	Symposium: B22 Room: Oslo	Symposium: B24 Room: Kopenhagen	Symposium: B25 Room: Riga	Symposium: B21 Room: Prag	Symposium: B11 Room: Belgrad	Symposium: B41 Room: Istanbul
	High Temperature Metallic and Intermetallic Materials	**Metal Matrix Composites**	**Highly Porous Metals and Ceramics**	**Complex Metallic Alloys**	**Advanced Nanostructures**	**Heat Sink and High Temperature Composites**
	Creep Fundamentals E. George, Oak Ridge National Laboratory (USA)	Titanium Based MMCs S. Barnes, University of Manchester (UK)	Processing C. Körner, University of Erlangen-Nuremberg (Germany)	Introduction and Structure J.-M. Dubois, Ecole des Mines, Nancy (France)	Fabrication of Fine-Scale Structures W. Clegg, University of Cambridge (UK)	Thermal Management using MMCs A. Mortensen, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
11:00	Highlight Lecture **Links between Elasticity and Newtonian Flow in Polycrystals** G. Greenwood, University of Sheffield (UK)	Keynote Lecture **Fibre Reinforced Titanium Composites for Landing Gear Applications** D. Bond, Messier-Dowty Ltd., Farnborough (UK); S. Kyle-Henney (Sp), TISICS ltd, Farnborough (UK)	Highlight Lecture **Thermomechanical Stability of a Fibre Network Material under Conditions Experienced in the Exhaust of a Gas Turbine Aeroengine** J.C. Tan (Sp), T.X. Pomfret, I.O. Golosnoy, University of Cambridge (UK); L. Marston, Fibretech Ltd, Pinxton (UK); C.D. Shortall, T.W. Clyne, University of Cambridge (UK)	Keynote Lecture **Complex Metallic Alloys: Materials for the Future?** W. Steurer, ETH Zurich (Switzerland)	Highlight Lecture **SiC-CNT-Nanocomposites and Their Properties Prepared by Electrostatically Stabilised Slurry Preparation** J. Helbig (Sp), Neue Materialien Würzburg GmbH (Germany); S. Foroero, Future Carbon GmbH, Bayreuth (Germany); R. Girmscheid, T. Frey, University of Applied Science Nuremberg (Germany)	Keynote Lecture **Thermal Management for Microelectronics Using Composite Materials** A. Kelly (Sp), University of Cambridge (UK); P.W. May, University of Bristol (UK); L.N. McCartney, National Physical Laboratory, Teddington (UK); L. Weber, Swiss Federal Institute of Technology, Lausanne
11:20	**Mechanical Alloying of Mo-Base Alloys for High Temperature Applications** M. Krüger (Sp), M. Heilmaier, H. Saage, A. Hilbig, Otto-von-Guericke-University Magdeburg (Germany); P. Jehanno, M. Böning, Technologiezentrum, Plansee SE, Reutte (Austria)		**High Temperature Porous Al2O3 Filter in Gradient Structure-Tabular Alumina Formation on Porous Alumina Substrate** B.-Y. Yu (Sp), W.J. Wei, National Taiwan University, Taipei (Taiwan); S.C. Wang, Southern Taiwan University of Technology, Taipei (Taiwan); J.I. Shyue, Academica Sinica, Taipei (Taiwan)		**Electrophoretically Infiltration of 2D Woven Carbon Fabrics with Carbide Nanopowders** A. Coupe (Sp), J. Canel, F. Tenegal, A. Réau, CEA, Saclay (France)	
11:40	**TEM Analysis of <111> Dislocation Reactions in an In Situ Deformed FeAl-Ni-B (B2) Alloy** A. Fraczkiewicz (Sp), Ecole Nationale Superieure des Mines, St-Etienne (France); B. Decamps, LCMTR, Thiais (France); D. Colas, O. Calonne, Ecole Nationale Superieure des Mines, St-Etienne (France) et al.	**Fatigue Strength of Titanium Matrix Composites Depending on Fibre Volume Content and Fibre Orientation** J.M. Hausmann, German Aerospace Center - DLR, Cologne (Germany)	**Laser Induced Foaming of Titanium Using Biocompatible Foaming Agents** A.A. Shaikh (Sp), Leibniz Universität Hannover (Germany); S. Dudziak, G. Hohenhoff, Laser Zentrum Hannover e. V. (Germany); T.M. Gesing, Leibniz Universität Hannover (Germany); O. Meier, Laser Zentrum Hannover e. V. (Germanv)	**Single Crystal Growth of Al-Rich Complex Metallic Alloys by the Czochralski Method** B. Bauer, Ludwig-Maximilians-Universität, München (Germany)	**Synthesis of SiAlON Ceramics: A New Route Combining Sol-Gel and SHS Processes** N. Pradeilles, University Montpellier II (France); M.-C. Record (Sp), University Aix-Marseille III, Marseille (France); D. Granier, R.M. Marin-Ayral, University Montpellier II (France)	**The Influence of Active Element Additions in Cu-Diamond Composites on Their Thermal Conductivity and the Coefficient of Thermal Expansion** L. Weber (Sp), R. Tavangar, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
12:00	**Defect Generation in Some Transition-Metal Silicides to Accommodate the Deviation from the Stoichiometric Compositions** H. Inui (Sp), K. Kishida, A. Ishida, S. Harada, Kyoto University (Japan)	**Strain Mapping in the Vicinity of a Fatigue Crack at Elevated Temperatures in Ti/SiC Composites by Synchrotron X-Ray Diffraction** Y.-C. Hung (Sp), J. Bennett, P.J. Withers, The University of Manchester (UK)	**Foaming Experiments under Macrogravity Conditions** B.M. Somosvári (Sp), P. Bárczy, P. Szirovicza, J. Szöke, T. Bárczy, ADMATIS Ltd., Miskolc (Hungary)	**YbCu4.5 - The Material with the Largest Unit Cell** S. Gottlieb (Sp), S. Bruehne, F. Ritter, W. Aßmus, Johann Wolfgang Goethe University, Frankfurt (Germany)	**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)	**Thermal Expansion of Metal Matrix Composites Highly Loaded with Low Expansion Phase: The Influence of Elastic Property Mismatch** R. Tavangar (Sp), M. Vetterli, L. Weber, Swiss Federal Institute of Technology, Lausanne (Switzerland)
12:20	**Study of the Role of Mo and Ta Additions in the Microstructure of Nb-Ti-Si-Cr-Al Silicide Base Alloys** P. Tsakiropoulos (Sp), The University of Sheffiled, Guilford (UK); K. Zelenitsas, J. Geng, University of Surrey (UK)	**Thermomechanical Processing of Titanium Matrix Composites** D. Tricker (Sp), M. Jackson, Imperial College London (UK); A. Tarrant, J. Silk, Aerospace Metals Composites, Farnborough (UK); R. Dashwood, Imperial College London (UK)	**High Pressure Integral Foam Moulding of Aluminium** H. Wiehler (Sp), C. Körner, R.F. Singer, University of Erlangen-Nuremberg (Germany)	**Intergrowths of the LaNi5 and Laves Phase Structures as Hydrogen Storage Materials** D. Fredrickson (Sp), D. Noréus, S. Lidin, K. Kadir, Stockholm University (Sweden)	**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)	**The Effect of Particle Contiguity on the Thermal Expansion of Al/Al2O3 Composites** G. Roudini (Sp), R. Tavangar, L. Weber, A. Mortensen, Swiss Federal Institute of Technology, Lausanne (Switzerland)

Monday

Symposium: D21
Room: Zagreb

Mechanical and Fracture Behavior in Nanomaterials and Nano Structures

Nanomechanical Properties of Thin Films and Nanostructures

E. Zschech, AMD Saxony LLC & Co. KG, Dresden (Germany)

Keynote Lecture

Fracture and Subcritical Cracking in Nanostructured Thin Film Structures

R.H. Dauskardt, Stanford University, CA (USA)

Physics and Mechanics of the Indentation Deformation of Glass

T. Rouxel (Sp), H. Ji, J.-C. Sangleboeuf, University of Rennes 1 (France); T. Hammouda, Université Blaise Pascal, Clermont-Ferrand (France)

Nanomechanical Characterization of Dense and Porous Low-k Materials

D. Chumakov (Sp), H. Geisler, M.-L. Sin, E. Zschech, AMD Saxony LLC & Co. KG, Dresden (Germany)

Correlation between Multiple Impact Nanoindentation Response and Erosion by High Velocity Sand Particles of PEO Coatings on Titanium Alloys

J.M. Wheeler (Sp), K. Lange, K.A. Roberts, C.A. Collier, A.W. Rayment, J.A. Curran, T.W. Clyne, University of Cambridge (UK)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Growth of Phases and Associated Morphologies

Y. Bréchet, University of Grenoble, Saint Martin d'Hères (France)

Microstructural Changes during Roasting and Leaching of Ilmenite Ore for the Extraction of Titanium Dioxide

A. Lahiri (Sp), A. Jha, University of Leeds (UK)

Microstructure Evolution during Growth of Electrodeposited NiCo Films

A.F. Bastos (Sp), S. Zaefferer, D. Raabe, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Highlight Lecture

Whisker Formation on Sn Thin Films on Cu Substrates

M. Sobiech (Sp), U. Welzel, E. Mittemeijer, Max Planck Institute for Metals Research, Stuttgart (Germany); W. Hügel, A. Seekamp, V. Müller, Robert Bosch GmbH, Reutlingen (Germany)

Determination of the Critical Limit of the Delta to Gamma Massive Transformation in Fe-Cr Alloys Using Diffusion Couples

B. Chehab (Sp), SIMAP, Saint Martin d´Hères (France); J. Garrett, H.S. Zurob, McMaster University, Hamilton (Canada); Y. Brechet, M. Veron, SIMAP, Saint Martin d´Hères (France) et al.

Highlight Lecture

Structure and Crystallography of Gamma-Massive Microstructure in TiAl-Based Alloys

A. Sankaran (Sp), E. Bouzy, A. Hazotte, Paul-Verlaine University in Metz (France)

Symposium: C32
Room: Helsinki

Powder Processing from Powders to Complex Products and Innovation

Metal Injection Moulding

P. Imgrund, Fraunhofer Institute for Manufacturing Technology and Applied Materials Research, Bremen

Novel Powder Processing for Microchannel Devices

L. Tuchinskiy (Sp), R.O. Loutfy, MER Corp., Tucson (USA)

Preparation of Heat-Resistant Titanium Based Materials by Powder Metallurgy

P. Novák (Sp), M. Moranikova, D. Vojtich, J. Zerak, Institute of Chemical Technology in Prague, Praque (Czech Republic)

Near-Net-Shape Production of Graphite Parts via Powder Injection Moulding of Carbon Mesophase Using a Partially Water-Soluble Binder System

B. Derfuss (Sp), M. Gruhl, C.A. Rottmair, A. Volek, R.F. Singer, University of Erlangen-Nuremberg, Fuerth (Germany)

Keynote Lecture

Metal Injection Moulding for Creating Multi-Functional Parts

T. Hartwig, Fraunhofer Institute for Manufacturing Technology and Applied Materials Research, Bremen (Germany)

Symposium: C34
Room: Stockholm

Nanoscaled Inorganic Materials by Molecular Design

Synthesis/Processing I

R. Riedel, Technical University of Darmstadt (Germany)

Keynote Lecture

Polymeric Precursor Approaches to Nano- and Micro-Structured Nonoxide Ceramics

L.G. Sneddon (Sp), U. Kusari, X. Wei, M. Guron, University of Pennsylvania, Philadephia, PA (USA)

Synthesis of WC-Co Cemented Carbides by Precursor Reactions and Spark Plasma Sintering

X. Song (Sp), W. Liu, J. Zhang, Beijing University of Technology (China); M. Rettenmayr, Friedrich Schiller University Jena (Germany)

Mixed Oxide Xerogels Based on Titania or Silica with Non-linear Optical Properties

S. Lisinski (Sp), German Aerospace Center - DLR, Cologne (Germany); D. Schaniel, University of Cologne (Germany); L. Ratke, German Aerospace Center - DLR, Cologne (Germany); T. Wolke, University of Cologne (Germany)

Creating Nano-structured Films from Self-Encapsulated Inorganic-Organic Hybrid Materials

P. Müller-Buschbaum (Sp), J. Perlich, Technical University of München, Garching (Germany); M. Memesa, Max Planck Institute for Polymer Research, Mainz (Germany); S.V. Roth, HASYLAB, Hamburg (Germany) et al.

Symposium: D11
Room: Lubljana

Tomography and Related 3D Techniques for Micro-/Nano Characterization

Micro-Tomography

A.R. Pyzalla, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Highlight Lecture

In-Situ 3D Characterization of Creep Damage Using Synchrotron X-Ray Microtomography

A. Isaac (Sp), F. Sket, G. Sauthoff, A. Pyzalla, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Processing of Graphite-AlSi12 Composites and Analysis by Means of X-Ray Microtomography

J. Narciso (Sp), S.A. Sanchez, F. Rodríguez-Reinoso, University of Alicante (Spain); P.D. Lee, Imperial College, London (UK)

Synchrotron-Radiation Computed Laminography

L. Helfen, A. Myagotin, Forschungszentrum Karlsruhe GmbH (Germany); P. Mikulík, Masaryk University, Brno (Czech Republic); M. DiMichiel, P. Cloetens, J. Baruchel, European Synchrotron Radiation Facilitv. Grenoble (France)

Volumetric Digital Image Correlation Adapted to Images with a Spatially Non Uniform Contrast

Y. Pannier (Sp), M. Bornert, Laboratoire de Mecanique des Solides, Palaiseau (France)

Microstructure and Texture Analyses of AlMn Alloys Determined with High-Energy Synchrotron Radiation

C.E. Tommaseo (Sp), H. Klein, University of Göttingen (Germany)

Symposium: C51
Room: Shanghai

Thin Film Technology

Diagnostics and Simulation

R. Nickel, RWTH Aachen University (Germany)

Keynote Lecture

In Situ Transmission Electron Microscopy: Challenges and Opportunities

J.T.M. De Hosson, University of Groningen (Netherlands)

RF Bias Optimized by Optical Emission Spectroscopy during Deposition of Chromium Nitride Using DC Magnetron Sputtering

Z. Zhang (Sp), O. Rapaud, N. Bonasso, D. Mercs, C. Dong, C. Coddet, UTBM, Montbéliard (France)

Surface Characterization of AISI H13 Steel Modified by Electrical Discharge (EDM) Alloying Techniques

G.P. Rodriguez (Sp), J. Simao, G. Herranz, C. Sanchez-Bautista, P. Aragon, M. Castillo, University of Castilla-La Mancha (UCLM), Ciudad Real (Spain)

Induced Local Ordering and Structure Softening in Silicon and Hydrogen Doped Tetrahedral Amorphous Carbon Thin Films

G.A. Abbas (Sp), P. Papakonstantinou, J. McLaughin, University of Ulster, Newtownabbey (UK)

Symposium: C52
Room: Singapur

Thick Coating Developments and Technology

Processes and Coating Concepts

T. Schläfer, RWTH Aachen University (Germany)

Detonation Flamespraying as a New Method for Producing MMC Hard-Coatings to be Employed in Grinding Tools

J. Nebel (Sp), W. Tillmann, E. Vogli, University of Dortmund (Germany); F.-W. Bach, K. Möhwald, D. Kolar, University of Hannover (Germany)

A Novel Method for the Production of Aluminium Nitride Surface Coatings

D. Kent (Sp), G.B. Schaffer, The University of Queensland, Brisbane (Australia); T.B. Sercombe, The University of Western Australia, Perth (Australia); J. Drennan, The University of Queensland, Brisbane (Australia)

Coating Bores of Light Metal Engine Blocks with a Nanocomposite Material Using the Plasma Transferred Wire Arc Thermal Spraying Process

F. Schreiber, T. Wenz, DURUM Verschleiss-Schutz GmbH, Willich (Germany); K. Bobzin, F. Ernst, J. Zwick, RWTH Aachen University (Germany); T. Schläfer (Sp), RWTH Aachen University (Germany) et al.

Deposit Brazing of Hard Material Mats for Manufacturing Enhanced Wear-Resistant Metal Forming Tools

F.-W. Bach, K. Möhwald, T.A. Deißer (Sp), Leibniz Universität Hannover, Witten (Germany); B.-A. Behrens, M. Bistron, Leibniz Universität Hannover, Garbsen (Germany)

Supersonic Nozzles for Supersonic Free-Jet PVD

H. Sasaki (Sp), A. Yumoto, F. Hiroki, N. Naotake, Kogakuin University, Tokyo (Japan)

Symposium: C53 Room: Neu-Dehli	Symposium: C42 Room: Krakau	Symposium: C43 Room: Budapest	Symposium: X22 Room: Kiew	Symposium: C21 Room: Seoul	Symposium: Room:	
Chemical, Electrochemical and Plasmachemical Surface Treatment and Plating	**Ionic Liquids: New Solvents for Chemical and Electrochemical Processing /Molten Salts**	**Slag Metallurgy, Engineering and Valorization**	**Automotive Advanced Materials**	**Joining: Processes**		
Anodic and Plasma Anodic (PEO) Processes I	Properties/Chemistry	Slags I	Steel Sheets	Brazing & Soldering		
G. Nauer, ECHEM-Center of Competence, Wiener Neustadt (Austria)	F. Endres, Technical University of Clausthal, Clausthal-Zellerfeld (Germany)	L. Segers, Université Libre de Bruxelles, Brussels (Belgium)	J. Staeves, BMW AG, Munich (Germany)	J. Janczak-Rusch, Swiss Federal Laboratories for Materials Testing and Research, Dübendorf		
Dielectric Characteristics of Plasma Electrolytic Oxide (PEO) Coatings C. Dunleavy (Sp), V.L. Weaver, J.A. Curran, T.W. Clyne, Cambridge University (UK)	Highlight Lecture **Prediction of Key Physical Properties of ILs** I. Krossing, University of Freiburg (Germany)	**Production and Use of the Co-Products: Blastfurnace and Steel Slags - State of the Art** D. Mudersbach (Sp), FEhS - FEhS - Building Materials Institute, Duisburg (Germany); H. Motz, EUROSLAG, Duisburg (Germany)	**Applications of Innovative Trip and Twip Steels to Automotive Body Structures** G. Scavino, Politecnico di Torino (Italy); C. Federici, S. Maggi, FIAT Auto, Torino (Italy); J. Lamontanara, Arcelor-Mittal, Paris (France) et al.	**Joining Alumina with Steel Using a Laser Brazing Method** I. Südmeyer (Sp), M. Rohde, Forschungszentrum Karlsruhe GmbH (Germany)		11:00
Effects of the Quantity of the Passed Current during Microplasma Process on the Electrolyte Composition and Coating Characteristics O.P. Terleeva (Sp), A.I. Slonova, A.P. Rijikh, I.V. Mironov, Russian Academy of Science, Novosibirsk (Russian Federation)	**The Dielectric Properties of Ionic Liquids** J.R. Sangoro (Sp), A. Serghei, University of Leipzig (Germany); C. Wespe, F. Bordusa, Max Planck Institute, Halle (Germany); F. Kremer, University of Leipzig (Germany)	**Application of Hydrothermal Reaction for Recycling of Blast Furnace Slag** S.-J. Tae (Sp), K. Morita, The University of Tokyo (Japan)	**Mechanical Properties and Deformation Mechanism of High-Strength Lightweight Mn Al C TRIPLEX Steels** R. Rablbauer (Sp), G. Frommeyer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	**Brazing Gamma-TiAl with a Ti-Cu-Ni Filler: Microstructural Evolution at Interface and Reaction Mechanisms Promoting Bonding** A. Guedes (Sp), A.M.P. Pinto, University of Minho, Guimarães (Portugal); M.F. Vieira, F. Viana, Faculdade de Engenharia da Universidade do Porto (Portugal)		11:20
Anodic Oxidation and Sol-Gel Coating for Corrosion Protection of AM60B Magnesium Alloys P.L. Cavallotti (Sp), M. Bestetti, A. Da Forno, F. Barlassina, P. Gronchi, Politecnico of Milano (Italy)	**Surface Activity in Simple and Complex Ionic Liquid Systems - An X-Ray Photoelectron Spectroscopy Study** F. Maier (Sp), M. Kilian, T. Cremer, C. Potzner, J.M. Gottfried, N. Müller, P.S. Schulz, P. Wasserscheid, H.-P. Steinrück, University of Erlangen-Nuremberg (Germany)	Highlight Lecture **The Removal of Inclusions by Slags during Steel Production** G. Shannon, S. Seetharaman (Sp), Carnegie Mellon University, Pittsburgh, PA (USA)	**Mechanical Properties and Corrosion Behaviour of Ferritic Stainless Al Cr Steels** R. Rablbauer (Sp), K. Dönecke, A. Hassel, G. Frommeyer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	Highlight Lecture **Study on Brazing of Titanium/Steel Dissimilar Joint with Copper-Based Braze Alloy** A. Elrefaey (Sp), W. Tillmann, University of Dortmund (Germany)		11:40
Spark Discharge Anodization as a Pretreatment Method for Corrosion-Protection, Bonding and Coating Processes J. Wendrinsky (Sp), N. Godja, A. Schindlel, M. Pözler, G.E. Nauer, ECHEM-Center of Competence in Applied Electrochemistry, Wiener Neustadt (Austria)	**Hydrides and Protons in Ionic Liquids** K. Johnson (Sp), University of Regina, SK (Canada); D.F. Wassell, The Queen´s University of Belfast, Northern Ireland (Ireland); R.M. Pagni, J. Bartmess, University of Tennessee, Knoxville, TN (USA) et al.	**Solidification of CaO-MgO-SiO2 Slag** D. Durinck (Sp), G. Mertens, P.T. Jones, J. Elsen, B. Blanpain, P. Wollants, Katholieke Universtiteit Leuven (Belgium)	**Strain Hardening Behaviour of Modern Car Body Steels in Dependence of Temperature** A. Bäumer (Sp), W. Bleck, RWTH Aachen University (Germany)	**The Grain Boundary Wetting Transition and Interfacial Energies in Solid Sn - Zn/Sn Melt System** V. Murashov (Sp), Lomonosov Moscow State University, Moskau (Russian Federation); B. Straumal, Russian Academy of Science, Chernogolovka (Russian Federation) et al.		12:00
Rapid Anodic Growth of TiO2 and WO3 - Nanotubes in Fluoride Free Electrolytes R. Hahn (Sp), J.M. Macak, S. Berger, X. Feng, J. Kunze, P. Schmuki, University of Erlangen-Nuremberg (Germany)	**Electroplating of Al on Mild Steel Substrates in Ionic Liquids** Q. Liu (Sp), S. Zein El Abedin, F. Endres, Technical University of Clausthal, Clausthal-Zellerfeld (Germany)	**Thermodynamic Study of MnO-SiO2-MnS Slag System** S.H. Kwon, S.-M. Jung (Sp), H. Gaye, H.G. Lee, Pohang University of Science and Technology (Korea, Republic)	**Microstructures and Mechanical Properties of Ultrafine Grained C-Mn Steel Sheets due to Super Short Interval Multi-Pass Rolling** K. Miyata (Sp), M. Wakita, S. Fukushima, M. Eto, T. Sasaki, T. Tomida, Sumitomo Metal Industries, Ltd., Hyogo (Japan)	**Particle Reinforced Lead-Free Solders: Design and Process Optimization** V. Sivasubramaniam (Sp), Laboratoire de mécanique appliquée et d'analyse de fiabilité, EPFL, Dübendorf (Switzerland); J. Janczak-Rusch, EMPA, Dübendorf (Switzerland) et al.		12:20

