SiC(p)+Graphite(p) G. Popescu (Sp), P. Moldovan, S. Bejan, University Politehnica Bucharest (Romania)	B24-1480	Application of AMMCs for Mould Casting for Air Compressor Pistons M. Dyzia, J. Wiecek, Silesian University of Technology, Katowice (Poland); A. Dolata-Grosz (Sp), J. Sleziona, Silesian University of Technology, Katowice (Poland)	B24-1945	AlZnMgCu Composites Formed in Semi-Solid State W. Szymanski (Sp), Institute of Non-Ferrous Metals, Skawina (Poland); M. Richert, University of Mining and Metallurgy, Krakow (Poland)
B24-770	Hardness and Wear Resistance of Nickel Composite Coatings Containing Ceramic and Polymer Particles H. Simunkova (Sp), P. Pessenda-Garcia, D.C. Guio-Perez, Center of Competence in Applied Electrochemistry, Wiener Neustadt (Austria); H. Kronberger, Vienna University of Technology (Austria) et al.	B24-1499	Aluminium Matrix Composites Reinforced with Aluminium Nitride Particles Formed by In Situ Reaction M. Dyzia (Sp), J. Sleziona, Silesian University of Technology, Katowice (Poland)	B24-2021	Features Regarding the Obtaining Methods for Aluminum Based In Situ Composite Materials I. Apostolescu (Sp), P. Moldovan, G. Popescu, University Politehnica of Bucharest (Romania)
B24-871	The Interaction between Aluminium Matrix and Titanium Particles in Composite Obtained by Powder Metallurgy Method A. Olszowska-Myalska, Silesian University of Technology, Katowice (Poland)	B24-1586	Zeolite / Aluminum Composite Adsorbents for Heat Transformation Processes J. Bauer (Sp), E. Che, J. Ofili, R. Herrmann, W. Schwieger, University of Erlangen-Nuremberg (Germany)	B24-2080	Role of Copper-Carbon Nano Fibres Interfaces on Thermal Conductivity of Cu-CNF Composite C. Vincent (Sp), CNRS, Pessac (France); B. Robertson, University of Nebraska-Lincoln, NE (USA); J.F. Silvain, J.M. Heintz, CNRS, Pessac (France)
					Highly Porous Metals and Ceramics
				B25-100	Development of Porous LaCx and UCx for SPES Direct Target L. Biasetto (Sp), P. Colombo, A. Andrighetto, S. Caruran, M. Tonzeller, P. Zanonato, P. DiBernardo, G. Prete, LNL-INFN, Legnaro (PD) (Italy)

Topic: B2 - Advanced Metallic and Hybrid Materials

Topic: B4 - Materials for the extreme Environment

B25-306 Investigation and Modelling of Foam Aluminium Produced from Aluminium Raw Materials by Mechanical Alloying
D. Ivanov (Sp), A. Aksenov, I. Ivanov, Moscow State Institute of Steel and Alloys, Moskau (Russian Federation)

B25-342 Structural Damping of Integral Foam Components
A. Trepper (Sp), C. Körner, R.F. Singer, University of Erlangen-Nuremberg (Germany); A. Mars, G. Bauknecht, ZF Friedrichshafen AG (Germany)

B25-505 Structural, Magnetic and Electrical Resistivity Properties of Birnessite
J. Ju (Sp), T. Ohdaira, J. Sasaki, M. Ishikawa, N. Toyota, Tohoku University, Sendai (Japan)

B25-589 Particle-Stabilized Ceramic Foams
P.N. Sturzenegger (Sp), U.T. Gonzenbach, A.R. Studart, E. Tervoort, L.J. Gauckler, ETH Zurich (Switzerland)

B25-816 Micromechanical Instability and Percolation Transitions in Porous Ceramic Material
S. Kulkov (Sp), S. Buyakova, Russian Academy of Science, Tomsk (Russian Federation)

B25-846 Al-Si Alloy Foam by Liquid Melt Route
M. Pande (Sp), I.I.T. Bombay (India); Y.P. Kathuria, I. I. T. Bombay (India)

B25-1244 Processing Routes for Gold Nanostructures in Mesoporous Titania Films
I. Bannat, K. Wessels, T. Oekermann, M. Wark (Sp), Leibniz Universität Hannover (Germany)

B25-1332 Ellipsometry Porosimetry: Fast and Non Destructive Method of Porosity Characterization of Cubic Mesoporous TiO₂ Thin Films
V. Couraudon (Sp), A. Bourgeois, J.P. Piel, C. Defranoux, SOPRA S.A., Bois-Colombes (France)

B25-1464 Formation of Porous Metallic Materials by Co-Deposition of the Vapour Phases of Metals and Alkali metal Halogenides
A.I. Ustinov, T.V. Melnichenko, K. Liapina (Sp), The E.O.Paton Electric Welding Institute of NASU, Kiev (Ukraine)

B25-1560 Electrodeposition of Porous Copper Layers: A New Route to the Deposition of Coatings for Applications in the Solar Energy Field
U. Bardi (Sp), A. Lavacchi, A. Giorgetti, S. Caporali, A. Fossati, G. Rizzi, A. Scivani, University of Firenze, Sesto Fiorentino (Italy)

B25-1896 Processing of Nanoporous Structures
S. Matthews (Sp), J. Matthews, SCF Processing Ltd, Dundalk (Ireland)

B25-2061 Study on the Influence of Micronics Ni Metallic Powders Particles Shape on the Sintering Process in the Obtaining High Porous Permeable Materials
E. Vasilescu, „Dunarea de Jos” University of Galati (Romania)

B25-2077 Phase Change Materials as Eco-Reliable Materials Allowing a Rational and Efficient Use and Storage of Energy or Thermal Protection
L. Ventola (Sp), M.A. Cuevas-Diarte, T. Calvet, University of Barcelona (Spain); I. Angulo, M. Vivanco, I. Aranberri, Centro Tecnológico Gaiker, Zamudio (Spain); D. Mondieig, University of Bordeaux, Talence (France)

B25-2321 Mold Contamination Influence in Titanium Porous Materials
J.A. Acalero, AMES, Barcelona (Spain); V. Arnigó, L. Reig-Cerdá (Sp), D. Busquets, Polytechnical University of Valencia (Spain)

B25-2355 Processing of Macroporous Polymer Derived Ceramic Foams as Catalyst Support Structures
E. Stern, University of Erlangen-Nuremberg (Germany); J. Torrey (Sp), F. Scheffler, Bavarian Center for Applied Energy Research, Erlangen (Germany); C. Zollfrank, P. Greil, University of Erlangen-Nuremberg (Germany)

Heat Sink and High Temperature Composites

B41-41 The Behaviour of Geopolymer Paste and Concrete at Elevated Temperature
B. Toumi (Sp), University oum El Bouaghi, El Khroub, Constantine (Algeria); Z. Guemmedi, University of Constantine (Algeria)

B41-166 Shear Properties of Hybrid Carbon-SiC_xO_y Ceramic Matrix Composites Reinforced with Knitted Carbon Fiber
M.L. Gregori (Sp), Centro Tecnico Aeroespacial/IAE, Sao Jose dos Campos (Brazil); L.C. Pardini, Centro Tecnico Aeroespacial/IAE, São José dos Campos (Brazil); M.A. Schiavon, Federal University of S.J. del Rey (Brazil) et al.

B41-482 Finely Dispersed SiC-B4C/C Composites for Aerospace Applications
C. Garcia-Rosales, A. Muniategui, University of Navarra, San Sebastian (Spain); I. López Galilea (Sp), CEIT & TECNUN (University of Navarra), San Sebastian (Spain)

B41-700 Thermal Conductivity Measurement of Thin Cu and Ag Metallic thin Films Using Temperature Distribution Method
Y. Kim (Sp), S. Ryu, W. Juhng, Chonnam National University, Gwang-ju (Korea, Republic)

B41-797 Characteristic of Structure and Composition of Metal/Ceramics Interphase in SiC Fibre Reinforced Cu Matrix Composites
H. Matysiak (Sp), M. Pisarek, M. Miskiewicz, Warsaw University of Technology (Poland); P. Kedzierzowski, M. Janik-Czachor, Institute of Physical Chemistry, Warsaw (Poland)

B41-848 Modeling of Heat Transfer and Mechanical Properties in Diamond Copper Composite
Tomasz Boguszewski, Łukasz Ciupiński, Krzysztof Kurzydłowski, Warsaw University of Technology

B41-974 Interfacial Characterisation of Tungsten Fibre Reinforced Copper for High-Temperature Heat Sink Material for Fusion Application
A. Herrmann (Sp), M. Balden, A. Brendel, H. Bolt, Max Planck Institute for Plasma Physics, Garching (Germany)

B41-1006 Thermal Conductivity and Interfacial Conductance of Aluminum Nitride Reinforced Metal Matrix Composites
M. Kida (Sp), L. Weber, A. Mortensen, Swiss Federal Institute of Technology, Lausanne (Switzerland)

Topic: B4 - Materials for the extreme Environment

B41-1062 Mechanical Properties of SiC-Fibre and W-Wire Reinforced Cu- and CuCrZr-Matrix Composites for Heat Sink Applications

J. Hempenmacher (Sp), H. Schumann, K.H. Trautmann, P.W.M. Peters, German Aerospace Center (DLR), Cologne (Germany)

B41-1178 Bidimensional Simulation of the Heat Transfer during an Operation of Welding TIG of the Thin Sheet Metal Using Different Models of Source of Energy

B. Bouyousfi (Sp), University of Blida (Algeria); H. Maza, CSC, Cheraga (Algeria)

B41-1303 Heat Capacity Determination on Ceramics at High and Very High Temperature

R. Naumann (Sp), L. Benoist, SETARAM, Caluire (France)

B41-1381 Influence of Precursor Densification on Strength Retention of Zirconia Coated Nextel TM 610 Fibers

R. Krüger (Sp), M.J. Bockmeyer, Fraunhofer Institute for Silicate Research, Würzburg (Germany)

B41-1475 Fabrication Ti3Al Base Intermetallic Composites Using Hydrostatic Extrusion Process

H. Garbacz (Sp), K. Samsel, Warsaw University of Technology (Poland); M. Kulczyk, Polish Academy of Sciences, Warsaw (Poland); K.J. Kurzydłowski, Warsaw University of Technology (Poland)

B41-1554 Surface Defects in Investment Cast Elements of Aircraft Engines Made from Nickel Based Superalloys

J. Michalski (Sp), H. Matysiak, K.J. Kurzydłowski, Warsaw University of Technology (Poland)

B41-1711 Aluminum Based Composites Reinforced by Mixtures of Diamond and Silicon Carbide

J.M. Molina, M. Rheme, J. Carron, L. Weber (Sp), Swiss Federal Institute of Technology, Lausanne (Switzerland)

B41-1884 Heat Sinks: Graphite Foams – Cu-Cr Composites

R. Prieto (Sp), University of Alicante (Spain); J.M. Molina, Swiss Federal Institute of Technology, Lausanne (Switzerland); E. Louis, J. Narciso Romero, University of Alicante (Spain)

B41-2131 Influence of Atomic Scale Interfaces on the Thermal Transport Properties of Copper-Carbon Nanofiber Composites

C. Vincent (Sp), J.M. Heintz, J.F. Silvain, CNRS, Pessac (France); N. Chandra, G. Khare, University of Nebraska, Lincoln, NE (USA)

B41-2278 Microstructural Oxidation Behaviour of C/C Composites: TEM Characterisation and Modelling

P. Weisbecker (Sp), M. Alrivie, J. Lachaud, G.L. Vignoles, Lab. for ThermoStructural Composites, Pessac (France)

B41-2314 All-Aromatic Liquid Crystalline Polyester Thermosets with High Glass-Transition Temperatures for High Performance Composites

M. Iqbal (Sp), T. Dingemans, Delft University of Technology (Netherlands)

Topic: C1 - Solidification and Solid State Transformation

Solid State transformations: Microstructure formation and evolution

C12-22 Structure-Phase States of the Nickel Surface Layers after Electroexplosive Carburizing

V. Gromov (Sp), E.A. Budovskikh, A.Y. Bagautdinov, O.A. Tsvirkun, Siberian State Industrial University, Novokuznetsk (Russian Federation); Y.F. Ivanov, Russian Academy of Science, Tomsk (Russian Federation) et al.

C12-107 Contribution to the Study of the Phases Transformations in the Ternary Al-Zn-Mg Alloys

L. Hadjadj, University of Mentouri, Constantine (Algeria)

C12-111 The Effect of Copper Addition on Dilatometric Curves

L. Hadjadj (Sp), University of Mentouri, Constantine (Algeria); R. Amira, D. Hamana, P. Auger, University Mentouri, Constantine (Algeria)

C12-536 Fractography Study of Carbon Diffusion Behavior in Commercial Pure Molybdenum

K. Imamura (Sp), T. Inoue, Y. Hiraoka, Okayama University of Science (Japan); T. Kadokura, Y. Yamamoto, A.L.M.T.Corp., Toyama (Japan)

C12-565 Strengthening Mechanisms and Oxidation Behaviour in Platinum and Platinum Alloys

U. Zeigmeister (Sp), M. Rettenmayr, Friedrich Schiller University Jena (Germany)

C12-657 Variant Selection of Reversed Austenite in 13Cr-6Ni Martensitic Steel

N. Nakada (Sp), T. Tsuchiyama, S. Takaki, Kyushu University, Fukuoka (Japan); S. Hashizume, NKKTUBES, Kawasaki (Japan)

C12-1031 Microstructure and Formation Process of Reddish Color Pattern on Traditional Japanese Unglazed Stoneware

Y. Kusano (Sp), A. Doi, Kurashiki University of Science, Kurashiki-shi (Japan); N. Tahara, S. Komura, K. Yamaguchi, M. Fukuhara, T. Fujii, J. Takada, Okayama University (Japan); Y. Ikeda, M. Takano, Kyoto University, Uji (Japan)

C12-1192 Influence of Warm Forging Temperature on the Structure and Mechanical Characteristics of C70S6 Microalloyed Steel

A. Buzăianu (Sp), S.C. METAV CD S.A., Bucharest (Romania); E. Alexandrescu, S.C. Metav S.A., Bucharest (Romania); D. Raducanu, University Politehnica, Bucharest (Romania) et al.

Topic: C1 - Solidification and Solid State Transformation

- C12-1197** **In-Situ Neutron Diffraction Studies of Austenite-to-Ferrite Transformation in Fe-Mn-C Alloys upon Thermomechanically Controlled Processing**
V. Davydov (Sp), P. Lukás, O. Muránsky, Academy of Sciences of the Czech Republic, Rez (Czech Republic); P.G. Xu, M.S. Koo, Y. Tomota, Ibaraki University (Japan); Y. Adachi, National Institute for Materials Science, Nagoya (Japan)
- C12-1363** **The Effect of Strontium on the Microstructure of Magnesium-Aluminum Alloys**
T. Rzychon (Sp), A. Kielbus, Silesian University of Technology, Katowice (Poland)
- C12-1372** **Researches Regarding Precipitation of Intermetallic Phases and Factors in which it's Depends in Maraging Steels**
M. Branzei (Sp), M. Miculescu, F. Miculescu, University Politehnica of Bucharest (Romania)
- C12-1677** **Modeling of Structure Stability Parameter of Retained Austenite in Austempered Ductile Irons**
S. Vasseva (Sp), G. Georgiev, S. Vodenicharov, Bulgarian Academy of Science, Sofia (Bulgaria)
- C12-1691** **3D Grain Structure Evolution and Grain Growth Using a Phase-Field Model**
M. Selzer (Sp), M. Reichardt, B. Nestler, University of Applied Sciences, Karlsruhe (Germany)
- C12-1998** **The Influence of Solution Treatment on the Gamma Prime Precipitates Characteristics in a Ni-Base Superalloy**
S. Behrouzghaemi, A. Abdollahzadeh, H. Asadi, M. Aliof Khazraei (Sp), Tarbiat Modares University, Tehran (Iran)
- C12-2153** **A Two-Dimensional Cellular Automaton Simulation for the Description of the Austenitization in Hypoeutectoid and Eutectoid Fe-C Steels**
G. Karacs (Sp), A. Roósz, University of Miskolc (Hungary)

Topic: C2 - Joining

Joining: Processes

- C21-90** **Ultrasonic Welding between Mild Steel Sheet and Al-Mg Alloy Sheet**
T. Watanabe (Sp), A. Yanagisawa, I. Hwang, University of Niigata (Japan)
- C21-197** **Interaction Kinetics of Nickel with Liquid Pb-free Sn-Bi-In-Zn-Sb Soldering Alloys**
K. Barmak, D.C. Berry, Carnegie Mellon University, Pittsburgh, PA (USA); V.R. Sidorko, A.V. Samelyuk, V. Dybkov (Sp), University of Kiev (Ukraine)
- C21-218** **Heat Treatment and Welding Effects on Mechanical Properties and Microstructure Evolution of 2024 and 7075 Aluminium Alloys**
M. Hakem (Sp), R. Rabah Otmani, M. Maza, T. Fahssi, N. Debbache, D. Allou, S & T Research Center of Welding & Controle, Cheraga-Alger (Algeria)
- C21-323** **Solid State Welding between CPTI and AZ31B Magnesium Alloy Using a Rotating Probe with Thread**
H. Tanabe (Sp), C.T. Watanabe, C.R. Yoshida, C.A. Yanagisawa, Niigata University (Japan)
- C21-413** **Metal Ceramic Joining Using Sputtering and Diffusion Bonding Techniques**
C.J. Aguinaga, Fundacion INASMET, San Sebastian Gipuzkoa (Spain); K. Mergia (Sp), T. Speliotis, N. Moutis, S. Messoloras, National Center for Scientific Research "Demokritos", Athens (Greece)
- C21-528** **Improvement of Joint Strength of W-Cu Composite Using Ti-Added Ag-Cu Alloys as Filler Material**
T. Oka (Sp), H. Hanado, Y. Hiraoka, Okayama University of Science (Japan)
- C21-1021** **Barium Titanate Seignettelectric Ceramic Materials Wettability by Liquid Metals, Metallization and Brazing Processes**
T. Sydorenko (Sp), O.V. Durov, Y.V. Naidich, National Academy of Science of Ukraine, Kiev (Ukraine)
- C21-1152** **Microstructure and Growth Kinetics of Intermetallic Phases in Diffusion Soldered Ag/Sn/Ag Interconnections**
J. Wojewoda, Polish Academy of Sciences, Cracow (Poland); R. Filipek, University of Science and Technology, Cracow (Poland); P. Romanów, P. Zieba (Sp), Polish Academy of Sciences, Krakow (Poland)
- C21-1661** **Dissolution-Precipitation as the Creep Mechanism at Wetted Grain-to-Grain Contacts**
V. Murashov (Sp), V. Traskine, Z. Skvortsova, I. Gazizullin, A. Muralev, Lomonosov Moscow State University, Moskau (Russian Federation)

- C21-2037** **Modelling the Heat and Fluid Flow in the Welded Pool of Composite Metallic Joints**
I.S. Leoveanu (Sp), G. Zgura, University Transylvania Brasov (Romania)

Joining: Mechanical testing and modelling and Applications

- C22-53** **Evaluation of Critical Relative Slippage on Loosening of Thread Joints under Transverse Cyclic Loading**
N. Nishimura (Sp), T. Hattori, M. Yamashita, S. Mori, Gifu University (Japan)
- C22-120** **Tin Whisker Growth on the Surface of Sn-6.6RE(RE=Co, La, Lu, La+Ce) Alloys**
T.-H. Chuang (Sp), H.J. Lin, C.C. Chi, National Taiwan University, Taipei (Taiwan); J. Wang, SHENMAO Technology Inc., Taoyuan (Taiwan)
- C22-322** **Evaluation of Residual Stresses on Metal-Non Oxide Ceramic Joints by Synchrotron Radiation**
oral poster
A.E. Martinelli, R.M. Nascimento, UFRN, Department of Materials Engineering, Natal (Brazil); A. Buschinelli (Sp), U. Reisgen, J. Rimmel, S.M. Gross, Research Centre Juelich (Germany) et al.
- C22-385** **Strain Recovery of Deformed Polycarbonate and Direct/Indirect Joining and Disassembly by Recovery**
Y. Kasuga (Sp), Y. Sanomura, T. Okai, S. Kawamori, N. Suzuki, Tamagawa University, Machida, Tokyo (Japan)
- C22-481** **Of some Mechanical and Metalurgics Characteristics during Experimental Analysys Low Cycles Fatigue Process for High Alloy Steel**
S.-D. Măcută, University "Dunera de Jos" of Galati (Romania)
- C22-500** **Computer Simulations of Rolling-Diffusion Bonding in Steel/Cu/Steel System under Plastic Deformation**
L. Hong (Sp), L. Zhuoxin, Beijing University of Technology (China)
- C22-697** **The Iron Influence of the Mechanical Properties in the 7075 Aluminium Alloy (System Al-Zn-Mg-Cu)**
L. Cristea (Sp), Politechnical University of Bucharest (Romania); E. Cristea, Romanian University of Science and Arts "Gh.Cristea", Bucharest (Romania)

Topic: C2 - Joining

Topic: C3 - Powder synthesis and processing

- C22-997** **Measurement and Numerical Simulation of Thermal and Mechanical Properties of AlSi-Polyester Abradable Coatings**
J.-L. Seichepine (Sp), University of Technologie of Belfort-Montbéliard, Belfort Cedex (France); R. Bolot, University of Technologie of Belfort-Montbéliard (France) et al.
- C22-1052** **Characterization of Friction Welding for Titanium-Based Alloys**
N.-K. Park (Sp), D.G. Lee, J.T. Yeom, J.H. Kim, Korea Institute of Machinery & Materials, Changwon (Korea, Republic); Y.S. Kong, Pukong National University, Busan (Korea, Republic)
- C22-1120** **Dissimilar Weld Joints of Steels for High-Temperature Exploitations in Energy Production**
J. Sopousek (Sp), Masaryk Univ., Brno (Czech Republic); R. Foret, Brno University of Technology (Czech Republic)
- C22-1211** **Impact Behaviour of Damped Composite**
C. Toscano (Sp), F. Lenzi, A. Ferrigno, L. Marciano, CIRA – Italian Aerospace Research Center, Capua (Italy)
- C22-1255** **Pretreatment and Bonding of Light Weight Metal Alloys**
J. Wondrinsky (Sp), N. Godja, C. Löcker, A. Schindel, G.E. Nauer, EICHEM-Center of Competence in Applied Electrochemistry, Wiener Neustadt (Austria)
- C22-1317** **Solid-State Diffusion Welding of Hastelloy C-22: Modeling Based Optimization**
W.W. Basuki (Sp), J. Aktaa, A. von der Weth, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)
- C22-1336** **Effect of Stress Fields on Adhesion in Deformed Polymer-Metal Interfaces**
oral poster
A. Fedorov (Sp), W.-P. Vellinga, J. de Hosson, University of Groningen (Netherlands)
- C22-1382** **Manufacturing Routes for Actively Cooled Structural Components for ITER Port Plugs**
oral poster
A. Meier (Sp), R. Heidinger, K. Kleefeldt, P. Späh, D. Strauss, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany); C. Broeckmann, A. Höfter, A. Packeisen, Köppern Entwicklungs-GmbH, Hattingen (Germany)
- C22-1443** **Thermal Assisted Direct Bonding and Imprinting for Microfluidic Devices Fabrication in Glasses**
oral poster
M. Ferraris (Sp), Q.P. Chen, D. Milanese, M. Fokine, C.L. Chen, Politecnico di Torino (Italy)

- C22-1733** **Failure Analysis of Cavitation Resisting Layers Deposited by Repair Welding on Kaplan Turbine Runner Blades**
D. Frunzaverde (Sp), University "Eftimie Murgu" Resita (Romania); W. Brandl, G. Marginean, University of Applied Sciences Gelsenkirchen (Germany); V. Campian, University "Eftimie Murgu" Resita (Romania)
- C22-1874** **Microstructure and Residual Stresses in an AA6040 / AZ31 Friction Stir Weld**
A. Kostka (Sp), R. Coelho, A. Pyszalla, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); R. Zettler, J. dos Santos, GKSS Research Center, Geesthacht (Germany)
- C22-2082** **Relationship between Properties and Microstructure after Heat Treatment of Martensitic X20CrMoV 12.1 Steels**
D. Allou (Sp), R. Rabah Otmani, M. Hakem, M. Maza, N. Debbache, CSC, Cheraga-Alger (Algeria)
- C22-2172** **Glass-Metal Joining in Nuclear Environment: the State of the Art**
oral poster
M. Jacobs (Sp), B. Richard, G. Van Oost, J. Degrieck, J. Linke, Ghent University, Mol (Belgium)
- C22-2183** **Effect of Buffer Layers Composition on the Controlling Weld Metal Dilution and Distorsion**
I. Voiculescu (Sp), V. Geanta, University "Politehnica" Bucharest (Romania); H. Binciciu, SC SUDOTIM AS SRL, Timisoara (Romania); R. Vasiu, SC TEHNOMAG SA, Cluj-Napoca (Romania)

- Powder synthesis - solution precipitation, gas phase and physical methods**
- C31-106** **Preparation of Nanoparticles and Nanocrystalline Bulks of Pure Rare-Earth Metals by Integrating Inert-Gas Condensation and SPS**
X. Song (Sp), J. Zhang, N. Lu, Beijing University of Technology (China); M. Rettenmayr, Friedrich Schiller University Jena (Germany)
- C31-281** **Reaction Mechanism and Kinetic Parameters of the CO₂ Sorption on Li₄SiO₄. Effect of the Particle Size**
M.J. Venegas, H. Pfeiffer (Sp), Universidad Nacional Autonoma de Mexico, Mexico City (Mexico)
- C31-282** **Sodium Metasilicate (Na₂SiO₃): Synthesis and Kinetic Analysis of Its CO₂ Chemical Sorption**
H. Pfeiffer (Sp), H. Pfeiffer, Universidad Nacional Autonoma de Mexico, Mexico City (Mexico)
- C31-485** **Effect of Processing Condition on Size and Morphology of Aluminium Powder Particles Prepared via SAMD Technique**
P. Delshad Khatibi (Sp), F. Akhlaghi, University of Tehran (Iran)
- C31-749** **Synthesis and Characterization of CeO₂: Y₂O₃ Containing Pr and Tb**
S.K. Tadokoro (Sp), Instituto de Pesquisas Energéticas e Nucleares, São Paulo (Brazil); E.N.S. Muccillo, Cidade Universitária, S. Paulo (Brazil)
- C31-755** **Effect of the Synthesis Route on Solute Dispersion in Cerium Dioxide Containing Yttrium and Praseodymium**
S.K. Tadokoro (Sp), E.N.S. Muccillo, Instituto de Pesquisas Energéticas e Nucleares, São Paulo (Brazil)
- C31-826** **Gas Phase Synthesis of Lithium Silicates and Their Characteristics**
J. Grabis (Sp), Riga Technical University, Salaspils (Latvia); G. Kizane, University of Latvia, Riga (Latvia)
- C31-962** **Investigation on the Experimental Conditions for the Preparation of Microwave Assisted Hydrothermally Strontium-Doped Lanthanum Manganites**
V. Buscaglia (Sp), National Research Council, Genova (Italy); A. Rizzuti, University of Modena and Reggio Emilia (Italy); M. Viviani, National Research Council, Genova (Italy) et al.