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	Symposium: B22 Room: Oslo	Symposium: B24 Room: Kopenhagen	Symposium: B25 Room: Riga	Symposium: B21 Room: Prag	Symposium: B11 Room: Belgrad	Symposium: B41 Room: Hongkong
	High Temperature Metallic and Intermetallic Materials	**Metal Matrix Composites**	**Highly Porous Metals and Ceramics**	**Complex Metallic Alloys**	**Advanced Nanostructures**	**Heat Sink and High Temperature Composites**
	Superalloys I F. Pyczak, University of Erlangen-Nuremberg (Germany)	Magnesium Based MMCs S. Barnes, University of Manchester (UK)	Processing M. Scheffler, Brandenburgische Technische Universität Cottbus (Germany)	Properties I J. Dolinsek, University of Ljubljana (Slovenia)	Behaviour of Fine-Scale Structures J. Binner, University of Loughborough (UK)	High Temperature Materials R. Martin, Materials Engineering Research Laboratory Ltd., Hitchin (UK)
14:40	Highlight Lecture **Mechanisms and Modeling of Deformation in Ni-Base Superalloys at Intermediate Temperatures** R.M. Unocic, P.M. Sarosi, L. Kovarik, G.B. Viswanathan, C. Shen, Y. Wang, Ohio State University, Columbus, OH (USA); M.J. Mills (Sp), Ohio State University, Columbus, OH (USA)	Highlight Lecture **Creep Rates and Stress Exponents of Unreinforced and Short Fibre Reinforced Magnesium Alloy AE42** H. Dieringa (Sp), Y. Huang, N. Hort, K.U. Kainer, GKSS Research Center, Geesthacht (Germany)	Highlight Lecture **Ultra-Stable Particle-Stabilized Ceramic Foams** U.T. Gonzenbach (Sp), A.R. Studart, E. Tervoort, L.J. Gauckler, ETH Zurich (Switzerland)	Highlight Lecture **Cage Compounds** S. Bühler-Paschen (Sp), E. Alleno, Vienna University of Technology (Austria); U. Aydemir, M. Baitinger, Max Planck Institute for Chemical Physics of Solids, Dresden (Germany) et al.	Highlight Lecture **Observation of the Deformation in Titanium Silicon Carbide/ Titanium Carbide Multilayers** F. Giuliani (Sp), O. Wilhelmsson, P. Eklund, U. Jansson, L. Hultmann, Linköping University, Linkpöping (Sweden)	**SiC Multilayer by Tape Casting and Sintering for Thermal Protection** S. Biamino (Sp), L. Camedda, M. Pavese, P. Fino, C. Badini, Politecnico di Torino (Italy)
15:00	**Microstructural and Mechanical Degradation of CMSX-4** H. Klingelhöffer (Sp), Federal Institute for Materials Research and Testing, Berlin (Germany); T. Link, A. Epishin, Technical University of Berlin (Germany) et al.	**Deformation Behaviour of Magnesium Composites at High Temperatures** P. Lukác (Sp), Z. Trojanova, Charles University, Prague 2 (Czech Republic)	**Consolidation of Solid Particles Stabilized Emulsions** B. Neirinck (Sp), J. Fransaer, J. Vleugels, O. Van der Biest, Katholieke Universiteit Leuven (Belgium)	**TEM and EELS Investigation of Ge Based Clathrates** C. Hébert (Sp), P. Pongratz, Vienna University of Technology (Austria); U. Aydemir, M. Beitinger, Y. Grin, Max Planck Instiute for Chemical Physics of Solids, Dresden (Germany) et al.	**Fibrous Al2O3-Based Nanoeutectics** J.C. Diez, P.B. Oliete, J.I. Pentildea, A. Larrera, R.I. Merino, V.M. Orera (Sp), C.S.I.C., Zaragoza (Spain)	**Porous Ceramic Structures for High Temperature Applications** H. Ghanem (Sp), H. Gerhard, N. Popovska, University of Erlangen-Nuremberg (Germany)
15:20	**Rafting Morphology Depending on Stress and Strain States in the MC2 Nickel Based Superalloy** F. Touratier (Sp), E. Andrieu, B. Viguier, CIRIMAT, Toulouse (France)	**Microstructure Characterization of Particle Reinforced AZ91D and AM50 Magnesium Alloys** M. Regev (Sp), Ort Braude College of Engineering, Karmiel (Israel); Z. Koren, H. Rosenson, Y. Narovni, Technion - Israel Institute of Technology, Haifa (Israel)	**Porous Ceramics from Preceramic Polymers** P. Colombo (Sp), L. Biasetto, E. Bernardo, C. Vakifahmetoglu, University of Padova (Italy)	**Electronic Structure and Chemical Bonding in Al-Containing Metallic Compounds** E. Belin-Ferré, Universite Pierre & Marie Curie, Paris (France)	**The Effect of Fine-Scale Multilayer Structures on the Hardness of Ceramics** W.J. Clegg (Sp), Y. Long, University of Cambridge (UK)	**Continuous Fabrication of Fiber Reinforced Ceramic Composites** A. Glück (Sp), O. Goerke, H. Schubert, Technical University of Berlin (Germany)
15:40	**Characterization of Intra- and Intergranular Deformation at High Temperature of a Disk Superalloy using EBSD and Local Microextensometry** A. Soula (Sp), D. Boivin, P. Caron, D. Locq, J.L. Pouchou, Y. Renollet, Y. Brechet, ONERA, Chatillon (France)	**Short Fibres and Particles Impact on the Behaviour of AZ91 Magnesium Alloy** Z. Trojanová (Sp), V. Gärtnerová, Z. Száraz, F. Chmelík, P. Lukác, Charles University, Prague (Czech Republic)	**Porous Hybrid Materials with Catalytic Activity Derived from Polysiloxanes Containing Metallic Nano Particles** M. Wilhelm (Sp), D. Koch, G. Grathwohl, University of Bremen (Germany)	**Lattice Dynamics of CMA: Experiment and Simulations** M. de Boissieu (Sp), SIMAP, Saint Martin d´Hères (France); M. Mihalkovick, Slovak Akademy of Science, Bratislava (Slovak Republic); M. Feuerbacher, Research Centre Juelich (Germany); F. Gaehler, University of Stuttgart (Germany) et	**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)	**Electrical Behavior of High Temperature Dielectric Materials and Coatings Based on Reaction Sintered BNxCy Composites** V. Petrovsky, National Academy of Science, Kiev (Ukraine)
16:00	**Thermomechanical Fatigue Life Prediction of Nimonic 90 Nickel Base Superalloy** H. Klingelhöffer (Sp), Federal Institute for Materials Research and Testing, Berlin (Germany); M. Marchionni, Consiglio Nazionale delle Richerche, Milan (Italy) et al.	**Microstructural Characterisation of Magnesium Based MMCs** F. Scherm (Sp), R. Völkl, U. Glatzel, University of Bayreuth (Germany)	**Manufacture of Porous Ceramic Components Using Supercritical Fluid-Assisted Technology** S. Matthews (Sp), J. Matthews, SCF Processing Ltd, Dundalk (Ireland)	**Low Thermal Conductivity of Al-Based Complex Metallic Alloys** A. Smontara (Sp), I. Smiljanic, A. Bilusic, J. Lukatela, G. Stanic, Institute of Physics, Zagreb (Croatia); J. Dolinsek, University of Ljubljana, Jamova (Croatia); M. Feuerbacher, B. Grushko, Research Centre Juelich (Germany)	**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)	**Exothermic Brazing Technology for Ultra High Temperature Structural Applications** A. Yousefiani (Sp), The Boeing Company, Huntington Beach, CA (USA); R.W. Smith, Materials Resources International, Lansdale, PA (USA); E.A. Shtessel, Exotherm Corporation, Camden, NJ (USA)

Monday

Symposium: D21
Room: Zagreb

Mechanical and Fracture Behavior in Nanomaterials and Nano Structures

Mechanical Behaviour of Small Metal Structures

M. Göken, University of Erlangen-Nuremberg (Germany)

Phase Transformation and Plastic Deformation of Pseudoelastic Sub-Micron Compression Pillars
C. Frick, S. Orso, B.G. Clark (Sp), E. Arzt, Max Planck Institute for Metals Research, Stuttgart (Germany)

Mechanical Properties of BCC Metals in Confined Geometries
T. Wübben (Sp), G. Richter, Max Planck Institute for Metals Research, Stuttgart (Germany); A. Schneider, University of Stuttgart (Germany); E. Arzt, Max Planck Institute for Metals Research, Stuttgart (Germany)

High Strength Ultrafine-Grained AlMgScZr with Enhanced Thermal Stability
M. Hüller (Sp), B. Lenczowski, EADS Innovation Works Germany, München (Germany); H.W. Höppel, M. Göken, University Erlangen-Nürnberg (Germany)

Deformation Behaviour of Ultrafine Grained Al and AlMg Alloys under Monotonic and Cyclic Loads
J. May (Sp), H.W. Höppel, M. Göken, University of Erlangen-Nuremberg (Germany)

Multipurpose On-chip Nanomechanical Laboratory Revealing the Size-Dependent Strength and High Ductility of Pure Aluminium Submicron Films
T. Pardoen (Sp), Catholic University of Louvain, Louvain-la-Neuve (Belgium); M. Coulombier, S. Gravier, Université catholique de Louvain, Louvain-la-Neuve (Belgium); D. Fabregue, GEMPPM, Lyon (France) et al.

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Phase Transformation Kinetics

E. Aeby-Gautier, Ecole des Mines, Nancy Cedex (France)

In Situ Alpha->Gamma->Alpha Phase Transformation in a Ti-IF Steel
S. Lubin (Sp), ENSMP, Evry Cedex (France); H. Réglé, ARCELOR Research, Maizieres-les-Metz (France)

Application of the New Heat Treatment Quench and Partitioning(Q&P) to the Conventional Low Carbon Steel and Dilatometric Study
S.-J. Kim (Sp), H.S. Kim, B.C. De Cooman, Pohang University of Science and Technology (Korea, Republic)

Austenite Decomposition in Fe-Mn-Al-C Alloys
Ian Zuazo, SIMAP, INPG, Saint Martin d'Heres, France; Yves Bréchet, SIMAP, INPG, Saint Martin d'Heres, France; Patricia Donnadieu, SIMAP, INPG, Saint Martin d'Heres, France; Philippe Maugis, CIRIMAT, INPT, Toulouse. France

Three-Dimensional Morphology of Intragranular Ferrite in an Fe-C-Mn Alloy
K.-M. Wu (Sp), L. Cheng, Wuhan University of Science and Technology (China); Z.G. Li, Technology Center, Baosteel Group, Shanghai (China)

Alpha to Beta Phase Transformation of Nickel Sulfide in Tempered Glass
O. Yousfi (Sp), P. Donnadieu, Y. Brechet, Institut National Polytechnique de Grenoble, Saint Martin d´Hères (France); A. Kasper, FEB (SAINT-GOBAIN GLASS Deutschland Gmbh) Forschung und Entwickluna Baualas. Herzoaenrath

Symposium: C32
Room: Helsinki

Powder Processing from Powders to Complex Products and Innovation

Modelling Processes

C. Martin, Grenoble Institute of Technology, Saint Martin d´Hères (France)

The Effect of the Strength and Morphology of Aggregates on the Compaction Behaviour of Ceramic Powders – Discrete Element Simulations
C.L. Martin (Sp), SIMAP, Saint Martin d´Hères (France); G. Delette, P. Pizette, CEA, Grenoble (France)

Importance of Length Scales in the Static and Dynamic Configurations of Pharmaceutical Particulate Systems
M. Dutt (Sp), B.C. Hancock, A.C. Bentham, J.A. Elliott, University of Cambridge (UK)

Microwave-Assisted Fast Debinding of MIM/CIM Parts: Modeling and Optimisation
P. Veronesi (Sp), L. Denti, University of Modena and Reggio Emilia (Italy); L. Colombini, PM-Technology Srl, Fiorano (Italy)

Continuous Powder Extrusion Using Conform-Technology
C. Stadelmann (Sp), M. Böhm, M. Hartmann, R.F. Singer, Neue Materialien Fürth GmbH (Germany)

Highlight Lecture

Modelling Constrained Sintering Using Limited Experimental Data
J. Pan (Sp), R. Huang, University of Leicester (UK)

Symposium: C34
Room: Stockholm

Nanoscaled Inorganic Materials by Molecular Design

Synthesis/Processing II

S. Kaskel, Technical University of Dresden (Germany)

Highlight Lecture

Synthesis of Mesoporous SiO2 and TiO2 Nanoparticles by Miniemulsion Technique
C. Weiß (Sp), R. Rossmanith, K. Landfester, J. Geserick, N. Hüsing, University of Ulm (Germany); P. Kubiak, M. Wohlfahrt-Mehrens, ZSW, Ulm (Germany); U. Hoermann, U. Kaiser, Y. Denkwitz, R. Behm, University of Ulm (Germany)

Oligophenothiazines – Coupled Redox Systems for Hole Transporters, Surface Functionalization, and Hybrid Materials
T.J.J. Müller, University of Düsseldorf (Germany)

Novel Organic/Inorganic Hybrid Materials by Covalent Anchoring Phenothiazines on Mesoporous Supports
Z. Zhou, W.R. Thiel (Sp), University of Kaiserslautern (Germany); A. Franz, T.J.J. Müller, University of Düsseldorf (Germany)

Preparation of Hierarchically Structured SnO for Li ion Batteries by an Aqueous Solution System
H. Uchiyama (Sp), H. Imai, Keio University, Yokohama (Japan); E. Hosono, Z. Haoshen, National Institute of Advanced Industrial Science and Technology, Tsukuba (Japan)

Metal Containing Precursor SiCN Ceramics - Molecular Precursor Design
G. Glatz (Sp), T. Schmalz, G. Motz, R. Kempe, University of Bayreuth (Germany)

Symposium: D11
Room: Lubljana

Tomography and Related 3D Techniques for Micro-/Nano Characterization

3 FIB-Tomography

F. Mücklich, Saarland University, Saarbrücken (Germany)

Highlight Lecture

3D-Orientation Microscopy in a FIB-SEM: A New Dimension of Microstructure Characterisation
S. Zaefferer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

FIB Nanotomography – A Versatile Tool for 3D Microstructure Analysis
F. Mücklich (Sp), A. Velichko, Saarland University, Saarbrücken (Germany)

Microstructure and Conductivity of Metal-Insulator Composites
J. Reuteler (Sp), M. Hütter, L.J. Gauckler, ETH Zurich (Switzerland)

Three Dimensional Field Ion Microscopy: Tomography at the Atomic Scale
F. Danoix (Sp), Université de Rouen, St Etienne (France); T. Al Kassag, University Göttingen (Germany); P. Jessner, S. Cazottes, F. Vurpillot, Université de Rouen, St Etienne (France)

Oral Poster - Subsession
Poster 1: D11-1720
Poster 2: D11-1301
Poster 3: D11-1263
Poster 4: D11-836
Poster 5: D11-1562

Symposium: C51
Room: Shanghai

Thin Film Technology

Structured Thin Film Concepts

K. Bouzakis, Aristoteles University Thessaloniki (Greece)

Structure and Properties of (TiB2-B4C) Thin Films
R. Andrievskiy (Sp), G.V. Kalinnkov, Russian Academy of Sciences, Moskau (Russian Federation); J. Neidhardt, C. Mitterer, University of Leoben (Austria)

Metallic NEMS Components Fabricated from Nanocomposite Al-Mo Films
V. Radmilovic (Sp), Z. Lee, U. Dahmen, University of California, Berkeley, CA (USA); C. Ophus, L.M. Flscher, N. Nelson-Fitzpatrick, K.L. Westra, S. Evoy, D. Mitlin, University of Alberta, AB (Canada)

Mechanical and Structural Properties of CrN/C(N) and CrSiN/C(N) Nanoscale Multilayers Deposited by Reactive Magnetron Sputtering
D. Mercs (Sp), P. Briois, C. Petitot, LERMPS-UTBM, Belfort (France); V. Demange, LSGS-ENSMN, Nancy (France); C. Coddet, LERMPS-UTBM, Belfort (France)

Tailoring bcc Thin Film Microstructures
G. Richter (Sp), A. Huber, P. Jüllig, A. Schneider, T. Wübben, E. Arzt, Max Planck Institute for Metals Research, Stuttgart (Germany)

Direct Current Behavior and Doping of Thin Carbon Films Fabricated by Electron Beam Induced Deposition
M. Hüppe (Sp), H. Hildebrand, J. Kunze, P. Schmuki, University of Erlangen-Nuremberg (Germany)

Symposium: C52
Room: Singapur

Thick Coating Developments and Technology

Nanostructured Coating Concepts

K. Möhwald, Leibniz University Hanover, Witten (Germany)

Keynote Lecture

Improved Properties with Nanostructured Ceramic HVOF Coatings
E. Turunen (Sp), T. Varis, VTT Technical Research Centre of Finland, Espoo (Finland); J. Silvonen, J. Knuuttila, Millidyne Oy, Tampere (Finland)

Fabrication and Characterisation of Nanostructured Oxide and Non-Oxide Coatings Deposited by Atmospheric Plasma Spraying
E. Sanchez, V. Cantavella, E. Bannier (Sp), Universitat Jaume I, Castellon (Spain); M.D. Salvador, Universidad Politeacute de Valencia (Spain); F. Segovia, Universidad Politecnica de Valencia (Spain) et al.

Ceramic Nanostructured Coatings Elaborated by Suspension Plasma Spraying
F.-L. Toma (Sp), L.-M. Berger, C.C. Stahr, T. Naumann, Fraunhofer Institute for Material and Beam Technology, Dresden (Germany)

Development and Thermal Fatigue Behaviour of Thick and Porous Thermal Barrier Coatings Systems
C. Giolli, University of Firenze (Italy); A. Scrivani (Sp), Turbocoating s.p.a., Rubbiano di Solignano (Italy); A. Fossati, F. Borgioli, University of Firenze (Italy); G. Rizzi, Turbocoating s.p.a., Rubbiano di Solianano (Italv)

Symposium: C53 Room: Neu-Dehli	Symposium: C42 Room: Krakau	Symposium: C43 Room: Budapest	Symposium: X22 Room: Kiew	Symposium: C21 Room: Seoul	Symposium: BI Room: Istanbul	
Chemical, Electrochemical and Plasmachemical Surface Treatment and Plating	**Ionic Liquids: New Solvents for Chemical and Electrochemical Processing /Molten Salts**	**Slag Metallurgy, Engineering and Valorization**	**Automotive Advanced Materials**	**Joining: Processes**	**Bernhard Ilschner Memorial**	
Anodic and Plasma Anodic (PEO) Processes II	Electrodeposition	Slags II	Steels	Friction Stir Welding	Bernhard Ilschner Memorial I	
G. Nauer, ECHEM-Center of Competence, Wiener Neustadt (Austria)	S. Zein El Abedin, Technical University of Clausthal, Clausthal-Zellerfeld (Germany)	H. Gaye, Pohang University of Science and Technology (Korea, Republic)	E. Beeh, German Aerospace Center (DLR), Stuttgart (Germany)	F. Balle, University of Kaiserslautern (Germany)	P. Portella, Federal Institute for Materials Research and Testing, Berlin (Germany)	
The Thermal Conductivity of PEO Coatings on Titanium Alloys J.A. Curran (Sp), University of Cambridge (UK); J. Paillard, I.O. Golosnoy, T.W. Clyne, Cambridge University (UK)	Highlight Lecture **A General Overview on the Electrodeposition in Ionic Liquids** S. Zein El Abedin (Sp), F. Endres, Technical University of Clausthal, Clausthal-Zellerfeld (Germany)	**Reduction of Tin Oxide in Slag with Natural Gas** L. Segers (Sp), Université libre de Bruxelles, Brüssel (Belgium); H. Choque Huyhua, Pontificia Universidad Catolica del Peru, Lima (Peru)	**Are "Industrial" Constitutive Equations Intrinsic to Materials or Do Their Identification Depend on Their Application Scope?** F. Moussy, Renault SA, Guyancourt (France)	Highlight Lecture **Friction Stir Welding: A State of the Art Review** R. Zettler (Sp), A.A.M. da Silva, J.F. dos Santos, GKSS Research Center, Geesthacht (Germany)	**Plasticity and Microstructure of Crystalline Materials** W. Blum, University of Erlangen-Nuremberg (Germany)	14:40
The Effect of Al in the Substrate and/or The Electrolyte on the Microstructure of PEO Coatings on Titanium Alloys J. Paillard (Sp), Cambridge University (UK); K. Lange, J.A. Curran, T.W. Clyne, University of Cambridge (UK)	**Magnesium Corrosion in Water Containing Ionic Liquids** A. Shkurankov (Sp), S. Zein El Abedin, F. Endres, Technical University of Clausthal (Germany)	**Dross Formation on the Top of the Molten Aluminum** L. Zhang (Sp), A. Ciftja, Norwegian University of Science and Technology, Trondheim (Norway)	**Numerical Simulation and Modern Mechanical Surface Treatments for Tooth Gear Optimisation** C. Haberer (Sp), H. Leitner, I. Gódor, W. Eichsleder, University of Leoben (Austria)	**Magnesium-Steel Joints Produced by Friction Stir Welding** J.F. dos Santos, A. Glatz, N. Hort, S. Sheikhi, C.A. Weis Olea (Sp), GKSS Research Centre, Geesthacht (Germany)	**Some Microstructural Aspects of High-Temperature Deformation of Monocrystalline Nickel-Base Superalloys** H. Mughrabi, University of Erlangen-Nuremberg (Germany)	15:00
In-Depth Analysis of the Chemical Composition of Thick Coatings V.-D. Hodoroaba, Federal Institute for Materials Research and Testing, Berlin (Germany)	**Electrodeposition of Semiconductors in Ionic Liquids** N. Borisenko (Sp), S. Zein El Abedin, F. Endres, Technical University of Clausthal, Clausthal-Zellerfeld (Germany)	**Formation of Calcium Zirconate Compound in Stainless Steel Slags Containing ZrO2** J. Park, POSCO, Pohang (Korea, Republic)	**Increasing the Fatigue Limit by Thermomechanical Treatment** E. Kerscher (Sp), K.-H. Lang, O. Vöhringer, D. Löhe, University of Karlsruhe (Germany)	**Aluminium-Rich FexAly(Siz) Phase Formation in Al/Steel Welds with AlSi Fillers** L. Agudo (Sp), A. Kostka, S. Weber, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); J. Wagner, E. Arenholz, voestalpine Stahl GmbH, Linz (Austria); J. Bruckner, Fronius International. Wels (Austria) et al.	**High Strength Wires for the Piano Sound** W. Kurz, Ecole Polytechnique Fédérale de Lausanne (Switzerland)	15:20
Oral Poster - Subsession Poster 1: C53-1207 Poster 2: C53-1680 Poster 3: C53-2143	**Effect of Diluents on the Speciation and Rate of Deposition from Chloroaluminate Ionic Liquids** K. Ryder (Sp), A.P. Abbott, F. Qiu, University of Leicester (UK)	**The Risk Assessment of Lead Blast Furnace Slag: A Combined Multi-Scale Approach** N. Seignez (Sp), A. Gauthier, University of Lille, Villeneuve d'ascq (France)	**Optimization Of C/D Ratio Of Adjacent Pre Stressed Holes Using Finite Element Analysis** S. Nagaraj (Sp), S.C. Sharma, R.S. Kulkarni, R.V.College of Engineering, Bangalore (India)	**Investigation of Intermetallic FexAly-Interlayers Formed in Steel-Aluminium Joinings** K. Lau (Sp), F.-W. Bach, Leibniz Universität Hannover, Garbsen (Germany)	**Thermal Fatigue of Metallic Alloys** F. Rezaï-Aria, Ecole des Mines d'Albi-Carmaux (France); L. Remy (Sp), Ecole des Mines de Paris, Evry (France)	15:40
	Electrochemical Deposition of Tantalum from Ionic Liquids: The Mixtures 1-Butyl-1-Methylpyrrolidinium Chloride-Potassium Heptafluorotantalate S. Ekres (Sp), O.B. Babushkina, G.E. Nauer, ECHEM Centre of Competence in Applied Electrochemistry, Wiener Neustadt (Austria)	**Oral Poster - Subsession** Poster 1: C43-365 Poster 3: C43-1261	**High Temperature Properties of High Performance 30%Ni and 70%Ni Superalloys for Engine Exhaust Valves** S. Ueta (Sp), S. Kurata, T. Shimizu, T. Noda, Daido Steel Co. Ltd., Nagoya (Japan)		**Superplasticity in Intermetallics** K.A. Padmanabhan (Sp), M.R. Basaria, Anna University, Madras (India)	16:00