Topic: C3 - Powder synthesis and processing

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| <p>C31-1175 Phase-Tunable Synthesis of Nanocrystalline Titania from Titania Nanotubes
S.-H. Chien (Sp), W.-Y. Yu, Y.-W. Yeh, B.-L. Chen, Academia Sinica, Taipei (Taiwan)</p> | <p>C31-2064 Nitrate-Alkoxide Based Synthesis of Lanthanum Zirconate Fine Powder
B. Malic (Sp), E. Ion, M. Kosec, Jozef Stefan Institute, Ljubljana (Slovenia)</p> | <p>C32-1150 Powder Injection Moulding of Mesophase Carbon with Water-Based Binder Systems
M. Gruhl (Sp), B. Derfuss, C.A. Rottmair, R.F. Singer, University of Erlangen-Nuremberg (Germany)</p> |
| <p>C31-1417 Embedded and Oxidation Resistance Metallic Nanoparticles Formagnetic and Optical Applications
R.P. Zapardiel (Sp), C. Pecharromán, A. Esteban, J.S. Moya, CSIC, Madrid (Spain)</p> | <p>C31-2270 New Pulsed Compression Reactor for Nanoparticle Manufacturing
M. Glushenkov, A. Kronberg (Sp), Energy Conversion Technologies B.V., Enschede (Netherlands)</p> | <p>C32-1191 Application of Powder Metallurgical Layers by Rolling
<i>oral poster</i>
H. Mall (Sp), W. Theisen, Ruhr-University Bochum (Germany)</p> |
| <p>C31-1511 Studies on WO₃ Thin Films Prepared by Dip Coating Method
L. Muresan, E.-J. Popovici, R. Grecu, Institute for Research in Chemistry, Cluj-Napoca (Romania); L.C. Cotet (Sp), Babes Bolyai University, Cluj-Napoca (Romania)</p> | <p>Powder processing from powders to complex products and innovation</p> | |
| <p>C31-1788 Synthesis and Characterization of ZnCdSe Powders for Phosphor Application
V. Valdna (Sp), Tallinn Technical University (Estonia); Y. Diawara, R.D. Durst, Bruker AXS, Inc., Madison, WI (USA); M. Grossberg, J. Hite, Tallinn Technical University (Estonia) et al.</p> | <p>C32-50 Rheological Investigation of 316L Stainless Steel Feedstocks Prepared with PMMA Emulsion and PMMA Powders
K.R. Jamaludin (Sp), S.Y.M. Amin, N. Muhamad, M.N.A. Rahman, S. Abdullah, University of Technology Malaysia, Kuala Lumpur (Malaysia)</p> | <p>C32-1218 Multi Material Micro Components Made by Powder Injection Moulding
V. Plotter (Sp), K. Plewa, A. Ruh, R. Ruprecht, J. Hausselt, Forschungszentrum Karlsruhe GmbH (Germany)</p> |
| <p>C31-1807 Microstructural Characterization of Equiatomic NiTi Alloy Prepared by High Energy Milling
M.C.A. da Silva, H.R. Silva, F. Ambrozio Filho (Sp), São Paulo University (Brazil)</p> | <p>C32-124 Deformation and Destruction of Porous Copper at the Elevated Temperatures
L. Ryabicheva (Sp), A. Sklyar, East-Ukrainian Volodymir Dal National University, Lugansk (Ukraine)</p> | <p>C32-1567 Investigation of Structure and Properties of Hot Shock Wave Consolidated Cu-W Composites
B. Godibadze (Sp), A. Peikrishvili, G. Tsulukidze Mining Institute, Tbilisi (Georgia); L. Kecskes, US Army Research Laboratory, Aberdeen (USA); G. Mamniashvili, Andronikashvili Institute of Physics, Tbilisi (Georgia) et al.</p> |
| <p>C31-1812 In-Situ Spark Plasma Sintering Synthesis of Nanocrystalline Co-Doped Titania
E. Otterstein (Sp), University of Rostock (Germany); Z. Shen, D. Salomon, Stockholm University (Sweden); R. Nicula, University of Rostock (Germany); F. Vasiliu, National Institute for Materials Physics, Bucharest (Romania) et al.</p> | <p>C32-187 Rheological Properties of the MIM Feedstocks Prepared with Bimodal Powder Particles
K.R. Jamaludin, University of Technology Malaysia, Kuala Lumpur (Malaysia)</p> | <p>C32-1843 Study of Microstructure and Kinetics of FCC-Free Surface Layer Formation in Novel Hardmetals with Complex Co/Fe/Ni Binders
J. Garcia (Sp), C. Barbatti, A. Pyzalla, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)</p> |
| <p>C31-1813 Spark Plasma Sintering of Zirconium Titanate Xerogels
E. Otterstein (Sp), R. Nicula, University of Rostock (Germany); Z. Shen, M. Nygren, Stockholm University (Sweden); M. Stür, C. Schick, E. Burkel, University of Rostock (Germany)</p> | <p>C32-219 On the Sintering of Powder Injection Molded Mesophase Carbon
C. Rottmair (Sp), M. Gruhl, B. Derfuss, A. Volek, R.F. Singer, University of Erlangen-Nuremberg, Fürth (Germany)</p> | <p>C32-1875 Solid State Recycling of Aluminum Machined Chip Wastes by Compressive Torsion Processing
<i>oral poster</i>
N. Kanetake (Sp), Y. Kume, M. Kobashi, Y. Morita, Nagoya University (Japan)</p> |
| <p>C31-1936 Nano and Submicron Powders of Copper & Copper Alloys: Formation, Properties and Ways of Application
B. Gelchinski (Sp), L. Zolotukhina, N. Kishkopyarov, Russian Academy of Sciences, Ekaterinburg (Russian Federation)</p> | <p>C32-615 A CIP-HIP Method for the Production of Near Net Shaped Titanium Components
<i>oral poster</i>
F. Derguti (Sp), M. Jackson, D. Dye, R. Dashwood, M. Ward Close, Imperial College London (UK)</p> | <p>C32-1894 Processing of High Wear Resistant Coatings by Sintering
S. Weber (Sp), Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); W. Theisen, Ruhr-University Bochum (Germany)</p> |
| <p>C31-2072 Liquid Collection in Aqueous Medium of TiO₂ Nanoparticles Synthesized by Laser Pyrolysis at Pilot Scale
F. Tenegal (Sp), B. Guizard, S. Giraud, A. Reau, C. Sentein, CEA-Saclay, Gif sur Yvette (France)</p> | <p>C32-843 Preparation of Compositive Fire-Suppressing Powders on the Basis of Mineral Raw Materials
L. Gurchumelia (Sp), B. Godibadze, G. Tsulukidze Mining Institute, Tbilisi (Georgia)</p> | <p>C32-1899 High Pressure Casting and Microstructural Design of Preform Metal Matrix Composites for Components
O. Lott (Sp), Aalen University (Germany); B. Huchler, Hilti, Schaan (Liechtenstein); D. Staudenecker, A. Nagel, Aalen University (Germany)</p> |
| | <p>C32-965 Nanocrystallization and Thermal Stability of Cryomilled Fe-Al Powder
N. Cíncas (Sp), J.M. Guilemany, University of Barcelona (Spain); L. Ajdelsztajn, E.J. Lavernia, University of California, Davis, CA (USA)</p> | <p>C32-2319 Additive Optimisation for Improved Ceramics
P. Jackson, CERAM Research, Stoke-on-Trent (UK)</p> |

Topic: C3 - Powder synthesis and processing

- C32-2365** **Effects of moulding conditions on the tolerances of precision parts in ceramic injection moulding**
M. Beck (Sp), V. Piötter, R. Ruprecht, J. Haußelt, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)
- Powder processing - self-assembly and tailored nanostructures - towards applications**
- C33-842** **Phase Behaviour and Properties of a Model Binary Charged Sphere System**
oral poster
N. Lorenz (Sp), University of Mainz (Germany); P. Weitzer, German Aerospace Center - DLR, Cologne (Germany); J. Liu, University of Düsseldorf (Germany); H.J. Schöpe, T. Palberg, University of Mainz (Germany)
- C33-947** **Nitrogen and Carbon Doped Titania Aerogels as Photocatalytic Materials**
M. Popa, A. Nicoara, V. Cosoveanu, Babes Bolyai University, Cluj-Napoca (Romania); L.C. Cotet (Sp), Babes Bolyai University, Cluj-Napoca (Romania) et al.
- C33-1019** **Bragg Diffracting Hydrogels – Fabrication of Polycrystalline Bulk Material with Tunable Lattice Constant**
R. Goldberg (Sp), H.J. Schöpe, Johannes Gutenberg-University, Mainz (Germany)
- C33-1226** **Conducting Microbeads Prepared with a Novel Electroless Plating Technique by Using Gold Nanoparticle**
T. Nagaoka (Sp), S. Takeda, H. Shiigi, Y. Yamamoto, Osaka Prefecture University, Sakai (Japan)
- C33-1227** **The Effect of a Polyelectrolyte on the Structure of Calcite Crystals**
oral poster
B. Aichmayer (Sp), H. Cölfen, O. Paris, P. Fratzl, Max Planck Institute of Colloids and Interfaces, Potsdam (Germany)
- C33-1726** **Synthesis of Novel Vanadium Oxide Nanostructures**
L. Vera-Robles (Sp), A. Campero, Universidad Autónoma Metropolitana, Mexico City (Mexico)
- C33-2287** **Synthesis of High Functional Fe Powders for Heat Papers by Self Sustaining Combustion Method**
N.-H. Lee, H.-J. Oh, C.-R. Yoon, K.S. Park, S.-I. Kim (Sp), Sejong University, Seoul (Korea, Republic)
- Nanoscaled Inorganic Materials by Molecular Design**
- C34-102** **Proton Conductors in Materials for Fuel Cell Applications**
W. Leite Cavalcanti (Sp), P. Tölle, C. Köhler, T. Frauenheim, University of Bremen (Germany)
- C34-161** **Oligophenothiazines in Mesoporous Silica: New Redox-Active, Covalent Hybrid Materials**
A.W. Franz (Sp), T.J.J. Müller, University of Düsseldorf (Germany)
- C34-267** **Comparison Between Semi-Conducting Polymer-Polymer and Polymer-Inorganic Hybrid Thin Films**
G. Kaune (Sp), M. Ruderer, P. Müller-Buschbaum, Technische Universität München, Garching (Germany)
- C34-487** **Characterization of Nanostructured Films of Inorganic-Organic Hybrid Materials with X-Ray Scattering under Grazing Incidence**
J. Perlich (Sp), Technische Universität München, Garching (Germany); M. Memesa, J.S. Gutmann, Max Planck Institute for Polymer Research, Mainz (Germany); P. Müller-Buschbaum, Technische Universität München, Garching (Germany)
- C34-502** **Microstructure Characterization of Ultra-hard BN Nanocomposites**
M. Motylenko (Sp), V. Klemm, G. Schreiber, D. Rataja, M. Schwarz, T. Barsukova, E. Kroke, Technical University of Freiberg (Germany)
- C34-594** **Effects of the Molecular Distribution of Siloxane Resin on the Pyrolysis of Precursors and Properties of SiOC-Ceramic**
M. Haußmann (Sp), H. Bockhorn, R. Oberacker, M. Eshfehanian, University of Karlsruhe (Germany)
- C34-820** **Proton Conducting Nanohybrids Based on Polysiloxanes for Fuel Cells Operating above 100°C**
M. Wilhelm (Sp), M. Jeske, D. Koch, G. Grathwohl, University of Bremen (Germany)
- C34-924** **Integrated Approaches in Self Assembled Nanomaterials for Photovoltaic Applications**
M. Memesa, Y. Cheng, Max Planck Institute for Polymer Research, Mainz (Germany); J. Perlich, P. Müller-Buschbaum, Technische Universität München (Germany); S. Nett, J.S. Gutmann (Sp), University of Mainz (Germany)
- C34-1145** **Modified Mesoporous Silicas: Inorganic Proton Conductors as Additives for Fuel Cell Membranes Application**
R. Marschall (Sp), M. Wark, J. Caro, Leibniz Universität Hannover (Germany)
- C34-1146** **Synthesis, Electrochemical and Surface Analysis of Olivine Phosphates - Novel Composite Materials for Li-Ion Batteries**
S. Bhuvaneshwari (Sp), N. Bramnik, W. Jaegermann, H. Ehrenberg, Technical University of Darmstadt (Germany)
- C34-1174** **Laser Surface Treatments of AISI 420 Martensitic Stainless Steel – Microstructural Characterization**
M.A. Larosa, M.A. Pinto, M.C. Ierardi (Sp), State University of Campinas (Brazil)
- C34-1185** **Structure Formation at the Nano-Scale in Polymer-Derived-Ceramics**
P. Kroll (Sp), R. Singh, RWTH Aachen University (Germany)
- C34-451** **Rheological Properties of Micelle-Stabilized BaTiO3 Nanoparticle and Zirconia Alkoxide Hybrid Solutions and Their Thin Film Phase Formation Behavior**
K. Schindler (Sp), University of Erlangen-Nuremberg (Germany); J. Dornseiffer, Research Centre Juelich (Germany); S. Halder, RWTH Aachen University (Germany); S.B. Majumder, Indian Institute of Technology, Kharagpur (India) et al.
- C34-1340** **Mechanical Properties of Superhard Nanocomposites a Prepared under High Pressure-High Temperature**
T. Barsukova (Sp), M. Schwarz, E. Kroke, Technical University of Freiberg (Germany)
- C34-1748** **New Au/TiO2 Catalysts for the CO Oxidation Based on Mesoporous TiO2 Supports**
Y. Denkwitz (Sp), J. Geserick, U. Hörmann, U. Kaiser, N. Hüsing, R.J. Behm, University of Ulm (Germany)
- C34-2358** **Hybrid Organic-Inorganic Membranes-Stabilizing Ceramic Nanopores with Organic Links**
A. Ten Elshof (Sp), H.L. Castricum, A. Sah, University of Twente, Enschede (Netherlands); J.F. Vente, Energy Research Centre of The Netherlands, Petten (Netherlands); D.H.A. Blank, University of Twente, Enschede (Netherlands)

Topic: C4 - Extraction and chemical processing of metals

Molten Salts / Advanced aqueous processing					
C41-301	Structural Changes in Olivine (Mg, Fe)2SiO4 Mechanically Activated in High-Energy Mills E. Turianicova (Sp), P. Balaz, Slovak Academy of Sciences, Kosice (Slovak Republic)	C41-1054	High-Purity Iron Compound from a Low Grade Magnetite Ore by a Selective Precipitation D.S. Kil (Sp), Y.J. Suh, H. Shao, KIGAM, Daejeon (Korea, Republic); T.E. Oh, Kongju National University, Gongju (Korea, Republic); K.S. Chung, H.D. Jang, J.C. Lee, KIGAM, Daejeon (Korea, Republic) et al.	C42-1547	Synthesis of Metal Oxide Nanoparticles in RTILs by Sol Gel Method M. Al Zoubi (Sp), F. Endres, Technical University of Clausthal (Germany)
C41-304	The Effect of Mechanical Activation on Cementation of Silver Ions onto Zinc Powder from Thiosulfate Solutions M. Fabian (Sp), P. Balaz, Slovak Academy of Sciences, Kosice (Slovak Republic)	C41-1102	Thermodynamic and Kinetic Studies of Titanium Dioxide Reduction in Molten Calcium Chloride by an Electrochemical Process M. Târcolea (Sp), T. Dragos, University Politehnica Bucharest (Romania); S. Vasile, S. Ioan, National R&D Institute for Nonferrous and Rare Metals, Bucharest (Romania) et al.	C42-1816	Asymmetric Hydrogenation of Ionic Liquids P. Wasserscheid, P.S. Schulz, N. Müller, A. Bösmann (Sp), University of Erlangen-Nuremberg (Germany)
C41-346	Alkaline Leaching of Antimony from Mechanically Activated Jamesonite FePb4Sb6S14 M. Achimovicova (Sp), P. Balaz, Slovak Academy of Sciences, Kosice (Slovak Republic)	C41-1378	Synthesis and Characterization of Nano-Sized Carbon Materials in Molten Salts I. Novoselova (Sp), V.F. Lapshyn, S.V. Volkov, E.V. Panov, National Academy of Science of Ukraine, Kyiv-142 (Ukraine)	Slag Metallurgy, Engineering and Valorization	
C41-492	Cathodic Behaviour of CaO in Calcium Chloride S. Wang (Sp), W. Wang, X. Guo, Northeastern University, Shenyang, Liaoning (China)	C41-1730	Studies on Physical Processing and Leaching of Spent Saline and Alkaline Batteries F. Margarido (Sp), Technical University of Lisbon, Lisboa (Portugal); M. Cabral, R. Guerra, C. Nogueira, CVRM, Lisbon (Portugal)		
C41-501	Electrolytic Production Route for Affordable Titanium Fibre Composites J. Gussone (Sp), J. Hausmann, German Aerospace Center - DLR, Cologne (Germany); C. Kommer, B. Friedrich, RWTH Aachen University (Germany)	C41-669	Li+ Extraction Reactions with Spinell Type Li1.33Mn1.67O4 and Their Electronic Structures K.-S. Chung (Sp), H. Lee, K.-K. Hwang, Y.-J. Suh, D.-S. Kil, J.-C. Lee, Korea Institute of Geology and Minerals, Daejeon (Korea, Republic); Y.-S. Kim, Korea Basic Science Institute, Sooncheon (Korea, Republic)	C43-178	Microstructural Evolution of Stainless Steel Slag during EAF Refining D. Durinck (Sp), P.T. Jones, M. Guo, F. Verhaeghe, Katholieke Universiteit Leuven (Belgium); G. Heylen, R. Hendrickx, R. Baeten, Ugine & ALZ Belgium, Genk (Belgium) et al.
C41-730	Titanium Alloy Obtaining by Direct Electroreduction of the Oxides in Molten Chlorides Media V. Soare (Sp), I. Surcel, M. Burada, Romanian Society of Metallurgy, Pantelimon (Romania); M. Tarcolea, Politehnica University of Bucharest (Romania); I. Carcea, Technical University Gh. Asachi, Iasi (Romania)	C41-1033	Solvent Extraction and Crystallization-Stripping: Simple Two-Phase Systems for the Preparation of Metal and Semiconductor Fine Particles G. Sánchez (Sp), J.M. Aguilera, R.L. Tovar, F. Ruiz, J.R. Martínez, Universidad Autónoma de San Luis Potosí (Mexico); G.A. Martínez, Centro de Investigación en Materiales Avanzados, Chihuahua (Mexico)	C43-333	Phase Relations in Stainless Steel Slags S. Arnout (Sp), M. Guo, D. Durinck, P.T. Jones, B. Blanpain, P. Wollants, Katholieke Universiteit Leuven (Belgium)
			Ionic Liquids: New Solvents for Chemical and Electrochemical Processing / Molten Salts	C43-365	Borate-stabilisation of Stainless Steel Slags: From Dusty Wastes to Useful Products M. Greenhill-Hooper (Sp), Rio Tinto Minerals, Toulouse (France); D. Schubert, Rio Tinto Minerals, Denver, CO (USA); T. Wilhelm, Rio Tinto Minerals, Chicago, IL (USA)
				C43-1261	Experimental Determination of Manganese and Chromium Distribution between CaO-SiO2-MgO-Cr2O3-MnO Slag and Fe-18Cr-12Mn Stainless Steel M.-A. Van Ende (Sp), M. Guo, P.T. Jones, Katholieke Universiteit Leuven, Heverlee (Belgium); N. De Wispelaere, N. Akdut, Arcelor Research Industry Ghent, Zelzate (Belgium) et al.
				C43-1270	Development and Structural Study of Cements Containing Additions of Industrial Waste M. Saidi (Sp), M. Hamiane, A. Benmounah, K. Boumchedda, D. Safi, M' hamed Bougara University, Boumerdes (Algeria)
				C43-1835	Effect of Fly Ash and Slag Additions on the Durability of the Cement-Glass Fibre Composite H. Chabil (Sp), University of Constantine (Algeria); T. Aliouane, University Ferhat Abbes, Seif (Algeria)

Topic: C4 - Extraction and Chemical Processing of Metals

- C43-2149** **Effects of Charge Components on Ferromolybdenum Production by Aluminothermic Process**
B. Derin (Sp), M. Alkan, O. Yucel, Istanbul Technical University (Turkey)

Topic: C5 - Coating and Surface Engineering

- Thick Coating Developments and Technology**
- C52-196** **Formation of Boride Coatings on Iron-Chromium Alloys and Their Dry Abrasive Wear Resistance**
V. Dybkov (Sp), L.V. Goncharuk, V.G. Khoruzha, K.A. Meleshevich, A.V. Samelyuk, V.R. Sidorko, University of Kiev (Ukraine)
- C52-321** **Comparison of the Tribological Properties of Carbon-Metal (Ag, Cu, Al) Coatings Prepared by Plasma Spray and Thermionic Vacuum Arc Methods**
C. Lungu (Sp), A.M. Lungu, I. Mustata, C.C. Surdu-Bob, C. Iacob, NILPRP, Bucharest (Romania); D. Trusca, I. Trusca, Plasma Jet SRL, Bucharest (Romania); A. Tudor, T. Laurian, Politehnica University, Bucharest (Romania) et al.
- C52-332** **Superficial Hardening of Leading Edges of Steam Turbine Blades by High Velocity Oxygen Fuel Thermal Spray Process**
C. Munteanu (Sp), Technical University „Gh. Asachi” of Iasi (Romania); P. Motoiu, Technical University "Gh.Asachi", Iasi (Romania); I. Trusca, S.C. Plasmajet S.R.L., Magurele (Romania) et al.
- C52-734** **Duplex Surface Treatment of Pre-Electroplating and Pulsed Plasma Electrolytic Nitrocarburizing of Mild Steel**
M. Aliofkhaezai (Sp), S.H.H. Mofidi, A.S. Rouhaghdam, Tarbiat Modares University, Tehran (Iran); E. Mohsenian, University of Potsdam (Germany)
- C52-801** **Investigations of Dissolution Reaction of Iron-Silicon Alloys in Pure Liquid Zinc in Stationary Conditions**
A. Tatarek, P. Liberski (Sp), H. Kania, P. Podolski, Silesian Technical University, Katowice (Poland)
- C52-834** **Structural Reasons of Products Strength Decrease after Hot Dip Galvanizing Process**
H. Kania (Sp), P. Liberski, P. Podolski, A. Tatarek, Silesian University of Technology, Katowice (Poland)
- C52-838** **Zn-Al Coating Obtained in the Batch Double Dip Process**
H. Kania (Sp), R. Liberski, P. Podolski, A. Tatarek, Silesian University of Technology, Katowice (Poland)
- C52-889** **Applications of Computational Fluid Dynamic Methods in the Development of Thermal Barrier Coatings for Turbine Blades**
I. Petkovic (Sp), K. Bobzin, R. Nickel, D. Parkot, RWTH Aachen University (Germany)
- C52-1167** **Structure and Properties of Al-Fe-Cu Thin Films Obtained by PLD Technique**
S. Kac (Sp), AGH University of Science and Technology, Krakow (Poland); M. Kac, Polish Academy of Science, Krakow (Poland); A. Radziszewska, AGH University of Science and Technology, Krakow (Poland)
- C52-1045** **Composite Coatings on Metals by Electrochemical Means**
I. Corni (Sp), E.J. Minay, M.P. Ryan, A.R. Boccaccini, Imperial College London (UK); E. Sanchez, Universitat Jaume I., Castellon (Spain)
- C52-1306** **Galvanizing of Steel with Different Content of Silicon in a Bath withSn Addition**
H. Kania, P. Liberski (Sp), P. Podolski, A. Tatarek, Silesian Technical University, Katowice (Poland)
- C52-1337** **Thin Thermal Barrier Coatings for Engines Components**
A. Buzaianu (Sp), E. Vasile, R. Trusca, S.C. METAV R&D, Bucharest (Romania); C. Baci, I. Rusu, Technical University "Gh.Asachi, Iasi (Romania)
- C52-1380** **Microstructure and Adhesive Strength of Titanium Film on a Carbon Steel Substrate with Supersonic Free-Jet PVD**
T. Shimizu (Sp), A. Yamato, T. Yamamoto, N. Niwa, Kogakuin University, Tokyo (Japan)
- C52-1390** **Fabrication of Hydroxy-Apatite/Titanium Composite Coating with Supersonic Free-Jet PVD**
A. Yamato (Sp), Kogakuin University, Tokyo (Japan); T. Yamamoto, The University of Tokyo (Japan); F. Hiroki, I. Shiota, N. Niwa, Kogakuin University, Tokyo (Japan)
- C52-1442** **55AlZn Coatings on Cast Irons**
J. Mendala (Sp), H. Kania, P. Liberski, Silesian University of Technology, Katowice (Poland)
- C52-1531** **Feeding of Fine Powders: The First Step in Developing Near-Net-Shape Coatings**
Fr.-W. Bach, K. Mähwald, B. Dräßler, T. Bause (Sp), Leibniz Universität Hannover, Witten (Germany)
- C52-1578** **Thermal Spray Functional Coatings for SOFC Using LPPS-Thin Film Technology**
M. Gindrat (Sp), K. von Niessen, A. Refke, R. Damani, Sulzer Metco AG, Wohlen (Switzerland)
- C52-1848** **Microstructured Cermet Coatings Produced by HVOF Process**
P. Kulu (Sp), P. Peetsalu, J. Pirsu, S. Zlmakov, Tallinn University of Technology (Estonia)
- C52-1943** **The Structure and Properties of the Carbon Plain Steel Surface Layer Laser**
A. Radziszewska, AGH University of Science and Technology, Krakow (Poland)

Topic: C5 - Coating and Surface Engineering

- C52-1967** **Corrosion Resistance of 55AlZn Coatings**
J. Mendala (Sp), P. Podolski, P. Liberski, Silesian University of Technology, Katowice (Poland)
- C52-2089** **The Use of Ac Impedance Technique for Cathodic Disbanding of Chlorinated Rubber Coating - Steel System**
A. Elbasir, Alfateh University of Tripoli (Libya)
- C52-2290** **Frictional Wear Resistance of the Composite Layers Based on Intermetallic Phases of the Ti-Al System Produced on Two Phases Titanium Alloy**
M. Ossowski (Sp), Warsaw University of Technology (Poland); W. Rakowski, T. Wierzchon, AGH University of Science and Technology, Cracow (Poland)
- Chemical, Electrochemical and Plasmachemical Surface Treatment and Plating**
- C53-658** **Catalytic Active Layers on Aluminium**
oral poster
V. Rudnev (Sp), I.V. Lukiyanchuk, A.Y. Ustinov, L.M. Tyrina, M.S. Vasilyeva, Russian Academy of Science, Vladivostok (Russian Federation); N.B. Kondrikov, Far-Eastern State University, Vladivostok (Russian Federation)
- C53-662** **The Tungsten Trioxide Layers on Valve Metals**
I.V. Lukiyanchuk (Sp), V.S. Rudnev, Russian Academy of Science, Vladivostok (Russian Federation)
- C53-737** **Pulsed Plasma Electrolytic Boriding of CP-Ti**
M. Aliafkhazraei (Sp), A.S. Rouhghadam, Tarbiat Modares University, Tehran (Iran); E. Mohsenian, University of Potsdam (Germany)
- C53-829** **Electrochemical Properties of Pt-TiO₂/Ti Composite Electrode Prepared through Ultrasonic-Assisted Deposition**
J. Tao (Sp), L. Qin, L. Wang, T. Wang, Nanjing University of Aeronautics and Astronautics, Nanjing, Jiangsu (China)
- C53-1205** **Corrosion-Electrochemical Behaviour of Orthopedic Stomatologic Titanium Alloys in the Conditions Modelling Modes of Their Operation**
A. Kutuzov (Sp), Moscow Institute of Steel and Alloys, Maskau (Russian Federation); J. Pustov, M. Filonov, Moscow Institute of Steel and Alloys (Russian Federation)

- C53-1207** **Decorate Protective Microplasma Coatings on the Surface of Silumin**
oral poster
O.P. Terleeva (Sp), A.I. Slonova, Russian Academy of Science, Novosibirsk (Russian Federation); I.G. Efremov, Federal Unitary State Organization Manufactory Mountain Chemistry, Zheleznogorsk (Russian Federation)
- C53-1269** **Formation of Composite Layers Aluminium Oxide - Metal by an Electrolytic Process**
oral poster
P. Tomassi, Institute of Precision Mechanics, Warsaw (Poland)
- C53-1680** **Electroplating of Magnesium as a Water Sensitive Substrate**
oral poster
A. Bakkar (Sp), V. Neubert, Institut für Materialprüfung und Werkstofftechnik - Dr Neubert GmbH, Clausthal-Zellerfeld (Germany)
- C53-2095** **Electroless Wafer Bumping Process Development for Flip-Chip Applications**
G. Rondeau (Sp), J. Legeleux, P. Benaben, ENSM-SE, Gardanne (France)
- C53-2143** **Plasma Electrolytic Oxidation of Arc Sprayed Aluminium Coatings**
oral poster
V. Pokhmurskii, G. Nykyforchyn, M. Student, M. Klapkiv, Academy of Sciences of Ukraine, Kiev (Ukraine); H. Pokhmurska (Sp), B. Wielage, T. Grund, S. Schubert, S. Steinhäuser, Chemnitz University of Technology (Germany)
- C53-2302** **Comparing the Corrosion Behaviour of Nano Oxide Cerium Coated by Sol Gel and Conversion Methods on AA5083**
H.R. Jafarian, H. Hasannejad, T. Shahabi, M. Zamanzade (Sp), Tarbiat Modares University, Tehran (Iran)
- C53-2348** **Get Stimulated – Gold Coated Fabrics for Electrotherapy**
A. Schwarz (Sp), J. Hakuzimana, E. Gasana, P. Westbroek, L. Van Langenhove, Ghent University, Zwijnaarde (Belgium)
- C53-2354** **Polyaniline Films for Sensor Applications**
P. Obreja (Sp), D. Cristea, M. Purica, T. Ignat, R. Gavrilă, National Institute for Research and Development in Microtechnologies, Bucharest (Romania)

Topic: D1 - Microstructural Characterisation Techniques

- Tomography and Related 3D Techniques for Micro-/Nano Characterization**
- D11-426** **3D Morphology and Crystal Structure of Graphite in Cast Iron Investigated with FIB Tomography and Related Techniques**
A. Velichko (Sp), F. Mücklich, Saarland University, Saarbrücken (Germany); K. Schladitz, ITWM, Kaiserslautern (Germany)
- D11-437** **Metallurgical Characterisation of Intermetallic FeAl-Phases in Laser Beam Aluminium-Steel Mixed Material Joints**
E. Guimaraens (Sp), H. Laukant, U. Glatzel, University of Bayreuth (Germany)
- D11-836** **3D-Characterization of Al-Si and Al-Si-Mg-Alloys by High Resolution FIB-SEI-EDX Tomography**
oral poster
F. Lasagni (Sp), Vienna University of Technology (Austria); A.F. Lasagni, M. Engstler, Saarland University, Saarbrücken (Germany); H.P. Degischer, Vienna University of Technology (Austria) et al.
- D11-1123** **High-Energy Synchrotron Analyses of Texture, Phase and Microstructure of Historical Objects of Art**
C.E. Tommaseo (Sp), H. Klein, University of Göttingen (Germany)
- D11-1263** **New Insights in Nano-Scale Materials by Electron Tomography**
oral poster
R. Ghadimi (Sp), T. Weirich, A. Aretz, RWTH Aachen University (Germany); G. Schlieper, Universitätsklinikum Aachen (Germany); J. Mayer, RWTH Aachen University (Germany) et al.
- D11-1301** **X-Ray Tomography - A Method for Process and Material Optimization in Micro Powder Injection Moulding**
oral poster
R. Heldele (Sp), M. Schulz, J. Hausselt, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)
- D11-1562** **Advances in High Resolution Computed Tomography**
oral poster
D. Sommerfeld, phoenix / x-ray Systems + Services GmbH, Grasbrunn (Germany); D. Neuber (Sp), phoenix / x-ray Systems + Services GmbH, Wunstorf (Germany)
- D11-1720** **High Resolution Computer Tomography as New Holistic Method for the Quantitative Characterization of Granulate Materials**
oral poster
R. Löffler (Sp), T. Bernthaler, A. Nagel, Aalen University (Germany); J. Ohser, Technical University of Darmstadt (Germany); G. Schneider, Aalen University (Germany)

Topic: D1 - Microstructural Characterisation Techniques

D11-1886 An Automatic Procedure for Residual Stress Analysis in Individual Crystallites of a Polycrystalline Material

M. Moscicki (Sp), H. Pinto, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); C. Paulmann, Mineralogisch-Petrographisches Institut, Hamburg (Germany) et al.

D11-1888 Interaction of Cracks with Grain Boundaries and Precipitates: Understanding Crack Growth Mechanisms through Focused Ion Beam Tomography

W. Schäf (Sp), Saarland University, Saarbrücken (Germany); C. Holzapfel, Schleifring, München (Germany); M. Marx, H. Vehoff, F. Mücklich, Saarland University, Saarbrücken (Germany)

D11-2276 Implanted Bioceramics within Regenerating Bone Tissue Studied with Synchrotron Microtomography and 3D Image Analysis

A. Rack (Sp), Forschungszentrum Karlsruhe, Eggenstein-Leopoldshafen (Germany); M. Stiller, O. Dalügge, C. Koch, Charité Berlin (Germany); S. Zabler, Hahn-Meitner Institute Berlin (Germany) et al.

D11-2342 White-Light X-Ray In-line Phase Tomography and Time-Resolved Microradiography at the ANKA Synchrotron Light Source

T. Weirkamp (Sp), A. Rack, A. Cecilia, Forschungszentrum Karlsruhe, Eggenstein-Leopoldshafen (Germany); D. Wegrzynek, E. Chinea-Cano, International Atomic Energy Agency, Seibersdorf (Germany) et al.

Advances in Scanning Probe Microscopy and Atomic Level Imaging

D12-673 Electron Microscopic Characterization of Nanostructured Perovskite Oxides

V. Nikolaichik (Sp), L.A. Klinkova, Russian Academy of Sciences, Chernogolovka (Russian Federation)

D12-1172 The KOSSEL, X-Ray Rotation-Tilt, and EBSD Technique - Applications in Functional Materials

J. Bauch (Sp), M. Böbling, D.C. Lupascu, Technical University of Dresden (Germany)

D12-1759 Microstructural Analysis of Nanocrystalline Nickel Synthesised by Electrodeposition in a Conventional Watt Bath

R. Imbang Tritjahjono (Sp), R.F. Cochrane, R. Brydson, University of Leeds (UK)

D12-2238 Near-Field Imaging with an Apertureless Solid-Immersion Lens System as a Novel Tool for Surface Characterisation in the Nanoscale

R. Kessler, T. Merz (Sp), Reutlingen University (Germany)

Topic: D2 - Mechanical Testing and Characterisation

Mechanical and Fracture Behavior in Nanomaterials and Nano Structures

D21-361 Mechanical and Acoustic Emission Behaviour During Channel-Die Compression Tests of Ultra-Fine Grained Mg-Li-Al Alloys Obtained by HPT Technique

J. Kusnierz (Sp), A. Pawelek, A. Piatkowski, Z. Jasienski, Polish Academy of Sciences, Krakow (Poland); S. Kudela, S. Kudela Jr., Slovak Academy of Sciences, Bratislava (Slovak Republic) et al.

D21-410 Microstructure and Deformation Behaviour of Nanocrystalline Palladium

L. Kurmanaeva (Sp), J. Ivanisenko, H. Rösner, Forschungszentrum Karlsruhe GmbH (Germany); R.Z. Valiev, Ufa State Aviation Technical University (Russian Federation); H.-J. Fecht, University of Ulm (Germany)

D21-917 Influence of Microstructure on Short Time Creep Behaviour of Hot-Work Tool Steels

H. Wurmbauer (Sp), Materials Center Leoben Forschung GmbH (Austria); E. Stergar, M. Panzenböck, H. Leitner, C. Scheu, H. Clemens, University of Leoben (Austria)

D21-995 Development of Deformation Resistance of Pure Copper in Equal Channel Angular Pressing up to 24 Passes

W. Blum (Sp), Y.J. Li, University of Erlangen-Nuremberg (Germany); J.T. Wang, Nanjing University of Science and Technology (China)

D21-1020 Effect of Hardening Process on Tensile Ductility and Dynamic Toughness of Ultra-Fine Grained Metals

D. Preininger, Forschungszentrum Karlsruhe GmbH (Germany)

D21-1096 Models of Nanocomposites Fracture Toughness and Durability

M. Perelmuter, Russian Academy of Science, Moscow (Russian Federation)

D21-1469 Fabrication and Mechanical Testing of Nanoscale BCC Metals

T. Wübben (Sp), A. Huber, P. Jüllig, G. Richter, Max Planck Institute for Metals Research, Stuttgart (Germany); A. Schneider, University of Stuttgart (Germany) et al.

Topic: D2 - Mechanical Testing and Characterisation

- D21-1488** **Multi- and Single-Stage Hydrostatic Extrusion of 6xxx Aluminium Alloy – Microstructure and Mechanical Properties**
P. Widlicki (Sp), P. Wicinski, H. Garbacz, K.J. Kurzydowski, Warsaw University of Technology (Poland)
- D21-1581** **Large-Scale Atomistic Simulations of Scale Dependent Plasticity in Metal Matrix Nanocomposites**
A. Hartmaier (Sp), University of Erlangen-Nuremberg (Germany); N. Brödling, Max Planck Institute for Metals Research, Stuttgart (Germany); M. Buehler, Massachusetts Institute of Technology, Cambridge, MA (USA) et al.
- D21-1822** **Structure Evolution of MgAl₆Zn_{0,6} after ECAE Pressing at Evaluated Temperature**
M. Lech-Grega (Sp), S. Boczkal, B. Plonka, Institute of Non Ferrous Metals Light Metals Division, Skawina (Poland)
- D21-2114** **Fatigue Behaviour of Ultrafine-Grained Ti-6Al-4V ELI Alloy for Medical Application**
L. Saitova (Sp), H.W. Hoepfel, M. Göken, University of Erlangen-Nuremberg (Germany); R.Z. Valiev, Ufa State Aviation Technical University (Russian Federation)

Topic: X2 - Materials for Transportation

- Automotive Light Weight Structures**
- X21-109** **The Influence of Interstitial Elements on Titanium Tensile Strength**
C. Dumitrescu (Sp), M. Dobrescu, University Politehnica of Bucharest (Romania)
- X21-138** **Studies Concerning Titanium Alloys Hardening**
M. Dobrescu (Sp), C. Dumitrescu, S. Dimitriu, University Politehnica of Bucharest (Romania)
- X21-773** **Mechanical Behaviour of MgNi₂Y₁Ce₁ Alloy Processed by a Powder Metallurgy Route**
P. Pérez, S. González, G. Garcés, M. Maeso, G. Caruana, P. Adeva (Sp), National Center for Metallurgical Research, Madrid (Spain)
- X21-891** **Interface Characteristic and Bonding Strength of Copper Clad Aluminum Alloy Composite Produced by Indirect Extrusion Process**
S.-C. Lim (Sp), H.C. Kwon, T.K. Jung, Korea Institute of Industrial Technology, Incheon (Korea, Republic)
- X21-950** **Characterisation of Intermetallic Phases in Steel-Aluminum-Composites**
R. Sonnleitner, ECHEM-Center of Competence in Applied Electrochemistry, Wiener Neustadt (Austria); W. Fragner, ARC Ranshofen GmbH (Austria) et al.
- X21-1037** **Natural Ageing in Mg-Zn Based Alloys**
J. Buha, National Institute for Materials Science, Tsukuba -shi, Ibaraki-ken (Japan)
- X21-1552** **The Friction and Wear of Polymer Composites Containing Glassy Carbon under Dry Friction Conditions**
J. Myalski (Sp), J. Sleziona, Silesian Technical University, Katowice (Poland)
- X21-1665** **Effect of Aging on Damping of the Magnesium-Aluminium-Zinc Alloys**
R. González Martínez (Sp), D. Letzig, K.U. Kainer, GKSS Research Center, Geesthacht (Germany)
- X21-1760** **The Study of Electrochemical Behavior of the Nb/Nb₂O₅ System for Hydrogen Sensor**
A.G.S.G. da Silva, A. Pashchuk, C.E.B. Marino, H. Ponte (Sp), Federal University of Parana, Curitiba (Brazil)
- X21-1778** **Low Cycle Fatigue Properties of Extruded ZK60A Magnesium Alloy**
Y. Tsuchida (Sp), H. Yano, Daido Institute of Technology, Aichi (Japan)

- X21-2017** **Effect of Activation Procedure on Sm-Co-Fe-Zr-B Compounds for Low Temperature Efficient Hydrogen Storage**
S. Makridis (Sp), University of Western Macedonia, Kozani (Greece); C.N. Christodoulou, Frederick Research Center (FRC), Kozani (Cyprus); T. Steriotis, NCSR "Demokritos", Kozani (Greece) et al.
- X21-2324** **Deformation Features of Magnesium Alloys**
A. Jager (Sp), V. Gartnerova, Academy of Sciences of the Czech Republic, Prague (Czech Republic); A. Singh, T. Mukai, National Institute for Materials Science, Tsukuba (Japan)
- X21-2341** **Fatigue Performance of Cold Expanded Holes in Al7050 Aluminium Alloy**
S.C. Sharma (Sp), N. Shanmukha, R.V. College of Engineering, Bangalore Karnataka (India)

Automotive Advanced Materials

- X22-97** **Local Strain Hardening of Sheet Forming Components during Formation of Martensite in Metastable Austenitic Steels**
B.-A. Behrens, S. Hübner, K. Voges-Schwieger, K. Weilandt (Sp), Leibniz Universität Hannover, Garbsen (Germany)
- X22-140** **Forming Limit Prediction of High-Strength Steel Sheets by Ductile Fracture Criterion**
H. Takuda, Kyoto University (Japan)
- X22-162** **Modelling of the Structure-Property Relations in Ultra Fine Grained HSLA and IF Steels**
J. Majta (Sp), K. Muszka, AGH University of Science and Technology, Krakow (Poland)
- X22-185** **A Theoretical Approach of the Heat Transfer in Nanofluids**
P. Vizureanu (Sp), M. Agop, Technical University of Iasi (Romania)
- X22-432** **Cf/SiC-Composites for Frictional Applications Produced by the Liquid Silicon Infiltration Process**
V.I. Kulik (Sp), Baltic State Technical University, Saint-Petersburg (Russian Federation); A.S. Nilov, Techsics Ltd, St.-Petersburg (Russian Federation) et al.

Topic: X2 - Materials for Transportation

X22-542 **Metal Quality Studies in Manufacturing of Wide Forged Plates**
V. Popov (Sp), Moscow State Institute of Steel and Alloys (Russian Federation); O.A. Kobelev, Metallurgical Plant, Volgograd (Russian Federation); R. Kawalla, Technical University of Freiberg (Germany) et al.

X22-741 **Strengthening Mechanisms in a Novel Precipitation Hardening Steel for Plastic Molds**
D. Firrao (Sp), Politecnico di Torino (Italy); M. Chiarbonello, P. Matteis, G.M.M. Mortarino, P. Russo Spena, G. Scavino, G. Ubertalli, Politecnico di Torino (Italy) et al.