pm2 ↓

	Symposium: B22 Room: Oslo	Symposium: B24 Room: Kopenhagen	Symposium: B25 Room: Riga	Symposium: B21 Room: Prag	Symposium: B11 Room: Belgrad	Symposium: B41 Room: Hongkong
	High Temperature Metallic and Intermetallic Materials	**Metal Matrix Composites**	**Highly Porous Metals and Ceramics**	**Complex Metallic Alloys**	**Advanced Nanostructures**	**Heat Sink and High Temperature Composites**
	Superalloys II H. Klingelhöffer, Federal Institute for Materials Research and Testing, Berlin (Germany)	Processing and Mechanical Properties of MMCs S. Barnes, University of Manchester (UK)	Processing J. Kovácik, Slovak Academy of Sciences, Bratislava (Slovak Republic)	Properties II E. Belin-Ferré, Universite Pierre & Marie Curie, Paris (France)	Nanocrystalline Ceramics W. Clegg, University of Cambridge (UK)	Metal based Heat Sinks A. Kelly, University of Cambridge (UK)
17:00	Highlight Lecture **The Effect of Casting Conditions on Microstructure and Properties of Directionally Solidified Superalloys** M. Lamm (Sp), R.F. Singer, University of Erlangen-Nuremberg (Germany)	**Mechanical Properties of Al/ Al-Cu-Fe HIP Sintered Composite Materials** A. Joulain (Sp), T. El Kabir, V. Gauthier, S. Dubois, J. Bonneville, University of Poitiers, Futuroscope Chasseneuil (France)	Highlight Lecture **Novel Manufacturing Process for Metal and Ceramic Microhoneycombs** L. Tuchinskiy (Sp), R. Loutfy, MER Corp., Tucson, AZ (USA)	Highlight Lecture **o-Co4Al13, a Low-Scale Prototype of Complex Metallic Alloys** Y. Grin (Sp), Max Planck Institute for Chemical Physics of Solids, Dresden (Germany); B. Bauer, LMU, München (Germany); U. Burkhardt, R. Cardoso Gil, Max Planck Institute for Chemical Physics of Solids, Dresden (Germany) et al.	Keynote Lecture **Processing and Properties of Nanostructured Zirconia** J. Binner (Sp), B. Vaidhyanathan, A. Annapoorani, A. Paul, B. Raghupathy, University of Loughborough (UK)	Highlight Lecture **High Conductivity Copper-Carbon Composites** T. Schubert, H. Weidmüller, Fraunhofer Institute for Manufacturing Technology and Applied Materials Research, Dresden (Germany) et al.
17:20	**Effect of Combining Gamma-Prime Precipitation and Oxide Dispersion on the Dynamic Strength of Ni-Base Superalloys** M. Nganbe (Sp), University of Ottawa, ON (Canada); M. Heilmaier, Otto-von-Guericke-University Magdeburg (Germany)	**Interfacial Intermetallic Growth in Fe Fibre Reinforced Al Alloys** S. Kenningley (Sp), Federal Mogul, Weisendorf (Germany); Y. Sun, University of South Carolina, Colombia, SC (USA); S. Barnes, University of Manchester (UK); T. Shiraishi, NHK Spring Co, Yokohama (Japan)	**Don't Freeze Twice, It's Alright: Porous Ceramics and Composites with Complex Hierarchy** S. Deville (Sp), C. Guizard, Saint-Gobain CREE, Cavaillon (France)	**Orientation-Dependent NMR Study of the Giant-Unit-Cell Al-Rich Intermetallics** J. Dolinsek (Sp), P. Jeglic, University of Ljubljana (Slovenia)		**Thermophysical Properties of Copper-Diamond Composites Made from PVD Coated Diamonds** E. Neubauer (Sp), Austrian Research Centers GmbH, Seibersdorf (Austria); J. Hell, C. Eisenmenger-Sittner, Vienna University of Technology (Austria); P. Angerer, ECHEM GmbH, Wiener Neustadt (Austria)
17:40	**Effect of Carbon Additions on Hot Tearing of a Second Generation Nickel-Base SuperAlloy** Y. Zhou (Sp), University of Birmingham (UK); A. Volek, University of Erlangen-Nuremberg (Germany)	**FeCrSi Fiber Reinforced Aluminum Alloy Composites Prepared by Low-Pressure Infiltration Method** G. Sasaki (Sp), T. Yamanaka, Y.-b. Choi, K. Matsugi, O. Yanagisawa, Hiroshima University, Higashi-Hiroshima (Japan)	**Cellular Titanium by Selective Electron Beam Melting** P. Heinl (Sp), C. Körner, University of Erlangen-Nuremberg (Germany)	**Surface of Complex Metallic Alloys** R. Addou, T. Duguet, T. Deniozou, CNRS, Nancy (France); M. Heggen, M. Feuerbacher, Research Centre Juelich (Germany); O. Gröning, EMPA, Dübendorf (Switzerland); J.M. Dubois, J. Ledieu, V. Fournée (Sp). CNRS. Nancy (France)	**Synthesis and Electrical Characterization of Fully Dense Nanocrystalline Ceramic Materials Obtained by High-Pressure Spark Plasma Sintering** F. Maglia (Sp), U. Anselmi-Tamburini, University of Pavia (Italy); G. Chiodelli, IENI-CNR, Pavia (Italy); Z.A. Munir, University of California, Davis, CA (USA)	**SiC Long Fibre Reinforced Copper for the Divertor Heat Sink** A. Brendel (Sp), T. Koeck, H. Bolt, Max Planck Institute for Plasma Physics, Garching (Germany); T. Brendel, MTU Aero Engines, München (Germany)
18:00	**Pt-Base Superalloys – The Current State-of-the-Art** R. Voelkl (Sp), M. Wenderoth, J. Preussner, University of Bayreuth (Germany); S. Vorberg, B. Fischer, University of Applied Sciences, Jena (Germany); U. Glatzel, University of Bayreuth (Germany)	**Microstructure and Mechanical Properties of Wear Resistant Fe-Base MMC Produced by Hot Direct Extrusion** M. Karlsohn (Sp), W. Theisen, Ruhr-University Bochum (Germany)	**Aerated Autoconclaved Concrete: A High-Potential Support for Heterogeneous Catalysis** D. Vasilakakis (Sp), P. Ptácek, J. Havlica, L. Mörl, Otto-von-Guericke-University Magdeburg (Germany)	**Metadislocations in Complex AlPdMn-Phases** M. Engel, University of Stuttgart (Germany)	**Fabrication of Bulk Nanocrystalline Ceramic Materials** T. Chraska (Sp), P. Rohan, J. Dubsky, B. Kolman, K. Neufuss, Institut of Plasma Physics ASCR, Prague (Czech Republic)	**The Design of the Interface in SiC-Fibre and W-Filament Reinforced CuCr1Zr as a Heat Sink Material in Fusion Reactors** P.W.M. Peters (Sp), D. Muchilo, J. Hemptenmacher, H. Schurmann, German Aerospace Center (DLR), Cologne (Germany)
18:20	**Oral Poster - Subsession** Poster 1: B22-2034 Poster 2: B22-1509 Poster 3: B22-113 Poster 4: B22-355 Poster 5: B22-408	**Properties of Cu ¡V 10 vol. % MWCNTs Composite Material** S. Emmer (Sp), J. Kovácik, J. Bielek, Slovak University of Technology, Bratislava (Slovak Republic)	**Aluminium Alloy Foaming by Hybrid Process** Y.P. Kathuria, I. I. T. Bombay, Mumbay (India)	**Defects and Plasticity of Complex Metallic Alloys** M. Feuerbacher (Sp), M. Heggen, M. Lipinska-Chwalek, S. Roitsch, Research Centre Juelich (Germany)	**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)	**Cu/W Heat Sink with Extremely High Thermal Stability** K. Ivdinsky (Sp), F. Simanèik, J. Koráb, I. Kramer, P. Stefánik, S. Kaveck, A. Csuba, M. Zemanková, T. Dvorák, T. Srámková, Slovak Academy of Sciences, Bratislava (Slovak Republic)

Monday

Symposium: D21
Room: Zagreb

Mechanical and Fracture Behavior in Nanomaterials and Nano Structures

Nanostructures and Fracture Mechanisms

R. Dauskardt, Stanford University (USA)

Mechanical Properties of Metallic Nanowires
L. Philippe (Sp), I. Peyrot, J. Michler, Eidgenössische Materialprüfungs- und Forschungsanstalt (EMPA), Thun (Switzerland)

Fatigue Behavior of Pure Metals at Nanocrystalline and Ultrafine Grain Size Scale
P. Cavaliere (Sp), University of Salento, Lecce (Italy); S. Suresh, Massachusetts Institute of Technology, Cambridge, MA (USA)

Fracture and Buckling of Thin Brittle Coatings under Uniaxial Loading
S. Frank (Sp), U.A. Handge, R. Spolenak, ETH Zurich (Switzerland)

Mechanisms of Fracture in Crystals under Low and Shock-Wave Stresses
V.P. Kisel, Russian Academy of Sciences, Chernogolovka (Russian Federation)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Modelling: Growth/Dissolution

E. Aeby-Gautier, Ecole des Mines, Nancy Cedex (France)

A Sharp Interface Model for Solid-State Phase Transformations under Homogenization Conditions
S. van der Zwaag (Sp), E. Javierre, F.J. Vermoelen, C. Vuik, Delft University of Technology (Netherlands)

Modeling the Evolution of Globular Precipitates of Alpha Phase in Titanium Alloys during Various Treatments
B. Appolaire (Sp), J. Da Costa-Teixeira, E. Aeby-Gautier, Ecole des Mines, Nancy (France)

Highlight Lecture

A Phenomenological Modelling Approach to the Transition from Lamellar to Massive Microstructures in Gamma-TiAl
A. Rostamian (Sp), A. Jacot, École Polytechnique Fédérale de Lausanne (Switzerland)

A Numeric Simulation on the Microstructure Evolution of 3xxx Alloys during Homogenization
Y. Li (Sp), T. Pettersen, T. Furu, Hydro Aluminium, Sunndalsöra (Norway)

Modeling of Kinetics in Ni-Based Alloys with Magnetic and Chemical Order
H. Zapolsky (Sp), S. Bokoch, R. Patte, D. Blavette, University of Rouen, Saint-Etienne du Rouvray (France)

Symposium: C32
Room: Helsinki

Powder Processing from Powders to Complex Products and Innovation

Forming Components

F. Moussy, Renault S.A.S., Guyancourt (France)

Direct and Indirect Fabrication of Ceramic Prototypes Using Rapid Prototyping
J. Homa (Sp), J. Stampfl, Vienna University of Technology (Austria)

Homogeneously Coagulated Multi-walled CNT-Alumina Composite Powders through Electrostatic Attraction
M. Estili (Sp), A. Kawasaki, H. Sakamoto, Y. Mekuchi, M. Kuno, T. Tsukada, Tohoku University, Sendai (Japan)

Highlight Lecture

Rotational Moulding : Technology Transfer to the Ceramics Industry
P. Jackson (Sp), CERAM Research, Stoke on Trent (UK); I.A. Al-Dawery, Sandvik Hard Metals, Coventry (UK); J. Binner, Loughborough University (UK); G. Tari, CERAM Research, Stoke on Trent (UK)

Innovative Processing of Metal-Ceramic Composites through a Colloidal Approach
R. Moreno (Sp), A.J. Sánchez-Herencia, B. Ferrari, Condejo Superior de Investigaciones Cientificas, Madrid (Spain)

Oral Poster - Subsession
Poster 1: C32-1191
Poster 2: C32-615
Poster 3: C32-1875

Symposium: C34
Room: Stockholm

Nanoscaled Inorganic Materials by Molecular Design

Properties and Applications I

D. Rafaja, Technical University of Freiberg (Germany)

Highlight Lecture

Designing Inorganic Glasses to Meet Specific Elastic Properties
T. Rouxel, University of Rennes (France)

Impact of Precursor Molecular Weight Distribution on Development and Properties of SiOC Ceramics
M. Esfehanian (Sp), M. Haußmann, R. Oberacker, H. Bockhorn, University of Karlsruhe (Germany)

Transparent and Flexible Silica Aerogels - Synthesis and Properties
B. Milow (Sp), M. Claas, L. Ratke, German Aerospace Center - DLR, Cologne (Germany)

Phase Transformation Behaviour and Enhancement of Piezoelectricity in Nanoscale NaNbO3 Derived from Microemulsion Mediated Synthesis
C. Pithan, Research Centre Juelich (Germany)

Metal Modified, Porous SiCN-Precursor Ceramics
T. Schmalz (Sp), W. Krenkel, G. Motz, R. Kempe, G. Glatz, University of Bayreuth (Germany)

Symposium: D11
Room: Lubljana

Tomography and Related 3D Techniques for Micro-/Nano Characterization

Electron-Tomography

F. Lasagni, Vienna University of Technology (Austria)

Keynote Lecture

Atom Probe Tomography: 3D Imaging at the Atomic Scale
A. Cerezo, Oxford University (UK)

Three Dimensional Imaging in Controlled Pressure Scanning Electron Microscopy
P. Jornsanoh (Sp), G. Thollet, K. Masenelli-Varlot, C. Gauthier, MATEIS - UMR CNRS 5510, Villeurbanne (France)

Characterization of Tungsten Nano-Dots by STEM Tomography
J.-L. Lue (Sp), H. Wang, T. Wang, ProMOS Technologies Inc., Hsinchu (Taiwan)

Nanoscale Materials Analysis by Electron Tomography
B.J. Inkson (Sp), G. Möbus, X.J. Xu, Z. Saghi, Y. Peng, The University of Sheffield (UK)

Symposium: C51
Room: Shanghai

Thin Film Technology

Structured Thin Film Concepts

J.T. De Hosson, University of Groningen (Netherlands)

Growth of Nanostructured Charge-Density-Wave Oxide Rb0.3MoO3 by Pulsed Laser Deposition
D. Dominko, K. Biljakovic, Tomeljak (Sp), D. Mihailovic, J. Demsar, "J. Stefan" Institute, Ljubljana (Slovenia); G. Socol, C. Ristoscu, I.N. Mihailescu, National Institute for Lasers, Bucharest (Romania)

Development of Surface Modified Alumina for High Performance Friction Applications
R. Wallstabe (Sp), University of Karlsruhe (Germany); M. Rohde, Forschungszentrum Karlsruhe GmbH (Germany); J. Schneider, K.-H. Zum Gahr, University of Karlsruhe (Germany)

Structural Characterization of Silver Containing Titania Nanocomposite Films Synthesized by RF-Magnetron Sputter Deposition
J. Zuo (Sp), P. Keil, G. Grundmeier, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Microstructure and Abrasive Wear Properties of Coatings Deposited by Arc Spraying Cored Wires with Carbide Ceramic
B. Fu (Sp), F.Y. Zhang, J.M. Jiang, Z.H. Wang, Beijing University of Technology (China)

Adhesion and Failure Mechanisms of Chromium Oxide Coatings Subjected to Scratch Tests
K. Gao (Sp), F. Luo, X.L. Pang, University of Science and Technology Beijing (China)

Symposium: C52
Room: Singapur

Thick Coating Developments and Technology

Diagnostics and Simulation

C. Coddet, Université de Technologie de Belfort-Montbéliard (France)

Artificial Neural Networks Vs. Fuzzy Logic: Simple Tools to Predict and Control Complex Processes - Application to Plasma Spray Processes
A.-F. Kanta (Sp), M.-P. Planche, UTBM, Université de Technologie de Belfort-Montbéliard (France); G. Montavonspcts, University of Limoges (France); C. Coddet, UTBM, Université de Technologie de Belfort-Montbéliard (France)

Quantification of Heat and Mass Transfers through Thick Thermal-Sprayed Porous Layers
R. Bolot, University of Technology of Belfort-Montbéliard (France); G. Antou, ENSCI, Limoges (France); G. Montavon (Sp), University of Limoges (France)

Debonding of Thick Coatings on Metals under In-Plane Loading : Experiments and Cohesive Zone Modelling
S. Ryelandt (Sp), F. Delannay, A. Kizizie, K. van Acker, L. Delannay, Catholic University of Louvain, Louvain-la-Neuve (Belgium)

Microstructure Dependence on Temperature in a Solar Cladding Process. A Numerical Approach
C. Sanchez-Bautista (Sp), G.P. Rodriguez, University of Castilla-La Mancha, Ciudad Real (Spain); A. Ferriere, Laboratory of Processes, Odeillo (France)

Tomographic Investigation of Plasma Jets of Multi-Electrode Plasma Torches
J. Schein (Sp), K. Landes, G. Forster, J. Zierhut, Bundeswehr University Munich, Neubiberg (Germany)

Symposium: C53 Room: Neu-Dehli	Symposium: C42 Room: Krakau	Symposium: C34 Room: Budapest	Symposium: X22 Room: Kiew	Symposium: C21 Room: Seoul	Symposium: BI Room: Istanbul	
Chemical, Electrochemical and Plasmachemical Surface Treatment and Plating	**Ionic Liquids: New Solvents for Chemical and Electrochemical Processing /Molten Salts**	**Nanoscaled Inorganic Materials by Molecular Design**	**Automotive Advanced Materials**	**Joining: Processes**	**Bernhard Ilschner Memorial**	
Electroplating Processes I	Chemistry/Electrochemistry	Properties and Applications III	Advanced Materials	Diffusion Bonding	Bernhard Ilschner Memorial II	
M. Metzner, Fraunhofer Institute Manufacturing Engineering and Automation, Stuttgart (Germany)	I. Krossing, University of Freiburg (Germany)	M. Herrmann, Fraunhofer Institute for Ceramic Technologies and Systems, Dresden (Germany)	R. Rablbauer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	O. Dezellus, University of Lyon, Villeurbanne (France)	W. Nix, University of Stanford (USA)	
Increasing the Wear Resistance of Chromium Layers with Gradient- and Multilayers K. Romankiewicz, Fraunhofer Institute Manufacturing Engineering and Automation, Stuttgart (Germany)	**Ionic Liquids in Motion. First-Principles Simulations on Imidazolium Chloride-AlCl3 Ionic Liquids** B. Kirchner, University of Leipzig (Germany)	**Highlight Lecture** **Mesoporous Silicon Carbide Materials – A New High Temperature Stable Catalyst Support** E. Kockrick (Sp), Technical University of Dresden (Germany); U. Petasch, Fraunhofer-Institute for Ceramic Technologies and Systems, Dresden (Germany); P. Krawiec, Technical University of Dresden (Germany) et al.	**Production and Characterisation of Graphite Composites for Low Emission Combustion Engines** J. Narciso (Sp), S.A. Sanchez, F. Rodríguez-Reinoso, E. Louis, University of Alicante (Spain)	**Interfacial Chemistry and joint Microstructure of Alumina/Alumina and Copper/Alumina joints brazed by CuAg-Ti Alloys** O. Kozlova (Sp), R. Voytovich, Institute National Polytechnique de Grenoble, Saint Martin d´Hères (France); M.-F. Devismes, Schneider Electric, Varces Allières et Risset (France) et al.	**Creep of Ceramics: A Recollection** A. Mocellin, Plappeville (France)	**17:00**
Perspectives for Deposit of Chromium Layers from Trivalent Chrome Electrolytes J. Bohnet, Fraunhofer Institute Manufacturing Engineering and Automation, Stuttgart (Germany)	**f-Elements in Ionic Liquids** A.-V. Mudring (Sp), A. Getsis, S. Pitula, Ruhr-University Bochum (Germany)	**Silica Hybrids Containing Ionic Substructures: Versatile Materials for Catalysis and Separation** P. Hesemann (Sp), J.J.E. Moreau, CNRS UMR 5253, Ecole Nationale Supérieure de Chimie de Montpellier (France)	**Low-Temperature Oxidation Stabilization Studies of AR-Mesophase Pitch** Q. Li (Sp), University of Erlangen-Nuremberg, Fürth (Germany); C. Rottmair, B. Derfuss, A. Volek, University of Erlangen (Germany); P.C. Chau, B. Fathollahi, University of California, San Diego (USA)	**Fast Epitaxial High Temperature Brazing of Single-Crystalline Nickel Based Superalloys** S. Piegert (Sp), B. Laux, J. Rösler, Technical University Braunschweig (Germany)	**Casting with Liquid Metal Cooling: Single Crystal Turbine Blades with Decreased Cost and Improved Properties** R.F. Singer, University of Erlangen-Nuremberg (Germany)	**17:20**
ECD Deposition of Ni and Ni-P Composites P.L. Cavallotti (Sp), L. Magagnin, E. Pompei, K. Presia, Politecnico of Milan, Milano (Italy)	**Imidazolium Tosylates – Efficient Solvents for Free Radical Polymerization** V. Strehmel (Sp), E. Renaud, University of Potsdam, Golm (Germany); H. Wetzel, A. Laschewsky, Fraunhofer Institute for Applied Polymer Research, Golm (Germany)	**Microporous Inorganic Hollow Fiber Membranes (SiO2-MOx) via Molecular Design of Sol-Gel-Based Inorganic-Organic Hybrid Polymers (ORMOCER®s)** T. Ballweg, S. Metz (Sp), W. Storch, K.-H. Haas, Fraunhofer Institute for Silicate Research, Würzburg (Germany)	**Novel CMC Lightweight Component for Advanced Shock Absorber Systems** W. Hufenbach, Technical University of Dresden (Germany); C. Weimann, ThyssenKrupp Bilstein Suspension GmbH, Ennepetal (Germany); H. Richter (Sp), A. Langkamp, T. Behnisch, Technical University of Dresden (Germanv)	**Surface and Transport Properties of Al-Nb-Ti and Al-Ni-Ti Liquid Alloys** R. Novakovic (Sp), E. Ricci, National Research Council, Genova (Italy); D. Holland-Moritz, I. Egry, German Aerospace Center - DLR, Cologne (Germany)	**Ceramics in Microtechnology - Materials, Processes, Applications** J. Haußelt, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)	**17:40**
Safe Deposition of Chromium Based on Hexavalent Solutions G.A. Lausmann (Sp), M. Kurrle, IPT International Plating Technologies GmbH, Stuttgart (Germany)	**Ionic Liquids for the Electrodeposition of High Temperature, Corrosion Resistant Layers; the IOLISURF 6th Framework Project** U. Bardi (Sp), S. Caporali, University of Firenze, Sesto Fiorentino (Italy)	**On the Formation of Superhard Nanostructures in Bulk Materials Starting from Molecular and Solid State Precursors as Compared to Thin Films** M. Schwarz (Sp), T. Barsukova, E. Kroke, D. Rafaja, M. Motylenko, V. Klemm, G. Schreiber, Technical University of Freiberg (Germany); B. Fürderer, H. Reinecke, University of Freiburg (Germany)	**Effect of Alloying Metals and Preform Volume Fraction Ceramic/Aluminium Composite Materials Properties** N. Rojo-Calderon (Sp), J. Narciso, A. Rodríguez-Guerrero, E. Louis, F. Rodríguez-Reinoso, University of Alicante (Spain)	**Highlight Lecture** **Diffusion Bonding of Gamma-Titanium Aluminides** D. Herrmann (Sp), F. Appel, GKSS Research Center, Geesthacht (Germany)	**Diamondoid Stabilized Nanocrystalline Aluminum** J. Earthman, University of California, Irvine, CA (USA)	**18:00**
Shot Peening of Hard Chromium Coatings: Damage or Benefit? J. Wenzel (Sp), W. Pfeiffer, B. Blug, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany)	**Plasma Electrochemistry in Ionic Liquids: Deposition of Nanocrystalline Silver Particles** O. Höfft (Sp), M. Bretthollе, S. Zein El Abedin, F. Endres, Technical University of Clausthal, Clausthal-Zellerfeld (Germany)	**Modification of Micellar Solutions for Spin-Coating of Thick, Crack-Free Dielectric Layers and Their Properties** K. Schindler (Sp), A. Dellert, A. Roosen, University of Erlangen-Nuremberg (Germany)	**Highly Integrated Lightweight Solutions for the Vehicle Structure and New Concepts for Crash-Energy-Absorption** T. Lawson, Meridian Technologies Inc., Nottinghamshire (UK); C. Frantz, Meridian Technologies Inc., Stuttgart (Germany); H.E. Friedrich, G. Kopp, E. Beeh (Sp), German Aerospace Center - DLR, Stuttgart (Germanv)	**Interface Reaction Systematics in the Cu/In-48Sn/Cu System Bonded by Diffusion Soldering** S. Sommadossi (Sp), CONICET, Neuquen (Argentina); A. Fernandez-Guillermet, CONICET, San Carlos de Bariloche (Argentina)	**On the contribution of Carbides and Micro Grain Boundaries to the Creep Strength of Tempered Martensite Ferritic Steels** G. Eggeler, Ruhr-University Bochum (Germany)	**18:20**

	Symposium: B24 Room: Kiew	Symposium: B23 Room: Zagreb	Symposium: B25 Room: Oslo	Symposium: B12 Room: Lubljana	Symposium: B14 Room: Hongkong	Symposium: B41 Room: Kopenhagen
	Metal Matrix Composites	**Shape Memory and Amorphous Alloys**	**Highly Porous Metals and Ceramics**	**Ceramic Composite Concepts**	**Bioinspired Materials and Processes**	**Heat Sink and High Temperature Composites**
	Deformation and Fracture of MMCs S. Barnes, University of Manchester (UK)	Bulk Metallic Glasses V. Paidar, ASCR, Prague (Czech Republic)	Properties and Characterisation P. Colombo, University of Padova (Italy)	Ceramic Composites for Biomedical Applications M. Hoffmann, University of Karlsruhe (Germany)	Biominerals and Bioinspired Materials C. Zollfrank, University of Erlangen-Nuremberg (Germany)	Carbon based Heat Sinks L. Weber, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
11:00	Highlight Lecture **Changes of Residual Stresses and Micro Voids during Thermal Cycling of AlSiC MMCs** M. Schöbel (Sp), G. Requena, H.P. Degischer, Technical University of Vienna (Austria)	Highlight Lecture **Mechanical Properties of Nano Structure Controlled Zr-Al-Ni-Cu BMGs Using Icosahedral Local Structure** J. Saida (Sp), H. Kato, A.D.H. Setyawan, K. Yoshimi, A. Inoue, Tohoku University, Sendai (Japan)	Keynote Lecture **The Properties of Cellular Metals and Ceramics** M. Ashby, University of Cambridge (UK)	Highlight Lecture **Novel Nanocomposites for Bone Regeneration** A.P. Tomsia, Lawrence Berkeley National Laborator, CA (USA)	Highlight Lecture **FEMS Lecturer Award: Tailored Surface with Tunable Adhesion** A. del Campo, Max Planck Institute for Metals Research, Stuttgart (Germany)	**Heat Sinks Based in Carbon Technology** R. Prieto (Sp), J. Narciso, E. Louis, University of Alicante (Spain)
11:20	**Load Transfer in Short Fiber Reinforced Composites** G. Garces (Sp), CSIC, Madrid (Spain); G. Bruno, Corning SAS, Avon (France); A. Wanner, University of Karlsruhe (Germany)	**High Strain-Rate Compression of Zirconium- and Iron-Based Bulk Metallic Glasses** G. Sunny (Sp), V. Prakash, J. Lewandowski, Case Western Reserve University, Cleveland, OH (USA)		Highlight Lecture **Novel Nanocomposites for Bone Regeneration** A.P. Tomsia, Lawrence Berkeley National Laborator, CA (USA)	**Self-Assembly and Mineralization of Artificial Spicules of Marine Sponges** W. Tremel (Sp), M.N. Tahir, I. Shukoor, N. Loges, F. Natalio, P. Theato, H.C. Schröder, M. Schmidt, W.E.G. Müller, Johannes Gutenberg-University Mainz (Germany)	Highlight Lecture **Properties and Microstructure of Carbon Based Materials with Extremely High Thermal Conductivity** Q.G. Guo (Sp), Z.J. Liu, X.Q. Gao, L. Liu, Chinese Academy of Sciences, Taiyuan, Shanxi (China)
11:40	**Damage and Fracture of Particle-Reinforced Metal Matrix Composites** A. Hauert (Sp), A. Rossoll, A. Mortensen, Swiss Federal Institute of Technology, Lausanne (Switzerland)	**Investigations of New Composition Zr-Based Bulk Metallic Glasses** Y. Champion (Sp), S. Nowak, S. Guérin, P. Ochin, A. Pasko, CNRS, Vitry-sur-Seine (France)	**Correlation between Elastic Modulus, Shear Modulus, Poisson's Ratio and Porosity in Porous Materials** J. Kovácik, Slovak Academy of Sciences, Bratislava (Slovak Republic)	**Alumina with Zirconia Gradient - A Material for Endoprothetic Components** C. Ortmann (Sp), T. Oberbach, W. Glien, Mathys Orthopädie GmbH, Mörsdorf (Germany); D. Delfosse, Mathys AG Bettlach (Switzerland)	**Bioinspired Materials of Marine Origin: Innovative Silicon Carbide Ceramics** M. López Álvarez (Sp), L. Rial, J.P. Borrajo, P. Gonzalez, J. Serra, E. Solla, B. Leon, J.M. Sanchez, J. Martinez-Fernandez, University of Vigo (Spain); A.R. de Arellano-Lopez, F.M. Varela-Feria, University of Sevilla (Spain)	**Heat Sink Materials Reinforced with Continuous Pitch Based Carbon Fibers** K. Idinsky (Sp), I. Kramer, F. Simanèik, J. Koráb, P. Stefánik, P. Kaveck, A. Csuba, M. Zemanková, N. Frankovièová, T. Srámková, Slovak Academy of Sciences, Bratislava (Slovak Republic)
12:00	**Deformation Behavior and Strain Rate Sensitivity of PM-WE54 Alloy Matrix Composite at Elevated Temperatures** Z. Száraz (Sp), Z. Trojanová, Charles University, Prague (Czech Republic)	**High Temperature Deformation of Nanocomposites Glass/Crystal Derived from a Zr Based BMG** S. Gravier (Sp), Catholic University of Louvain, Louvain-la-Neuve (Belgium); J.J. Blandin, P. Donnadieu, SIMAP/INPG, CNRS/UJF, Saint-Martin d'Hères (France)	**Oxidation Protection on Silicon Carbide Foams** H.-P. Martin (Sp), G. Standke, J. Adler, Fraunhofer Institute for Ceramic Technologies and Systems, Dresden (Germany)	**New Ceramic Nanocomposites for Total Joint Arthroplasty** R. Torrecillas San Millán (Sp), INCAR-CSIC, Oviedo (Spain); J. Chevalier, INSA de Lyon (France); M. Miranda, INCAR-CSIC, Oviedo (Spain); L.A. Diaz, INCAR-CSIC, Lyon (France); S. Affatato, IOR, Bologne (Italy) et al.	**The Effect of Pillar Radius and Aspect Ratio on Bioinspired Fibrillar Adhesives** C. Greiner (Sp), E. Arzt, A. del Campo, Max Planck Institute for Metals Research, Stuttgart (Germany)	**Structural and Thermal Properties of Multilayer Cu/SHMCF and Cu/CNF Matrix Composite Materials Used for High Power Electronic Devices** J.-F. Silvain (Sp), C. Vincent, J.M. Heintz, ICMCB-CNRS, Pessac (France)
12:20	**Microstructural Study of an Al-7%Si Composite with High Strength and Increased Ductility Processed by Severe Plastic Deformation** I. Gutierrez-Urrutia (Sp), M.A. Muñoz-Morris, D.G. Morris, Centro Nacional de Investigaciones Metalúrgicas, Madrid (Spain)	**Structurally Inhomogeneous Bulk Metallic Glasses** J. Das (Sp), S. Pauly, Leibniz Institute for Solid State and Materials Research Dresden (Germany); B. Kim, Sejong University, Seoul (Korea, Republic); S. Yi, Kyungpook National University, Daeau (Korea. Republic) et al.	**Behaviour of Metallic Hollow Sphere Structures under Impact Loading Conditions** M. Vesenjak (Sp), University of Maribor (Slovenia); T. Fiedler, University of Aveiro (Portugal); Z. Ren, University of Maribor (Slovenia); A. Öchsner, University of Technology of Malaysia, Johor (Malavsia)	**Calcium Silicate Bioceramics** K. Sinkó (Sp), A. Meiszterics, L. Eötvös University, Budapest (Hungary)	**Biophotonic Device Fabrication by Layer-by-Layer Self-Assembly between Retinoic Acid and Chitosan and Their Photoreceptive Characteristic** S. Mitachi (Sp), Y. Tuchida, S. Sato, H. Nakayama, Tokyo University of Technology (Japan)	**Manufacture of Copper Matrix Composites Reinforced with High Volume Fraction of Carbon Nanofibres for Heat Management Applications** J. Barcena (Sp), J.I. Sarries, J. Maudes, M. Garcia de Cortazar, P. Egizabal, J. Coleto, INASMET-TECNALIA, San Sebastian (Spain)

Tuesday

Symposium: C11
Room: Istanbul

Solidification Processes, Microstructures and Defects

Kinetics

A. Jacot, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Keynote Lecture

Metastable Solids from Undercooled Melts
D.M. Herlach, German Aerospace Center - DLR, Cologne (Germany)

Numerical Study on Initial Transients during Rapid Solidification
M. Buchmann (Sp), M. Rettenmayr, Friedrich Schiller University Jena (Germany)

Twinned Dendrite Growth Directions in Aluminium Alloys
M.A. Salgado Ordorica (Sp), J. Vannod, M. Rappaz, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Influence of the Dendritic Tip Scaling Parameter in 2D and 3D on Solidification Modelling of Metallic Alloys
M. Rebow (Sp), Dublin Institute of Technology (Ireland); M. Seredynski, J. Banaszek, Warsaw University of Technology (Poland)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Microstructure Evolutions

S. van der Zwaag, Delft University of Technology (Netherlands)

Towards a Physically Based Through-Process Model for the Production of Cold Rolled Dual-Phase Steels
C. Bos (Sp), J. Sietsma, Delft University of Technology (Netherlands)

A New Approach for Modelling Recrystallization Kinetics
E. Pineda (Sp), P. Bruna, J.I. Rojas, D. Crespo, Universitat Politecnica de Catalunya, Castelldefels (Spain)

Thermal History, Microstructure and Phase Transformations
W.J. Kaluba (Sp), T. Kaluba, Université du Littoral- Côte d'Opale, Longuenesse (France)

Development of Measurement Technique for Optimization of Vacuum Carburizing Process
M. Bruncko (Sp), University of Maribor (Slovenia); A.C. Kneissl, University of Leoben (Austria); I. Anzel, University of Maribor (Slovenia)

Phase Analyses of a 2507 Duplex Steel through EBSD
P. Bassani (Sp), F. Passaretti, University of Lecco (Italy); I. Calliari, K. Brunelli, G. Rebuffi, University of Padua, Padova (Italy)

Symposium: C32
Room: Riga

Powder Processing from Powders to Complex Products and Innovation

Processing Nanomaterials

J. Binner, University of Loughborough (UK)

Synergized Processing of Nanohybrids of Enhanced Nanocrytallinity
J. Wang (Sp), A.H. Yuwono, Y. Zhang, W. Ji, The National University of Singapore (Singapore)

Colloidal Behaviour of Aqueous Suspensions of Nanosized Gamma-Al2O3 Powders
C. Tallon (Sp), M.I. Nieto, R. Moreno, Instituto de Ceramica y Vidrio, Madrid (Spain); L. Bergström, Stockholm University (Sweden)

Highlight Lecture

Microwave Hybrid Sintering of Nanostructured Ceramics
B. Vaidhyanathan (Sp), J. Binner, A. Paul, Loughborough University (UK)

Effect of Sintering Conditions on microstructural Parameters of Hydroxyapatite Nanopowders prepared by Sol-gel Method
M.H. Fathi (Sp), A. Hanifi, Isfahan University of Technology, Esfahan (Iran)

Development of New Nanocrystalline Composite Materials
N. Jalabadze (Sp), R. Chedia, A. Mikeladze, T. Kukava, L. Nadararia, Georgian Technical University, Tbilisi (Georgia)

Symposium: C34
Room: Stockholm

Nanoscaled Inorganic Materials by Molecular Design

Properties and Applications II

P. Kroll, RWTH Aachen University (Germany)

Keynote Lecture

Carbonaceous Non–Crystalline Polymer–Like Multifunctional Ultrahigh–Temperature Ceramics
R. Raj, University of Colorado, Boulder, CO (USA)

2D Arranged Carbon Nanotubes as Scaffolds for Electrochemical Applications
J. Schneider (Sp), A. Popp, Technical University of Darmstadt (Germany)

Polysiloxane Derived Si(Al,B)OC Bulk Ceramics for High-Temperature Resisting Sensors
L. Toma (Sp), R. Hauser, R. Riedel, Technical University of Darmstadt (Germany)

Novel Membrane Materials for High Temperature PEM Fuel Cells Based on Polysiloxanes and Functionalized Mesoporous Oxides
M. Wark (Sp), Leibnitz Universität Hannover (Germany); R. Marschall, S. Frisch, J. Caro, Leibniz Universität Hannover (Germany) et al.

Symposium: C31
Room: Helsinki

Powder Synthesis - Solution Precipitation, Gas Phase and Physical Methods

Precipitation and Synthesis from Solution

P. Bowen, STI IMX LTP , Lausanne (Switzerland)

Keynote Lecture

Synthesis of Nanoparticles from Solution. Thermodynamic and Kinetic Modelling
A. Testino, Università degli Studi di Milano Bicocca (Italy)

Synthesis and Characterisation of Coated Manganese Nanoparticles
M. Ward (Sp), R. Brydson, R. Cochrane, University of Leeds (UK)

Synthesis and Characterization of Spherical Indium Hydrate Particles
S.E. Lin (Sp), C.J. Wei, National Taiwan University, Taipei (Taiwan)

The Influence of Structure and Morphology of Ti Precursor on the Hydrothermal Synthesis of BaTiO3 Nanoparticles
F.V. Maxim (Sp), P. Ferreira, P.M. Vilarinho, University of Aveiro, CICECO (Portugal)

Symposium: D12
Room: Prag

Advances in Scanning Probe Microscopy and Atomic Level Imaging

Scanning Probe Microscopy

M. Göken, University of Erlangen-Nuremberg (Germany)

Highlight Lecture

Nanotribology, Nanomechanics and Materials Characterization Studies Using Scanning Probe Microscopy
B. Bhushan, The Ohio State University, Columbus,OH (USA)

Plastic and Ferroelelastic Response of BaTiO3 during Nanoindentation Applying Piezo Response Force Microscopy
G.A. Schneider (Sp), T. Scholz, Hamburg University of Technology (Germany); M. Swain, University of Sydney (Australia); B. Clegg, University of Cambridge (UK)

Understanding the Metallic Corrosion with In Situ AFM Measurements
G. Mendizabal (Sp), T. Appel, ThyssenKrupp Steel, Dortmund (Germany)

In-Situ Bulge Testing of Thin Films in an Atomic Force Microscope
E. Schweitzer (Sp), M. Göken, University of Erlangen-Nuremberg (Germany)

Nanotomography Based on Scanning Probe Microscopy
N. Rehse, Chemnitz University of Technology (Germany)

Symposium: C52
Room: Shanghai

Thick Coating Developments and Technology

Coating Properties and Behaviour

E. Turunen, VTT Technical Research Centre of Finland, Espoo (Finland)

Abrasion Resistance of Iron-Based Arc-Sprayed Coatings by Implementing Robust Designed Process Conditions into the Feedstock Wire Development
F.-W. Bach, K. Möhwald, M. Erne (Sp), Leibniz Universität Hannover, Witten (Germany); T. Wenz, F. Schreiber, Durum Verschleiss-Schutz GmbH, Willich (Germany)

Influence of a Sealing Treatment on the Behavior of Plasma-Sprayed Alumina Coatings
G. Berard, P. Brun, J. Lacombe, CEA, Bagnols-sur-Cèze (France); G. Montavon (Sp), A. Denoirjean, University of Limoges, Limoges (France)

Wear and Corrosion Resistance of HVOF Sprayed Iron-Based Hard Coatings
B. Wielage, H. Pokhmurska, T. Grund, C. Rupprecht, S. Schuberth (Sp), Chemnitz University of Technology (Germany); A. Wank, GTV Verschleiss-Schutz GmbH, Luckenbach (Germany) et al.

Enhanced TBC Systems for Coating Gas Turbine Baskets, Combustion Chamber and Transition Pieces
A. Scrivani, G. Rizzi, A. Lanzi, C. Giolli (Sp), Turbocoating SpA, Rubbiano di Solignano (Italy)

Microstructure and Properties of HVOF-Sprayed WC-(W,Cr)2C-Ni Coatings
L.-M. Berger (Sp), T. Naumann, S. Saaro, Fraunhofer Institute for Materials and Beam Technology, Dresden (Germany); M. Kasparova, F. Zahálka, Skoda Vazkum s.r.o., Plzen (Czech Republic)

Symposium: C53 Room: Seoul	Symposium: C41 Room: Neu-Delhi	Symposium: X23 Room: Krakau	Symposium: X22 Room: Budapest	Symposium: C21 Room: Singapur	Symposium: Ex Room: Forum Sydney	
Chemical, Electrochemical and Plasmachemical Surface Treatment and Plating	**Molten Salts / Advanced Aqueous Processing**	**Materials for Aerospace Structures and Propulsion**	**Automotive Advanced Materials**	**Joining: Processes**	**Exhibit Presentation**	
Electroplating Processes II A. Möbius, Enthone GmbH, Langenfeld (Germany)	Advanced Aqueous Processing T. Kekesi, University of Miskolc, Miskolc Tapolca (Hungary)	Aerospace Light Weight Structures J. Telgkamp, Airbus Deutschland, Hamburg (Germany)	Thermomechanical Fatigue P. Haehner, Joint Research Centre of the European Commission, Petten (Netherlands)	Welding R. Zettler, GKSS Research Center, Geesthacht (Germany)	Exhibition Forum 1	
Nanotechnology & Surface Finishing - Science or Alchemy? J. Abys, Enthone Inc., West Haven, CT (USA)	**Highlight Lecture** **Regeneration of HCl Pickling Solutions by an Efficient Cathodic Deposition of Iron and Anodic Oxidation of Hydrogen** T. Kekesi (Sp), G. Csicsovszki, T.I. Torok, University of Miskolc, Miskolc-Egyetemvaros (Hungary)	**High Speed Rotating CFRP Chopper Discs – Design and Manufacturing Process** T. Pühlhofer (Sp), H. Baier, L. Krämer, Technische Universität München, Garching (Germany)	**Lifetime Prediction of Components from Aluminium Alloys under Thermomechanical Fatigue Load** T.P. Nguyen (Sp), DaimlerChrysler Stuttgart (Germany); T. Beck, Research Centre Juelich (Germany)	**Performance Evaluation of Friction Spot Welding for AA5042 Aluminum Alloy** F. Ramos, T. Rosendo (Sp), GKSS Research Center, Geesthacht (Germany); M.A.D. Tier, DECC/URI, Santo Angelo (Brazil); A.A.M. da Silva, GKSS Research Center, Geesthacht (Germany) et al.	**13:00 - 13:20 h** **Networking in Bavaria for Science and Technology** M. Nüchter, Nanoinitiative Bayern GmbH, Gerbrunn (Germany)	**11:00**
The Development and Characterisation of New Electrochemical Functional Coatings J. Wosik (Sp), P. Pessenda-Garcia, G. Nauer, ECHEM-Center of Competence in Applied Electrochemistry, Wiener Neustadt (Austria)	**Study of Cu+2 Electrowinning from Aqueous Solution Using Flow-by Porous Electrode – A Statistic Approach** M.J. Jerônimo de Santana Ponte (Sp), N.M.S. Kaminari, M.J.J.S. Ponte, H.A. Ponte, Federal University of Paraná, Curitiba (Brazil)	**Advanced Materials Joining Processes for Light-Weighting of Aircraft Structures** M.J. Russel, C.M. Allen, G. Verhaeghe, C.L. Spence, C. Wiesner (Sp), TWI, Cambridge (UK)	**Lifetime Behaviour of Cast Irons at Thermal-Mechanical Loading Superimposed by High-Cycle-Fatigue Loadings** A. Uihlein (Sp), K.-H. Lang, D. Löhe, University of Karlsruhe (Germany)	**Friction Spot Welding of 2 mm-Thick Alclad AA 20024 T3 Aluminium Alloy – A Feasibility Study** T. Rosendo (Sp), F. Ramos, GKSS Research Center, Geesthacht (Germany); M.A.D. Tier, URI, Santo Angelo (Brazil); A.A.M. da Silva, GKSS Research Center, Geesthacht (Germany); T.R. Strohaecker, UFRGS, Porto Aleare (Brazil) et al.	**13:20 - 13:40 h** **NanoCT: Visualizing of Internal 3D-Structures with Submicrometer Resolution** D. Sommerfeld, phoenix|x-ray Systems + Services GmbH, Grasbrunn (Germany); D. Neuber (Sp), phoenix |x-ray Systems + Services GmbH, Wunstorf (Germany)	**11:20**
Electrodeposition of Morphological Selected Micro- and Nanodeposits from Ionic Liquids R. Boeck, FEM - Research Institute for Precious Metals & Metals Chemistry, Schwaebisch Gmuend (Germany)	**Chromatographic Separation of Ce, Pr, Nd and Sm from La with Di-(2-Ethyl Hexyl) Phosphoric Acid Impregnated Resins in Chloride Media** M. Uchikoshi (Sp), G.S. LEE, K. Mimura, M. Isshiki, Tohoku University, Sendai (Japan)	**Electric Behavior of Carbon Based Polymer Composite for Aircraft Applications** G. Andrei (Sp), A. Circiumaru, D. Dima, L. Andrei, I.G. Birsan, N. Tigau, University Dunarea de Jos of Galati (Romania)	**Superimposed TMF/HCF Tests on Cast Aluminium Alloys** T. Beck (Sp), Research Centre Juelich (Germany); J. Luft, KS Kolbenschmidt GmbH, Neckarsulm (Germany); D. Löhe, University of Karlsruhe (Germany)	**Resistance Spot Welding of Zinc-Coated Steel 1.0330 to Aluminium-Alloys 5754 and 6016** N. Jank (Sp), W. Stieglbauer, Fronius International, Wels (Austria); A.R. Pyzalla, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	**13:40 - 14:00 h** **EDX-Analyse mit der vierten Generation stickstofffreier Silizium Drift Detektoren (SDD)** H. Schuricht, Bruker AXS Microanalysis GmbH, Berlin (Germany)	**11:40**
Pearlbrite Copper a New Nickel- and Hexavalent Chromium Free Matt Base Coating for Decorative Applications A. Möbius (Sp), D. Elbick, Enthone GmbH, Langenfeld (Germany); G. Zeng, RWTH Aachen University (Germany)	**Influence of Leaching in the Alteration of Crystal Structures in Ilmenite Lattice** A. Jha (Sp), A. Lahri, J. Ephraim, University of Leeds (UK)	**Defect Tolerance Assessment of Aerospace Structures Using Fracture and Damage Mechanics Concepts** J. Hohe (Sp), D. Siegele, I. Varfolomeyev, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany); M. Windisch, MT Aerospace AG, Augsburg (Germany)	**Low-Cycle-Fatigue Behaviour of an Austenitic Stainless Steel under Monoaxial and Biaxial Strain Paths Using Shortened Test Approaches** S. Henkel (Sp), P. Hübner, H. Biermann, A. Braun, Technical University of Freiberg (Germany)	**Analysis of the Influence of Alloying Additions and Process Gases on the Melt Pool Intrinsic Dynamics of Ferrous Materials** N. Weidlich (Sp), S. Czerner, A. Ostendorf, H. Haferkamp, Laser Zentrum Hannover e.V. (Germany)	**14:00 - 14:20 h** **Tribological Testing and Modelling of Real Systems** D. Harris, Phoenix Tribology Ltd., (UK)	**12:00**
Biomimetic Composition of Ice Repellent Coatings U. Bergmann (Sp), S. Mühle, H. Worch, Technical University of Dresden (Germany); H. Böttcher, GMBU e.V., Dresden (Germany)	**Process for Recycling Domestic-Type Zn-Mn Spent Batteries by Hydrometallurgy** F. Margarido, CVRM, Lisbon (Portugal); C. Nogueira (Sp), National Institute of Engineering, Lisbon (Portugal)	**New AlMgSc Alloys for Advanced Aircraft Applications** S. Spangel (Sp), A. Buerger, Aleris Aluminium Koblenz (Germany); K. Juhl, M. Knuewer, Airbus Germany, Bremen (Germany); N. Telioui, Corus Research Development & Technology, IJmuiden (Netherlands)	**Fatigue of Cu-Ag Conductor Materials** J. Lyubimova (Sp), J. Freudenberger, K. Heinze, H.-J. Klauß, A. Gaganov, M. Schaper, L. Schultz, Leibniz Institute for Solid State and Materials Research Dresden (Germany)	**Highlight Lecture** **Joining of Sheet Metals to Carbon-Fibre-Reinforced Composites by Ultrasonic Metal Welding** F. Balle (Sp), G. Wagner, D. Eifler, University of Kaiserslautern (Germany)		**12:20**