X22-783 **Quality of Surface Layer of Non-Metal Materials Polished with Nanopowders Tools**
Y.D. Filatov (Sp), V.I. Sidorko, National Academy of Science, Kiev (Russian Federation)

X22-796 **Diagnostics of Damages in Gears**
A. Belsak (Sp), J. Fasker, University of Maribor (Slovenia)

X22-831 **Structural and Mechanical Analysis of Friction Materials**
A. Popa (Sp), I. Carceanu, Metallurgical Research Institute, Bucharest (Romania); V. Candea, Technical University, Cluj-Napoca (Romania); C. Macovei, P. Neagu-Manicatide, Metallurgical Research Institute, Bucharest (Romania)

X22-1003 **Consideration Concerning the Elaboration of Some Complex Materials for Special Applications**
I. Carceanu (Sp), A. Popa, Metallurgical Research Institute, Bucharest (Romania); G. Cosmeleata, Politehnica University of Bucharest (Romania); I. Roceanu, Carol I" National Defence University, Bucharest (Romania)

X22-1076 **Influence of Rolling Condition in Secondary Hardening Mo-Cr-Co-Ni Steels**
H. Kwon (Sp), K.S. Cho, J.H. Kim, H.S. Sim, K.B. Lee, Kookmin University, Seoul (Korea, Republic); H.R. Yang, Incheon City College (Korea, Republic)

X22-1667 **Mechanical Properties of High Carbon Lightweight Mn Al Si TRIP/TWIP Steels**
K. Brokmeier, R. Rablbauer (Sp), G. Frommeyer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

X22-1792 **Over-ageing Effects on Dual Phase Steel Microstructure and Mechanical Properties**
Y.-F. Gong (Sp), S. Biroasca, H.S. Kim, B.C. De Cooman, Pohang University of Science and Technology (Korea, Republic)

X22-1801 **Studies on Improving Titanium Alloys Machining**
M. Dobrescu (Sp), D. Cosmeleata, E. Nutu, University Politehnica of Bucharest (Romania)

X22-1924 **Mechanical Properties of Modified High Manganese TRIP Steels**
A. Maier (Sp), K. Brokmeier, R. Rablbauer, G. Frommeyer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

X22-1925 **Effect of Multiaxial Stress States on the Stress-Strain Behaviour of Deep Drawing Steels**
A. Maier (Sp), K. Brokmeier, R. Rablbauer, G. Frommeyer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Materials for Aerospace Structures and Propulsion

X23-286 **Virtual Testing of Fiber-Reinforced Composites under Low Velocity Impact**
oral poster
J. Llorca (Sp), C. González, F. Gálvez, E. Arévalo, Polytechnical University of Madrid (Spain)

X23-687 **Toughness Modification of the RTM6 Resin System Using Thermoplastic and Block-Copolymers**
F. Wolff-Fabris (Sp), V. Alstädter, A.A. Sanches, R. Perez, University of Bayreuth (Germany)

X23-800 **Modelling and Analysis of a Composite Sandwich Plate Containing an Auxetic Chiral Honeycomb Layer**
K. Zied (Sp), N. Ravirala, K. Alderson, A. Alderson, University of Bolton (UK)

X23-990 **Simulation and Experiment of Spherical Ti-6Al-4V Tank by Superplastic Blow Forming and Diffusion Bonding**
J.-H. Yoon (Sp), H.S. Lee, Y.M. Yi, Korea Aerospace Research Institute, Daejeon (Korea, Republic)

X23-1253 **Use of Ultrasonic Impact Treatment as an Effective Surface Engineering Treatment to Improve Corrosion Fatigue Properties of Al2024 T351**
S. Pili (Sp), Sheffield Hallam University (UK); C.A. Rodopoulos, University of Patras (Greece)

X23-1361 **Strength and Toughness Relationships in Aluminium Alloys through Interrupted Ageing**
D.D. Risanti (Sp), P.E.J. Rivera, S. van der Zwaag, Delft University of Technology (Netherlands)

X23-1404 **Influence of Gas Mixture Carburizing Atmosphere Composition on the Surface Properties of Titanium Alloys**
D. Siniarski, P. Kula, L. Kaczmarek (Sp), B. Januszewicz, Lodz University of Technology (Poland)

X23-1767 **Characterisation of Microstructures in Near-Beta Titanium Alloy Ti-6246**
R. Whittaker, University of Birmingham, Derby (UK)

X23-1964 **Ultrasonic Waves Multi-Scale Modeling and the Simulation of Their Interfacing with Material Flaws**
F. Bettayeb, Research Center on Welding and Control, Algiers (Algeria)

X23-2054 **Shape Memory Alloy Particulate Reinforced Aluminum Ultra-Tough Composites**
R. Thorat (Sp), D. Martin, P. Rivera, S. Zwaag, Delft University of Technology (Netherlands)

X23-2059 **The Thermal and Thermomechanical Processing of the Aluminium Alloys for Aeronautics**
E. Vasilescu, „Dunarea de Jos“ University of Galati (Romania)

X23-2092 **Thermomechanical Fatigue of Metallic Alloys**
oral poster
F. Rezaei-Aria, Ecole de Mines d'Albi Carmaux, Albi (France)

Miscellaneous

Miscellaneous

M-17 Roadmap for Uncovering Future Fields of Competence in Materials Teaching

M. Weissenberger-Eibl (Sp), D.J. Koch, University of Kassel (Germany)

M-24 Receiving of Nanomaterials in Volume of Metals and Alloys in a Mode of Superdeep Penetration

S. Usherenko (Sp), Israel Research Center Polymate, Beer-Sheva (Israel); O. Figovsky, R&D, Haifa (Israel); Y. Usherenko, Tel Aviv University (Israel)

M-132 Coating of Mg-AZ31 Sheets by Al and Al-Si Alloy Layer Applying Physical Vapor Deposition (PVD) Technique

M. Taha (Sp), Ain-Shams University, Guiza (Egypt); N.A. El-Mahalawy, R.M. Hammouda, S.I. Nassef, Ain-Shams University, Cairo (Egypt); C. Metzner, Fraunhofer Institute for Electron Beam and Plasma Technology, Dresden (Germany)

M-169 Microstructure and Properties of Nanocrystalline and Submicron Grained ODS Copper

J. Stobrawa (Sp), M. Rdzawski, IMN Gliwice (Poland)

M-231 Effect of Composition on the Structure and Properties of Ti-Co-Cr Alloys

T. Matkovic (Sp), L. Slokar, P. Matkovic, University of Zagreb, Sisak (Croatia)

M-249 Studies Regarding the Magnetic Field - Structural Changes Interaction in Fatigue Processes

L. Palaghian, C. Gheorghies (Sp), M. Thompson, "Dunarea de Jos" University, Galati (Romania)

M-557 New Separation and Recovery Process of Platinum Using Chlorinating Agents

C. Horike (Sp), T.H. Okabe, The University of Tokyo (Japan)

M-584 Composite on the Basis of Basalt and Carbon Hybrid Fibers for Blades of Small Wind Turbines

N. Chikhradze (Sp), G. Tsulukidze Mining Institute, Tbilisi (Georgia); M. Ushkin, Yuzhnoye State Design Office, Dnepropetrovsk (Ukraine); L. Vishnyakov, Frantsevich Institute of Problems of Materials Science, Kiev (Ukraine) et al.

M-643 A Study into the Electrolytic Reduction of Tantalum Pentoxide (Ta₂O₅) to Tantalum Metal (Ta) Using the FFC Cambridge Process

A.M. Jones, Sheffield Hallam University (UK); D. Hodgson, Metalysis Ltd., Rotherham (UK); D. Horsfield (Sp), Sheffield Hallam University (UK)

M-679 Nanostructured Mg₂M/Ni Type Materials (M=Ni, Cu)

I. Okonska (Sp), K. Smardz, M. Nowak, M. Jarzebski, L. Smardz, M. Jurczyk, Poznan University of Technology (Poland)

M-712 Change in Dislocation Structure of Martensite during Rolling Contact Fatigue in Bearing Steel

H. Hidaka (Sp), N. Mitamura, NSK Ltd., Fujisawa-shi, Kanagawa-ken (Japan)

M-759 Sintering and Hot-Pressing of Gamma-Alon SHS Derived Powders

J. Lis, M.M. Bubko, D. Zientara, L. Chlubny (Sp), AGH University of Science and Technology, Krakow (Poland)

M-794 An Effect of Thermo-Mechanical Treatment on the Properties and Microstructure of the CuFe₂ Alloys

J. Sobota (Sp), Silesian University of Technology, Katowice (Poland); Z. Rdzawski, Institute of Non-ferrous Metals, Gliwice (Poland)

M-1093 The Influence of Heat Treatment on Quantity and Morphology of MC Carbides in MAR M509 Cobalt Based Superalloy

P. Skupien, The Silesian University of Technology, Katowice (Poland)

M-1252 Wear Resistance of Titanium Alloy Ti6Al4V Modified On The Way of Vacuum Carburizing and Low Pressure Nitriding

B. Januszewicz (Sp), D. Siniarski, L. Kaczmarek, Technical University, Lodz (Poland)

M-1389 The Influence of the Preliminary Introduction of Ammonia Gas in Low Pressure Nitrocarburizing on the Structure of Treated Samples

D. Siniarski (Sp), P. Kula, M. Krasowski, Technical University of Lodz (Poland)

M-1448 News on Nitrocarburising of Iron: Simple and complex Compound-Layer Microstructures

M. Nikolussi (Sp), T. Gressmann, A. Leineweber, E.J. Mittemeijer, Max Planck Institute for Metals Research, Stuttgart (Germany)

M-1496 Mechanical Properties of Different Al Bronzes

V. Rontó (Sp), E. Nagy, M. Svéda, K. Tomolya, C. Páliska, University of Miskolc (Hungary); F. Varga, B. Molnár, Schmelzmetall Hungaria Ltd., Budapest (Hungary)

M-1528 A Half-Space Boundary Value Problem of a Thermoelastic Solid with Microstructure

C. Munteanu (Sp), I.A. Craciun, Technical University „Gh. Asachi” of Iasi (Romania)

M-1751 Novel Solid State Nitric Oxide Sensor Using a Siloxane-Poly(Oxypropylene) (PPO)

R. Herculano (Sp), C.A. Brunello, USP, Ribeirão Preto (Brazil); L.A. Chiavacci, UNESP, Araraquara (Brazil); C.F. O Graeff, UNESP, Bauru (Brazil)

M-2138 Modelling of Suppression of Dynamic Materials Stress

J. Vondrich (Sp), E. Thondel, Czech Technical University, Prague (Czech Republic)

M-2150 Environmental Issues Related to Residues from Military Activities: A Global Approach

M. Cabral, J.C. Bordado, A. Diogo (Sp), F. Margarido, Technical University of Lisbon (Portugal)

M-2165 Advances in Materials Treatment by Concentrated Solar Energy. New Reactors and Devices

I. Cañadas (Sp), D. Martinez, J. Rodriguez, CIEMAT, Tabernas (Spain)

M-2266 Interaction of Mercury to a Constructional Alloys and Development of the New Methods of Mercury Affected Objects Cleaning

S. Shapiev (Sp), Russian Academy of Science, Grozny (Russian Federation); R. Uspajiev, Technical State University, Grozny (Russian Federation); N. Mokaeva, Academy of Science of Chechen Republic, Grozny (Russian Federation) et al.

Topic: A1 - Electronic and photonic materials

	<p>Fundamental Properties of Organic Semiconductors and Materials for Solid State Memories</p>				
A11-83	<p>Rashba Spin Precession in One-Dimensional Organic Polymer S. Xie (Sp), J. Lei, H. Li, Shandong University, Jinan (China)</p>	A11-1039	<p>Ultrafast Photo-Induced Phase Switching in Charge Transfer Salts: Pd(dmit)₂ T. Ishikawa (Sp), R. Nakajima, N. Fukazawa, Y. Okimoto, Tokyo Institute of Technology (Japan); S. Koshihara, Tokyo Institute of Technology, JST-ERATO (Japan); M. Tamura, R. Kato, JST-CREST, RIKEN, Saitama (Japan)</p>	A12-345	<p>Rare Earth Complexes with Fullerene Based Ligands A. Fuchsbauer (Sp), N.S. Sariciftci, Johannes Kepler University Linz (Austria); O.A. Troshina, P.A. Troshin, R.N. Lyubovskaya, Institute of Problems of Chemical Physics of RAS, Chernogolovka (Russian Federation)</p>
A11-141	<p>Charge Carrier Generation through Re-Excitations of an Exciton in a Poly(p-Phenylene Vinylene) Molecule K. Gao, X.J. Lui, D.S. Liu, S. Xie (Sp), Shandong University, Jinan (China)</p>	A11-1115	<p>Characteristics of Au/BLT/LZO/Si(100) MFIS Structures for Ferroelectric-Gate Field-Effect-Transistors H.-S. Jeon, B.-E. Park (Sp), C.-J. Kim, University of Seoul (Korea, Republic)</p>	A12-389	<p>Thin Film Transistors Based on Solution-Processible Liquid Crystalline Semiconductors M. Funahashi (Sp), F. Zhang, N. Tamaoki, National Institute of Advanced Industrial Science and Technology, Tsukuba (Japan)</p>
A11-364	<p>Preparation and Characterization of Polymeric Films Doped with Coloured Monomers for Optical Applications F.G. Stanculescu (Sp), University of Bucharest (Romania); O. Grigorescu, National Institute for Materials Physics, Bucharest (Romania); A.-M. Albu, A. Stanculescu, University "POLITEHNICA" of Bucharest (Romania)</p>	A11-1441	<p>Preparation and Characterization of Thin Films of a New Solution-Processible Stilbenoid Dendrimer C. Coya (Sp), Universidad Rey Juan Carlos, Mostoles, Madrid (Spain); R. Gómez, Universidad Complutense de Madrid (Spain); A. de Andrés, Instituto de Ciencia de Materiales de Madrid (Spain) et al.</p>	A12-453	<p>Light-Weight, Large-Area, Multifunctional Membranes for Space Based Antennas L. Del Castillo (Sp), A. Moussessian, Jet Propulsion Laboratory, Pasadena, CA (USA); R.W. Johnson, Auburn University, AL (USA)</p>
A11-390	<p>Photoreactive Thin Layers for Organic Electronics A. Track (Sp), A. Lex, T. Griebler, G. Koller, L. Romaner, P. Frank, J. Stettner, A. Winkler, R. Schennach, G. Trimmel, W. Kern, E. Zojer, M.G. Ramsey, Graz University of Technology (Austria)</p>	A11-1718	<p>Buried Interfacial Layer of Highly Oriented Molecules in Copper Phthalocyanine Thin-Films on Polycrystalline Gold I. Biswas, H. Peisert, M.B. Casu (Sp), T. Chassé, University of Tübingen (Germany)</p>	A12-458	<p>Photoreactions in Aromatic Esters: Modulation of Optical Properties and Chemical Reactivity in Polymers and Ultrathin Surface Layers T. Griesser, T. Hoefler, G. Trimmel, W. Kern (Sp), Graz University of Technology (Austria); G. Jakopic, Joanneum Research - INP, Weiz (Austria); S. Temmel, U. Daschiel, Polymer Competence Center, Leoben (Austria)</p>
A11-392	<p>Polymerizable Organoplatinum Quinolates: Synthesis and Photo Physical Properties F. Niedermair (Sp), S. Kappaun, G. Kremser, Graz University of Technology (Austria); O. Kwon, Georgia Institute of Technology, Atlanta, GA (USA); C. Slugovc, Graz University of Technology (Austria)</p>	A11-1954	<p>Novel Sm³⁺ and Pr³⁺ Molybdates and Tungstates H. Bettentrup (Sp), D. Uhlich, T. Jüstel, University of Applied Sciences Münster, Steinfurt (Germany); P. Huppertz, J. Opitz, D. Wiechert, Philips Research Laboratories, Aachen (Germany)</p>	A12-460	<p>Modification of the Output Characteristics of an OLED by Refractive Index Modulation T. Höfler, M. Weinberger, W. Kern (Sp), S. Rentenberger, A. Pogantsch, K.F. Iskra, Graz University of Technology (Austria)</p>
A11-438	<p>DFT Studies of Systems Consisting of TCNQ and Cu G. Rangger (Sp), L. Romaner, Graz University of Technology (Austria); G. Heimel, Georgia Institute of Technology, Atlanta, GA (USA); E. Zojer, Graz University of Technology (Austria)</p>	A11-2085	<p>Preparation of Ferroelectric PbZr(x)Ti(1-x)O₃ (PZT) Thin Films by Liquid-Delivery Metalorganic Chemical Vapor Deposition Using Mixed Ligand mmp Precursors E.P. Burte (Sp), C.-P. Yeh, M. Lisker, Otto-von-Guericke-University Magdeburg (Germany); B. Seitzinger, P. Baumann, Aixtron AG, Aachen (Germany); B. Garke, J. Blasing, A. Krost, Otto-von-Guericke-University Magdeburg (Germany)</p>	A12-470	<p>Photoelectrochemical Cells Based on Dye-Sensitized TiO₂ Semiconductor Electrodes E. Indrea (Sp), S. Dreve, D.T. Silipas, National Institute for R&D of Isotopic and Molecular technology, Cluj-Napoca (Romania); V. Danciu, V. Cosoveanu, A. Nicoara, Babes-Bolyai University, Cluj-Napoca (Romania) et al.</p>
A11-661	<p>Early Stage of N,N'-Dipentyl-3,4,9,10-Perylenetetra-carboxylic Diimide (PTCDI-5C) Thin Film Growth M. Petit (Sp), R. Hayakawa, Y. Wakayama, T. Chikyow, NIMS, Tsukuba, Ibaraki (Japan)</p>	A11-2133	<p>2D Tetragonal Thin-Film Li_xC₆₀ - A Low Band-Gap Fullerene R.C. Savage (Sp), Uppsala University (Sweden); M. Macovez, P. Rudolf, University of Groningen (Netherlands); J. Schiessing, Uppsala University (Sweden)</p>	A12-590	<p>Photovoltaic Cells Based on Hybrids of Polybithiophene and Titania with Columnar Pores L. Wang (Sp), Y.-J. Lin, National Taiwan University, Taipei (Taiwan)</p>
A11-771	<p>Growth Process of Quaterylene Thin Films on Silicon Dioxide Surface Using Vacuum Deposition Technique R. Hayakawa (Sp), M. Petit, Y. Wakayama, T. Chikyow, National Institute for Materials Scienc, Tsukuba (Japan)</p>	A11-2180	<p>The Effect of Protonic Acids Used on the Conductivity of AOT-doped Polyaniline N. Kuramoto (Sp), K.S. Lee, Yamagata University, Yonezawa, Yamagata (Japan)</p>	A12-596	<p>The Influence of Water on the Work Function of Conducting Poly(3,4-Ethylenedioxythiophene)/Poly (Styrenesulfonate) A. Vollmer (Sp), BESSY, Berlin (Germany); A. Elschner, H.C.Starck GmbH & Co. KG, Leverkusen (Germany); N. Koch, Humboldt-Universität, Berlin (Germany)</p>

Topic: A1 - Electronic and photonic materials

A12-1049 **Metallocomplexes of Fullerenes for Plastic Solar Cells**
S.A. Zapunidy, V.V. Bruevich, Moscow State University (Russian Federation); E.V. Martynova, V.V. Bashilov, V.I. Sokolov, Y.N. Novikov, Institute of Organoelement Compounds, Moscow (Russian Federation) et al.

A12-1097 **Simple Preparation of Positively Charged Gold Nanoraspberry**
H. Shiigi (Sp), Y. Yamamoto, N. Yoshi, T. Nagaoka, H. Nakao, Osaka Prefecture University, Sakai (Japan)

A12-1110 **Development of the Electrical DNA Detection Using a Gold Nanoparticle Marker**
H. Shiigi (Sp), S. Tokonami, Y. Nishide, T. Nagaoka, Osaka Prefecture University, Sakai (Japan)

A12-1743 **A Flexible Organic Field Effect Transistor Structure for Innovative Sensing Applications**
I. Manunza (Sp), A. Bonfiglio, CNR-IFM, Modena (Italy)

A12-1866 **Magnetoresistive Effects in Alq3 Based Organics Light Emitting Diodes at Room Temperature**
J. Gomez-Luna (Sp), Universidade de São Paulo, Ribeirão Preto (Brazil); F. Nuesch, EMPA, Dübendorf (Switzerland); L. Zuppiroli, IMX-ST-EPFL, Lausanne (Switzerland) et al.

A12-1932 **Colour on Demand YAG:Co for Application in White pLEDs**
T. Jüstel, University of Applied Sciences Münster, Steinfurt (Germany); H. Winkler, Merck KGaA, Darmstadt (Germany); S. Moeller (Sp), University of Applied Sciences Münster, Steinfurt (Germany)

A12-2011 **The Injection and Trapping of Electric Charge in Low Mobility Materials**
E. Neagu, R. Neagu, Technical University of Iasi (Romania); J.N. Marat-Mendes (Sp), New University of Lisbon, Caparica (Portugal)

A12-2073 **The Selection of the Polymer Component in High-Gain Photorefractive Amorphous Organic Blends by Optimization of the Intermolecular Interactions**
F. Greco (Sp), University of Pisa (Italy); P. Masi, A. Romano, University of Napoli "Federico II", Portici (Italy); R. Angelone, F. Ciardelli, University of Pisa (Italy) et al.

A12-2102 **Charge Carrier Traps in Organic Diodes: Comparing Experiment and Numerical Simulation**
Y. Genenko (Sp), A.V. Golovchan, C. Melzer, H. von Seggern, Darmstadt University of Technology (Germany)

A12-2312 **P3HT-Fullerene Bulk Heterojunction Solar Cells**
A. Sharf (Sp), V. Bouda, Czech Technical University, Prague (Czech Republic)

A12-2315 **Production of Organic Photovoltaics Devices**
A. Sharf (Sp), V. Bouda, Czech Technical University, Prague (Czech Republic)

A12-2323 **Tetraaminopyrenes and Tetraazaperopyrenes: Synthesis, Properties, Deposition and Reactivity on Metal Surfaces**
T. Riehm (Sp), S. Martens, L.H. Gade, Universität Heidelberg (Germany); T. Jung, Paul-Scherrer-Institut, Villigen (Switzerland); M. Wahl, M. Stöhr, University of Basel (Switzerland)

Molecule-based Electronics

A13-766 **Structure of Mercaptoalkyl-Ferrocenes Embedded into Alkanethiol Self-Assembled Monolayers, Studied by STM**
L. Müller-Meskamp (Sp), Research Center Juelich, Jülich (Germany); S. Karthäuser, Research Center Juelich (Germany); M. Homberger, U. Simon, RWTH Aachen (Germany); R. Waser, Research Center Juelich (Germany)

A13-1265 **Incorporation of Molecular Switches in Large-Area Molecular Junctions**
A.J. Kronemeijer (Sp), H.B. Akkerman, T. Kudemac, B.J. van Wees, B.L. Feringa, P.W.M. Blom, B. de Boer, University of Groningen (Netherlands)

A13-1309 **Interface Dipole Formation at Metal-Organic Interfaces**
P.C. Rusu, G. Brocks (Sp), University of Twente, Enschede (Netherlands)

A13-1481 **Correlated Electron Transport in Single-Molecule Junctions**
G. Fagas (Sp), J.C. Greer, Tyndall National Institute, Cork (Ireland)

A13-1536 **Spin Transition in Transition Metal Complexes (Fe(II), Ru(II)) Driven by Gating or longitudinal Strain and Transport Properties**
V. Meded (Sp), M. Ruben, F. Evers, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)

A13-2164 **Formation of Si Nanostructures at the Al-SiO₂ Interface**
J.-P. Blondeau (Sp), V. Vival, L. Allam, University of Orleans, Chartres (France)

A13-2194 **Synthesis and Characterization of a New Ru (II) Complex with Electroluminescent Properties**
M. Alexandru (Sp), I.P. Jitaru, I. Costea, O.C. Oprea, L.F. Bancu, University "Politehnica" Bucharest (Romania)

Topic: A2 - Magnetic Materials

	<p>Hard and Soft Magnetic Materials</p>	
<p>A21-122</p>	<p>Study on High Strength Low Iron Loss Electrical Steels S. Chang (Sp), H. Park, Pohang University of Science and Technology (Korea, Republic)</p>	<p>A22-2209</p> <p>Artificial Pinning Centers in Y Ba₂Cu₃O_{7-x} Thin Films Created by Nanoparticles from the Gas Phase L. Schultz (Sp), E. Backen, M. Sparing, T. Freudenberg, J. Acker, R. Hühne, B. Rellinghaus, B. Holzapfel, Leibniz Institute for Solid State and Materials Research Dresden (Germany)</p>
<p>A21-142</p>	<p>Spin Filtering Through an Organic-Ferromagnet Based Device G.C. Hu, Y. Guo, J.H. Wei, S. Xie (Sp), Shandong University, Jinan (China)</p>	<p>A22-2221</p> <p>Structural and Magnetic Properties of Nanocomposites Based on RE₂TM₁₄B/alpha-Fe S. Hodorogea (Sp), M.M. Codescu, N. Stancu, E. Patroi, E. Manta, D. Patroi, W. Kappel, R&D National Institute for Electrical Engineering, Bucharest (Romania)</p>
<p>A21-506</p>	<p>Structural, Thermal, Spectroscopic, Specific Heat, and Magnetic Studies of a New Nickel Polyborate NiB₂O₁₄(OH)₁₀ and Its Dehydration Product J. Ju (Sp), J. Sasaki, T. Rachi, K. Tanigaki, N. Toyota, Tohoku University, Sendai (Japan)</p>	<p>A22-2222</p> <p>Structural and Magnetic Properties of Fe-Cu Alloys W. Kappel, M.-M. Codescu (Sp), N. Stancu, J. Pintea, E. Patroi, D. Patroi, R&D National Institute for Electrical Engineering, Bukarest (Romania)</p>
<p>A21-625</p>	<p>Magnetic and Electrical Properties of LaMnO₃ and LaYMnO₃ A.T. Seshadri (Sp), H. Kausik, Indian Institute of Technology, Madras, Chennai (India)</p>	<p>Magnetic Nanoparticles and Nanowires</p>
<p>A21-750</p>	<p>The Copper and Carbon Influence on Properties of Permanent Magnets Based on Fe₇₆Nd₁₆B₈ Alloy G. Brekharya (Sp), O. Kharitonova, Dneprodzerzhinsk Technical University (Ukraine); V. Vystavkina, Zaporozhye State University (Ukraine)</p>	<p>A23-775</p> <p>Effects of Substitution of Sb for Pd in MnPd Compound R. Pacurariu (Sp), M. Coldea, Babes Bolyai University, Cluj-Napoca (Romania); N. Neumann, University of Osnabruck (Romania); O. Isnard, CNRS, Grenoble (France); M. Räkera, Babes Bolyai University, Cluj-Napoca (Romania)</p>
<p>A21-926</p>	<p>Influence of SPD on the Magnetic Properties of Soft Magnetic Materials S. Scheriau (Sp), University of Leoben (Austria); K. Rumpf, H. Krenn, Graz University of Technology (Austria); S. Kleber, Böhler Edelstahl GmbH, Kapfenberg (Austria); R. Pippan, University of Leoben (Austria)</p>	<p>A23-803</p> <p>Microstructure and Magnetism of Co-Doped TiO₂ Polycrystalline Samples F. Manda, I. Jitaru, J. Neamtu, C. Covaliu (Sp), G. Georgescu, University "Politehnica" Bucharest (Romania)</p>
<p>A21-1056</p>	<p>The Quantitative Analysis of Magnetic Reversal in RE-3d Permanent Magnets by Means of Magnetic Domain Structure Observation Y. Pastushenkov (Sp), K. Skolov, Tver State University (Russian Federation)</p>	<p>A23-805</p> <p>Magnetic Nanoparticles Deposition on Nanoperforated Oxides for High Density Storage Devices J. Allouche (Sp), M. Kuemmel, C. Chaneac, E. Tronc, C. Boissiere, D. Grosso, C. Sanchez, Université Pierre et Marie Curie, Paris (France)</p>
<p>A21-1322</p>	<p>The Investigation of Structure-Phase Transformation during Sintering of as-Quenched Nd-Fe-Cu-(C,B) Alloys G.P. Brekharya, V.V. Vystavkina, Dneprodzerzhinsk State Technical University (Ukraine); T. Gulyaeva (Sp), Zaporozzhe National University, Dneprodzerzhinsk (Ukraine) et al.</p>	<p>A23-1024</p> <p>Granular TMR Layers Properties as Deposited by TVA Technology I. Mustata (Sp), A. Anghel, C.P. Lungu, M. Badulescu, C. Iacob, NILPRP, Bucharest (Romania)</p>
<p>A21-1459</p>	<p>Texture Evolution in a Micro-region of a Cold-Rolled Electrical Steel Sheet M.d.C. Amorim da Silva (Sp), F.J.G. Landgraf, M.F. de Campos, São Paulo University (Brazil)</p>	<p>A23-1042</p> <p>Morphological Modification of FePt Nanogranular Films by Swift Heavy Ion Irradiation M. Shirai (Sp), K. Tsumori, M. Kutsuwada, K. Yasuda, S. Matsumura, Kyushu University, Fukuoka (Japan)</p>

Topic: A2 - Magnetic Materials

- A23-1521** **Perpendicular FePt/Fe Bilayers: Nanoscale Structure, Magnetic Properties and Exchange-Spring Behavior**
oral poster
F. Casoli (Sp), F. Albertini, L. Nasi, L. Pareti, S. Fabbri, IMEM-CNR, Parma (Italy); P. Luches, S. Valeri, CNR-INFN, Modena (Italy); F. Bolzoni, C. Bocchi, IMEM-CNR, Parma (Italy)
- A23-1950** **Study of the Direct Bonding Conditions of Ferrite Garnet Layer on Ion-Exchanged Glass Waveguides**
oral poster
A.-L. Joudrier (Sp), Laboratoire des Matériaux et du Génie Physique, Grenoble (France); M. Couchaud, H. Moriceau, CEA, Grenoble (France); J.E. Broquin, Minattec INP Grenoble (France); B. Ferrand, CEA, Grenoble (France) et al.
- A23-1990** **Excitons in ZnO/ZnMnO Quantum Wells**
T. Tcheldidze (Sp), E. Chikoidze, T. Kereselidze, Tbilisi State University (Georgia)
- A23-2198** **Temperature Characteristics of a Magnetic Micro Strain Gauge**
oral poster
S. Hansen (Sp), L. Rissig, H.H. Gatzert, Leibniz Universität Hannover, Garbsen (Germany)
- A23-2344** **Structural and Magnetic Effects Induced by Annealing Process in Sputtered R_{1-x}Cox Amorphous Thin Film Alloys**
M.I. Soltani, Annaba University (Algeria)
- A23-2356** **Magneto-optical Kerr Effect Spectroscopy of Nickel/Rubrene Thin Films**
W. Li (Sp), M. Frank, D.R.T. Zahn, G. Salvan, Chemnitz University of Technology (Germany); R. Pacurariu, Babes-Bolyai University, Cluj-Napoca (Romania)

Topic: A4 - Materials for Nanotube and Nanowire

- Carbon Nanotubes: Catalysis, Growth and Integration**
- A41-1399** **Multiwalled Graphite Nanotubes in Iron Highly Doped Carbon Aerogels**
L.C. Cotet (Sp), M. Baia, L. Baia, V. Cosoveanu, Babes Bolyai University, Cluj-Napoca (Romania); J. Popp, Friedrich Schiller University Jena (Germany); V. Danciu, Babes Bolyai University, Cluj-Napoca (Romania)
- A41-1450** **Selective Growth of Carbon Nanotubes on Electrodeposited Ni and Co Nanoparticles**
A. Romo Negreira (Sp), P.M. Vereecken, D. Cott, G. Groeseneken, K. Maex, Katholieke Universiteit Leuven (Belgium)
- A41-1453** **Paper Functionalization by Sprayd Silica Sols Loaded with Carbon Nanoparticles**
E. Callone (Sp), University of Trento (Italy); J.M. Fletcher, University of Colorado, Boulder, CO (USA); G. Carturan, University of Trento (Italy); R. Raj, University of Colorado, Boulder, CO (USA)
- A41-1520** **The Study of New Generation of Activated Carbon Characteristic by Adsorption Methods**
K.B. Hoang (Sp), H.H. Binh, D.I. Yamandii, O.N. Temkin, Moscow State Academy of Fine Chemical Technology (Russian Federation)
- A41-1746** **Catalytic Effects on the Production of Carbon Nanotubes by Chemical Vapor Deposition of Ethylene**
V. Alexiadis (Sp), X.E. Verykios, Foundation for Research and Technology Hellas, Patras (Greece)
- Semiconducting Nanowires: Catalysis, Growth and Integration**
- A42-370** **Optical Properties of Silicon Nanocrystals Encapsulated by Silicon Oxide Nanowires**
S.M. King, S. Chauré, S. Krishnamurthy, Trinity College Dublin (Ireland); A. Colli, University of Cambridge (UK); W.J. Blau (Sp), Trinity College Dublin (Ireland); A.C. Ferrari, University of Cambridge (UK)
- A42-872** **Study of Influence of Precursor in the Structure and Luminescent Properties of Mg, Sn and Te Doped Zn Nanostructures**
P. Fernández (Sp), A. Iribarren, Y. Ortega, A. Urbieto, J. Piqueras, University Complutense, Madrid (Spain)

- A42-1064** **Silicon Carbide Nanowires with Special Morphologies**
X. Guo (Sp), Y.-J. Hao, D.-H. Wang, Institute of Coal Chemistry, Taiyuan, Shanxi (China)
- A42-1427** **Electron-Beam Induced Growth of Silica and Carbon Nanostructures from Porous Silicon Substrates**
F. Solá (Sp), O. Resto, A. Biaggi-Labiosa, L.F. Fonseca, University of Puerto Rico, Rio Piedras (Puerto Rico)
- A42-2122** **Synthesis and Characterization of Tungsten Oxide and Tungsten Nitride Nanowires**
Y. Zhao (Sp), Y. Zhu, W.B. Hu, Y.D. Xia, Y.H. Li, D.G. McCartney, E. Smith, University of Nottingham (UK); C.W. Dunnill, D.H. Gregory, University of Glasgow (UK)
- Metal Nanowires and Novel Interconnect Materials**
- A43-200** **The Growth and Mechanical Properties of Metal Nanowires**
oral poster
R. Dou (Sp), D. LeClere, B. Derby, University of Manchester (UK)
- A43-746** **Structure and Properties Stability in New Silver Alloys**
oral poster
W. Gluchowski (Sp), Z. Rzdawski, Institute of Non-ferrous Metals, Gliwice (Poland)
- A43-1288** **Thermal Stability of Spin-on MSQ Low-k Dielectrics**
N. Ahner (Sp), S.E. Schulz, M. Rennau, Chemnitz University of Technology (Germany)
- A43-1342** **Characterization of Porous Low K Films and Pore Sealing Treatment on Patterned and Blanket Wafers by Ellipsometric Porosimetry**
oral poster
J.P. Piel, V. Couraudon (Sp), Y. Turcant, C. Defranoux, A. Bourgeois, SOPRA S.A., Bois-Colombes (France)
- A43-1627** **Ordered Self-Assembled Array of Metal Nanowires on III-V Semiconductor Surface: Synthesis and Optical Properties**
oral poster
T. Barlas (Sp), N. Dmitruk, N. Kotova, V. Romanyuk, National Academy of Ukraine, Kiev (Ukraine); A. Dmytruk, Tohoku University, Sendai (Japan)

Topic: A4 - Materials for Nanotube and Nanowire

- A43-1690** **Tensile Testing of Gold Nanointerconnects**
oral poster
S. Olliges (Sp), Swiss Federal Institute of Technology Zurich (Switzerland); P. Gruber, Max Planck Institute for Metals Research, Stuttgart (Germany) et al.
- A43-1834** **The Influence of Heat Treatment on Electrical Resistance of Focused Beam Deposited W Nanowires**
E. Horvath (Sp), P.L. Neumann, A.L. Tóth, Z.E. Horváth, L.P. Biró, Hungarian Academy of Sciences, Budapest (Hungary)
- A43-1917** **Mechanical Stability of Different Porous Low-k Stacks Integrated in Single Damascene Architectures during Chemical Mechanical Polishing (CMP)**
K. Gottfried (Sp), I. Schubert, S.E. Schulz, Chemnitz University of Technology (Germany); T. Gessner, Fraunhofer IZM + Chemnitz University of Technology (Germany)
- A43-2306** **Fabrication of Copper Tetraaminophthalocyanine Nanostructures**
F. Gu (Sp), G.Q. Xu, S.G. Ang, National University of Singapore (Singapore)
- A43-2317** **Photonic Crystals and Its Impact**
G. Nzulu, Linköping University (Sweden)
- A43-2352** **Nanocrystalline FeTi Intermetallic Alloy with Small Lanthanum Additions for Hydrogen Storage**
R. Orban (Sp), Technical University of Cluj-Napoca (Romania); M. Lucaci, National Research and Development Institute for Electrical Engineering, Cluj-Napoca (Romania) et al.
- A43-2357** **Template-assisted Fabrication and Electronic Properties of Copper Tetraaminophthalocyanine Nanowires**
F. Gu (Sp), S.G. Ang, G.Q. Xu, National University of Singapore (Singapore)

Topic: A5 - Advanced Polymers

- Polymer-Nanoparticle-BI ends and their Applications**
- A51-535** **Microstructure Optimization and Exploitation Aspects of Ceramic-Polymer Nanocomposites used for Dental Fillings**
J. Siejka-Kulczyk (Sp), M. Lewandowska, K.J. Kurzydłowski, Warsaw University of Technology (Poland)
- A51-676** **Transparent Polymeric Nanocomposites Based on New Type of Heat Resistant Organophilic Layered Silicates**
Y.S. Kim (Sp), S.S. Han, J.H. Lee, Korea Research Institute of Chemical Technology, Daejeon (Korea, Republic)
- A51-1272** **Mold Pressure and Filler Concentration Effect on Both - the Percolation Threshold and the Piezo-Resistive Effect of the Polyisoprene-Nanostructured Carbon Black Composites**
J. Zavickis (Sp), M. Knite, V. Tupureina, V. Teteris, Technical University of Riga (Latvia)
- A51-1287** **Chitosan Mediated Multilayer Deposition of Platinum Nanoparticles**
oral poster
S. Dreve (Sp), E. Indrea, T.D. Silipas, National R&D Institute of Isotopic and Molecular Technologies, Cluj-Napoca (Romania); A. Nicoara, V. Cosoveanu, V. Danciu, Babes-Bolyai University, Cluj-Napoca (Romania)
- A51-1703** **Improvement of Corrosion Behavior of 316L Stainless Steel by Silica Based Organic-Inorganic Hybrid Nanocomposite Coatings in Simulated Body Fluid**
A.M. Nabizade-Haghighi, Iran University of Science and Technology, Tehran (Iran); A. Ershad-Langroudi, Iran Polymer and Petrochemical Institute, Tehran (Iran) et al.
- A51-1704** **Cellulose Acetate/Clay Nanocomposites: Morphology and Thermal Properties**
oral poster
R. Banzanini, M.d.C. Gonçalves (Sp), State University of Campinas (Brazil)
- A51-1955** **Polystyrene: A Shape Memory Polymer?**
S. Jeyapalina (Sp), R.J. Heath, B. Haworth, Loughborough University (UK)
- A51-1960** **A Study on the Fabrication of Epoxy Resin/Aluminum Composite and Its Mechanical Properties**
E. Rocha (Sp), R. Gonzales-Aguirre, A. Altamirano-Torres, Autonomous Metropolitan University, Mexico, D. F. (Mexico)

- A51-1975** **Injection Moulding Process of Conductive and Insulated Polymers for Two-Component Moulds Compatible to Electroforming**
J. Prokop (Sp), G. Finnah, J. Lorenz, V. Piotter, R. Ruprecht, J. Hausselt, Forschungszentrum Karlsruhe GmbH (Germany)
- A51-2070** **Production and Characterization of Claylike Nano-Particle-Modified Elastomer Systems**
J. Wiedemann (Sp), M. Gross, J. Helbig, Neue Materialien Würzburg GmbH (Germany); F. Friedrich, Forschungszentrum Karlsruhe (Germany)
- A51-2104** **Nanodiamond-Reinforced Polymer Composites: Processing and Mechanical Properties**
V. Popov (Sp), Moscow State Institute of Steel and Alloys, Moskau (Russian Federation); V.V. Karbushev, A.V. Semakov, V.G. Kulichikhin, S.V. Kotomin, Russian Academy of Sciences, Moscow (Russian Federation) et al.
- A51-2173** **Electrical and Morphological Properties of PANI/PSS Blends Obtained by In Situ Polymerization Technique**
L.C. Costa (Sp), C.P.L. Rubinger, University of Aveiro (Portugal); R. Faez, Federal University of São Paulo, Diadema (Brazil); C.R. Martins, Universidade Federal de Pernambuco, Cidade Universitária, Recife (Brazil) et al.
- A51-2322** **The Effect of Carbon Black in Polymeric Nanocomposites**
A. Mlich (Sp), V. Bouda, I. Pilarcikova, Czech Technical University, Prague (Czech Republic)

Polymers as Functional Electronic, Dielectric and Energy related Materials

- A52-296** **Preparation, Morphology and Properties of Poly(Vinylidene Fluoride)/Polypyrrole Piezoactive Composites**
G. Elyashevich (Sp), Russian Academy of Sciences, St. Petersburg (Russian Federation); M.A. Smirnov, E.Y. Rovova, V.K. Lavrentyev, I. Dmitriev, Russian Academy of Sciences, Saint-Petersburg (Russian Federation)
- A52-383** **Synthesis of Poly(3-Hexylthiophene)-Grafted TiO2 Nanotube Composite**
S.-M. Yang (Sp), M.D. Lu, National Central University, Jhong-Li (Taiwan)

Topic: A5 - Advanced Polymers

- A52-1187 High Resolution Solid State ^{13}C NMR Study of Xylylene Polymers**
S. Olejniczak, Polish Academy of Sciences, Lodz (Poland); A. Nosal, H. Szymanowski, Technical University of Lodz (Poland); M.J. Potrzebowski, Polish Academy of Sciences, Lodz (Poland) et al.
- A52-1232 High Resistivity Emitter Layer for Silicon Solar Cells Application**
K. Drabczyk (Sp), P. Ziba, K. Drabczyk, Polish Academy of Sciences, Krakow (Poland)
- A52-2123 Core-Shell Structures Based on Functionalized Polypyrrole-Magnetic Nanoparticles**
A. Nan (Sp), R. Turcu, I. Craciunescu, National Institute for R&D of Isotopic and Molecular Technologies, Cluj-Napoca (Romania); S. Karsten, J. Liebscher, Humboldt-Universität Berlin (Germany) et al.
- A52-2174 Preparation and Characterization of Ultra-High Aspect Ratio Polymer Based Nanowires**
J. Martín (Sp), R. Ranz, M. Hernández-Vélez, M. Vázquez, C. Mijangos, CSIC, Madrid (Spain)

Topic: A6 - Functional Ceramic Materials and Devices

- Dielectric and Piezoelectric Ceramics and Devices**
- A61-209 Enhancement of Conductivity and Transmittance of Al-Doped ZnO Thin Films Prepared by a Metallic Zn:Al Target**
J.-S. Fang (Sp), Y.S. Lin, C.S. Cheng, Y.C. Lee, H.Y. Hsio, National Formosa University, Hwei, Yunlin (Taiwan)
- A61-305 Microwave Characterization of Ferroelectric and Relaxor Ceramics by Composite Dielectric Resonator**
V. Bovtun (Sp), Federal Institute for Materials Research and Testing, Berlin (Germany); S. Veljko, Institute of Physics ASCR, Prague (Czech Republic); J. Krupka, Warsaw University of Technology (Poland) et al.
- A61-1204 Highly Robust Piezoelectric Composites for Health Monitoring and Structural Control**
R. Petricevic (Sp), M. Gurka, Neue Materialien Würzburg GmbH (Germany)
- A61-1229 Dielectric Study on YSZ Single Crystals**
S. Komine (Sp), K. Furuya, Y. Fujie, Seimichemical Co., Ltd., Chigasaki-City (Japan)
- A61-1419 Fatigue of PZT under Static Mechanical Preload**
A. Lekstutis, J. Banyus, Vilnius University (Lithuania); T. Granzow, E. Aulbach, Technical University of Darmstadt (Germany); D.C. Lupascu (Sp), Technical University of Dresden (Germany)
- A61-2250 Sputtered Nanocrystalline ZnO Film for Surface Acoustic Wave Devices**
S.-C. Tan (Sp), Y.Q. Fu, X.Y. Du, J.K. Luo, A.J. Flewitt, S. Pisana, A. Ferrari, University of Cambridge (UK) et al.

Solid Oxide Fuel Cells

- A62-81 Modelling and Simulations of the Mechanical Degradation of Planar SOFC**
K. Girona (Sp), G. Delette, F. Lefebvre-Joud, CEA, Grenoble (France); M. Dupeux, SIMAP, Saint Martin d'Hères (France)
- A62-101 Advanced SOFC Composite Cathode with Simultaneous Graded Composition and Porosity by Electrostatic Spray Deposition**
A. Lintanf (Sp), A. Princivalle, E. Djurado, University of Grenoble, St Martin d'Hères (France)

- A62-222 Oxygen Transport Properties in Mixed Ionic and Electronic Conducting Oxides $\text{Ba}_x\text{Sr}_{1-x}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ ($x=0, 0.2$ and 0.5)**
S. Svarcová (Sp), Academy of Sciences of the Czech Republic, Rez (Czech Republic); K. Wilk, J. Tolchard, T. Grande, NTNU, Trondheim (Norway)
- A62-618 Residual Stress in SOFC Electrolytes**
B. Sun (Sp), A. Atkinson, R. Sweeney, Imperial College, London (UK)
- A62-1008 Structural and Chemical Properties of Nanocrystalline $\text{La}_{0.55}\text{Sr}_{0.5}\text{CoO}_{3-\delta}$ Layers on Yttria-Stabilized Zirconia Obtained by Sol-Gel Processing**
L. Dieterle (Sp), D. Bach, R. Störmer, D. Gerthsen, University of Karlsruhe (Germany); U. Guntow, Fraunhofer Institute for Silicate Research, Würzburg (Germany) et al.
- A62-1157 Ab Initio Study of Proton Conduction in Barium Stannate**
E. Bevilion (Sp), Y. Wang, A. Chesnaud, G. Dezanneau, G. Geneste, Laboratoire SPMS, Chateray Malabry (France)
- A62-1215 Protonic Conductors Dedicated to PCFC Device Grown by Reactive Magnetron Sputtering**
M. Arab Pour Yazdi (Sp), P. Briois, F. Lapostolle, A. Billard, University of Technology of Belfort-Montbéliard (France)
- A62-1285 Optimization of Electrode Structures for Microtubular SOFCs to Improve the Performance and Long-Time Stability**
G. Buchinger, S. Potzmann, T. Raab, S. Griesser, V. Lavlor, Upper Austrian University of Applied Sciences, Wels (Austria); S. Kühn, K. Klein, ALPPS Fuel Cell Systems GmbH, Graz (Austria); W. Sitte, University of Leoben (Austria) et al.
- A62-1329 Insight of Microstructure Effects on Electrical Properties of $\text{La}_{9.33+x}\text{Si}_6\text{O}_{26+3x/2}$ Oxyapatite-Type Materials**
Y. Wang (Sp), Ecole Centrale Paris, Chateray Malabry (France); G. Dezanneau, C. Bogicevic, F. Karolak, Ecole Centrale Paris, Châtenay-Malabry (France); C. Estournès, University Paul-Sabatier, Toulouse (France)
- A62-1432 Joining of Crofer 22 APU to Yttria-Stabilized-Zirconia by Glass-Ceramic Sealant**
A. Ventrella, F. Smeacetto, M. Salvo, M. Ferrari (Sp), Politecnico di Torino (Italy); A. Boccaccini, Imperial College London (UK)
- A62-1770 Ba-Al-Si-B-Oxide Glass-Ceramic Materials as Sealant for Solid Oxide Fuel Cell**
Y.-J. Chen (Sp), C.Y. Taipei, W.C.J. Wei, National Taiwan University, Taipei (Taiwan)

Topic: A6 - Functional Ceramic Materials and Devices

A62-1856 HRTEM Study of Carbon Deposited Species on a Ni-GDC/YSZ/LSM SOFC, Operated with Biomass Product Gas

I. Tsiaoussis (Sp), N. Frangis, Aristotle University of Thessaloniki (Greece); P. Hoffmann, L. Fryda, National Technical University of Athens (Greece) et al.

A62-2212 Impedance of Pt/YSZ- and LSM-Electrodes as a Function of Temperature and Oxygen Partial Pressure

S. Mosch (Sp), M. Kusnezoff, N. Trafimenko, Fraunhofer Institute for Ceramic Technologies and Systems, Dresden (Germany)

Topic: B2 - Advanced Metallic and Hybrid Materials

High Temperature Metallic and Intermetallic Materials

B22-152 Fluorine Surface Treatment of TiAl-Alloys for Aerospace Applications

oral poster

A. Donchev (Sp), M. Schuetze, DECHEMA e.V., Frankfurt (Germany)

B22-208 Micro-Alloying Process for Microstructure Homogeneity of Wrought TiAl

oral poster

J. Zhang (Sp), X. Zhang, China Iron and Steel Research Institute Group, Beijing (China)

B22-1010 Production of Nb3Al Based Intermetallic Granules by PREP

oral poster

A. Logacheva (Sp), A. Logunov, P. Taran, E. Stepkin, A. Logachev, K. Nikonov, JSC "Kompozit", Korolev (Russian Federation)

B22-1044 Atomic Diffusion and Phase Equilibria in the Ir/TiAl System and the Potential of Ir as Diffusion Barrier

oral poster

Y. Kimura (Sp), H. Fujita, M. Ohsaki, Y. Mishima, Tokyo Institute of Technology, Yokohama (Japan)

B22-1104 Experimental Investigations on the Fe-W System at High Temperatures

oral poster

L. Eleno (Sp), G. Inden, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); A. Schneider, Salzgitter Mannesmann Forschung GmbH, Duisburg (Germany)

B22-1225 Properties of Ultra High Temperature Refractory Metal Based Silicide Materials

oral poster

S. Drawin, ONERA, Chatillon Cédex (France)

B22-1237 Laves Phases in the Ternary Nb-Cr-Al System: Phase Equilibria at 1150, 1300, and 1450 °C

oral poster

O. Prymak (Sp), F. Stein, M. Palm, G. Frommeyer, D. Raabe, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

B22-1676 The Epsilon-Phase in the Binary Al-Fe and in the Ternary Al-Fe-Ti

oral poster

M.H. Braga (Sp), Engineering Faculty of the Porto University (Portugal); J. Ferreira, LNEG, Porto (Portugal); L.F. Malheiros, University of Porto (Portugal)

B22-1852 High Temperatures Abrasive Wear Behaviour of High Cr-Ni Cast Steels

oral poster

Y. Sun, H. Ahlatcedil, H. Cimenoglu (Sp), Istanbul Technical University (Turkey)

B22-2353 Phase and Structural Development at NiAl Synthesis by Mechano-Chemical Processing

oral poster

R. Urban (Sp), Technical University of Cluj-Napoca (Romania); M. Lucaçi, National Research and Development Institute for Electrical Engineering, Cluj-Napoca (Romania) et al.