pm1 ↓

	Symposium: B22 Room: Kiew	Symposium: B23 Room: Hongkong	Symposium: B25 Room: Oslo	Symposium: B12 Room: Lubljana	Symposium: B13 Room: Zagreb	Symposium: B42 Room: Kopenhagen
	High Temperature Metallic and Intermetallic Materials	**Shape Memory and Amorphous Alloys**	**Highly Porous Metals and Ceramics**	**Ceramic Composite Concepts**	**Modelling and Reliability of Ceramic Materials and Components**	**Materials for Fusion Applications**
	Titanium Aluminides I M. Mills, Ohio State University, Columbus (USA)	SMA - Materials and Mechanisms P. Sittner, Academy of Sciences, Prague (Czech Republic)	Properties and Characterisation J. Binner, University of Loughborough (UK)	Ceramic Composite Materials for Structural Applications R. Torrecillas San Millán, INCAR-CSIC, Oviedo (Spain)	Modelling and Reliability of Ceramic Materials and Components G. Schneider, Hamburg University of Technology (Germany)	New Materials for Extreme Environments 1 H.-H. Bolt, Max-Planck-Institut für Plasma Physik, Garching (Germany)
14:40	**Improving High Temperature Properties of Orthorhombic Ti2AlNb-Based Alloys by Compositional and Constitutional Modification** M. Hagiwara (Sp), S. Satoshi, M. Yong, National Institute for Materials Science, Tsukuba, Ibaraki (Japan); F. Tang, University of California, Davis, CA (USA)	Keynote Lecture **Lattice Dynamics Investigations in Ni-Based Heusler Magnetic Shape Memory Alloys from Inelastic Neutron Scattering** T. Mehaddene (Sp), Technische Universität München, Garching (Germany); J. Neuhaus, W. Petry, K. Hradil, P. Link, Forschungsneutronenquelle Heinz Maier-Leibnitz, Garching (Germany)	Keynote Lecture **Metal Foams - from Research Object to Serial Applications** T. Hipke (Sp), R. Neugebauer, Fraunhofer-Institute for Machine Tools and Forming Technology, Chemnitz (Germany)	Highlight Lecture **Novel Metal Matrix Composites Based on Freeze-Cast Ceramic Preforms** A. Wanner (Sp), R. Oberacker, University of Karlsruhe (Germany); A. Nagel, L.H. Kallien, Hochschule für Technik und Wirtschaft Aalen, Aalen (Germany) et al.	Highlight Lecture **Better Resolution of Mechanical Strength Data Using Advanced Stochastic Tools** H. Riesch-Oppermann (Sp), O. Kraft, Forschungszentrum Karlsruhe GmbH (Germany); M. Hofmann, M. Riva, University of Karlsruhe (Germany)	Keynote Lecture **ExtreMat - The European Integrated Project on Materials for Extreme Environments** Ch. Linsmeier (Sp), H. Bolt, Max Planck Institute for Plasma Physics, Garching (Germany)
15:00	**Crystal-Plasticity of Near-Gamma Titanium-Aluminide Microstructures** C. Zambaldi (Sp), F. Roters, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); T.R. Bieler, Michigan State University, East Lansing, MI (USA) et al.			**Micromechanical Modelling of Idealized and Real Microstructures of Freeze Cast Metal Matrix Composites with Lamellar Microstructure** T. Ziegler (Sp), A. Neubrand, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany)	**Defect-Strength Correlations of Alumina Evaluated by Quantitative Microstructure Analysis** T. Bernthaler (Sp), A. Nagel, G. Schneider, Aalen University (Germany); M. Hoffman, University of New South Wales, Sydney (Australia)	
15:20	**Recent Achievements and Challenges in the Science and Technology of Gamma Titanium Aluminides** C. Leyens (Sp), J. Lindemann, M. Glavatskikh, Brandenburg Technical University, Cottbus (Germany); D. Roth-Fagaraseanu, Rolls-Royce Deutschland, Dahlewitz (Germany); J. Zhang, Brandenburg Technical Universitv. Cottbus (Germanv)	**Wire Drawing and Functional Characterization of Thin NiTi Wires** P. Bassani, G. Carcano, R. Casati, F. Passaretti, M. Pini, E. Villa, University of Lecco (Italy); A. Tuissi (Sp), National Research Council of Italy, Lecco (Italy)	**Characterisation and Modelling of Non Sintered Steel Wool** J.-P. Masse (Sp), ARCELOR, Saint-Martin d'Hères (France); C. Barbier, L. Salvo, Y. Bréchet, SIMAP, Grenoble (France); O. Bouaziz, ARCELOR, Maizière-lès-Metz (France); F. Pinard, ARCELOR, Montataire (France)	**Synthesis of Master Alloys Based on Complex Carbonitride Phases by Mechanically Induced Self-Sustaining Reactions** J.M. Córdoba (Sp), M.A. Aviles, M.D. Alcala, M.J. Sayagues, F.J. Gotor, University of Sevilla (Spain)	**Reliability Analysis of Ceramic Rings and Springs** S. Nohut (Sp), G.A. Schneider, Hamburg University of Technology (Germany)	**Interfacial Fracture Toughness of Tungsten-Armoured Eurofer Steel Beams** P. Haehner (Sp), M. Musella, Joint Research Centre of the European Commission, Petten (Netherlands); T. Hoeschen, J.-H. You, Max Planck Institute for Plasma Physics, Garching (Germany)
15:40	**Creep in Nb-Alloyed TiAl-Base Intermetallics** A. Dlouhy (Sp), A. Orlova, K. Kucharova, Academy of Sciences, Brno (Czech Republic)	**Stress-Induced Martensitic Transformations in a CuAlNi Shape Memory Alloy - In Situ TEM Study** N. Zárubová (Sp), J. Gemperlova, A. Gemperle, ASCR, Prague (Czech Republic)	**Gas Permeability of Microcellular Ceramic Foams** L. Biasetto (Sp), LNL - I NFN, Legnaro (PD) (Italy); P. Colombo, University of Padova (Italy); M.D.M. Innocentini, University of Ribeirão Preto (Brazil); S. Mullens, Flemish Institute for Technological Research, Mol (Belgium)	**Hardening Effect of Ni Nanoparticles in Alumina -nNi Composites** J.S. Moya (Sp), T. Rodriguez-Suarez, S. Lopez-Esteban, C. Pecharroman, CSIC, Madrid (Spain); L.A. Diaz, R. Torrecillas, NCAR-CSIC, Oviedo (Spain); M. Nygren, Stockholm University (Sweden)	**Mechanical Characterization of Silica Optical Fibres** I. Severin (Sp), C. Borda, University Politehnica Bucharest (Romania); R. El Abdi, M. Poulain, Université de Rennes (France)	**Ti-Doped Isotropic Graphite for Plasma Facing Components** C. Garcia-Rosales (Sp), I. López-Galilea, N. Ordás, CEIT, San Sebastian (Spain); C. Adelhelm, M. Balden, Max Planck Institute for Plasma Physics, Garching (Germany); G. Pintsuk, Research Centre Juelich (Germanv) et al.
16:00	**Relation between Cyclic Strain Hardening and Microstructure in a Heat-Treated PM Ti-48Al-2Cr-2Nb Alloy** O. Berteaux, ONERA, Chatillon (France); G. Hénaff (Sp), M. Jouiad, ENSMA, Chasseneuil Futuroscope (France)	**Pseudoelastic Cycling and the Effect of Grain Size on the Martensitic Transition in CuAlBe Alloys** M. Sade (Sp), F.C. Lovey, Centro Atómico Bariloche, San Carlos de Bariloche (Argentina); V. Torra, University Politécnica of Cataluña, Barcelona (Spain)	**Simulation of the Permeability and Behaviour of Titanium Foam Scaffolds** R. Singh (Sp), P.D. Lee, T.C. Lindley, R.J. Dashwood, E. Ferrie, Imperial College London (UK); D. Bernard, CNRS, Pessac (France); T. Imwinkelried, Synthes, Oberdorf (Switzerland)	**Oral Poster - Subsession** Poster 1: B12-606 Poster 2: B12-604 Poster 3: B12-567 Poster 4: B12-119		**Preparation of Ti or Zr-Doped Graphites for Plasma Facing Applications** J.M. Ramos-Fernández, University of Alicante (Spain); M. Martínez-Escandell (Sp), F. Rodríguez-Reinoso, University of Alicante (Spain)

Tuesday

Symposium: C11
Room: Istanbul

Solidification Processes, Microstructures and Defects

Kinetics / Nucleation

M. Qian, University of Portsmouth (UK)

Non-Equilibrium Effects in Rapid Dendritic and Eutectic Solidification
P.K. Galenko (Sp), D.M. Herlach, German Aerospace Center - DLR, Cologne (Germany)

Investigation of the Concentration Dependency of the Solid-Liquid Interface Energy in the Al-Cu-Ag System
A. Bulla (Sp), B. Pustal, R. Berger, E. Subasic, A. Bührig-Polaczek, RWTH Aachen University (Germany); A. Ludwig, University of Leoben (Austria)

Highlight Lecture
Melting and Freezing Transformations of Nanoparticles Confined into Al Matrices
N. Boucharat (Sp), University Münster (Germany); H. Rösner, Forschungszentrum Karlsruhe GmbH (Germany); G. Wilde, University Münster (Germany)

Electron Microscopy and X-Ray Diffraction Study of Ni-Cr Rapidly Quenched Alloys
E. Vasile (Sp), E. Alexandrescu, D. Daisa, A. Ioncea, R. Trusca, METAV S.A., Bucharest -1 (Romania); D. Predoi, Research & Development National Institute of Materials Physics
, Bucharest (Romania)

Influence of Grain Refinement on Damping Properties of the Al-Zn Cast Alloys
W.K. Krajewski (Sp), University of Science and Technology, Krakow (Poland); A.L. Greer, University of Cambridge (UK); J. Zych, University of Science and Technology, Krakow (Poland)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Precipitation

F. Delannay, Catholic University of Louvain, Louvain-la-Neuve (Belgium)

Highlight Lecture
Atom Probe Tomography Study of Nucleation of NbC and NbN in a Low Alloyed Ferritic Steel
F. Danoix (Sp), T. Epicier, Université de Rouen, St Etienne (France); P. Maugis, ARCELOR Research, Maizières-lès-Metz (France); E. Bémont, D. Blavette, Université de Rouen, St Etienne (France)

Characterisation of Precipitates in a Martensitic Fe-Co-Mo Alloy
M. Schober (Sp), E. Eidenberger, E. Leitner, University of Leoben (Austria); P. Staron, GKSS Research Center, Geesthacht (Germany); D. Caniskanoglu, Böhler Edelstahl, Kapfenberg (Austria); F. Danoix, University Rouen (France) et al.

Effect of Carbon on the Precipitation of Cu in Ferritic Steels
R. Shabadi (Sp), R. Taillard, Laboratoire de Métallurgie Physique et Génie des Matériaux, Villeneuve d'Asq (France); B. Radiguet, Université de Rouen (France) et al.

Microstructure Evolution during Retrogression and Reaging Treatments in Newly Developed High Strength 7000 Series Aluminum Alloys
T. Marlaud (Sp), B. Baroux, A. Deschamps, INPG, Grenoble (France); C. Henon, Alcan CRV, Grenoble (France)

Thermal Transformation of Metal Oxides into Metal Nitrides Using Cyanamide or Urea
J. Buha (Sp), Max Planck Institute of Colloids and Interfaces, Potsdam (Germany); I. Djerdj, M. Niederberger, Swiss Federal Institute of Technology Zurich (Switzerland)

Symposium: C33
Room: Riga

Powder Processing - Self-Assembly and Tailored Nanostructures - towards Applications

Self Assembled Structures

H. Coelfen, Max Planck Institute of Colloids and Interfaces, Potsdam (Germany)

Polymer Controlled Crystallization: Self-Assembly of Inorganic Materials and Inorganic-Organic Hybrids
S.-H. Yu, University of Science and Technology of China, Hefei, Anhui (China)

Application of oriented Nanocrystals to Host Materials and Synthesis of Functional Metal Oxide Nanostructures
Y. Oaki (Sp), H. Imai, Keio University, Yokohama (Japan)

Nanocomposite Ferroelectric Perovskites and Ionic Conductors by Colloidal Chemistry
M.T. Buscaglia, M. Viviani, National Research Council, Genova (Italy); V. Buscaglia (Sp), M. Bassoli, National Research Council, Genova (Italy); A. Bassano, P. Nanni, University of Genoa (Italy) et al.

Layered Chalcogenide Nanoparticles and Nanotubes: Synthesis and Asembly
W. Tremel (Sp), A. Yella, M.N. Tahir, H.A. Therese, N. Zink, U. Kolb, F. Banhart, Johannes Gutenberg-University Mainz (Germany)

Synthesis of Complex Nanostructures via Self-Assembly
H.C. Zeng, National University of Singapore (Singapore)

Symposium: C34
Room: Stockholm

Nanoscaled Inorganic Materials by Molecular Design

Characterisation/Microstructure I

H. Bockhorn, University of Karlsruhe (Germany)

Highlight Lecture
Stereostructured SiC-Based Ceramics from Novel Inorganic Polymers: Diblock Copolymer and Inorganic Polymer Photoresist
D.-P. Kim (Sp), Q.D. Nghiem, T.A. Pham, Chungnam National University, Daejeon (Korea, Republic)

Microstructure of Ultra-Hard BN Nanocomposites as Seen by X-Ray Diffraction and Transmission Electron Microscopy
D. Rafaja (Sp), M. Motylenko, V. Klemm, G. Schreiber, M. Schwarz, T. Barsukova, E. Kroke, Technical University of Freiberg (Germany)

Synthesis and Characterisation of Porous CeO2-SiC-Composites for Catalytic Applications
M. Herrmann (Sp), U. Petasch, Fraunhofer-Institute for Ceramic Technologies and Systems, Dresden (Germany); E. Kockrick, Technical University of Dresden (Germany) et al.

Precursor-Derived Ceramics Reinforced by Single-Wall Carbon Nanotubes
L. Fernandez Recio (Sp), J. Bill, University of Stuttgart (Germany); M. Burghard, Max Planck Institute for Solid State Research, Stuttgart (Germany); Z. Burghard, J. Golczewski, F. Aldinger, University of Stuttgart (Germany) et al.

Wet Chemical Deposition of Perowskite Nanoparticles Dispersed in Molecular Precursor Solutions and Control of Morphology
T. Schneller (Sp), S. Halder, RWTH Aachen University (Germany); C. Pithan, J. Dornseiffer, Research Centre Jülich, Juelich (Germany); S.B. Majumder, Indian Institute of Technology, Kharagpur (India) et al.

Symposium: C31
Room: Helsinki

Powder Synthesis - Solution Precipitation, Gas Phase and Physical Methods

Solid-State Synthesis and related Methods

V. Buscaglia, National Research Council, Genova (Italy)

Highlight Lecture
Suppression of Grain Growth for Well-Crystallized Phase Pure Complex Oxide Nanoparticles for Electroceramics
M. Senna, Keio University, Yokohama (Japan)

About the Nucleation Phenomenon in the Thermal Processing of Powders
L. Favergeon, M. Pijolat (Sp), Ecole Nationale Superieure des Mines de Saint-Etienne (France)

A Study of the Mechanochemical Reaction between Na2CO3 and Nb2O5
T. Rojac (Sp), M. Kosec, B. Malie, J. Holc, Josef Stefan Institute, Ljubljana (Slovenia); P. Egedin, University of Ljubljana (Slovenia); B. Zalar, B. Zupaneie, Josef Stefan Institute, Ljubljana (Slovenia)

Synthesis of Nanosized Mullite by a Coagulation Route
O. Burgos-Montes (Sp), R. Moreno, Instituto de Ceramica y Vidrio, Madrid (Spain); S. Rousseau, P. Bowen, Swiss Federal Institute of Technology, Lausanne (Switzerland)

Synthesis of Zirconium Tungstate (ZrW2O8) by the Amorphous Carboxylate Process
C. Georgi (Sp), H. Kern, Technical University of Ilmenau (Germany)

Symposium: C51
Room: Shanghai

Thin Film Technology

Sol Gel Processes and Films

P. Portella, Federal Institute for Materials Research and Testing, Berlin (Germany)

Nanosized Spinel Oxide Films via Gel-Combustion
U. Zavyalova (Sp), F. Langenhorst, K. Pollock, P. Scholz, B. Ondruschka, Friedrich Schiller University Jena (Germany)

Oxidation Protection of Metals by Sol-Gel Derived Alumina Coatings
M. Dressler (Sp), M. Notz, I. Dörfel, Federal Institute for Materials Research and Testing, Berlin (Germany)

Low-Emitting Transparent Hard Coatings Based on Transparent Conductive Oxides Applied via a Sol-gel Routine
M. Reidinger (Sp), C. Scherdel, M. Arduini-Schuster, J. Manara, Bavarian Center for Applied Energy Research, Würzburg (Germany)

Titanium Dioxide Sol-Gel Coatings on Stainless Steel Wire Cloths for Pollutant Photocatalytic Degradation
D. Sacco, M.F. Brunella, P.L. Cavallotti (Sp), S. Franz, L. Samiolo, Politecnico of Milano (Italy)

Symposium: D12
Room: Prag

Advances in Scanning Probe Microscopy and Atomic Level Imaging

Atomic Level Imaging and Spectroscopy Techniques

J. Mayer, RWTH Aachen University (Germany)

Highlight Lecture
Aberration Corrected Microscopy at the Ernst Ruska-Centre: High-resolution TEM and STEM on Perovskite Multilayers
M. Luysberg (Sp), M. Boese, D. Avila, J. Schubert, T. Heeg, Research Centre Juelich, Jülich (Germany)

Approaching 10 nm Resolution with Energy Loss Magnetic Chiral Dichroism (EMCD)
P. Schattschneider (Sp), C. Hébert, S. Rubino, Vienna University of Technology, Wien (Austria); M. Stöger-Pollach, Vienna University of Technology (Austria) et al.

Quantitative TEM Characterizations of Multilayer Systems for X-Ray Optics
D. Häußler (Sp), E. Spiecker, W. Jäger, A.E. Örs, V.B. Özdöl, A. Lemke, F. Liu, University of Kiel (Germany); M. Störmer, GKSS Research Center, Geesthacht (Germany); C. Michaelsen, Incoatec GmbH. Geesthacht (Germanv) et al.

Transmission Electron Microscopy Study of DNA - Metallized Systems
A. Sologubenko (Sp), M. Fischer, J. Timper, J. Mayer, U. Simon, RWTH Aachen University (Germany)

Determination of the Optical Properties of Carbonaceous Nanoparticles Using Monochromated Electron Energy-Loss Spectroscopy
D.T.L. Alexander (Sp), J. Anderson, P.A. Crozier, Arizona State University, Tempe (USA)

Symposium: C53 Room: Seoul	Symposium: C41 Room: Neu-Delhi	Symposium: X23 Room: Krakau	Symposium: X21 Room: Budapest	Symposium: C22 Room: Singapur	Symposium: Room:	
Chemical, Electrochemical and Plasmachemical Surface Treatment and Plating	**Molten Salts / Advanced Aqueous Processing**	**Materials for Aerospace Structures and Propulsion**	**Automotive Light Weight Structures**	**Joining: Mechanical Testing and Modelling**		
Electroplating III and Electroless Processes	Molten Salts I	Materials for Aerospace Structures and Propulsion	Leightweight Materials	Tests and Application 1		
P.L. Cavallotti, Politecnico of Milano (Italy)	D. Fray, University of Cambridge (UK)	J. Eßlinger, MTU Aero Engines GmbH, Munich (Germany)	W. Staufner, DaimlerChrysler AG, Sindelfingen (Germany)	R. Steinbrech, Research Centre Juelich (Germany)		
Innovative Palladium Electrolytes for Dark Design Layers H.U. Eckert (Sp), S. Schäfer, Enthone GmbH, Langenfeld (Germany)	**Highlight Lecture** **Current Status of Advanced Metal Production Technology Using Molten Salts** T.H. Okabe, The University of Tokyo (Japan)	**Carbon Fibre Reinforced Silicones** H. Baier, L. Datashvili, J. Schimitschek (Sp), Technische Universität München, Garching (Germany)	**Fatigue Characterization of Thermoplastic Materials** S. Bergamo (Sp), C. Dumas, E. Vaillant, Renault, Guyancourt (France)	**Lead-Free Soldering: Effect of Gap Size on Mechanical Properties** P. Zimprich, P. Weiss, U. Saeed, H. Ipser (Sp), University of Vienna (Austria)		**14:40**
Palladium as Diffusion Barrier – A Way to the Multifunctional PCB Surface N. Schulze, Umicore Galvanotechnik GmbH, Schwaebisch Gmuend (Germany)	**Towards Optimisation of the Electrochemical Reduction of Titanium Dioxide by Kinetic Studies** D.T.L. Alexander (Sp), Arizona State University, Tempe (USA); C. Schwandt, D.J. Fray, University of Cambridge (UK)	**Modeling of the Non-Isothermal Creep Behavior at High Temperature of Ni-Based Single Crystal Superalloys** J. Cormier (Sp), X. Milhet, J. Mendez, LMPM UMR CNRS 6617, Futuroscope - Chasseneuil (France)	**Accumulative Roll-Bonding, Mechanical Properties and Deformation Behaviour of Aluminium AA1050 and Aluminium Alloy AA6016** I. Topic (Sp), H.W. Höppel, M. Göken, University of Erlangen-Nuremberg (Germany)	**Mechanical Properties of Alumina/Copper Brazed Joints: Reactive Versus Non-reactive Brazing** O. Kozlova, M. Braccini (Sp), INPG, Saint Martin d´Hères (France); M.-F. Devismes, Schneider Electric, Varces Allières et Risset (France); N. Eustathopoulos, INPG, Saint Martin d´Hères (France)		**15:00**
High Performance Contact Materials for the PCB- and Semiconductor- Produktion T. Ebert, Umicore Galvanotechnik GmbH, Schwaebisch Gmuend (Germany)	**Inert Anodes Based on the Al-Ti-Cu Alloys for the Electro-Winning of Aluminium** X. Yang (Sp), A. Jha, University of Leeds (UK)	**Determination of Isothermal Flow Curves and the Dynamic Recristallization Kinetics of a Nickel Base Superalloy using Rastegaev Specimens** C. Stotter (Sp), C. Sommitsch, Christian Doppler Laboratory for Materials Modelling and Simulation, Leoben (Austria); P. Poelt, S. Mitsche, Graz University of Technology (Austria); B. Buchmayr, University of Leoben (Austria) et al.	**Robust Manufacturing of Textile-Reinforced Thermoplastic Composites with Embedded Piezo-Ceramic Actuators for Automotive Applications** M. Dannemann (Sp), O. Täger, W. Hufenbach, M. Krahl, A. Winkler, Technical University of Dresden (Germany)	**Finite Element Analysis of Functionally Graded Tungsten-Steel Joints** M.-K. Hajji (Sp), J. Aktaa, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)		**15:20**
The Phosphating Process – History, Theory and Application L. Kwiatkowski (Sp), Institute of Precision Mechanics, Warsaw (Poland); S. Steinhäuser, B. Wielage, T. Lampke, D. Dietrich, Technical University of Chemnitz (Germany)	**The Reduction of Mixed Metal Oxides via the FFC Cambridge Process to form Low Oxygen â Ti Alloys** R. Bhagat (Sp), M. Jackson, D. Inman, R. Dashwood, Imperial College, London (UK)	**Microstructure Stability of 4th Generation Superalloy during Creep Deformation at High Temperatures** A. Czyrska-Filemonowicz (Sp), M. Zietara, B. Dubiel, AGH University of Science and Technology, Krakow (Poland)	**Warm Deep Drawing of 6xxx Aluminium Alloys** M. Ghosh, A. Miroux (Sp), Netherlands Institute for Metals Research, Delft (Netherlands); R. Werkhoven, P.-J. Bolt, TNO, Eindhoven (Netherlands); L. Kestens, Delft University of Technology (Netherlands)	**Microstructure and Properties of AZ31B Magnesium Alloy Laser Beam Welds** R.S. Coelho (Sp), A. Kostka, A. Pyzalla, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); S. Riekehr, M. Horstmann, M. Koçak, GKSS Research Center, Geesthacht (Germany)		**15:40**
Corrosion Behavior and Physical Properties of Electroless Ternary Alloys J. Georgieva, E. Valova, S. Armyanov (Sp), Bulgarian Academy of Sciences, Sofia (Bulgaria)	**Nb-Ta Alloy by Electrochemical Reduction of Nb2O5/Ta2O5 Mixtures in a Eutectic CaCl2-NaCl Melt** Q. Xu (Sp), Northeastern University, Shenyang, Liaoning (China); C. Schwandt, D.J. Fray, University of Cambridge (UK)	**Damage Mechanisms of APS-TBCs in Thermomechanical Fatigue Tests** O. Trunova (Sp), Research Centre Juelich GmbH (Germany); R. Herzog, MAN TURBO AG, Oberhausen (Germany); R.W. Steinbrech, T. Beck, L. Singheiser, Research Centre Juelich GmbH (Germany)	**Improving Mechanical Properties of AlSi9Cu3(Fe) by Adjusted Heat Treatment of Squeeze and Low Pressure die Cast Parts** P. Schuldenzucker, W. Fragner (Sp), Austrian Research Centers GmbH, Ranshofen (Austria)	**Method to Produce Coated and Joined Foam Glass Samples** A. Ventrella (Sp), M. Avalle, M. Ferraris, M. Salvo, F. Smeacetto, Politecnico di Torino (Italy)		**16:00**

pm2 ↓

	Symposium: B22 Room: Kiew	Symposium: B23 Room: Hongkong	Symposium: B25 Room: Oslo	Symposium: B14 Room: Lubljana	Symposium: B13 Room: Zagreb	Symposium: B42 Room: Kopenhagen
	High Temperature Metallic and Intermetallic Materials	**Shape Memory and Amorphous Alloys**	**Highly Porous Metals and Ceramics**	**Bioinspired Materials and Processes**	**Modelling and Reliability of Ceramic Materials and Components**	**Materials for Fusion Applications**
	Titanium Aluminides II G. Eggeler, Ruhr-University Bochum (Germany)	SMA - Applications and Processes M. Sade, Centro Atómico Bariloche, San Carlos de Bariloche (Argentina)	Properties, Characterisation and Applications T. Hipke, Fraunhofer Institute of Machine Tools and Forming Technology, Chemnitz (Germany)	Bioinspired Routes D. Zhang, Shanghai Jiao Tong University (China PR)	Modelling and Reliability of Ceramic Materials and Components J. Kübler, Swiss Federal Laboratories for Materials Testing and Research, Dübendorf (Switzerland)	New Materials for Extreme Environments 2 C. Garcia-Rosales, CEIT, San Sebastian (Spain)
17:00	Highlight Lecture **Status of Alloy Development, Production Processes and Application of Intermetallic Gamma - TiAl - Based Structural Materials** W.G. Smarsly (Sp), MTU Aero Engines GmbH, Munich (Germany); A. Bartels, Hamburg University of Technology, Hamburg-Harburg (Germany); H. Clemens, University of Leoben (Austria) et al.	Highlight Lecture **Net-Shape Processing of Nickel-Titanium by Micro Metal Injection Moulding (Micro-MIM)** P. Imgrund (Sp), H. Schmidt, L. Kramer, A. Rota, Fraunhofer IFAM, Bremen (Germany)	Highlight Lecture **Fatigue of Hollow Metal Spheres** O. Caty (Sp), E. Maire, INSA de Lyon, Villeurbanne (France); R. Bouchet, ONERA, Chatillon (France)	Highlight Lecture **Biopolymer Membranes as Matrix for the Bio-Inspired Mineralisation of CaCO3** C. Zollfrank (Sp), M.W. Rauch, University of Erlangen-Nuremberg (Germany)	Highlight Lecture **Advances in Modelling Ceramic Shaping and Sintering Techniques** H. Riedel, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany)	**Deuterium Ion Beam and Plasma Exposure Experiments of Metal-Doped Carbon Materials Relevant for Fusion Applications** C. Adelhelm (Sp), M. Balden, Max Planck Institute for Plasma Physics, Garching (Germany); P. Starke, University of Augsburg (Germany); A. Centeno, C. Blanco, CSIC, Oviedo (Spain) et al.
17:20	**Axial-Torsional Thermo-Mechanical Fatigue of a Near-Gamma TiAl-Alloy** B. Skrotzki (Sp), S. Brookes, H.-J. Kühn, H. Klingelhöffer, R. Sievert, Federal Institute for Materials Research and Testing, Berlin (Germany); J. Pfetzing, Ruhr University Bochum (Germany) et al.	**Multi Axial one Way Shape Memory Effect: Experimental Investigation on a Ni-Ti Alloy** K. Taillard (Sp), S. Calloch, ENS Cachan (France); S. Arbab Chirani, LI2, Brest (France); C. Lexcellent, LMARC, Besancon (France)	**Cellular Ceramics in Heat Storage Applications** F. Scheffler (Sp), ZAE Bayern, Erlangen (Germany); M. Scheffler, Brandenburg Technical University, Cottbus (Germany)	**Bioinspired Routes to Chalcogenides Nanocrystallites on Natural Biofibers at Room Temperature** H. Su (Sp), D. Zhang, J. Han, Shanghai Jiaotong University (China)	**Damage Assessment of Biomorphic Silicon Carbide in Thermal Excursions** K. Pappacena (Sp), K.T. Faber, Northwestern University, Evanston, IL (USA)	**Ceramic Routes to SiC/SiC Composites for Fusion Application** S. Novak (Sp), K. Mejak, Jozef Stefan Institute, SFA EURATOM-MHEST, Ljubljana (Slovenia); A. Boccaccini, Department of Materials, Imperial College London, London SW7 2 BP (UK)
17:40	**The Influence of the Mechanical Properties of TiAl Alloys Measured by Nanoindentation** F. Pyczak (Sp), University of Erlangen-Nuremberg (Germany); S. Gebhard, German Aerospace Centre - DLR, Cologne (Germany); M. Göken, University of Erlangen-Nuremberg (Germany)	**On the Transitions of Shape Memory Alloys** S. Ignacová (Sp), T. Cernoch, V. Novák, P. Sittner, Academy of Sciences CR, Prague (Czech Republic)	**NMR Techniques to Analyse the Porous Structure of Ceramics** E. Rambaldi (Sp), P. Fantazzini, A. Tucci, L. Esposito, G. Timellini, University of Bologna (Italy)	**Biomimetic Micropatterns on Surfaces as Restricted Reaction Areas for Silica Deposition** O. Helmecke (Sp), Braunschweig University of Technology (Germany); P. Behrens, Leibniz Universität Hannover (Germany); H. Menzel, Braunschweig University of Technology (Germany)	**Fracture in Multilayer Ceramics – Reliability of Thick Film Resistors** N. Dorsch (Sp), P. Spies, Robert Bosch GmbH, Gerlingen (Germany); A. Schneider, Hamburg University of Technology (Germany)	**Design of Tungsten Composites for High Temperature Application with Wide-Range Thermal Operation Windows** J. Hohe (Sp), P. Gumbsch, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany)
18:00	**The Effect of Aging on the Microstructure and Creep Behaviour of Powder Metallurgy Ti-48Al-2Cr-2Nb-1W** S. Bulmer (Sp), Carleton University, Ottawa, ON (Canada); D.Y. Seo, National Research Council of Canada, Ottawa, ON (Canada); H. Saari, Carleton University, Ottawa, ON (Canada) et al.	**Functional Composite Materials; Probing the Mechanism of Internal Stress Generation and Transmission** D. Bollas, P. Pappas, Foundation for Research and Technology Hellas, Platani, Rio, Achaia (Greece); J. Parthenios (Sp), C. Galiotis, Foundation for Research and Technology Hellas, Platani, Rio, Achaia (Greece)	**Lattice Modelling of Open-Cell Metallic Foams for Use in Computational Simulations** M. Borovinsek (Sp), Z. Ren, University of Maribor (Slovenia)	**Study on Morph-Genetic Materials from Natural Materials** D. Zhang (Sp), H.L. Su, T.X. Fan, Q. Dong, Z.T. Liu, Shanghai Jiao Tong University (China); X.L. Gong, Troyes University of Technology (France)	**Simulation of PTC Behavior of High-Temperature Heat Source Based on Layered Resistive CMM** V. Petrovsky, National Academy of Science, Kiev (Ukraine)	**Material Issues for the Components of the ITER ECRH Port Plug** D. Strauß (Sp), R. Heidinger, G. Dammertz, I. Danilov, G. Gantenbein, G. Hailfinger, K. Kleefeldt, A. Meier, A. Serikov, P. Späth, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)
18:20	**Oral Poster - Subsession** Poster 1: B22-275 Poster 2: B22-1830 Poster 3: B22-1883 Poster 4: B22-718 Poster 5: B22-1296	**Sputtered Ni-Ti-Ag Shape Memory Thin Films** E. Quandt (Sp), University of Kiel (Germany); C. Zamponi, Caesar, Bonn (Germany); M. Wuttig, University of Maryland, College Park, MD (USA)	**Properties of Ceramic-Metal Interpenetrating Composites** J. Binner (Sp), H. Chang, R. Higginson, University of Loughborough (UK); R. Sambrook, Dytech Corp. Ltd., Sheffield (UK)	**Bio-Inspired Synthesis and Patterning of Silica Nanotubes from Molecular Templates** H. Scheel (Sp), C. Zollfrank, P. Greil, University of Erlangen-Nuremberg (Germany)	**Oral Poster - Subsession** Poster 1: B13-1130 Poster 2: B13-1465 Poster 3: B13-253 Poster 4: B13-14	**Characterisation of Fusion Reactor Materials by Instrumented Indentation** H.-C. Schneider (Sp), Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany); N. Huber, GKSS Research Center, Geesthacht (Germany) et al.

Tuesday

Symposium: C11
Room: Istanbul

Solidification Processes, Microstructures and Defects

Nucleation

D. Herlach, German Aerospace Center (DLR), Cologne (Germany)

Highlight Lecture

Heterogeneous Nucleation and Grain Formation on Substrates of Different Potency and Geometries during Solidification
M. Qian, Brunel University, Uxbridge (UK)

Peritecitic Nucleation and Growth under the Influence of Convection
H. Emmerich (Sp), R. Siquieri, RWTH Aachen University (Germany)

Nucleation Controlled Phase Selection in Drop Tube Processing of Nd-Fe-B
M. Krivilev (Sp), J. Fransaer, KUL, Leuven (Belgium)

Temperature- and Orientation-Dependent Nucleation Site Densities in Hot Dipped Zn-Al Coatings
A. Mariaux (Sp), Ecole Polytechnique Fédérale de Lausanne (Switzerland); Z. Zermout, Arcelor Research Industry Gent, Zelzate (Belgium); B. Gay, Umicore Research, Olen (Belgium) et al.

Crystallisation Kinetics in Model Systems of Spherical Colloids: Where Classical Nucleation Theory Holds and Where it Fails
H.J. Schöpe (Sp), Johannes Gutenberg University Mainz (Germany); G. Bryant, W. van Megen, Royal Melbourne Institute of Technology (Australia)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Interaction Deformation / Phase Transformation

E. Aeby-Gautier, Ecole des Mines, Nancy Cedex (France)

Intermixing and Ordering in Al/Ni Multilayers Prepared by Cold Rolling
X. Sauvage (Sp), University of Rouen, Saint-Etienne du Rouvray (France); G. Wilde, WWU Münster (Germany)

Damascene Steel Investigations by NanoIndentation
U.D. Hangen (Sp), Hysitron, Inc., Ismaning (Germany); H. Bögershausen, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Highlight Lecture

In-Situ Small Angle X-Ray Scattering Measurements of Precipitation Kinetics during Thermomechanical Treatments
G. Fribourg (Sp), A. Deschamps, Y. Bréchet, SIMAP - LTPCM, Saint Martin d'Hères (France)

TEM Analysis of Al_sub3 (Sc,Zr) Precipitation Kinetics in Highly Deformed 7010 Aluminium Alloys
P. Pongratz (Sp), M. Schöbel, H.-P. Degischer, Vienna University of Technology (Austria)

Characterization of Austenite Decomposition in Continuous Cooling of Eutectoid Steel
M. Maalekian (Sp), E. Kozeschnik, H. Cerjak, Graz University of Technology (Austria)

Symposium: C33
Room: Riga

Powder Processing - Self-Assembly and Tailored Nanostructures - towards Applications

Synthesis in structured Media

L. Bergström, Stockholm University (Sweden)

Incorporating TiO2 Nanoparticles into Aerosol-Generated Mesoporous Particles
P.O. Vasiliev (Sp), B.S. Ng, B. Faure, L. Bergström, Stockholm University (Sweden)

Kinetics and Intermediary Stages of Zinc Oxide Film Formation in Methanol
P. Lipowsky (Sp), J. Bill, F. Aldinger, Max Planck Institute for Metals Research, Stuttgart (Germany); N. Hedin, L. Bergström, Stockholm University (Sweden)

Reactive Ionic Liquids as Precursors for Inorganic Materials
A. Taubert, University of Potsdam, Golm (Germany)

Crystallisation of Calcium Carbonate in Self-Organised Hydrogels
U. Helbig (Sp), M. Beyer, D. Platte, University of Würzburg (Germany)

Oral Poster - Subsession
Poster 1: C33-842
Poster 2: C33-1227

Symposium: C34
Room: Stockholm

Nanoscaled Inorganic Materials by Molecular Design

Characterisation/Microstructure II

J. Bill, University of Stuttgart (Germany)

Highlight Lecture

New Insights into the Nanostructure of SiCO Glasses Obtained via Molecular Design
G.D. Soraru (Sp), R. de la Pena, P. Dibandjo, R. Raj, University of Trento, Povo (Trento) (Italy)

Nanocrystals in Amorphous Matrices: Modeling, Simulation, and Prediction of Struture and Properties
P. Kroll (Sp), R. Singh, RWTH Aachen University (Germany)

Mesoscopic Organised Nanomaterials: Synthesis – Characterisation – Applications
P. Kubiak, M. Wohlfahrt-Mehrens (Sp), N. Hüsing, ZSW, Ulm (Germany); R. Rossmanith, K. Landfester, U. Hörmann, U. Kaiser, University of Ulm (Germany)

Nitrogen Reference Materials for Glow Discharge Optical Emission Spectroscopy (GDOS) of Coatings
A. Schütz (Sp), R. Völkl, U. Glatzel, University of Bayreuth (Germany); M. Analytis, Spectruma Analytik GmbH, Eurasburg (Germany)

Conversion of Liquid Preceramic Polymers into Nanostructured Ceramics by Laser Induced Pyrolysis
J. Wilden, G. Fischer (Sp), Technical University Ilmenau (Germany)

Symposium: C31
Room: Helsinki

Powder Synthesis - Solution Precipitation, Gas Phase and Physical Methods

Atomistic Modelling and Vapour Phase Synthesis

P. Bowen, STI IMX LTP , Lausanne (Switzerland)

Highlight Lecture

Atomistic Simulation of Polymer Adsorption on Calcite Surfaces
U. Aschauer (Sp), Swiss Federal Institute of Technology, Lausanne (Switzerland); J. Ebert, University of Karlsruhe (Germany); S. Pedrazzini, Swiss Federal Institute of Technology, Lausanne (Switzerland) et al.

Production of Nanopowder with an Atmopsheric Plasma Torch
F. Cambier, CRIF, Seraing (Belgium)

From the Synthesis of Carbide Nanopowders by Laser and Plasma Driven Processes to their Densification by Flash Sintering Methods
Y. Leconte (Sp), CEA Saclay, Gif sur Yvette (France); M. Leparoux, EMPA, Thun (Switzerland); L. Combemale, Institut Carnot de Bourgogne, Dijon (France); X. Portier, SIFCOM-ENSICAEN (France) et al.

Reactive Hot Gas Atomization for Composite Powder Manufacturing
G. Wolf (Sp), D. Bendix, M. Faulstich, ATZ Entwicklungszentrum, Sulzbach-Rosenberg (Germany)

Production of Silicon Carbide (SiC) Nanoparticles by Laser Pyrolysis: Effects of Synthesis Parameters
A. Reau (Sp), B. Guizard, CEA, Gif sur Yvette Cedex (France); J. Galy, CNRS, Toulouse (France); J. Canel, F. Ténéga, CEA, Gif sur Yvette Cedex (France)

Symposium: C51
Room: Shanghai

Thin Film Technology

Thin Film Processes

G. Richter, Max Planck Institute for Metals Research, Stuttgart (Germany)

Keynote Lecture

Understanding Reactive Sputtering Processes
S. Berg, Uppsala University (Sweden)

Multilayered and Nanocomposite TiCrBN/WSex Coatings Deposited by Ion Implantation Assisted Sputtering of TiCrB and WSe2 Targets
A.N. Sheveyko, P.V. Kiryukhantsev-Korneev (Sp), D.I. Sorokin, Moscow State Institute of Steel and Alloys (Russian Federation); E.A. Vinogradov, Russian Academy of Sciences, Troitsk (Russian Federation) et al.

Plasma Diagnostics as a Support for the Upscaling of PVD Deposition Processes onto Industrial Coating Units
P. Immich (Sp), K. Bobzin, E. Lugscheider, R. Nickel, D. Parkot, RWTH Aachen University (Germany)

Pulsed Sputter Deposition of Binary and Ternary Oxides in the Systems Si-O, Cr-O and Al-O
R. Cremer, J. Müller, H.-G. Fuss (Sp), CemeCon AG, Würselen (Germany)

Symposium: C52
Room: Prag

Thick Coating Developments and Technology

Coating Properties and Behaviour

G. Montavon, University of Limoges, Limoges Cedex (France)

Flame-Sprayed Glaze Coatings: Process and Structure
A. Arcondeguy (Sp), SPCTS-UMR 6638, Limoges Cedex (France); G. Gasgnier, Imerys Tableware France, Aixe-sur-Vienne (France); A. Grimaud, B. Pateyron, G. Montavon, A. Denoirjean, SPCTS-UMR 6638, Limoges (France) et al.

Growth Mechanisms of Carbide Layers in Tantalum and Tungsten Tantalum
J. Dhers (Sp), M. Rocher, École des Mines de Saint Etienne, Montelimar (France); P. Goeuriot, École des Mines de Saint Etienne, St. Etienne (France)

Microstructures and Hardness of Functionally Graded Coatings with Supersonic Free-Jet PVD
I. Shiota (Sp), A. Yumoto, T. Yamamoto, F. Hiroki, N. Niwa, Kogakuin University, Tokyo (Japan)

Dry Sliding Wear Performance of Thermal Sprayed Coatings for the Oil and Gas Drill Pipes
M.T.P. Paes, R.R. Marinho, C.E. Fonseca, Petrobras, Rio de Janeiro (Brazil); G. Godoy, J.O. de Morais, V.L.D.S. Franco, S.D. Franco (Sp), Universidade Federal de Uberlândia, Uberlândia / MG (Brazil)

Symposium: C53 Room: Seoul	Symposium: C41 Room: Neu-Delhi	Symposium: X23 Room: Krakau	Symposium: X21 Room: Budapest	Symposium: C22 Room: Singapur	Symposium: Room:	
Chemical, Electrochemical and Plasmachemical Surface Treatment and Plating	**Molten Salts / Advanced Aqueous Processing**	**Materials for Aerospace Structures and Propulsion**	**Automotive Light Weight Structures**	**Joining: Mechanical Testing and Modelling**		
Dispersion Coatings	Molten Salts II	Materials for Aerospace Structures and Propulsion	Magnesium	Tests and Applications 2		
L. Kwiatkowski, Institute of Precision Mechanics, Warsaw (Poland)	G. Kaptay, University of Miskolc, Miskolc, Egyetemvaros (Hungary)	T. Vugrin, Airbus Deutschland GmbH, Bremen (Germany)	I. Topic, University of Erlangen-Nuremberg (Germany)	M. Ferraris, Politecnico di Torino (Italy)		
Corrosion Behaviour of Ni and Ni-P Based Composite Coatings A. Królikowski (Sp), Warsaw University of Technology (Poland); L. Kwiatkowski, Institute of Precision Mechanics, Warsaw (Poland)	**Highlight Lecture** **Development and Scale up of the FFC Cambridge Process** D. Hodgson (Sp), I.R. Buckingham, J.D. Jackson, A. Fones, N. van Dijk, M. Stephenson, I. Mellor, Metalysis Ltd., Rotherham (UK)	**Keynote Lecture** **Strain-Controlled Thermo-Mechanical Fatigue: European Research and Development into Best Practises** P. Haehner, Joint Research Centre of the European Commission, Petten (Netherlands)	**Statistical Process Analysis on Casting Defects and Performance for Large Thin-Walled Magnesium Parts** L. Zaffaina (Sp), Università di Padova, Vicenza (Italy); R. Alain, Meridian Technologies, Verres (Italy); F. Bonollo, Università di Padova, Vicenza (Italy)	**Mechanical Testing of Titanium / Aluminium-Silicon Interface by Push-Out** O. Dezellus (Sp), L. Milani, F. Bosselet, M. Sacerdote-Peronnet, J.C. Viala, University of Lyon, Villeurbanne (France); D. Rouby, INSA Lyon, Villeurbanne (France)		**17:00**
Taylor-Made Surface Properties by Composite Plating A. Dietz (Sp), Fraunhofer Institute for Surface Engineering and Thin Films, Braunschweig (Germany); T. Boiadjieva, Technical University Vienna (Austria)	**On the Wettability of Carboneous Materials by Molten Salts** P. Baumli, University of Miskolc, Miskolc, Egyetemvaros (Hungary); J. Sytchev, BAY Foundation, Miskolc, Egyetemvaros (Hungary); G. Kaptay (Sp), University of Miskolc, Miskolc, Egyetemvaros (Hungary)		**Processing, Characterization and Corrosion Behavior of New Magnesium Alloys** G. Ben-Hamu (Sp), D. Eliezer, Ben Gurion University of the Negev, Beer-Sheva (Israel)	**Laser Beam Aluminium-Steel Mixed Material Joints – Mechanical and Dynamical Properties, Joining Tolerances and Corrosion Behaviour** H. Laukant (Sp), U. Glatzel, University of Bayreuth (Germany)		**17:20**
Gold/Carbon Nanotubes Composite by Electro Deposition A. Vicenzo, P. Cojocaru, P.L. Cavallotti (Sp), Politecnico of Milano (Italy)	**Molten Salt Electrolytes in Thermally Activated ("Thermal") Batteries** P. Masset, Karl-Winnacker-Institut der Dechema e.V., Frankfurt (Germany)	**Challenges in the Development of Compatible Superalloy - TBC Bond Coat Systems** T.M. Pollock (Sp), B. Tryon, F. Cao, University of Michigan, Ann Arbor, MI (USA)	**Effect of Rare Earth Elements on the Facture Behavior of AZ91 Mg- Alloy at Ambient and High Temperature** S.M. Miresmaeili (Sp), B. Nami, H. Jafari, Rajaei University, Tehran (Iran)	**Oral Poster - Subsession** Poster 1: C22-1382 Poster 2: C22-2172 Poster 3: C22-1443 Poster 4: C22-322 Poster 5: C22-1336		**17:40**
Surface Characteristics of Electroless Ni-P/PTFE Composite Coatings K. Tanaka, K. Gunji (Sp), Doshisha University, Kyotanabe (Japan); A. Yukawa, M. Hashimoto, Protonics System Lab.Ltd., Osaka (Japan); T. Katayama, Doshisha University, Kyotanabe (Japan)	**Electrochemical Reduction of Zirconium Oxide in Molten Calcium Chloride** D. Fray (Sp), K.S. Mohandas, University of Cambridge (UK)	**Stacking Sequence Dispersion for Improved Damage Tolerance** C. Lopes (Sp), O. Seresta, M. Abdalla, Z. Gurdal, Delft University of Technology (Netherlands); P. Camanho, University of Porto (Portugal)	**Influence of Calcium and Ce-MM on the Microstructure and Mechanical Properties in AZ31 Indirect Extruded Profiles** M.R. Nürnberg (Sp), D. Letzig, K.U. Kainer, GKSS Research Center, Geesthacht (Germany)			**18:00**
Oral Poster - Subsession Poster 1: C53-658 Poster 2: C53-1269	**Direct Production of Titanium Powder from Titanium Ore by Calciothermic Reduction** H. Zheng (Sp), T.H. Okabe, The University of Tokyo (Japan)	**Oral Poster - Subsession** Poster 1: X23-286 Poster 2: X23-2092	**Processing and Characteristics of MRI 202S Magnesium Foam** T. Yered (Sp), E. Aghion, Ben Gurion University, Beer Sheva (Israel)			**18:20**