Topic: B3 - Building Materials

Micro-structure and Water Repellent Treatment

B31-867 Interaction of Water Vapour with Hardened Cement Paste

oral poster

J. Adolphs, POROTEC GmbH, Hofheim (Germany)

B31-1108 Design and Creation of Bioinspired Surfaces with Special Wettability

oral poster

L. Jiang, Chinese Academy of Sciences, Beijing (China)

B31-1166 Superhydrophobic Perpendicular Nano-Pin Film by the Bottom up Process

oral poster

E. Hosono (Sp), National Institute of Advanced Industrial Science and Technology, Tsukuba (Japan); S. Fujihara, Keio University, Yokohama (Japan) et al.

B31-1413 Hydration Kinetics of Nano-oxide Powders and Films at Ambient Temperature

oral poster

I.W. Lo (Sp), C.C. Lin, W.C.J. Wei, National Taiwan University, Taipei (Taiwan)

B31-1473 Considerations on the Efficacy Thresholds of Protective Polymers Used for the Conservation of Cultural Heritage

oral poster

G. Biscontin, E. Zendri, Università Ca' Foscari di Venezia, Mestre-Venezia (Italy); I. Nardini (Sp), S. Riato, Università Ca' Foscari di Venezia, Mestre-Venezia (Italy); G. Driussi, Arcadia Ricerche s.r.l., Venice (Italy)

B31-2033 Properties of Aerated Cement Composite Containing Flax By-Product Particles

oral poster

T. Langlet (Sp), E. Aamr-Daya, A. Benazzouk, M. Queneudec, Laboratoire des Technologies Innovantes (EA 3899), Amiens (France)

B31-2190 Polycondensation Properties of Silicon Based Model Compounds on Brick and Stone

oral poster

H. De Clercq, Royal Institute for Cultural Heritage, Brüssel (Belgium)

Monitoring and Chemistry of Cementitious Materials

B32-47 Use of Limestones Filler to Improve the Quality of Algerian Concretes and Cement Past

oral poster

Z. Guemmedi (Sp), University of Constantine (Algeria); G. Escadeillas, INSA-UPS, Toulouse (France); B. Toumi, University of Quem El Bouaghi, Constantine (Algeria)

Topic: B3 - Building Materials

Topic: B4 - Materials for the extreme Environment

- B32-68** **Development of High Damping Cement Concrete Using Mineral-Based Aggregate Coated with Bitumen**
M. Mayama (Sp), Hokkaido Institute of Technology, Sapporo (Japan); H. Ishigame, Hozumi Construction Co., Ltd., Hachinohe (Japan); M. Harada, Harada Construction Co., Ltd., Sapporo (Japan)
- B32-177** **Corrosion and Hydrogen Absorption of Mild Steel in Media with Mould Fungi and Their Suppression by Organic Inhibitors**
oral poster
S. Beloglazov (Sp), D. Malyarevskiy, Immanuel-Kant-University, Kaliningrad (Russian Federation)
- B32-552** **Novel Construction Binders**
I. Mohanu (Sp), I. Petre, F. Amzica, G. Ilie, E. Andreeescu, CEPROCIM S.A., Bucharest (Romania)
- B32-798** **Porous Building Ceramic without Combustible Additives**
R. Svinka (Sp), V. Svinka, L. Bidermanis, A. Butlers, Riga Technical University (Latvia); S. Krebs, Schlenk Metallpulver GmbH&Co, Barnsdorf (Germany)
- B32-939** **The Dormant Period of Cement Hydration**
oral poster
S. Brendle (Sp), M.R. de Rooij, K. van Breugel, Delft University of Technology (Netherlands)
- B32-1143** **Rheological Behaviour Changes When Using Fluidising Additives in some Injection Fluids Based on Ordinary Cement**
G. Rosu (Sp), University of Agricultural Sciences and Veterinary, Bucharest (Romania); E. Andreeescu, F. Amzica, SC CEPROCIM SA, Bucharest (Romania) et al.
- B32-1836** **Use of Stone Waste Materials and Recycled Aggregates in Earth-Moist Concrete**
oral poster
M. Hunger (Sp), H.J.H. Brouwers, University of Twente, Enschede (Netherlands)
- B32-2090** **Chloride Attack on Reinforced Concrete Made with Electric Furnace Slag as Coarse Aggregate**
A. Elbasir (Sp), A.M. Elwefati, S.S. Krem, M.K. Ramadan, Alfateh University of Tripoli (Libya)
- B32-2185** **Corrosion Rates of Concrete Made with Different Binders and Exposed for 20 Year in Natural Sea Water**
C. Andrade, N. Rebolledo (Sp), I. Martinez, CSIC, Madrid (Spain)
- B32-2199** **Investigations in the Microstructure of PCC after Mechanical Load**
K.A. Bode, A. Dimig-Osburg, A. Flohr (Sp), Bauhaus-University Weimar (Germany)

- Materials for Fusion Applications**
- B42-130** **Deuterium Retention in Chemical Vapor Deposited Tungsten Carbides Exposed to a D Plasma**
V. Goncharov (Sp), V.K. Alimov, D.A. Komarov, Y.V. Lakhotkin, V.P. Kuzmin, Russian Academy of Science, Moscow (Russian Federation); J. Dörner, J. Roth, Max Planck Institute for Plasma Physics, Garching (Germany)
- B42-226** **On Possible Role of Thermomdiffusion for Redistribution of Impurity Atoms in a Supersaturated Solid Solution during Collision Cascade Relaxation**
E.A. Koptelov, Russian Academy of Sciences, Moscow (Russian Federation)
- B42-269** **Microstructure and Mechanical Properties of Eurofer 97 Steel Subjected to Hydrostatic Extrusion**
A. Krawczynska (Sp), M. Rosinski, M. Lewandowska, K.J. Kurzydowski, Warsaw University of Technology (Poland)
- B42-411** **Neutron Reflectivity Study of W-Compounds Oxidized Coatings**
K. Mergia (Sp), National Center for Scientific Research "Demokritos", Athens (Greece); F. Koch, Max Planck Institute for Plasma Physics, Garching (Germany) et al.
- B42-489** **The Effects of CO2 Laser Beam Irradiation on Be-W Films Prepared by Thermionic Vacuum Arc Method**
C. Lungu (Sp), I. Mustata, A. Anghel, A.M. Lungu, C.C. Surdu-Bob, I. Morjan, E. Popovici, I. Voicu, I. Soare, National Institute for Lasers, Plasma and Radiation Physics, Bucharest (Romania) et al.
- B42-510** **Irradiation Behavior of Ti-Stabilized 316L-Type Steel at 265 oC**
B. Rodchenkov (Sp), G.M. Kalinin, Y.S. Strebkov, Research and Development Institute of Power Engineering (RDPE), Moskau (Russian Federation) et al.
- B42-523** **TiC Coatings as Wetting Promoter for Optimizing Carbon/Copper Brazed Joints in High Heat Flux Components**
P. Warbs (Sp), Max Planck Institute for Plasma Physics, Garching (Germany); B. Schwarz, Vienna University of Technology (Austria); H. Maier, H. Bolt, Max Planck Institute for Plasma Physics, Garching (Germany)
- B42-630** **Formation of Y-Ti-O Nanoclusters in Nanostructured Ferritic Alloys by Kinetic Monte Carlo Simulations**
C. Hin (Sp), B. Wirth, H.-I. Lee, Berkeley University of California, CA (USA)

- B42-653** **MD Investigations of Vacancy-Type Defects in Tungsten and Iron**
M. Gilbert (Sp), S.L. Dudarev, University of Oxford, Abingdon (UK); P.M. Derlet, Paul Scherrer Institute, Villigen (Switzerland); D.G. Pettifor, University of Oxford, Abingdon (UK)
- B42-685** **Theoretical Modeling of Radiation Swelling of Graphite and SiC Materials**
A. Ryazanov (Sp), S.V. Kovalenko, A.B. Ustinova, V.A. Egorov, Russian Research Center "Kurchatov Institute", Moscow (Russian Federation)
- B42-706** **Erosion of Plasma-Facing Materials Accumulated High Level of Radiation Damage**
A. Ryazanov (Sp), O.K. Chugunov, B.I. Khripunov, V.S. Koidan, S.N. Kornienko, B.V. Kuteev, S.T. Latushkin, A.M. Muksunov, V.B. Petrov, V.P. Smirnov, Russian Research Center "Kurchatov Institute", Moscow (Russian Federation) et al.
- B42-1083** **First Results and Prospects on the Characterization of the 13Cr1W0.3Y2O3 0.3Ti RAF – ODS – Steel**
C.C. Eiselt (Sp), R. Lindau, A. Möslang, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)
- B42-1359** **Microstructures of Co-Deposited Layer on Plasma-Facing Carbon Surfaces after High Power Laser Treatments**
P. Gasior (Sp), A. Czarnačka, P. Parys, M. Rosinski, J. Wolowski, Institute of Plasma Physics and Laser Microfusion, Warsaw (Poland); J. Compan, T. Hirai, J. Linke, E. Wessel, V. Philipps, Research Centre Juelich (Germany) et al.
- B42-1371** **Neutron Irradiation Experiments on Innovative Materials for Extreme Environments**
H. Hegeman (Sp), O. Wouters, J.G. van der Laan, NRG Petten (Netherlands)
- B42-1468** **Single-Step Brazing Process to Join C/C Composites to Copper and Copper Alloy**
M. Ferraris (Sp), A. Ventrella, V. Casalegno, M. Salvo, Politecnico di Torino (Italy); M. Merola, ITER Organisation, Cararache Centre (France)
- B42-1555** **Chemical Erosion of Doped Carbon Layers in Deuterium Low Pressure RF Plasmas**
P. Starke (Sp), University of Augsburg (Germany); C. Adelhelm, M. Balden, U. Fantz, Max Planck Institute for Plasma Physics, Garching (Germany)

Topic: B4 - Materials for the extreme Environment

B42-1559 Design and Material Selection for a Pressure Controlled bellows Actuator for the Angular Positioning of the Steering Mirror in the ITER ECRH Upper Port Plug

R. Chavan (Sp), M. Henderson, R. Bertizzolo, J.-D. Landis, F. Sanchez, Swiss Federal Institute of Technology, Lausanne (Switzerland)

B42-1601 Transfer of the EUROFER Uniaxial Diffusion Weld Process from Non Structured Samples to Functional Samples Similar to Blanket Cooling Plates

A. von der Weth (Sp), U. Bürkle, B. Daffner, J. Aktaa, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)

B42-1608 Monte - Carlo Simulation of Point Defect Clustering During Ion Implantation and Subsequent Annealing

A. Fedorov (Sp), J. De Hosson, H. Schut, University of Groningen (Netherlands)

B42-1702 Powder Metallurgical Processed Carbon-Copper-Composite with Tailored Properties

H. Ballmes (Sp), C. Rottmair, A. Volek, R.F. Singer, University of Erlangen, Fürth (Germany)

B42-1780 MD Simulation of Diffusion of D and He in W Crystal

T. Muramoto (Sp), Okayama University of Science (Japan); T. Kenmotsu, Kibi International University, Takahashi (Japan)

B42-2148 Peculiarities of Hydrogen Trapping in Gas Discharge Irradiated Graphites

A. Airapetov, L. Begrambekov (Sp), O. Fadeeva, P. Shigin, A. Zakharov, State University, Moscow (Russian Federation)

B42-2162 Tritium Measurement in Tritium Storage Bed With Gas Flowing Calorimetry

X.-j. Luo (Sp), W.-h. Aluo, G.-q. Ajiang, Y. Asun, H.-q. Atang, China Academy of Engineering Physics, Mianyang (China)

B42-2177 Separation of Hydrogen Isotopes by Palladium Alloy Membranes Separator

J. Song (Sp), L. Deli, X. Yifu, L. Congxian, H. Zhiyong, China Academy of Engineering Physics, Mianyang (China)

Materials for advanced Fission Applications

B43-147 Influence of Stacking Fault Energy on the Deformation Mode of Stainless Steels

X. Li, W. Van Renterghem, A. Almazouzi (Sp), SCK.CEN, Mol (Belgium)

B43-186 Stress Corrosion Cracking Behaviour of 304L Stainless Steel in Supercritical Water Condition

K. Mathis (Sp), P. Hähner, Joint Research Centre of the European Commission, Petten (Netherlands)

B43-229 Choice of a Material and Method of Coating for Tungsten Plates

I.I. Kononov, A.A. Maslov, Bochvar Institute of Inorganic Materials, Moscow (Russian Federation); S.F. Sidorkin, E.A. Koptelov (Sp), Russian Academy of Sciences, Moscow (Russian Federation)

B43-373 Synthesis of Pure TiSiC₂ Starting from Ti/SiC/C and Ti/Si/C Mixtures

J. Canel, CEA, Saclay (France)

B43-623 Mechanical Properties and Microstructure of Austenitic Stainless Steels after Irradiation in SINQ Targets

Y. Dai (Sp), G. Egeland, X. Jia, Paul Scherrer Institut, Villigen (Switzerland); K. Kikuchi, Japan Atomic Energy Agency, Ibaraki-ken (Japan)

B43-823 Corrosion Behavior of Fe-13Cr-2Mo(TiO₂) Oxide Dispersion Strengthened Ferritic Steel in Pb Melt

O. Yeliseyeva (Sp), I. Ivanova, V. Tsisar, V. Fedirko, A. Demick, National Academy of Sciences of Ukraine, L'viv (Ukraine)

B43-1002 Mechanical Characterisation of Austenitic Stainless Steels and Inconel Alloys under Dynamic Strain Aging Conditions

M. Ivanchenko (Sp), Y. Yagodzinskyy, H. Hänninen, Helsinki University of Technology, Espoo (Finland)

B43-1366 Mechanical Performance of Ni-Base Superalloys at High Temperatures in Corrosive Environments

M. Musella (Sp), P. Hähner, N. Taylor, Joint Research Centre of the European Commission, Petten (Netherlands); R. Couturier, CEA Grenoble (France)

B43-1708 On the Potential of Ni-W-Cr Alloys for Gen IV Nuclear Reactor Applications

J.-P. Chevalier (Sp), CNAM, Paris (France); R. Cury, T. Auger, ICMPE, Thiais (France)

B43-1910 Irradiation Behavior of PM2000, a Commercial Oxide Dispersion Strengthened Steel

M.A. Pouchon (Sp), J. Chen, A. Froideval, W. Hoffelner, Paul-Scherrer-Institute, Villigen (Switzerland)

B43-2210 Advanced Materials for Fission and Fusion Applications Studied by Moessbauer and Positron Annihilation Spectroscopy

V. Slugen (Sp), V. Kriak, M. Miklo, Slovak University of Technology, Bratislava (Slovak Republic); A. Zeman, Institute for Energy, Joint Research Centre of the European Commission, Petten (The Netherlands)

Topic: C1 - Solidification and Solid State Transformation

	<p>Solidification Processes, Microstructures and Defects</p>				
C11-163	<p>Columnar Dendritic Growth and Columnar to Equiaxed Transition in Intermetallic Ti-45.9Al-8Nb Alloy Z. Gabalcová (Sp), J. Lapin, Slovak Academy of Sciences, Bratislava (Slovak Republic)</p>	C11-960	<p>Numerical Study on the Prediction of Microstructure Parameters in Multi-Scale Modeling of the Directional Solidification of Binary Aluminum-Silicon Alloys J. Dagner (Sp), J. Friedrich, G. Müller, Fraunhofer Institute of Integrated Systems and Device Technology, Erlangen (Germany)</p>	C11-1486	<p>Effect of Undercooling on Microstructural Evolution in Rapidly Solidified Ag-Cu Melts C. Clopet (Sp), A.M. Mullis, R.F. Cochrane, University of Leeds (UK)</p>
C11-254	<p>Phase Field Simulations of Binary Dendritic Growth in a Forced Flow M. Walterfang (Sp), RWTH Aachen (Germany); G. Zimmermann, L. Sturz, ACCESS e.V., Aachen (Germany)</p>	C11-1065	<p>The Numerical Optimisation of a Casting Technology of the Ceramics Eucor F. Kavicka (Sp), B. Sekanina, J. Stetina, K. Stransky, Brno University of Technology (Czech Republic); J. Heger, ALSTOM Power Technology, Leicester (UK); J. Dobrovska, Technical University of Ostrava (Czech Republic)</p>	C11-1538	<p>Multi-Phase Flow and Solidification Simulation of a Controlled Directional Solidification Experiment E. Subasic, R. Berger, B. Pustal (Sp), RWTH Aachen University (Germany); G. Kasperovich, L. Ratke, German Aerospace Center - DLR, Cologne (Germany); A. Bührig-Polaczek, RWTH Aachen University (Germany)</p>
C11-445	<p>Experimental Determination and Numerical Application of Statistical Grain Nucleation Parameters M. Ahmadein (Sp), N. Selva, C. Afrath, B. Pustal, R. Berger, E. Subasic, A. Bührig-Polaczek, RWTH Aachen University (Germany)</p>	C11-1068	<p>Two Numerical Models of a Solidifying Massive Casting of Ductile Cast-Iron F. Kavicka (Sp), K. Stransky, B. Sekanina, J. Stetina, Brno University of Technology (Czech Republic); J. Heger, Alstom Power Technology, Leicester (UK); J. Dobrovska, Technical University of Ostrava (Czech Republic)</p>	C11-1622	<p>Coherence of Dendritic Sidebranching in Directional Solidification of a Dilute Alloy M. Georgelin (Sp), S. Bodea, A. Pocheau, University Aix-Marseille I (France)</p>
C11-497	<p>Impact Toughness of Ferritic Fe-Cr-Al Steels at room Temperature S.W. Kim (Sp), Research Institute of Industrial Science & Technology, Ulsan (Korea, Republic); J.H. Park, I.B. Kim, Changwon Specialty Steel Co., Ltd. (Korea, Republic)</p>	C11-1183	<p>Influence of Cooling Rate on the Ductile Iron Structure A. Tomaszewska (Sp), H. Woznica, Silesian University of Technology, Katowice (Poland)</p>	C11-1647	<p>Microstructure of Zn-Cd Alloys Directionally Solidified O. Fornaro (Sp), H. Palacio, Universidad Nacional del Centro de la Provincia de Buenos Aires, Tandil (Argentina)</p>
C11-537	<p>Solidification of Ni3Al Gas Atomised Powder Particles A. García Escorial (Sp), M. Lieblich, CENIM-CSIC, Madrid (Spain)</p>	C11-1256	<p>Hot Deformability of Tin Bronze Modified with Zirconium W. Ozgowicz, Silesian University of Technology, Gliwice (Poland); L. Ciura, W. Malec (Sp), Institute of Non-Ferrous Metals, Gliwice (Poland)</p>	C11-1688	<p>Mechanism Formation of Widmanstätten Structure A. Ciocan (Sp), University of Galati "Dunarea de jos", Galatzi (Romania); T. Radu, E. Drugescu, „Dunarea de Jos” University of Galati (Romania)</p>
C11-547	<p>The Effect on Si, Cu and Rate of Cooling on the End of Solidification and the Beginning of Remelting of Commercial AA3xxx-Alloys, Case Studies with ALSTRUC A.L. Dons (Sp), SINTEF, Trondheim (Norway); B.R. Hendriksen, Elkem Aluminium, Kristiansand (Norway); T. Furu, Hydro Aluminium, Sunndals (Norway)</p>	C11-1370	<p>Study of the Structure of the Fe-Al Intermetallic Alloys by Using a Physical Method M. Jablonska (Sp), E. Bernstock, G. Niewielski, A. Ianc, Silesian University of Technology, Katowice (Poland)</p>	C11-1766	<p>Effect of Density Extremum on the Solidification of Water in Both Rectangular and Cylindrical Cavity B. Bai (Sp), Xi'an Jiaotong University, Xi'an City (China); L. Heng, S. Yanbing, L. Guo, Xi'an Jiaotong University, Xi'an City (China)</p>
C11-714	<p>Crystal Growth of B2-AlNi: A Computer Simulation A. Kerrache (Sp), J. Horbach, K. Binder, Johannes Gutenberg University Mainz (Germany)</p>	C11-1383	<p>Grain Size Refinement of Co-Cr Rapidly Quenched Alloys D.D. Daisa, A. Buzaianu (Sp), E. Vasile, E. Alexandrescu, A. Ioncea, R. Trusca, S.C. METAV CD S.A., Bucharest (Romania); D. Predoi, Research & Development National Institute of Materials Physics, Bucharest-Magurele (Romania)</p>	C11-1776	<p>Measurement and Simulation of Velocity Field during the Solidification of NH4Cl-H2O B. Bai (Sp), Xi'an Jiaotong University, Xi'an City (China); G. Liejin, Q. Ma, Y. Su, H. Li, Xi'an Jiaotong University, Xi'an City (China); G. Wang, Xi'an Jiaotong University, Xi'an City (China)</p>
C11-833	<p>Cellular Automata Study on the Dendritic Growth of Pure Metals H. Lauterbach (Sp), M. Reitenmayer, Friedrich Schiller University Jena (Germany)</p>	C11-1384	<p>Modeling of Micro & Macro Segregation in DC Casting of Ternary Al Based Alloys B. Sarler (Sp), University of Nova Gorica (Slovenia); I. Vusanovia, University of Montenegro, Podgorica (Slovenia)</p>	C11-1922	<p>A Ferritic Potential Influence on Heat Transfer Conditions in Industrial Mold during Continuous Casting of Steels J.A. Spim (Sp), W. Fogazzi, V. Karlinski, C.R. Frick F., C. Alexandre, Federal University of Rio Grande do Sul, Porto Alegre (Brazil)</p>
C11-854	<p>Microsegregation Behaviour of As-Cast and Heat Treated Nickel-Based Superalloy IN 738LC J. Dobrovska (Sp), VSB-Technical University of Ostrava (Czech Republic); F. Kavicka, V. Dobrovska, K. Stransky, Brno University of Technology (Czech Republic)</p>	C11-1455	<p>Effect of Mg Content and Growth Rate on Secondary Dendrite Arm Spacing and Dendrite Tip Radius in Al-Cu-Mg Ternary Alloys A. Berkdemir (Sp), M. Gündüz, Erciyes University, Kayseri (Turkey)</p>	C11-2004	<p>Levitation Melting Technique in the Microcasting A. Sypien (Sp), W. Przybyto, Polish Academy of Sciences, Krakow (Poland)</p>

Topic: C1 - Solidification and Solid State Transformation

C11-2009 Experimental Determination of the Heat Transfer Coefficient and the Gap Formation during Casting of Aluminium Alloy and Cast Irons and Validation of Microsegregation Model

P.-X. Kuntz (Sp), B. Pustal, E. Subasic, RWTH Aachen University (Germany); V. Runser, V. Schulze, D. Löhe, University of Karlsruhe (Germany); G. Laschet, ACCESS e.V., Aachen (Germany) et al.