	Symposium: B22 Room: Kiew	Symposium: A11 Room: Riga	Symposium: A12 Room: Budapest	Symposium: A61 Room: Stockholm	Symposium: A23 Room: Krakau	Symposium: B42 Room: Helsinki
	High Temperature Metallic and Intermetallic Materials	**Fundamental Properties of Organic Semiconductors and Materials for Solid State Memories**	**Organic Electronic Devices**	**Dielectric and Piezoelectric Ceramics and Devices**	**Magnetic Thin Films**	**Materials for Fusion Applications**
	Defects, Phases and Microstructural Evolution	Materials for Organic Electronics	Material Properties	Piezoelectric Materials	Magnetic Thin Films I	Intense Thermal Loads
	A. Kostka, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	E. Zojer, Graz University of Technology (Austria)	N. Koch, Humboldt-Universität zu Berlin (Germany)	E. Hennig, PI Ceramic GmbH, Lederhose (Germany)	E. Quandt, Christian-Albrechts-Universität zu Kiel (Germany)	J. Linke, Research Centre Juelich (Germany)
11:00	Highlight Lecture **Thermal Vacancy Hardening in B Containing and ODS Fe100-xAlx (28<x<40)** H. Skoglund (Sp), M. Knutson Wedel, Chalmers University of Technology, Gothenburg (Sweden)	Keynote Lecture **New Materials and Processing Opportunities for Organic Electronics and Optoelectronics** S. Marder, Georgia Institute of Technology, Atlanta, GA (USA)	Highlight Lecture **A Jet Approach to the Growth of Organic Molecular Materials for Electronic Devices** S. Iannotta (Sp), L. Aversa, N. Coppedé, M. Nardi, A. Pallaoro, T. Toccoli, R. Verucci, IFN-CNR Institute for Photonics and Nanotechnology, Povo di Trento (Italy)	Highlight Lecture **Processing and Characterization of Sodium Potassium Niobate Based Ceramics** B. Malic (Sp), D. Jenko, J. Bernard, A. Bencan, J. Holc, M. Kosec, Jozef Stefan Institute, Ljubljana (Slovenia)	**Effects of Magnetic Fields on CoFe Alloys Electrodeposition** J. Koza (Sp), M. Uhlemann, A. Gebert, L. Schultz, Leibniz Institute for Solid State and Materials Research Dresden (Germany)	Keynote Lecture **Materials Issues in IFE First-wall Experiments - Response of Wall Materials to Repeated Pulses of High-energy Ions* **** T. Renk (Sp), P.P. Provendo, T.J. Tanaka, C.L. Olson, Sandia National Laboratories, Albuquerque, NM (USA); J.P. Blanchard, University of Wisconsin, Madison, WN (USA)
11:20	**Periodical Formation of Long-Range Ordered Intermetallic Phases in Multilayer Systems by Laser Interference Metallurgy (LIMET)** C. Gachot (Sp), F. Mücklich, Saarland University, Saarbrücken (Germany)		**Low Ionization Engery Molecules for Efficient N-doping of Organic Film** C.K. Chan (Sp), Princeton University (USA); S. Barlow, S. Marder, Georgia Institute of Technology, Atlanta (USA); A. Kahn, Princeton University (USA)	**Lead Free Piezoceramics Based on Alkaline Niobate Tantalates** J. Acker (Sp), S. Wagner, M.J. Hoffmann, University of Karlsruhe (Germany)	**Magnetic Properties of Co-Fe Ultra-Thin Films Obtained by Electroless Deposition** P.L. Cavallotti, S. Franz, M. Bestetti, Politecnico of Milano (Italy); C. Borioli (Sp), Politecnico di Milano (Italy)	
11:40	**Microstructure Evolution and Mechanical Properties of Alloy 617** H. Nickel (Sp), P. Ennis, L. Singheiser, Research Centre Juelich (Germany)	**Preparation of Highly Oriented Layers by Electrical Field Alignment of Rigid Pi-Systems** A. Cristadoro (Sp), H.J. Räder, K. Müllen, Max Planck Institute for Polymer Research, Mainz (Germany)	**The Molecular Structure of the Pentacene Thin-Film-Phase** B. Nickel (Sp), S. Schiefer, Ludwig-Maximilians-Universität, Ismaning (Germany)	**Mechanically Assisted Domain Switching in Piezoelectric Ceramics** T. Granzow (Sp), A.B. Kounga Nijwa, T. Leist, J. Rödel, Technical University of Darmstadt (Germany)	**Study of the Magnetic and Electrical Properties of Amorphous and Nano-Crystalline Fe-Based Thin Films Prepared by Magnetron Sputtering** R. Nouar (Sp), University of Belfort-Montbéllard (France); N. Fenineche, University of Belfort-Montbéllard, Sevenans (France); A. Billard, D. Mercs, University of Belfort-Montbéllard, Montbéliard (France) et al.	**Experiments for Testing of Materials under Action of High-Power Heat Loads at Linear Trap GOL-3** A. Burdakov (Sp), A. Arzhannikov, V. Astrelin, V. Burmasov, G. Derevyankin, I. Ivanov, M. Ivantsivsky, I. Kandaurov, K. Kuklin, S. Kuznetsov, A. Makarov, Budker Institute of Nuclear Physics, Novosibirsk (Russian Federation) et
12:00	**Point and Layer Defects in Transition-Metal Based Laves Phases** A. Leineweber (Sp), J. Aufrecht, W. Baumann, E.J. Mittemeijer, Max Planck Institute for Metals Research, Stuttgart (Germany) et al.	**Squaraine Based Organic Photodetectors for Red-NIR Sensing** L. Beverina (Sp), R. Ruffo, C.M. Mari, G.A. Pagani, University of Milano-Bicocca (Italy); D. Natali, M. Sampietro, M. Caironi, Politecnico of Milano (Italy)	**Real-Time Observation of Oxidation and Photo-Oxidation of Rubrene Thin Films by Spectroscopic Ellipsometry** M. Kytka (Sp), University of Tübingen (Germany); A. Gerlach, Unievrsity of Tübingen (Germany); J. Kovac, Slovak University of Technology in Bratislava (Slovak Republic); F. Schreiber, University of Tübingen (Germany)	**Piezoelectric Characterisation on PZT Single Fibres and Correlation with Piezoelectric Properties 3-1 Composites** F. Clemens (Sp), Swiss Federal Laboraties for Materials Testing and Research, Dübendorf (Switzerland); M. Piechowiak, University of Silesia, Sosnowiec (Poland) et al.	**Co-Based Heusler Thin Films for Magnetic Tunnel Junctions** A. Thomas (Sp), A. Weddemann, S. Okamura, D. Ebke, N.N. Liu, A. Huetten, J. Schmalhorst, G. Reiss, University of Bielefeld (Germany)	**Beryllium Coatings for the ITER-Like Wall Project at JET: Overview on Heat Flux Testing and Material Properties** T. Hirai (Sp), Research Centre Juelich (Germany); M. Rubel, Association EURATOM-VR, Stockholm (Sweden); J. Linke, Research Centre Juelich (Germany); P. Sundelin, Association EURATOM-VR, Stockholm (Sweden) et al.
12:20	**Stoichiometric Effects of B2-RuAl Intermetallic Compound** K. Woll (Sp), F. Mücklich, Saarland University, Saarbrücken (Germany)	**Template Assisted Fluidic Assembly of Electroluminescent Semiconducting Polymer Nanospheres for Nanostructured Polymer Light Emitting Devices** E. Fisslthaler (Sp), H. Plank, S. Gamerith, E.J.W. List, Graz University of Technology (Austria); K. Landfester, University of Ulm (Germany)	**The Influence of the Metal Grain Size on Conjugated Polymer / Metal Bilayer Wringling** E.J.W. List (Sp), H. Plank, Graz University of Technology (Austria); R. Güntner, U. Scherf, University of Wuppertal (Germany)	**Development of a Piezoceramic Fibre Technology Based on the Polysulfone Process** U. Scheithauer (Sp), Technical University of Dresden (Germany); L. Seffner, M. Engel, Fraunhofer-Institute for Ceramic Technologies and Systems, Dresden (Germany); A. Michaelis, Technical University of Dresden (Germany)	**Magnetization Reversal in Magnetically Coupled Soft/Hard Multilayer Microwires** J. Torrjón, G. Infante, G. Badini, K. Pirota, M. Vazquez Villalabeitia (Sp), Consejo Superior de Investigaciones Cientificas, Madrid (Spain)	**Thermo-Oxidation of Be-Containing Codeposits from JET Divertor Tiles** A.A. Haasz (Sp), C. Tsui, J.W. Davis, University of Toronto (Canada)

Wednesday

Symposium: C11
Room: Istanbul

Solidification Processes, Microstructures and Defects

Microstructures I: Cells and Dendrites

M. Gruber-Pretzler, University of Leoben (Austria)

Keynote Lecture

Three-dimensional Phase-field Simulations of Cellular Solidification microstructures

M. Plapp, Ecole Polytechnique, Palaiseau Cedex (France)

Interdendritic Fluid Flow Pattern Investigated by Phase Field Simulations

M. Apel (Sp), I. Steinbach, ACCESS e.V., Aachen (Germany)

Crystal Anisotropy and Growth Directions of Cells and Dendrites in Directional Solidification

M. Georgelin (Sp), J. Deschamps, A. Pocheau, University Aix-Marseille I (France)

Microstructure of Dilute Sn-Pb Alloys Directionally Solidified

O. Fornaro (Sp), Universidad Nacional del Centro de la Provincia de Buenos Aires, Tandil (Argentina); H. Ochoa, University of Antofagasta (Chile)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Interaction External Field / Phase Transformations

B.C. De Cooman, Pohang University of Science and Technology (Korea, Republic)

Highlight Lecture

Mechanically-Induced Phase Transformations in Fe-Mn Based TRIP and TWIP Steels

A. Pétein, Universite catholique de Louvain, Louvain-la-Neuve (Belgium); P.J. Jacques (Sp), Catholic University of Louvain, Louvain-la-Neuve (Belgium)

Crystallography and Kinetics of Dynamic Ferrite Transformation in Steels

Y. Adachi (Sp), D. Dorner, National Institute for Materials Science, Tsukuba (Japan); P. Luckas, Nuc lear Physics Institute (Czech Republic); P.G. Xu, Y. Tomota, Ibaraki University (Japan)

The Use of Magnetic Fields to Promote the Martensitic Transformation in a Metastable Austenitic Stainless Steel

D. San Martin (Sp), K.W.P. Aarts, P.E.J. Rivera Diaz del Castillo, N.H. van Dijk, Delft University of Technology (Netherlands); E. Bruck, University of Amsterdam (Netherlands) et al.

Plasticity Induced Transformations in Titanium Alloys: Modelling and Experiments

N. Suresh (Sp), Delft University of Technology (Netherlands); P. di Napoli, LSG2M& EMN, Nancy (France); P.E.J. Riveira, S. van der Zwaag, Delft University of Technology (Netherlands)

Oral Poster - Subsession

Poster 1: C12-646
Poster 2: C12-1629
Poster 3: C12-491
Poster 4: C12-1290
Poster 5: C12-436

Symposium: D32
Room: Prag

Modelling Plasticity at small Scales

Dislocation Plasticity

M. Geers, Eindhoven University of Technology (Netherlands)

Dislocation Dynamics in Non-Convex Domains: Applications of the Embedded Discontinuity Method

J. Llorca (Sp), J. Segurado, I. Romero, Polytechnical University of Madrid (Spain)

Size Effects in Plasticity under Stress and Strain Gradients in Micro-Bending Beams Using 3D Discrete Dislocation Dynamics Simulations

C. Motz (Sp), D. Weygand, P. Gumbsch, University of Karlsruhe (Germany)

Plasticity of Sub-Micrometer Sized Pillars: On the Origin of the Size Effect Using a Discrete Dislocation Dynamics Simulation

D. Weygand (Sp), J. Senger, O. Kraft, University of Karlsruhe (Germany); P. Gumbsch, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany)

Modeling Dislocation Climb in Discrete Dislocation Dynamics

D. Mordehai (Sp), E. Clouet, Service de Recherches de Métallurgie Physique, Gif sur Yvette (France); M. Fivel, GPM2, CNRS/INPG, Saint-Martin-d'Hères (France)

On the Relevance of Discreteness in the Continuum Modeling of Dislocation Interactions

A. Roy (Sp), R.H.J. Peerlins, M.G.D. Geers, Eindhoven University of Technology (Netherlands)

Symposium: D31
Room: Oslo

Atomistics and ab Initio Materials Modelling

Magnetic Properties

K. Reuter, Fritz-Haber-Institut der MPG, Berlin (Germany)

Highlight Lecture

Magnetic Origin of Phase Stability and Defect Properties in Fe-Cr Alloys from First-Principles Study

D. Nguyen-Manh (Sp), M. Lavrentiev, S. Dudarev, EURATOM/UKAEA Fusion Association, Abingdon (UK)

Spin and Orbital Magnetism in Fe-Cr Alloys

R. Iglesias (Sp), M. Samaras, A. Froideval, M. Victoria, W. Hoffelner, Nuclear Energy and Safety Department, Villigen (Switzerland)

Effect of Impurities on Grain Boundary Cohesion in Iron

E. Wachowicz, A. Kiejna (Sp), University of Wroclaw (Poland)

Magnetic Molecular Dynamics Simulation of Spin-Coordinate Relaxation Transients in Ferromagnetic Iron

P.-W. Ma (Sp), C.H. Woo, The Hong Kong Polytechnic University (China); S.L. Dudarev, EURATOM/UKAEA Fusion Association, Osfordshire (UK)

First-Principles Studies on Magnetism in Doped Semiconductors

S.K. Nayak (Sp), S. Buschmann, M.E. Gruner, P. Entel, University of Duisburg-Essen (Germany)

Symposium: D34
Room: Kopenhagen

Modelling of Materials Properties at Mesoscale

Modelling of Materials Properties at Mesoscale I

B. Appolaire, Ecole des Mines, Nancy (France)

Keynote Lecture

Precursor Nanoscale Textures and Elastic Anisotropy in Structural Phase Transitions

P. Loveras, M. Porta, T. Castan (Sp), A. Planes, University of Barcelona (Spain); A. Saxena, Los Alamos National Laboratory, NM (USA)

A Texture Component Model for Predicting Recrystallization Textures

A. Brahme (Sp), M. Winning, D. Raabe, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Kinetics of the Martensitic Transitions: Phase Field vs. Lagrangian Dynamics

O.-U. Salman (Sp), A. Finel, CNRS, Chatillon (France)

Recent Advances in Cluster Dynamics

J. Lepinoux, INP Grenoble, St Martin d'Heres (France)

Symposium: C51
Room: Shanghai

Thin Film Technology

Thin Film Processes

S. Berg, Uppsala University (Sweden)

Low Temperature Alpha Alumina Coating by AC Inverted Magnetron Sputtering Technique

A. Aryasomayaajula (Sp), M. Gordon, University of Arkansas, Fayetteville (USA); D.G. Bhat, SBIR/STTR, National Science Foundation, Arlington (USA); A.T. Santhanam, Kennametal Fellow, Kennametal Inc., Latrobe (USA)

Analyses of the Performance Potential of Oxidic PVD Wear-Protection Coatings on Cutting Tools Using the Example of Crystalline Gamma-Al2O3

F. Klocke, K. Gerschwiler, R. Fritsch, D. Lung, S. Cordes (Sp), RWTH Aachen University (Germany)

Nanotechnology Applied on Hot Forging Dies

H.-C.F. Tinius, Thyssenkrupp Metalurgica Campo Limpo, Campo Limpo Paulista-SP (Brazil); S.S. Guerreiro (Sp), J. Segundo Bellodi, Thyssenkrupp Metalurgica Campo Limpo, Campo Limpo Paulista-SP (Brazil)

Influence of the Residual Stress State on Cohesive Damage of PVD-Coated Carbide Cutting Tools

B. Breidenstein (Sp), B. Denkena, Leibniz Universität Hannover, Garbsen (Germany)

Functional PVD-Multilayer Systems for Tool Surfaces in Production Engineering

S. Momeni (Sp), W. Tillmann, E. Vogli, F. Hoffmann, University of Dortmund (Germany)

Symposium: D22
Room: Seoul

Mechanical Characterisation using In Situ Methods

Nanoindentation

G. Dehm, University of Leoben (Austria)

Keynote Lecture

Direct Observation of Material Deformation by Quantitative Nanomechanical Testing in the Transmission Electron Microscope

O.L. Warren (Sp), Z. Shan, S.A. Syed Asif, Hysitron, Inc., Eden Prairie, MN (USA); E.A. Stach, Purdue University, West Lafayette, IN (USA); A.M. Minor, Lawrence Berkeley National Laboratory, CA (USA)

The Use of In Situ Electrochemical Nanoindentation to Study Hydrogen Embrittlement

A. Barnoush (Sp), H. Vehoff, Saarland University, Saarbrücken (Germany)

Deformation under Nanoindents in Copper Examined Using EBSD and TEM

M. Rester (Sp), C. Motz, R. Pippan, Erich Schmid Institute of Materials Science, Leoben (Austria)

In-Situ SEM and TEM Mechanical Testing of Metal Nanostructures

B.J. Inkson (Sp), A. Lockwood, J.J. Wang, R. Gay, Y. Peng, D. Deivasagayamand, The University of Sheffield (UK); M.S. Bobji, Indian Institute of Science, Bangalore (India)

Symposium: C54
Room: Singapur

Industrial Applications

Applications in Surface Technology

W. Tillmann, University of Dortmund (Germany)

Hot Gas and Slag Resistance of SIBOR-Coated Molybdenum
H.-P. Martinz (Sp), Plansee SE, Reutte (Austria); B. Kleinpass, Plansee Metall GmbH, Reutte (Austria); B. Tourneret, Plansee SE, Reutte (Austria); H. Larcher, Plansee Metall GmbH, Reutte (Austria) et al.

The Deposition Process of Nanoscaled Multilayer Coatings for X-Ray Optics
F. Hertlein (Sp), J. Wiesmann, Incoatec GmbH, Geesthacht (Germany); D. Häußler, University of Kiel (Germany); A. Oehr, S. Kroth, C. Michaelsen, Incoatec GmbH, Geesthacht (Germany); W. Jäger, University of Kiel (Germany)

Thermal Sprayed Layers for Biomass Conversion Plants
D. Bendix (Sp), M. Faulstich, ATZ Entwicklungszentrum, Sulzbach-Rosenberg (Germany)

Improvement of the High Temperature Oxidation Resistance of Gamma-TiAl by Selectively Pre-Treated Si-Based Coatings
A. Ebach (Sp), M. Fröhlich, R. Braun, German Aerospace Center - DLR, Cologne (Germany); C. Leyens, Brandenburg Technical University, Cottbus (Germany)

Halogen-Based Treatments of TiAl Alloys: A Complete Thermodynamic Assessment
P. Masset (Sp), M. Schütze, Karl-Winnacker-Institut der Dechema e.V., Frankfurt (Germany)

Symposium: X42
Room: Neu-Delhi

Bioactive Materials, Surfaces and Coatings

Multifunctional Biosurfaces

K. Jandt, Friedrich Schiller University Jena (Germany)

Highlight Lecture
Bioactive (Ti,Ta)-Based Ceramics Films for Implants
I. Bashkova (Sp), A.N. Sheveiko, P.V. Kiryukhantsev-Korneev, Moscow State Institute of Steel and Alloys (Russian Federation); N.A. Gloushankova, Cancer Research Center of RAMS, Moscow (Russian Federation) et al.

Biocompatible Silver-Containing Glasses and Glass-Ceramics with Antibacterial Properties
E. Verné (Sp), S. Ferraris, M. Miola, S. Di Nunzio, Polytechnic of Turin, Torino (Italy); P. Robotti, Eurocoating SpA, Trento (Italy)

Novel Antibacterial and Abrasion-Resistant Biofunctionalized Ceramic Surfaces
L. Treccani (Sp), K. Rezwan, University of Bremen (Germany)

Keynote Lecture
FEMS Materials Science and Technology Prize 2007 – Smart and Biomimetic Systems for Medical Applications
J.F. Mano, University of Minho, Braga (Portugal)

Symposium: B32
Room: Lubljana

Monitoring and Chemistry of Cementitious Materials

Structural Health Monitoring

K. Hariri, Braunschweig University of Technology (Germany)

Structure and Hot Rolled Reinforcement Rods Properties Evolution in the Process of Long Service Life in Concrete
V. Gromov (Sp), S.V. Konovalov, V.R. Mikryukov, Siberian State Industrial University, Novokuznetsk (Russian Federation)

An Innovative Monitoring System for rc-/pc-Structures
K. Hariri (Sp), H. Budelmann, Technical University Braunschweig (Germany)

Flexible Strain-Sensitive Sensors for Monitoring and Life Cycle Assessment
F. Clemens (Sp), Swiss Federal Laboratories for Materials Testing and Research, Dübendorf (Switzerland); I. Leite Silveira,, C.P. Bergmann, University Federal of Rio Grande, Porto Alegre (Brazil) et al.

Life Cycle Analysis Incorporated Development of Geopolymer Binder - Explained on a Special Example: Pre Cast Element
A. Buchwald (Sp), Bauhaus-University Weimar (Germany); M. Weil, Forschungszentrum Karlsruhe GmbH (Germany); K. Dombrowski, Technical University of Freiberg (Germany)

Symposium: B31
Room: Zagreb

Micro-structure and Water Repellent Treatment

Water Repellent Treatment

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

Water Repellent Treatment of Concrete: Truly a Benefit to Its Durability?
J. Visser, TNO Built Environment and Geosciences, Delft (Netherlands)

Durability of Hydrophobic Treatments on Concrete Surface - What Does Affect the Durability and what are the Reasons?
M. Raupach, T. Büttner (Sp), RWTH Aachen University (Germany)

Surface Treatment of Cracked and Salt Contaminated Concrete by Means of Water Repellent Agents
F.H. Wittmann (Sp), Aedificat Institute Freiburg (Germany); G. Zhu, P. Guo, T. Zhao, Qingdao Technological University (China)

Long Term Performance of Water Repellent Treatments
A. Johansson (Sp), J. Silfwerbrand, Swedish Cement and Concrete Research Institute, Stockholm (Sweden)

Chloride Penetration into Integral Water Repellent Concrete
F.H. Wittmann (Sp), Aedificat Institute Freiburg (Germany); Y. Xian, T. Zhao, Qingdao Technological University, Quingdao (China)

Symposium: Y11
Room: Hongkong

Teaching and Learning of Materials Science and Engineering

The Approach to Teaching

T. Clyne, University of Cambridge (UK)

Keynote Lecture
A Design-Led Approach to Teaching of Materials to Engineers
M. Ashby, University of Cambridge (UK)

Tools for Defining the Required Sensorial Properties of Materials for New Products
I. van Kesteren, Delft University of Technology (Netherlands)

Interfacing Materials Education with Professional Responsibility
D. Brandon, Technion - Israel Institute of Technology, Haifa (Israel)

Symposium: Ex
Room: Forum Sydney

Exhibit Presentation

Exhibition Forum 2

13:00 - 13:20 h
The Center of Excellence New Materials - Service in R+D for Industrial Innovations
W. Faul (Sp), M. Gurka, Kompetenzzentrum Neue Materialien Nordbayern GmbH, Bayreuth (Germany)

13:20 - 13:40 h
Hysitron: A Focus on Applications in NanoMechanical Testing
D. Hongerholt, Hysitron, Inc., Minneapolis (USA)

13:40 - 14:00 h
PORAVER- Expanded glass beads Innovative Material for Innovative Applications
P. Kumpf, Dennert Poraver GmbH, Schlüsselfeld (Germany)

14:00 - 14:20 h
Integrating the Physics of new Processes with Engineering Reality
P. Newbatt (Sp), W. Hopkins, PSI - Phoenix Scientific Industries Ltd., East Sussex (UK)