C11-2014 A Study on Macrosegregation in Continuous Casting of Technical Bronze-Comparison of Simulation Results with Experiments

M. Gruber-Pretzler (Sp), A. Ishmurzin, M. Wu, A. Ludwig, University of Leoben (Austria); J. Riedle, U. Hofmann, Wieland-Werke AG, Ulm (Germany)

C11-2066 Microsegregation during Solidification of an Al-Cu Binary Alloy at Largely Different Cooling Rates (0.1 K/s – 20000 K/s) – Modelling and Experimental Study

G. Kasperovich (Sp), German Aerospace Center - DLR, Cologne (Germany); T. Volkman, L. Ratke, D.M. Herlach, German Aerospace Center - DLR, Cologne (Germany)

C11-2186 Dendritic Array Variations Induced by Controlled Acceleration in Directionally Solidified Ammonium Chloride-Aqueous Solution System

M. Jarowski, Warsaw University of Technology (Poland); M. Rebow (Sp), Dublin Institute of Technology, Cork (Ireland)

C11-2303 Dendrite Growth Directions in Al-Zn Alloys

F. Gonzales (Sp), M. Rappaz, Ecole Polytechnique Federal de Lausanne, Lausanne (Switzerland)

C11-2305 Microporosity in Aluminium Alloys Characterised by X-Ray Tomography

M. Felberbaum (Sp), Swiss Federal Institute of Technology, Lausanne (Switzerland); L. Savlo, M. Suéry, INP Grenoble, Saint-Martin d'Hères (France); M. Rappaz, Swiss Federal Institute of Technology, Lausanne (Switzerland)

C11-2313 Age Hardening and Accompanying Transformations of Supersaturated Al-Ag and Mg-Zn Solid Solutions

A. Touati, M. Kadi-Hanifi (Sp), University of Science and Technology Houari Boumediene, Alger (Algeria)

Solid State Transformations: Microstructure Formation and Evolution

C12-55 Microstructure and Minerals in Industrial Ceramic Tiles

H. Azzouz (Sp), Faculty of Sciences of Tunis (Tunisia); R. Alouani, Faculty of Science of Bizerte (Tunisia); S. Tlig, Faculty of Sciences of Tunis (Tunisia)

C12-436 Crack Development in Dependence of the Local Microstructure in TRIP Steels

J. Imlau (Sp), RWTH Aachen (Germany); S. Zaefferer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); W. Bleck, RWTH Aachen University (Germany)

C12-491 Microstructural Change of Metastable Austenitic Fe-18Cr-10Mn-0.4N Steel during Deformation

T.-H. Lee (Sp), H.-J. Bang, S.-T. Kim, C.-S. Oh, S.-J. Lim, Korea Institute of Machinery and Materials, Changwon, Kyungnam (Korea, Republic)

C12-646 Austenite Transformation of Eutectoid Steel after Simple Heating or Hot Rolling

H.J. McQueen (Sp), E.V. Konopleva, Concordia University, Montreal, QC (Canada); V.M. Khlestov, Piazovsky State Technical University, Donetsk (Russian Federation)

C12-1290 Development and Use of Advanced Equipment for Measuring Serrated Flow and Local Heating during Tensile Testing of Materials at Cryogenic Temperatures

S. Sgobba, CERN, Genève (Switzerland); E. Barisone (Sp), CERN, Genf (Switzerland); A. Gerardin, P. El-Kallassi, CERN, Genève (Switzerland)

C12-1350 Tuning the Functional Properties of Perovskite-Type Oxygen Permeation Membranes by Advanced Powder Processing

J. Martynczuk (Sp), M. Arnold, Leibniz Universität Hannover (Germany); H. Wang, South China University of Technology, Guangzhou (China); A. Feldhoff, Leibniz Universität Hannover (Germany)

C12-1629 In-Situ Study of Martensite Nucleation and Growth in a Metastable Austenitic Steel

D. San Martin (Sp), Delft University of Technology (Netherlands); L.C.N. Louws, M.P.H.F.L. von Maris, V.G. Kouznetsova, M.G.D. Geers, Eindhoven University of Technology (Netherlands) et al.

Topic: C5 - Coating and Surface Engineering

Thin Film Technology

C51-31 Phenomena Study of Ethanol Adsorption on ZnO Surface

A. Habib Zahmani (Sp), M. Zerdali, S. Harmazaoui, University of Sciences and Technology of Oran (Algeria)

C51-75 Electro Deposition and Characterization of MoxW1-xSe2 Thin Films

S.M. Delphinec (Sp), Alagappa University, Karaikudi (India); M. Jayachandran, ECMS Division, Karaikudi (India); C. Sanjeevirajaa, Holy Cross College, Nagercoil Tamilnadu (India)

C51-587 Influence of High-Energy Metal Ion Implantation on the Structure and Properties of TiN-Based Ceramics Coatings

A.N. Shevayko (Sp), Moscow State Institute of Steel and Alloys, Moskau (Russian Federation) et al.

C51-688 Effect of Photon Activation in the Formation of Silicides in the System Si-Ni-Pt (111)

S. Soldatenko (Sp), V.M. Ievlev, S.B. Kushev, Y.V. Gorozhankin, The Voronezh State Technical University (Russian Federation)

C51-696 Ion Implantation is the Method to Increase Physical-Mechanical Properties of Vacuum Coatings

M. Andreyev, National Academy of Science of Belarus, Minsk (Belarus)

C51-763 Photocatalytic Activity of Titanium Dioxide Thin Films Deposited by RF PECVD and Sol-Gel Methods

B. Pietrzyk (Sp), A. Sobczyk-Guzenda, H. Szymanowski, M. Gazicki-Lipman, W. Jakubowski, Technical University of Lodz (Poland)

C51-985 Protective Properties of Composite Oxide Coatings Deposited by Sol-Gel Method

S. Mszczak (Sp), B. Pietrzyk, Z. Gawronski, Technical University of Lodz (Poland)

C51-1109 Structured Low-Temperature Glass Deposition by Plasma-Assisted PVD for Wa-Fer-Level Micro-Technological Applications

S. Maus (Sp), U. Hansen, V. Seidemann, R. Wilke, J. Leib, MSG Lithoglas AG, Berlin (Germany); D. Mund, Schott Electronics GmbH, Landshut (Germany)

C51-1181 High-Temperature Resistant Alumina Coatings on Ni-Base Alloys

M. Nofz (Sp), R. Sojref, I. Dörfel, Federal Institute for Materials Research and Testing, Berlin (Germany)

Topic: C5 - Coating and Surface Engineering

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| <p>C51-1189 Super-Hard Carbon Layers Produced on the Cutting Edges Made of Gradient Al₂O₃+xwt%Si₃N₄(Wiskers).../Al₂O₃+xwt%Si₃N₄(Wiskers) Composites
A. Olszyna (Sp), K. Bieslada, Warsaw University of Technology (Poland)</p> | <p>C51-2119 New Low Temperature Technology of Application Coatings of Titanium Carbide on Alloys and Steels
A.I. Putilin, Ural State Technical University, Ekaterinburg (Russian Federation)</p> | <p>C54-220 Protection Coatings, Resistant at Temperature, Abrasion and Corrosion Wear, Associated to the Cooper Support
V. Manoliu (Sp), A. Stefan, G. Ionescu, National Institute for Aerospace Research "Elie Carafoli", Bucharest (Romania); G. Cosmeleata, "Politehnica" University, Bucharest (Romania) et al.</p> |
| <p>C51-1251 On structural and Optical Properties of Thermally Evaporated Sb₂S₃ Thin Films
N. Tigau (Sp), C. Gheorghies, G. Andrei, University of Galati "Dunarea de Jos" (Romania)</p> | <p>C51-2155 Tribological Examinations of the Hard Carbon Coatings onto the Substrates Made of the Cemented Carbide
D. Nowak (Sp), J. Grabarczyk, P. Niedzielski, Technical University of Lodz (Poland)</p> | <p>C54-546 The Improvement of Productivity in Multiple Wire Drawing Process by Steps Drawing Number Optimization
L. Nistor (Sp), M. Ancau, Technical University of Cluj-Napoca (Romania)</p> |
| <p>C51-1294 Utilizing Roll-to-Roll Coating Technique for Producing HIFETs
N. Kaihovirta (Sp), D. Tobjörk, T. Mäkelä, R. Östebäck, Åbo Akademi University, Åbo (Turku) (Finland)</p> | <p>C51-2160 Morphology and Growth Process of Carbon Films Prepared by Microwave /Radio Frequency Plasma Assisted CVD
W. Kaczorowski, P. Niedzielski (Sp), Technical University of Łódź (Poland)</p> | <p>C54-551 The Effect of 475oC Embrittlement on Mechanical Properties of 2205 Duplex Stainless Steel
J. Michalska, Silesian University of Technology, Katowice (Poland)</p> |
| <p>C51-1393 Crack Initiation and Growth in Chromium Nitride Coated Tool-Steel
S.B. Endler (Sp), R. Ebner, O. Kolednik, R. Daniel, University of Leoben (Austria)</p> | <p>C51-2281 Thermal and Microstructural Characterisation of Nanosequenced Multilayered (PyC/SiC) Materials
P. Weisbecker (Sp), F. Lagrange, M. Alrivie, R. Pailler, M.-P. Kovacs, Lab. for ThermoStructural Composites, Pessac (France)</p> | <p>C54-904 A Study on the Continuous Casting Process for Rod Type Cu-Be Alloy Production
S.-C. Lim (Sp), H.C. Kwon, T.K. Jung, K.H. Kim, K. Kang, Korea Institute of Industrial Technology, Incheon (Korea, Republic)</p> |
| <p>C51-1436 Synthesis Mechanism of Silica-Titania Films from Sol-Gel Process
N. Quaranta (Sp), M. Caligaris, G. Pelozo, Universidad Tecnológica Nacional, San Nicolás (Argentina)</p> | <p>C51-2301 Advantages of Superhard Nanocomposites Deposited by High Power Pulse Magnetron Sputtering (HPPMS) Technology Compared to Conventional Direct Current (DC) and
K. Bobzin, R. Nickel, S. Bolz, P. Immich (Sp), RWTH Aachen University (Germany)</p> | <p>C54-1095 Application of Multicomponent Coatings for Enhancing the Antifriction Properties of Titanium Alloys
O.I. Yaskiv (Sp), I.M. Pohrelyuk, V.M. Fedirko, Karpenko Institute of Physics and Mechanics, Lviv (Ukraine)</p> |
| <p>C51-1789 CdTe Films on Mo/Glass Substrates: Preparation and Properties
V. Valdna (Sp), M. Grossberg, J. Hiie, V. Mikli, M. Viljus, Tallinn Technical University (Estonia)</p> | <p>C51-2345 Electrical and Ferroelectric Properties of PbGeSe Thin Films
Z.S. El Mandouh (Sp), H.A. Meleegi, National Research Center, Kairo (Egypt)</p> | <p>C54-1118 Reducing Aluminum Oxide Layer on AlCu₂SMg Treated Parts through Improving Heat Transfer in a Radiative Furnace
A.-A. Minea, Technical University GH. Asachi, Iasi (Romania)</p> |
| <p>C51-1840 Application of Electric Fields for Optimisation of Laser-Produced Ion Streams Used for Modification of Semiconductor Materials
M. Rosinski (Sp), A. Czarnačka, P. Parys, M. Rosiński, J. Wolowski, Institute of Plasma Physics and Laser Microfusion, Warsaw (Poland)</p> | <p>C51-2349 Hard Nanostructured Coatings for High-Temperature Tribological Applications
P.V. Kiryukhantsev-Korneev (Sp), Moscow State Institute of Steel and Alloys (Russian Federation); C. Paternoster, A. Fabrizi, Università Politecnica Delle Marche, Ancona (Italy) et al.</p> | <p>C54-1131 Study Concerning the Mechanism of Hardening for Maraging 300 Steel
I. Nedelcu (Sp), SC Prelucrari Metalurgice SRL, Bucharest (Romania); G. Cosmeleata, Politehnica University of Bucharest (Romania); I. Carceanu, Metallurgical Research Institute of Bucharest (Romania) et al.</p> |
| <p>C51-1854 Studies on Diamond-Like Carbon Coatings Intended for the Application in Micro Actuators
D. Paulkowski (Sp), R. Bandorf, Fraunhofer Institute for Surface Engineering and Thin Films, Braunschweig (Germany); F. Pape, H.H. Gatzert, Leibniz Universität Hannover (Germany) et al.</p> | <p>Industrial Applications</p> | <p>C54-1286 Investigation of Fatigue in Direction Forks of Military Tanks
U. Ozsarac (Sp), S. Aslanlar, E. Ilhan, Sakarya University (Turkey)</p> |
| <p>C51-1857 Tribological Investigations of DLC Coatings for Surgical Implants
F. Deuerler (Sp), T. Ritzmann, I. Erdmann, University of Wuppertal (Germany); N. Wöhl, O. Filipov, B. Stamm, V. Buck, University of Duisburg-Essen (Germany)</p> | <p>C54-99 Evaluation of some Laboratory Prepared Cationic Surfactants
I. Aiad (Sp), A. Hafiz, M. Hegazy, Egyptian Petroleum Research Institute, Cairo (Egypt); H.A. Shehata, A.A. Abd El-wahab, Al-Azhar University, Cairo (Egypt)</p> | <p>C54-1295 Characterisation of Wear in Walking Parts of Military Tanks
U. Ozsarac, Sakarya University (Turkey); S. Aslanlar (Sp), E. Ilhan, Sakarya University (Turkey)</p> |
| <p>C51-2042 The Influence on Structural and Morphological Characteristics of Diamond Films Grown on Carbon Felt with Different Graphitization Index
N. Ferreira (Sp), E.C. Almeida, M.R. Baldan, Instituto Nacional de Pesquisas Espaciais -INPE, Sao Jose dos Campos (Brazil)</p> | | |

Topic: C5 - Coating and surface engineering

C54-1308 Microstructural Investigation of Walking Parts of Military Tanks Coated with ARC Spraying

E. Ilhan (Sp), U. Ozsarac, S. Aslanlar, Sakarya University, Adapazari (Turkey)

C54-1385 Ecologic Moulds for Titanium Alloys Implants

I. Marginean (Sp), V. Mirea, M. Tarcolea, A. Cocolas, University Politehnica of Bucharest (Romania)

C54-1790 Investigation into Internal and Selective Oxidation of TRIP Steel during Annealing

Y.-F. Gong (Sp), S. Biroasca, H.S. Kim, B.C. De Cooman, Pohang University of Science and Technology (Korea, Republic)

C54-1977 Bioinspired Surface Architectures through Laser Interference Metallurgy

F. Mücklich (Sp), Saarland University, Saarbrücken (Germany); C. Daniel, Oak Ridge National Laboratory, TN (USA); A. Lasagni, Saarland University, Saarbrücken (Germany)

C54-2159 Manufacturing of Carbon Coatings on Cutting Blades

P. Beer, Agricultura University of Poznan (Poland); P. Niedzielski (Sp), A. Sokolowska, J. Grabarczyk, Technical University of Łódź, Poznan (Poland)

C54-2191 Comparison of Wear Performances of Train Brake Pads Manufactured from Cast Iron and Carbon-Carbon Composites

U. Ozsarac (Sp), S. Aslanar, E. Ilhan, Sakarya University (Turkey)

Coatings for High Temperature Applications

C55-416 Optical Properties of PbS-Cu₂S Thin Films Deposited on Glass Substrate by Spray Pyrolysis

V. Popescu (Sp), G. Popescu, Technical University of Cluj-Napoca (Romania)

C55-476 Affect the Speed of the Withdrawal on the High Silicon Steel In the Hot-Deep Galvanizing

J. Ben Nasr (Sp), ENIS, Sfax (Tunisia); A. Snoussi, Institute superieur des Etudes Technologique, Sfax (Tunisia); C. Bradai, F. Halouani, ENIS, Sfax (Tunisia)

C55-883 Oxidation Resistant Coatings for TiAl Intermetallics

M. Goral (Sp), G. Moskal, L. Swadzba, Silesian University of Technology, Katowice (Poland)

C55-1732 Thermal Properties Determinations for ZrO₂-Y₂O₃ Thick Thermal Barrier Coatings Used for Engines Components

I. Rusu (Sp), C. Baciu, Technical University "Gh. Asachi", Iasi (Romania); A. Buzaianu, S.C. METAV-R&D S.A, Bucharest (Romania)

C55-2325 Electrodeposition of Nano Structure Zn-Fe Coatings by Reverse-Pulse Current

D. Mohammadyani (Sp), M. Heydarzadeh Sohi, Tehran University (Iran); A.H. Rezaee Kalaj, Azad University, Tehran (Iran); A. Bayat, Shahid Beheshti University, Tehran (Iran)

C55-2326 Study of Corrosion Behavior of Chromated and Non-Chromated Zn-Co Coating

D. Mohammadyani (Sp), M. Heydarzadeh Sohi, Tehran University (Iran)

Topic: D2 - Mechanical Testing and Characterisation

Mechanical Characterisation using In Situ Methods

D22-711 In-situ Stress Behavior of Cu and Ag Thin Films during Thermal Evaporation

Y. Kim (Sp), S. Ryu, K.C. Lee, Chonnam National University, Gwang-ju (Korea, Republic)

D22-1284 The Characterization of Fe₃₀Cu₇₀ Powder Obtained by Mechanical Alloying

V.-C. Prica (Sp), C.V. Candea, C. Pavel, Technical University of Cluj-Napoca (Romania)

D22-1344 Cyclic Deformation Behavior of SAE 4140 Tension Screw Specimens

M. Klein (Sp), F. Walther, D. Eifler, University of Kaiserslautern (Germany)

D22-1397 Researches on the Influence of Cooper Amount on the Mechanical Properties of the Sintered Materials Made from Powders Based Iron

C. Pavel (Sp), V. Candea, C. Prica, Technical University of Cluj-Napoca (Romania)

D22-1416 Mechanical Properties of Thermal Barrier Bondcoat Alloys Determined by High Temperature Instrumented Microindentation

A. Villemiane (Sp), B. Passilly, P. Kanouté, R. Mévrel, ONERA, Chatillon (France)

D22-1428 A Cantilever Technique to Determine 3D Stress Distributions in Thin Residually Stressed Surfaces

S. Massl (Sp), Austrian Academy of Sciences, Leoben (Austria); J. Keckes, University of Leoben (Austria); R. Pippan, Austrian Academy of Sciences, Leoben (Austria)

D22-1526 Atomic Force Microscopy Used to Study Cyclic Plasticity Mechanisms in a Duplex Stainless Steel

I. Serre (Sp), Université de Lille 1, Villeneuve d'Ascq Cedex (France); D. Salazar, J.-B. Vogt, Université de Lille 1, Villeneuve d'Ascq (France)

D22-1548 Effect of the Addition of Zinc on the Mechanical Properties of Extruded Mg Alloys

E. Meza-García (Sp), J. Bohlen, D. Letzig, K.U. Kainer, GKSS Research Center, Geesthacht (Germany)

D22-1824 The Sliding Friction Force Time Series: Further Evidence Supporting Its Fractal and 1/f Character

M. Duarte Guigou (Sp), I. Vragovic, E. Louis, J. Narciso, Universidad de Alicante (Spain)

Topic: D2 - Mechanical Testing and Characterisation

D22-1985 Determination of Residual Stress in Spherical Balls by Resonant Ultrasound Spectroscopy

W. Araki (Sp), T. Kamikozawa, T. Adachi, Tokyo Institute of Technology (Japan)

D22-2318 Acoustic Emission Study of the Mechanical Anisotropy of Extruded AZ31

P. Dobron (Sp), F. Chmelik, Charles University, Prague (Czech Republic); J. Bohlen, GKSS Research Center, Geesthacht (Germany); M. Janeček, Charles University, Prague (Czech Republic) et al.

Topic: D3 - Materials Modelling on all Length Scales

Atomistics and ab Initio Materials Modelling

D31-279 Theoretical Study of the Novel Sandwich Compounds [Au₃Cl₃Tr₂]²⁺ and [Au₃Tr₂]⁻

J. Muñiz (Sp), E. Sansores, A. Martinez, R. Salcedo, Universidad Nacional Autonoma de Mexico, Mexico City (Mexico)

D31-428 Stability Analysis of Many-Body Potentials

A. Ostapovets (Sp), V. Paidar, Institute of Physics ASCR, Prague 8 (Czech Republic)

D31-498 Simulating the Control of the Morphology of Carbonates by Ions and Molecules

J. Harding (Sp), J. Asterios, C.L. Freeman, University of Sheffield (UK)

D31-568 Relaxed Atomic Structure of Interphase Boundary in Metal Heterosystem: Nanocrystal on Single-Crystal Surface

A. Prizhimov (Sp), V.M. Levlev, A.V. Evteev, A.T. Kosilov, Voronezh State Technical University (Russian Federation)

D31-595 Control of Calcite Growth in Coccoliths by Polysaccharide Molecules

J. Harding (Sp), M. Yang, University of Sheffield (UK)

D31-675 Structural and Electronic Properties of the Wide-gap Semiconductor Materials M_xMe_{1-x}R (M = B, C, Al, Ti; Me = Si, Ga, B, Al, In; R = N, C)

V.V. Ilyasov (Sp), A. Zhdanova, I. Nikiforov, M. Olchovoi, O. Ilyasova, I. Usik, Don State Technical University, Rostov-on-Don (Russian Federation)

D31-689 Simulation of Plate Shaped Second Phase Particles

E. Jannot (Sp), V. Mohles, G. Gottstein, RWTH Aachen University (Germany); B. Thijsse, Delft University of Technology (Netherlands)

D31-999 Ab Initio Calculation and Experimental Studies of Phase Transitions in the System Fe-W-C at Energy Streams Influence

A. Ilyasov (Sp), A. Ryzhkin, V. Ilyasov, Don State Technical University, Rostov-on-Don (Russian Federation)

D31-1070 Molecular Modelling of Ionic Liquids

W. Zhao (Sp), F. Mueller-Plathe, Technical University of Darmstadt (Germany)

D31-1078 Ab-Initio Investigation of Chromium Carbide - Diamond Interfaces

A. Boehner, R. Janisch (Sp), A. Hartmaier, University of Erlangen-Nuremberg (Germany)

D31-1233 A Combined Atomistic/Continuum Method For Modelling Multiscale Heat Conduction in Solids

K. Jolley, University of Leicester (UK)

D31-1268 First-Principles Study of the Carbon-Carbon Interaction in Iron

O. Kim (Sp), M. Friak, J. Neugebauer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

D31-1402 Phase Stability in Ni-Fe Alloys: Calculations of Interatomic Interactions

S. Bokoch (Sp), H. Zapolsky, D. Blavette, University of Rouen, Saint Etienne du Rouvray (France)

D31-1476 The Polymorphous Coherent Potential Approximation (PCPA) for Ordered and Disordered Metallic Alloys

F. Mammano, A. Fiorino, E.V. Morabito, A. Ridolfo, E. Bruno (Sp), University of Messina (Italy)

D31-1659 From ab Initio to Materials Properties: Accuracy and Error Bars of DFT Thermodynamics

B. Grabowski (Sp), T. Hickel, J. Neugebauer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

D31-1684 The Order-Disorder Transition in Cu_{0.5}Zn_{0.5} Alloys: Monte Carlo CEF Calculation

E. Bruno, F. Mammano (Sp), A. Fiorino, L. Zingales, University of Messina (Italy)

D31-1907 Molecular Dynamics Simulation of Internal Stresses Caused by Cu-Precipitates in Iron

P. Kizler (Sp), S. Schmauder, University of Stuttgart (Germany); M. Pirlog, I. Altpeter, Saarland University, Saarbrücken (Germany)

D31-1938 Atomic and Electronic Properties of Liquid Metals in Wide Temperature Range Studied by Methods of Classical and Ab Initio Molecular Dynamics

E. Dyulidina (Sp), Magnitogorsk State Technical University (Russian Federation); A. Mirzoev, Southern Ural State University, Chelyabinsk (Russian Federation) et al.

D31-2128 First-Principles Study of Structural and Magnetic Properties of 3d Nanowires

M. Zeleny (Sp), Brno University of Technology (Czech Republic); M. Sob, Masaryk University, Brno (Czech Republic); J. Hafner, University of Vienna (Austria)

D31-2249 Hydrogen Effects on Dislocation Activities during Nanoindentation of Ni

M. Wen (Sp), B. An, S. Fukuyama, K. Yokogawa, National Institute of Advanced Industrial Science and Technology, Tsukuba (Japan)

Topic: D3 - Materials
Modelling on all Length
Scales

D31-2296 Ab Initio and Thermodynamic Study of Ta-Cr and Nb-Cr Laves Phases

J. Pavlu, J. Vrestal, M. Sob (Sp), Masaryk University, Brno (Czech Republic)

D31-2310 Excitonic States in Spherical and Elliptical Quantum Dots

T. Tchelidze (Sp), I. Noselidze, T. Kereselidze, Tbilisi State University (Georgia)

Modelling Plasticity at small Scales

D32-543 A Model for Single Crystal Superalloy Dislocation Creep

A. Ma (Sp), D. Dye, Imperial College London (UK); R.C. Reed, The University of Birmingham (UK)

D32-837 Dislocation Dynamical Modelling of the Ductile-Brittle-Transition (DBT)

T. Hennecke (Sp), P. Hähner, Joint Research Centre of the European Commission, Petten (Netherlands)

D32-860 Interaction of Dislocations with Grain Boundaries in a 3D-Nanocrystalline Network

C. Brandl (Sp), P.M. Derlet, H. Van Swygenhoven, Paul Scherrer Institute, Villigen (Switzerland)

D32-1122 Equation of Motion of a Dislocation with Inertia

L. Pillon (Sp), C. Denoual, Y.P. Pellegrini, CEA, Bruyères-le-Châtel (France)

D32-1299 Discrete Dislocation Dynamics Study of Stress Distribution in Thin Polycrystalline Metallic Films

J. Senger (Sp), D. Weygand, O. Kraft, P. Gumbsch, University of Karlsruhe (Germany)

D32-1300 Determination of Elasto-Plastic Properties by Ball Indentation Test

J. Brumek (Sp), B. Stmadel, VSB-Technical University of Ostrava (Czech Republic); I. Dlouhy, Academy of Science of Czech Republic, Brno (Czech Republic)

Process Modelling of Metallic Alloys

D33-211 Grain Sizes and Mechanical Properties of Electroformed Ni Super-Micro Tubes

S. Mitachi (Sp), Y. Tajima, Y. Imamura, Tokyo University of Technology (Japan)

D33-288 Influence of the Relative Drawing Rate at Ultrasonic Processing of Metallic Tubes and Wires

M. Susan, L.-G. Bujoreanu (Sp), C. Baciu, „Gh.Asachi” Technical University of Iasi (Romania)

D33-511 Computerised Thermodynamic Study of Binary Alloy Systems Al-Sn

D. Taloi (Sp), I. Constantin, L. Vladutiu, C. Popescu, F. Pereteanu, University Politehnica Bucharest (Romania)

D33-614 Vacancy-Mediated Atomic Migration on Ordering in Bulk and Nanostructured Intermetallics

R. Kozubski (Sp), M. Kozłowski, A. Biborski, Jagellonian University, Krakow (Poland); V. Pierron-Bohnes, Institute de Physique et Chimie des Matériaux de Strasbourg (France); W. Pfeiler, Vienna University (Austria)

D33-822 Strain Hardening and Evolution of Microstructure under Complex Loading Paths

L.W. Meyer, C. Kuprin (Sp), Chemnitz University of Technology (Germany); F. Hahn, University of Applied Sciences Mittweida (Germany)

D33-855 Front Tracking Model of Binary Alloy Solidification with Double Diffusive Convection

J. Banaszek (Sp), M. Serdyski, Warsaw University of Technology (Poland); D.J. Browne, University College Dublin (Ireland)

D33-857 Optical Surface Analysis of Steel during Hot Compression: A Test to Determine Crack Initiation

R. Pschera (Sp), G. Winter, C. Sommitsch, Christian-Doppler-Laboratory for Materials Modelling and Simulation, Leoben (Austria)

D33-1539 Measurement and Prediction of Texture and Intergranular Stresses Development in Zirconium Alloy Cladding Tubes During a Rolling Sequence

J. Fajoui (Sp), D. Gloaguen, T. Berchi, E. Girard, R. Guillen, University of Nantes, Saint Nazaire (France)

D33-1551 Modeling of Morphology Aspects of Dual Phase Steels

A. Butz, W. Schmitt, O. Benevolenski, T. Rist (Sp), Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany)

D33-1750 Integrated Computer Modeling and Experimental Simulation of Diffusion-Controlled Transformations in Steels

L. Vassileva (Sp), Technical University of Sofia (Bulgaria); G. Georgiev, Bulgarian Academy of Science, Sofia (Bulgaria)

D33-2264 A Coupled Strain-Rate and Temperature Dependent Dynamic Hysteresis Model for High Performance Steel (SM570-TMC)

G.-C. Jang (Sp), K.-H. Chang, Chung-Ang University, Seoul (Korea, Republic)

Modelling of Materials Properties at Mesoscale

D34-114 Computer Model of C45 Steel for ANSYS Programme

W. Malorny, University of Applied Sciences, Neubrandenburg (Germany); T. Hryniewicz, K. Rokosz, L. Rypina, A. Biniek (Sp), Koszalin University of Technology (Poland)

D34-246 Computational Studies of Phase Diagram and Diffusional Mobility for Co-Based High-Temperature Alloys

Y. Cui (Sp), M. Jiang, O. Ohnuma, K. Oikawa, R. Kainuma, K. Ishida, Tohoku University, Sendai (Japan)

D34-350 Modeling Size Effect on Fracture Toughness in Semi-Brittle Crystals by Dislocation Dynamics

X. Zeng (Sp), A. Hartmaier, University of Erlangen-Nuremberg (Germany)

D34-681 Distributed Memory Parallelization of the Dislocation Dynamics Code MicroMEGAS

R. Madec, CEA, Bruyères-Le-Châtel (France)

D34-809 Microstructural Aspects of Grain Growth in Aluminium Processed by SPD: Modelling and Experimental Studies

T. Wejznanowski (Sp), M. Lewandowska, K.J. Kurzydowski, Warsaw University of Technology (Poland)

D34-861 Design of Precipitation Hardened UHS Stainless Steels through Alloy Combinatorial Approaches

W. Xu (Sp), Netherlands Institute for Metals Research, Delft (Netherlands); P.E.J. Rivera D^oaz del Castillo, S. van der Zwaag, Delft University of Technology (Netherlands)

D34-1280 Mechanical and Fracture Behaviour of Electrical and Optical Cables by Using Finite Element Analysis with Nonlinear Constitutive Equations

H.-C. Yang (Sp), Y.M. Kwon, T.S. Kim, W.B. Kim, LG Cable Ltd., Anyang (Korea, Republic)

Topic: D3 - Materials
Modelling on all Length
Scales

D34-1452 Influence of Forging Process Parameters on Fatigue Life, Exemplified for Inconel 718

M. Staschka (Sp), University of Leoben (Austria); M. Riedler, Böhler Schmiedetechnik GmbH & Co.KG, Kapfenberg (Austria); W. Eichlseder, University of Leoben (Austria)

D34-1591 Dislocation Dynamics Study of the Influence of Dislocation Density and Grain Size on Yield Strength and Flow Stress

A. Hartmaier (Sp), N. Ahmed, University of Erlangen-Nuremberg (Germany)

D34-1769 Predictive Mechanical Models for Cellular Materials

G.T. Lim (Sp), V. Altstaedt, University of Bayreuth (Germany)

D34-2292 A Mesoscale Approach to Simulate Plastic Dissipation and Friction during Delamination or Adhesive-Joints Debonding

G. Alfano, Brunel University, Uxbridge (UK)

Topic: X4 - Biomedical
Engineering

Biomedical Materials: Tissue Engineering and Drug Delivery

X41-52 A Paradigm to Design Multifunctional Biomaterials: Designing for Elastic Biomimeting

oral poster

N. Marchand (Sp), Computed Materials Corp., Montreal, QC (Canada); D. Delfosse, Mathys Medical, Bettlach (Switzerland)

X41-118 Evaluation of Polycaproctone and Sebacic Acid Blends Fused for Bone Tissue Engineering

C. Salgado (Sp), E.M.S. Sanchez, C.A.C. Zavaglia, UNICAMP, Campinas (Brazil)

X41-137 Development Latex Film for Use as Occlusive Membrane in Bone Guide Regeneration

oral poster

R. Herculano (Sp), C.P. Silva, University of Sao Paulo, Ribeirão Preto (Brazil); S.A.C. Guimarães, C. Ereno, USC, Bauru (Brazil); C.F.O. Graeff, UNESP, Bauru (Brazil); A. Kinoshita, USC, Bauru (Brazil)

X41-172 Dense HA Bioceramics with a High Compressive Strength

oral poster

S. Dorozhkin, Moscow (Russian Federation)

X41-173 Crystallization from a Milk-Based Revised Simulated Body Fluid

oral poster

S. Dorozhkin, Moscow (Russian Federation)

X41-212 Polyurethane Bi-phasic Construct for Osteochondral Defect Repair

D. Eglin (Sp), Y.K. Tsui, M. Glarner, M. Alini, AO Research Institute, Davos (Switzerland)

X41-352 The Physical and Chemical Properties of Modified Surgical Cements

M. Plaza (Sp), A. Balin, J. Myalski, S. Ziemia, Silesian University of Technology, Katowice (Poland)

X41-781 High Energy Mechanically Alloying of Ni-Ti

V.C. Candea (Sp), G. Arghir, C. Popa, C. Pavel, C. Prica, Technical University of Cluj-Napoca (Romania); A. Popa, Metallurgical Research Institute of Bucharest (Romania)

X41-840 Glass-Ceramic Scaffolds for Tissue Engineering

A. Ravaglioli (Sp), A. Krajewski, Italian C.N.R., Faenza (Italy); G. Baldi, Centro Ricerche Colorobbia S.p.A., Vinci (Italy)

X41-910 A Design of Hydrogel Graft for Restoring Articular Cartilage Defects Using a Porous Elastic Finite Element Formulation

oral poster

J. Hong (Sp), S. Min, Dept Control & Instrumentation Eng, Chungnam (Korea, Republic); T.-H. Lim, University of Iowa, Iowa City, IA (USA)

X41-927 Structure of Calcium Phosphates Nanoparticles Grown on Collagen Fibres

L. Bertinetti (Sp), G. Martra, S. Coluccia, University of Torino (Italy); M. Sandri, A. Tampieri, ISTECCNR, Faenza (Italy)

X41-993 Novel Bio-Mimetic nHAp/Chitosan Composite

T. Wang (Sp), J. Tao, Nanjing University of Aeronautics and Astronautics, Nanjing, Jiangsu (China)

X41-1057 Fatigue Crack Growth Property of Ultra High Molecular Weight Polyethylene Used for Artificial Knee Joints

K. Tanaka, Doshisha University, Kyoto (Japan); A. Kamimura (Sp), T. Katayama, Doshisha University, Kyoto (Japan); S. Kinoshita, Kyoto University (Japan); H. Sakoda, National Institute of Health Sciences, Tokyo (Japan) et al.

X41-1168 Effect of Initial Notch Size on Fatigue Corrosion of an AISI 316L Stainless Steel

H. Sedjal (Sp), Mouloud maameri University, Tizi Ouzou (Algeria); F. Hellal, Ecole Nationale Polytechnique, Algiers (Algeria); L. Rouibah, National Polytechnic School, Algiers (Algeria)

X41-1267 An Ab-Initio Study of Hardness Anisotropy of Crystalline Alpha-Chitin

oral poster

M. Petrov (Sp), M. Friák, L. Lymparakis, D. Raabe, J. Neugebauer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

X41-1307 The Use of Electrospinning for Preparation of Biodegradable Polyester Scaffolds for the Tissue Engineering. Introduction of Nanoporosity

T. Kowalczyk (Sp), T.A. Kowalewski, S. Blonski, Polish Academy of Sciences, Warsaw (Poland); S.K. Misra, A.R. Boccaccini, O. Bretcanu, Imperial College London (UK)

X41-1325 A Novel Experimental Model to Evaluate Bioglass® Scaffolds for Tissue Engineering

A. Gorustovich, National Atomic Energy Commission, Salta (Argentina); G. Vargas, National University of Salta (Argentina); O. Bretcanu, Imperial College of Science, Technology and Medicine, London (UK) et al.

X41-1542 Protein Coated Scaffold for the Differentiation of Type II Pneumocytes from Murine Embryonic Stem Cells

oral poster

M. Lewis (Sp), Y.-M. Lin, A.E. Bishop, A. Bismarck, Imperial College London (UK)

X41-1568 In Vitro Bio-Mineralization: Comparison with Naturally Mineralized Tissues

M. Sandri (Sp), A. Tampieri, L. Bertinetti, CNR, Faenza (Italy); A. Boskey, Cornell University, Ithaca, NY (USA)

Topic: X4 - Biomedical Engineering

X41-1634 Fabrication of Bioactive and Biodegradable Fibers for Cartilage and Bone Regeneration

C. Mlynska (Sp), P. Wawulska, W. Swieszkowski, T. Ciach, K. Kurzydowski, Warsaw University of Technology (Poland)

X41-1650 Biotribological Properties of Novel Hydrogels for Articular Cartilage Replacements

B. Dabrowski (Sp), W. Swieszkowski, Warsaw University of Technology (Poland); J. Katta, University of Leeds (UK); M. El-Fray, Technical University in Szczecin (Poland); Z. Jin, J. Fisher, University of Leeds (UK) et al.

X41-1725 Structure-Activity Effects in Bioactive Silicate Glasses by MD Simulations

oral poster

A. Tilocca, University College London (UK)

X41-1923 Use of Sol-Gel Method for Introduction of SiO₂ in Wood

J. Lacs (Sp), L. Berzina-Cimdina, Riga Technical University (Latvia); A. Zhurins, Latvian State Institute of Wood Chemistry, Riga (Latvia)

X41-1958 Replacing Material for Human Bone Tissue

T.M. Ulyanova (Sp), L.V. Titova, National Academy of Sciences of Belarus, Minsk (Belarus); V.L. Evtuhov, O.P. Chudakov, Belarusian State Medical University, Minsk (Belarus)

X41-2288 Designing an Implant for Long Bone Defects with Integrated Controlled Drug Release Based on Resorbable Textile Scaffolds, Exemplified by Antibiotics

A. Breier (Sp), Leibniz Institute of Polymer Research Dresden (Germany); A. Hofmann, Technical University of Dresden (Germany); C. Rentsch, Leibniz Institute of Polymer Research Dresden (Germany) et al.

Bioactive Materials, Surfaces and Coatings

X42-190 Endothelial Cell Adhesion and Proliferation on Zn-Containing Bioactive Glasses

V. Aina, A. Fiorio Pla, University of Torino (Italy); G. Lusvardi, G. Malavasi (Sp), L. Menabue, University of Modena and Reggio Emilia (Italy); L. Munaron, C. Morterra, University of Torino (Italy) et al.

X42-202 Dispersed and Nanodispersed Materials in Implants: Peculiarities of Their Use

A. Ilyuschenko, V. Savich (Sp), National Academy of Science of Belarus, Minsk (Belarus)

X42-203 Porous Titanium Implants for Replacement of Vertebral Bodies: Biomechanical and Technical Principles of Construction

V. Savich, National Academy of Science of Belarus, Minsk (Belarus)

X42-221 Fabrication and Evaluation of Sol Gel HA Nanostructured Coating on Cp Ti

M.H. Fathi (Sp), A. Hanifi, Isfahan University of Technology (Iran); V. Mortazavi, Isfahan University of Medical Science (Iran)

X42-300 Surface Modified Shape Memory Metallic Materials for Orthopedics

K. Yeung (Sp), Y.L. Chan, K.O. Lam, The University of Hong Kong (China); S.L. Wu, X.M. Liu, X.Y. Liu, C.Y. Chung, P.K. Chu, City University of Hong Kong, Kowloon (China) et al.

X42-351 In Situ SAXS Study of the Growth of Ordered Mesoporous Silica in Macroporous Bioactive Glasses for Drug Delivery

G. Croce (Sp), D. Viterbo, M. Milanesio, Università del Piemonte Orientale, Alessandria (Italy); B. Onida, E. Garrone, V. Cauda, S. Fiorilli, Politecnico di Torino (Italy)

X42-388 Surface Characteristics and Cytocompatibility of Orthopedic Nickel Titanium Shape Memory Alloy Modified by Micro-Arc Oxidation

K.W.K. Yeung (Sp), The University of Hong Kong (China); C.L. Chu, P.K. Chu, W.W. Lu, K.M.C. Cheung, X.M. Liu, S.L. Wu, Y.L. Chan, C.Y. Chung, City University of Hong Kong (China)

X42-444 Stability of Protective Oxide Layers on Pseudo Elastic Ni- Ti- Alloys

oral poster

A. Undisz (Sp), M. Rettenmayr, Friedrich Schiller University Jena (Germany)

X42-576 Functionalization of Bioactive Glasses for Guided Bone Regeneration

oral poster

E. Verné (Sp), C. Vitale-Brovarone, Politecnico di Torino (Italy); C. Bianchi, University of Milano (Italy)

X42-655 Characterization of Bioactive Nitinol Prepared by Sodium and Oxygen Plasma Immersion Ion Implantation

Y.L. Chan, P.K. Chu, A. Ngan, K. Cheung, W. Lu, K. Luk, X.M. Liu, City University of Hong Kong (China); K.W.K. Yeung (Sp), The University of Hong Kong (China)

X42-739 Electrochemical Evaluation of the Ceramic Nanostructural Layers Stability in Ringer Solution

I. Roman, E. Vasile, P. Nita, Metav R&D, Bucharest (Romania); C. Fratila (Sp), National Institute for Nonferrous and Rare Metals, Comuna Pantelimon, Ilfov (Romania)

X42-852 Mechanical Properties and Interface of Dentin/ Enamel – Experimental Composite with Bioceramics and Hydroxyapatite

V. Popescu (Sp), Technical University of Cluj-Napoca (Romania); C. Prejmorean, O. Murat, M. Trif, G. Furtos, A. Colceriu, D. Prodan, C. Tama, L. Silaghi, Raluca Ripan Chemistry Research Institute, Cluj-Napoca (Romania) et al.

X42-952 Development of Calcium Phosphate Based from Marine Coral

G. Croce (Sp), D. Viterbo, F. Camiato, Università del Piemonte Orientale, Alessandria (Italy); R. Gonzales, J.A. Fernandez, Investigaciones Cientificas de Cuba, La Habana (Cuba)

X42-1029 Effect of Oxygen and Aging of the Alloy Ti-35Nb-7Ta

P. Ferrandini (Sp), F.F. Cardoso, R. Caram, State University of Campinas, Campinas-SP (Brazil)

X42-1043 Electrolytic Deposition of Chitosan on Post Bioceramic Coated Ti6Al4V Implants

oral poster

S.-K. Yen (Sp), C.-S. Jiang, C.-C. Yang, C.-C. Lin, National Chung Hsing University, Taichung (Taiwan)

X42-1293 New Biocompatible Metallic Materials for Osteosynthesis Made by Metallurgical Research Institute of Romania

C.A. Moldoveanu, ICEM SA, Bucharest (Romania)

X42-1400 New Compositions in Co-Cr-Mo System Alloys for Orthopedic Implants

E. Alexandrescu (Sp), E. Vasile, D. Daisa, A. Iancea, R. Trusca, Metav - Research Development S.A., Bucharest (Romania)

X42-1412 Surface Structure and Hydration of Nanometric HA and Mg-Doped HA

oral poster

L. Bertinetti (Sp), University of Torino, Turin (Italy); G. Martin, S. Coluccia, University of Torino (Italy); E. Landi, A. Tampieri, ISTECCNR, Faenza (Italy)

X42-1423 Blood Compatibility of Sol-Gel Titanium Oxide Coatings Deposited on Stainless Steel

W. Okrój, Technical University of Lodz (Poland); B. Pietrzyk (Sp), B. Walkowiak, Technical University of Lodz (Poland)

X42-1572 Bottom up Design of Novel Titanium-Based Biomaterials through the Combination of ab-Initio Simulations and Experimental Methods

M. Friak (Sp), D. Ma, B. Sander, D. Raabe, J. Neugebauer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Topic: X4 - Biomedical Engineering

Topic: Y1 - Teaching materials science and engineering

X42-1574 **Plasma Sprayed Bioactive A-W Glass Ceramic on Titanium Alloy: Microstructural Characterisation and in Vitro Study**

oral poster

F. Pierli (Sp), V. Cannillo, L. Lusvarghi, C. Siligardi, University of Modena and Reggio Emilia (Italy)

X42-1614 **Electrophoretic Deposition of Bioactive Coatings on Bioderived SiC Ceramics**

L. Rial (Sp), M. Lopez-Alvarez, E.L. Solla, J. Serra, P. Gonzalez, B. Leon, University of Vigo (Spain)

X42-1615 **Microstructural Characterization of Bioactive Silicate Glasses**

H. Aguiar (Sp), E.L. Solla, J.P. Borrajo, J. Serra, P. Gonzalez, B. Leon, University of Vigo (Spain); F. Malz, C. Jäger, Federal Institute for Materials Research and Testing, Berlin (Germany)

X42-1641 **Microstructure and Mechanical Properties of Plasma Sprayed TiO₂-HA Functionally Graded Coatings**

oral poster

F. Pierli (Sp), L. Lusvarghi, V. Cannillo, A. Sola, University of Modena and Reggio Emilia (Italy)

X42-1683 **Correlation between Bo-Md Diagram and Mechanical Properties of Ti-Nb and Ti-Nb-Ta Alloys**

R.B. Manicardi, S.A. Souza, P.L. Ferrandini, R. Caram (Sp), Universidade Estadual de Campinas (Brazil)

X42-1738 **Synthesis, Sintering and Bioactivity of Si,S-Doped Hydroxylapatite**

A. Sain, A. Veresov, Moscow State University (Russian Federation); M. Pulkin (Sp), University of Bremen (Germany); V. Putlayev, Moscow State University (Russian Federation)

X42-1761 **Stability and Characterization of Hydroxyapatite in Biocompatible Materials in Simulated Body Fluid**

oral poster

C.E.B. Marino, R.S. Nakayama, E.M. Szesz, N.K. Kuramoto, H. Ponte (Sp), Federal University of Parana, Curitiba (Brazil)

X42-1853 **Surface Characterization of Micro-Arc Oxidized Titanium Alloys**

oral poster

M. Gunyuz, Istanbul Technical University (Turkey); M. Baydogan (Sp), H. Cimenoglu, E.S. Kayali, Istanbul Technical University (Turkey)

X42-1902 **Vascular Smooth Muscle Cells on Plasma-Modified Low- and High Density Polyethylene for Potential Tissue Engineering**

oral poster

M. Parizek (Sp), Academy of Sciences of the Czech Republic, Prague (Czech Republic); N. Kasalkova, Institute of Chemical Technology, Prague (Czech Republic) et al.

X42-1944 **3-D Biochips Based on Macroporous Monolithic Polymers for Diagnostics of Syphilis**

M. Slabospitskaya (Sp), Russian Academy of Sciences, St. Petersburg (Russian Federation); N.V. Razdolskaya, M.V. Serdyutskaya, Medical-Military Academy, St. Petersburg (Russian Federation) et al.

X42-2157 **New Stratified Composite Nanocrystalline Diamond / Hydroxyapatite**

A. Niedzielska, Technical University of Lodz (Poland)

X42-2158 **Film of Nanocrystalline Diamond as Interface**

A. Niedzielska (Sp), J. Gawrotki, Technical University of Lodz (Poland); W. Mróz, A. Prokopiuk, Military University of Technology, Warsaw (Poland)

X42-2316 **Evaluation of the Effect of Simulated Biological Media on the Electrochemical Corrosion of Dental Alloys**

R. Zamfir, C.M. Cotrut (Sp), S. Zamfir, Politechnical University of Bucharest (Romania); B. Iordache, University Bucharest (Romania)

Teaching and Learning of Materials Science and Engineering

Y11-96 **Features of Teaching of Nanomaterials Science**

R. Andrievskiy, Russian Academy of Sciences, Moskau (Russian Federation)

Y11-181 **Cost Effective Fabrication of Hysteresis Loop for Magnetic and Ferroelectric Materials**

A.T. Seshadri, Indian Institute of Technology, Chennai (India)

Y11-463 **A New Trial for Education of Process Selection in Industrial Products**

Y. Kasuga, Tamagawa University, Machida, Tokyo (Japan)

Y11-563 **Possibilities to Encourage Students to Study Materials Science and Engineering**

T. Schöpe (Sp), H. Biermann, M. Enke, Technical University of Freiberg (Germany)

Y11-715 **Past, Present and Future in Teaching Materials Science**

L. Cristea, Politechnical University of Bucharest (Romania)

Y11-925 **Laboratory "Science Meets School – Materials & Technologies in Freiberg"**

H. Biermann (Sp), G. Sacher, S. Wolf, S. Henkel, T. Schöpe, M. Enke, Technical University of Freiberg (Germany); I. Pezold, Geschwister-Scholl-Gymnasium, Freiberg (Germany)

Y11-1356 **A Website in Materials Science Education: Tale of a Mines Paris/Paristech**

M. Bletry (Sp), G. Cailletaud, S. Forest, A.F. Gourgues, ENSMP, Evry (France)

Y11-2040 **Teaching Scientific Literacy Using a Research-Based Writing Intensive Approach: An Experiential Study**

P. Howell, The Pennsylvania State University, Philadelphia, PA (USA)