11:00
11:20
11:40
12:00
12:20

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	Symposium: B22 Room: Kiew	Symposium: A11 Room: Budapest	Symposium: A12 Room: Riga	Symposium: A61 Room: Stockholm	Symposium: A23 Room: Krakau	Symposium: B42 Room: Helsinki
	High Temperature Metallic and Intermetallic Materials	**Fundamental Properties of Organic Semiconductors and Materials for Solid State Memories**	**Organic Electronic Devices**	**Dielectric and Piezoelectric Ceramics and Devices**	**Magnetic Thin Films**	**Materials for Fusion Applications**
	Steels and Iron Aluminides I	Experimental Studies on Organic Semiconductor Interfaces	Devices I	Dielectrics and Thin Films	Magnetic Thin Films II	Irradiation Effects 1
	V. Sklenicka, Academy of Sciences of the Czech Republic, Brno (Czech Republic)	R. Scholz, Technical University of München, Garching (Germany)	W. Brütting, University of Augsburg (Germany)	B. Malic, Jozef Stefan Institute, Ljubljana (Slovenia)	H.H. Gatzen, Leibniz Universität Hannover, Garbsen (Germany)	N. Baluc, Swiss Federal Institute of Technology, Villigen- PSI (Switzerland)
14:40	Highlight Lecture **The High Temperature Creep Behaviour of Iron Aluminide-Base Alloys** D.G. Morris (Sp), M.A. Munoz-Morris, I. Gutierrez-Urrutia, Centro Nacional de Investigaciones Metalúrgicas, Madrid (Spain)	**Spontaneous Charge Transfer Across Hexyl Layers to Establish Thermodynamic Equilibrium** S. Duhm (Sp), Humboldt-Universität zu Berlin (Germany); H. Glowatzki, Humboldt-Universität Berlin (Germany); R.L. Johnson, University of Hamburg (Germany); J.P. Rabe, N. Koch. Humboldt-Universität	Keynote Lecture **Organic Electronic Devices: Recent Progress** E.J.W. List, Graz University of Technology (Austria)	Highlight Lecture **Acceptor Segregation and Nonlinear Current-Voltage Characteristics in SrTiO3** S.-J.L. Kang (Sp), S.M. Wang, Korea Advanced Institute Science and Technology, Taejon (Korea, Republic); S.-Y. Chung, Inha University, Incheon (Korea, Republic)	**Domain Adjustment of Patterned CMOS-Compatible Ferromagnetic Films with High Frequency Suitability** H. Leiste (Sp), K. Seemann, Forschungszentrum Karlsruhe GmbH (Germany)	**Damage to Tungsten Macro-Brush Targets under ELM-like Heat Loads. Experiments vs. Numerical Simulations** B. Bazylev (Sp), G. Janeschitz, I. Landman, S. Pestchanyi, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany); A. Loarte, G. Federici, EFDA Close Support Unit Garching (Germanv) et al.
15:00	**Microstructures and Mechanical Properties of L2-1-Ordered Fe-Al-Ti-X (X = Cr, B) Alloys with Coherent and Incoherent Precipitates** R. Krein (Sp), M. Palm, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	**Polymer-Dye as a New Low Dose Gamma Radiation Dosimeter** C. Graeff (Sp), F.A. Castro, J. Borin, State University of Sao Paulo, Bauru (Brazil); T. Geiger, F. Nüsch, Empa, Dübendorf (Switzerland)		**Changes in Macroscopic Behaviour through Segregation in Niobium Doped Strontium Titanate** M. Bäurer (Sp), University of Karlsruhe (Germany); L.F. Zagonel, N. Barrett, CEA-DSM/DRECAM-SPCSI, Gif-sur-Yvette (France); M.J. Hoffmann, University of Karlsruhe (Germany)	**Domain Wall Pinning in Percolated Co Based Thin Films with Perpendicular Anisotropy** J. Fidler (Sp), D. Suess, T. Schrefl, Vienna University of Technology (Austria)	**Radiation-Induced Helium Embrittlement Modeling in an Engineering Perspective** R. Chaouadi (Sp), T. Hirai, J. Linke, G. Pintsuk, Research Centre Juelich (Germany)
15:20	**New 9-12% Cr-Steels with Enhanced Creep Resistance due to Modified Precipitation Strengthening** A. Chilukuru, K. Durst (Sp), M. Göken, W. Blum, University of Erlangen-Nuremberg (Germany)	**Frontier Electronic Structure with Relation to Molecular Aggregation Structure in Organic Semiconductor Thin Films** N. Sato (Sp), H. Yoshida, R. Murdey, Kyoto University, Uji (Japan)	**Organic Thin-Film Transistors Using Novel Self-Assembled Phosphonate Monolayers Have Excellent Perfomance** M. McDowell, I.G. Hill, Dalhousie University, Halifax, NS (Canada); J.E. McDermott, S.L. Bernasek, A. Kahn, J. Schwartz (Sp), Princeton University, NJ (USA)	**Microstructural Analysis of Ni-BaTiO3 Based MLCC Device by Reoxidation** C.-C. Lin (Sp), W.C.J. Wei, National Taiwan University, Taipei (Taiwan)	**Novel Multilayer Combination of CoCr and Pt with Adjustable Perpendicular Anisotropy** E. Papaioannou (Sp), P. Fumagalli, Freie Universität Berlin (Germany); M. Angelakeris, I. Tsiaoussis, Aristotle University of Thessaloniki (Greece); P. Poulopoulos, University of Patras (Greece)	**Dislocation Mobility in Dilute and Concentrated Fe-Cr Alloys** D. Terentyev (Sp), SCK-CEN, Mol (Belgium); Y.N. Osetsky, Oak Ridge National Laboratory, NM (USA); L. Malerba, G. Bonny, SCK-CEN, Mol (Belgium)
15:40	**Low Temperature Ageing of a FeAl Alloy Hardened by Fine Precipitation of Y2O3** M. Hantcherli (Sp), C. Genevois, A. Fraczkiwicz, Y. Girard, Ecole Nationale Superieure des Mines, St-Etienne (France)	**The Growth of Organic Materials: A Photoemission Electron Microscopy Investigation of Diindenoperylene Thin Films** M.B. Casu (Sp), I. Biswas, H. Peisert, T. Chassé, University of Tübingen (Germany)	**Growth of Neural Cells on Ultra Thin Organic Semiconductors** E. Bystrenova (Sp), P. Stoliar, A. Lazar, P. Greco, C. Dionigi, M.G. Cacace, F. Biscarini, CNR, Bologna (Italy); I. Tonazzini, C. Martini, University of Pisa (Italy) et al.	**Multiferroic BiFeO3 Thin Films Tailored by SrRuO3 Buffer Layer** J. Wang (Sp), R.Y. Zheng, X.S. Gao, S. Ramakrishna, The National University of Singapore (Singapore)	**Layered Ferromagnetic Thin Films as Cores in Toroidial Microinductors for rf-Applications in the GHz Range** A. Gerber, C. Schmutz, caesar, Bonn (Germany); J. McCord, Leibniz Institute for Solid State and Materials Research Dresden (Germany); E. Quandt (Sp), University of Kiel (Germany)	**Investigation of the Dislocation Interaction with Voids and Helium Bubbles in Nickel Using Molecular Dynamics** A. Simar (Sp), H.-J. Lee, Berkeley University of California, CA (USA); I.M. Robertson, University of Illinois, Urbana-Champaign, IL (USA); B.D. Wirth, Berkeley University of California, CA (USA)
16:00	**Grain Refinement of Fe3Al-Based Alloys Using Precipitate Particles in Thermomechanical Process** S. Kobayashi (Sp), T. Takasugi, Tohoku University, Sakai, Osaka (Japan)	**Tailoring the Structure and Morphology of Hexaphenyl (6P) Films on Mica (001)** P. Frank (Sp), Graz University of Technology (Austria); G. Hlawacek, University of Leoben (Austria); T. Haber, R. Resel, Graz University of Technology (Austria); C. Teichert, University of Leoben (Austria) et al.	**Observation of Hysteresis Effects in Organic Heterostructure Devices and Demonstration of Non-Volatile Memory Behaviour** F. Lindner (Sp), K. Walzer, K. Leo, Technical University of Dresden (Germany)	**Al-Oxynitride as a Buffer Layer for PrOx/SiC and PrOx/Si** K. Henkel (Sp), K. Karavaev, R. Sohal, Y. Burkov, D. Schmeißer, Brandenburg Technical University, Cottbus (Germany)	**Co/Pt Multilayers: Interface Effects at the Monolayer Limit** M. Angelakeris (Sp), Aristotle University, Thessaloniki (Greece); E.T. Papaioannou, Freie Universität, Berlin (Germany); P. Poulopoulos, University of Patras (Greece) et al.	**Irradiation and Dispersion Hardening Effects on Tensile Ductility and Dynamic Toughness of 7-13 Cr Steels** D. Preininger, Forschungszentrum Karlsruhe GmbH (Germany)

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Wednesday

Symposium: C11
Room: Istanbul

Solidification Processes, Microstructures and Defects

Microstructures II: Mono-, Peri- and Eutectics

M. Plapp, Ecole Polytechnique, Palaiseau Cedex (France)

Highlight Lecture

Numerical Simulation and Experimental Investigation on Droplet Dynamic in Hypermonotectic AlBi Alloys
M. Gruber-Pretzler (Sp), L. Könözsy, M. Wu, A. Ludwig, University of Leoben (Austria); R.H. Mathiesen, SINTEF Materials and Chemistry, Trondheim (Norway) et al.

Development of Monotectic Surface Layers by Laser Alloying
A. Roósz (Sp), University of Miskolc, Miskolctapolca (Hungary); M. Svada, University of Miskolc, Miskolc-Egyetemvaros (Hungary); G. Buza, Bay Zoltán Institute of Materials Science and Technology, Budapest (Hungary)

Real-Time Experimental Study of the Dynamics of Fibrous Eutectic Growth
M. Perrut (Sp), S. Bottin-Rousseau, S. Akamatsu, G. Faivre, INSP, Paris (France)

Study of Au-Fe-Ni Solidification and Solid State Precipitation
D. Favez (Sp), M. Rappaz, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Highlight Lecture

Modeling of Intermetallic Phase Growth
A. Umantsev, The University of North Carolina, Fayetteville, NC (USA)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Microstructure Optimization

E. Aeby-Gautier, Ecole des Mines, Nancy Cedex (France)

Highlight Lecture

Microstructure and Carbon Partitioning in Ni-Added High Strenght Steels Subjected to Quenching and Partitioning (Q&P)
F. Rizzo (Sp), A.R. Martins, Pontifícia Universidade Católica, Rio de Janeiro (Brazil); J.G. Speer, Advanced Steel Processing and Products Research Center, Golden, CO (USA); D. Edmonds, K. He, University of Leeds (UK) et al.

Influence of C, Mn, Al, and Cr on the TWIP Effect and other Hardening Effects in High Manganese Austenitic Steels
J. Nakano (Sp), M. Iker, S. Ryelandt, F. Delannay, T. Pardoen, P.J. Jacques, Catholic University of Louvain, Louvain-la-Neuve (Belgium)

New Low Transformation Filler Material for Optimizing the Welding-Specific Residual Stresses
A. Kromm (Sp), T. Kannengiesser, Federal Institute for Materials Research and Testing, Berlin (Germany)

On the Phase Transformations and Recrystallisation of Metastable Beta Titanium Alloys
N. Clement (Sp), Catholic University of Louvain, Louvain-la-Neuve (Belgium); P.J. Jacques, Universite catholique de Louvain, Louvain-la-Neuve (Belgium)

Influence of the Thermal Path on the Microstructure Formation of Titanium Alloys
E. Aeby-Gautier (Sp), B. Appolaire, F. Bruneseaux, G. Geandier, D. Bonina, M. Dehmas, P. Boulet, Ecole des Mines, Nancy (France)

Symposium: D32
Room: Prag

Modelling Plasticity at small Scales

Continuum Micro Plasticity

J. Llorca, Polytechnical University of Madrid (Spain)

Linking Localized Plastic Deformation to Grain Boundary Damage Nucleation in Single Phase Metals
P. Eisenlohr (Sp), R. Thiessen, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); T.R. Bieler, Michigan State University, East Lansing, MI (USA) et al.

Modeling the Deformation Texture Development under Various Strain Path in Aluminum Alloys
J. Sidor (Sp), Delft University of Technology (Netherlands); A. Miroux, Netherlands Institute for Metals Research, Delft (Netherlands); R. Petrov, Ghent University (Netherlands) et al.

Indentation Size Effect in Conical Indentation Experiments Using the Conventional Theory of Mechanism-Based Strain Gradient Plasticity
B. Backes (Sp), Y. Huang, K. Durst, M. Goeken, University of Erlangen-Nuremberg (Germany)

Strain Gradient Plasticity Based Analysis of Transformation Induced Plasticity in Multiphase Steels
L. Mazzoni (Sp), T.J. Massart, Université Libre de Bruxelles (Belgium); T. Pardoen, Catholic University of Louvain, Louvain-la-Neuve (Belgium)

Cyclic Behavior of Extruded Magnesium: Experimental, Microstructural and Numerical Approach
G. Cailletaud (Sp), Ecole Nationale Superieure des Mines de Paris, Evry (France); C. Guillemer, LTI, UPJV, CNRS EA 3899, Amiens (France); M. Clavel, Ecole Centrale de Paris, Chatenay-Malabry (France)

Symposium: D31
Room: Oslo

Atomistics and ab Initio Materials Modelling

Extended Defects I

S. Gemming, FZ Dresden-Rossendorf (Germany)

Highlight Lecture

General Stacking Fault Energies in Highly Strained Metallic Environments
C. Brandl (Sp), P.M. Derlet, H. Van Swygenhoven, Paul Scherrer Institute, Villigen (Switzerland)

Effects of Grain Boundary Anisotropy on Nucleation of Ni3Al Precipitates in Ni-Al Alloys
C. Hin (Sp), B. Wirth, Berkeley University of California, CA (USA)

Bulk and Defect Anharmonic Properties of the Magnetic Potential
S. Chiesa (Sp), P.M. Derlet, H. Van Swygenhoven, Paul Scherrer Institut, Villigen (Switzerland); S.A. Dudarev, EURATOM, Oxfordshire (UK)

Magnetic Moment, Stability and Segregation at Selected Grain Boundaries in Nickel
J. Kuriplach (Sp), O. Melikhova, Charles University, Prague (Czech Republic); M. Sob, Masaryk University, Brno (Czech Republic); P. Lejcek, V. Paidar, Academy of Sciences of the Czech Republic, Prague (Czech Republic)

Ab-Initio Based Multiscale Calculations of Grain Boundaries in Aluminum
L. Lymperakis (Sp), J. Neugebauer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Symposium: D34
Room: Kopenhagen

Modelling of Materials Properties at Mesoscale

Modelling of Materials Properties at Mesoscale II

Y. Le Bouar, CNRS/ONERA, Châtillon (France)

Highlight Lecture

Modelling of the Discontinuous Precipitation Reaction with the Phase-Field Method
M. Plapp (Sp), Ecole Polytechnique, Palaiseau (France); L. Amirouche, USTHB, Bab Ezzouar (Algeria)

Identification of Material Parameters for Continuum Modeling of Phase Transformations in Multicomponent Systems
A. Umantsev, The University of North Carolina, Fayetteville, NC (USA)

Staggered Growth Model for Pearlite Transformation in Fe-C
I. Steinbach (Sp), M. Apel, RWTH Aachen University (Germany)

Modeling of Non-Equilibrium Effects in Spinodal Decomposition of a Binary System
P.K. Galenko (Sp), German Aerospace Center - DLR, Cologne (Germany); V. Lebedev, Udmurt State University, Izhevsk (Russian Federation)

Parallel Algorithms for Microstructure Simulations with Fluid
M. Selzer (Sp), B. Nestler, University of Applied Sciences, Karlsruhe (Germany)

Symposium: C51
Room: Shanghai

Thin Film Technology

Characterisation and Analysis

S.S. Guerreiro, ThyssenKrupp Metalurgica Campo Limpo, Campo Limpo Paulista-SP (Brazil)

Keynote Lecture

Recent Developments in PVD-Coatings Characterization by the Impact Test; Applications in Predicting Coated Tools' Cutting Performance
K.D. Bouzakis (Sp), A. Asimakopoulos, E. Lili, A. Sampris, M. Batsiolas, Aristoteles University Thessaloniki (Greece)

Mechanical and Tribological Properties of CrN and Cr-Si-N Coatings Deposited by Means of Magnetron Sputtering Assisted by RF Plasmas
M. Baraket (Sp), LERMPS, Belfort (France); D. Mercs, C. Coddet, LERMPS, Montbéliard (France)

Influence of Microblasting Conditions on Residual Stresses of CVD kappa-Al2O3 Coated Hardmetals
C. Barbatti (Sp), Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); A. di Prinzio, M. Staia, Central University of Venezuela, Caracas (Venezuela) et al.

Symposium: D22
Room: Seoul

Mechanical Characterisation using In Situ Methods

Plasticity and Fracture I

B. Inkson, The University of Sheffield (UK)

In-Situ Investigation into Damage Mechanisms in TRIP Steel
S. Zaefferer (Sp), R. Thiessen, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Generation of Dislocation Sources in Grain Boundary during Slip Transfer
A. Gemperle, J. Gemperlová (Sp), V. Gärnerova, Academy of Sciences of the Czech Republic, Prague (Czech Republic)

In-Situ TEM Observations of Dislocation-Particle Interactions in Al Alloys at Elevated Temperature
B.G. Clark (Sp), Max Planck Institute for Metals Research, Stuttgart (Germany); I.M. Robertson, University of Illinois, Urbana-Champaign, IL (USA)

Digital Image Correlation to Characterise Ductile Mixed-Mode Fracture in Dissimilar Metal Welds and Base Metals
F. Hagemann, Joint Research Centre of the European Commission, Petten (Netherlands)

Experimental Investigation of the Nucleation and Propagation of Portevin-Le Châtelier Deformation Bands by Infrared Camera
G. Fischer (Sp), H.-A. Crostack, X. Feng, R. Zielke, University of Dortmund (Germany)

Symposium: C54 Room: Singapur	Symposium: X42 Room: Neu-Delhi	Symposium: B31 Room: Lubljana	Symposium: A41 Room: Zagreb	Symposium: Y11 Room: Hongkong	Symposium: Room:	
Industrial Applications	**Bioactive Materials, Surfaces and Coatings**	**Micro-structure and Water Repellent Treatment**	**Carbon Nanotubes: Catalysis, Growth and Integration**	**Teaching and Learning of Materials Science and Engineering**		
Applications in Surface Technology K. Bobzin, RWTH Aachen University (Germany)	Surface Functionalization and Characterisation A.R. Boccaccini, Imperial College, London (UK)	Nanostructure of the CSH-Phase and its Interaction with Moisture J. Adolphs, POROTEC GmbH, Hofheim (Germany)	Growth and Integration of Nanotubes I W. Milne, University of Cambridge (UK)	How we teach T. Bullough, University of Liverpool (UK)		
Keynote Lecture	**Keynote Lecture**	**Highlight Lecture**	**Highlight Lecture**	**Interactive E-Learning Across the Ages Using steeluniversity.org.** R. Hambleton (Sp), International Iron and Steel Institute, Brussels (Belgium); A.M. Green, University of Liverpool (UK)		**14:40**
Innovative Approaches for Wear-Resistant Low-Friction Hard Coatings for Tools C. Mitterer, University of Leoben (Austria)	**Functionalization of Inert Oxide Ceramic Surfaces for Bioactivation** H. Fischer (Sp), N. Kaltenborn, R. Telle, RWTH Aachen University (Germany)	**The Hydrogel-System of Hardened Cement Paste** M.J. Setzer, University of Duisburg-Essen (Germany)	**Optical and Optoelectronic Properties of Nanowire and Nanotube / Polymer Composites - A Model Study in Nanoscale Engineering** W.J. Blau, Trinity College Dublin (Ireland)			
		Growth of Cement Particles during the Early Hydration Stage S. Erfurt (Sp), U. Stark, A. Mueller, Bauhaus-University Weimar (Germany)	**Conductive, Field Emission and Mechanical Properties of Carbon Nanotubes Grown by Different Methods** J. Andzane (Sp), University of Latvia, Riga (Latvia); J. Tobin, Z. Li, National University of Ireland, Cork (Ireland); J. Prikulis, University of Latvia, Riga (Latvia); J.D. Holmes, National University of Ireland, Cork (Ireland) et al.	**AluMatter, a New Web Based e-Learning Tool** J. Hirsch (Sp), Hydro Aluminium Deutschland GmbH, Bonn (Germany); C. Leroy, European Aluminium Association (EAA), Brussels (Belgium); A. Green, The University of Liverpool (UK)		**15:00**
Diamond Coated Ceramic Capable of Dry Running in Bearings A. Dwars (Sp), M. van Geldern, J. Gröschel, KSB AG, Pegnitz (Germany)	**Installing Signalling Proteins on Titanium Implant Materials Employing Polymer Interlayers** N. Adden, D.G. Castner, A. Hoffmann, G. Gross, H. Windhagen, H. Menzel (Sp), Braunschweig University of Technology (Germany)	**On the Prediction of Moisture Transport in Cement Based Materials Submitted to Cyclic Changes of Relative Humidity** M. Thiery (Sp), V. Baroghel-Bouny, Laboratoire Central des Ponts et Chaussées, Paris (France)	**High Density Aligned CNT Arrays - An Alternative to Cu Interconnects** D. Cott (Sp), P. Vereecken, A.R. Negreira, S.C. Esconjauregui, IMEC, Leuven (Belgium); H. Griffith, Oxford Instruments Plasma Technology, Bristol (UK); G. Groeseneken, IMEC, Leuven (Belaium)	**Update on the DoITPoMS Project: A Global Resource for Web-Based Teaching and Learning of Materials Science** T.W. Clyne (Sp), J.A. Leake, Z.H. Barber, J.C. Tan, L.M. Sallows, N.A. Rutter, University of Cambridge (UK); A. Mannis, I. Taylor, D.W. Brook, Liverpool University (UK)		**15:20**
Well Adherent Diamond Coatings on Steel Substrates J.C. Bareiss, K. Kellermann (Sp), S.M. Rosiwal, R.F. Singer, University of Erlangen-Nuremberg (Germany)	**Multifunctional Behaviour of a Surface Modified Titanium YIloB** S. Spriano (Sp), S. Ferraris, Politecnico di Torino (Italy); C.L. Bianchi, University of Milan, Milano (Italy); M. Fini, R. Giardino, P. Torricelli, Rizzoli Orthopaedic Institute, Bologna (Italy) et al.	**Dynamic Water Vapour Sorption Studies on Cements and Calcium-Silicate-Hydrates** U. Diederichs, University of Rostock (Germany)	**Characterization of Carbon Nanotubes Grown in Vias Structures by Transmission Electron Microscopy** O. Richard (Sp), A. Romo Negreira, H. Bender, P. Vereecken, T. Hantschel, IMEC, Leuven (Belgium)	**Learning about Materials Science and Technology by Deconstructing Modern Products** A. Horsewell, Technical University of Denmark, Lyngby (Denmark)		**15:40**
High Performance Surfaces for Automotive Applications J. Vetter (Sp), Sulzer Metaplas, Bergisch Gladbach (Germany); G. Barbezat, Sulzer Metco AG, Wohlen (Germany); J. Crummenauer, Sulzer Metaplas, Bergisch Gladbach (Germany); J. Avissar, Sulzer Metaplas (US) Inc.. Westburv. NY	**Oral Poster - Subsession** Poster 1: X42-576 Poster 2: X42-1853 Poster 3: X42-1902 Poster 4: X42-1412 Poster 5: X42-1761	**Oral Poster - Subsession** Poster 1: B31-867 Poster 2: B31-182 Poster 3: B31-2033 Poster 4: B31-2190 Poster 5: B31-1108	**Production and Mechanical Behaviour of High Volume Fraction Epoxy Nanocomposites Based on Functionalized Carbon Nanotubes as Reinforcements** D. Kastanis (Sp), Foundation for Research and Technology – Hellas, Platani, Rio, Achaia (Greece); J. Parthenios, Foundation for Research and Technology - Hellas, Platani, Rio, Achaia (Greece) et al.			**16:00**

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	Symposium: B22 Room: Kiew	Symposium: A11 Room: Riga	Symposium: A12 Room: Budapest	Symposium: A62 Room: Stockholm	Symposium: A23 Room: Krakau	Symposium: B42 Room: Helsinki
	High Temperature Metallic and Intermetallic Materials	**Fundamental Properties of Organic Semiconductors and Materials for Solid State Memories**	**Organic Electronic Devices**	**Solid Oxide Fuel Cells**	**Magnetic Thin Films**	**Materials for Fusion Applications**
	Steels and Iron Aluminides II	Modelling of Organic Semiconductor Interfaces	Devices II	Electrolyte	Magnetic Thin Films III	Irradiation Effects 2
	D.G. Morris, CENIM-CSIC, Madrid (Spain)	L. Beverina, University of Milano-Bicocca (Italy)	E.J. List, Graz University of Technology (Austria)	H.P. Buchkremer, Research Centre Juelich (Germany)	L. Schultz, Leibniz Institute for Solid State and Materials Research Dresden (Germany)	R. Chaouadi, Research Centre Juelich (Germany)
17:00	Highlight Lecture **Creep Life Assessment of Advanced 9-12%Cr Power Plant Steels** V. Sklenicka (Sp), K. Kucharova, M. Svoboda, B. Million, Academy of Sciences of the Czech Republic, Brno (Czech Republic)	**Self-Assembled Monolayers on Noble Metals: A Theoretical View on the Interfacial Electronic Structure** G. Heimel (Sp), Georgia Institute of Technology, Atlanta, GA (USA); L. Romaner, Graz University of Technology (Austria); J.-L. Bredas, Georgia Institute of Technology, Atlanta, GA (USA) et al.	**Efficient Photon Harvesting in ZnPc/PPV/Fullerene Multicomponent Solar Cells** R. Koeppe (Sp), JKU Linz (Austria); P.A. Troshin, R.N. Lyubovskaya, Institute of Problems of Chemical Physics of RAS, Moscow (Russian Federation); N.S. Sariciftci, JKU Linz (Austria)	Keynote Lecture **Efficiency, Stability and Reliability of Solid Oxide Fuel Cells from the Materials Chemical Point of View** H. Yokokawa (Sp), AIST, Energy Technology Research Institute, Tsukuba (Japan); N. Sakai, T. Horita, K. Yamaji, M.E. Brito, H. Kishimoto, AIST, Energy Technology Research Institute, Tsukuba, Ibaraki (Japan)	**Conception of a System for Data Storage on Machine Components** O. Traisigkhachol, K.-H. Wu (Sp), H.H. Gatzen, Leibniz Universität Hannover, Garbsen (Germany)	**Monte Carlo Study of Diffusion and Cluster Formation in Fe-Cr Alloys** M. Lavrentiev (Sp), D. Nguyen-Manh, S.L. Dudarev, UKAEA, Abingdon (UK)
17:20	**Thermodynamic Calculations on the Cr-Ni-Pt System** J. Preußner (Sp), R. Völkl, University of Bayreuth (Germany); S. Prins, CSIR, Pretoria (South Africa); U. Glatzel, University of Bayreuth (Germany)	Highlight Lecture **Charge Neutrality Levels and Interface Properties of Organic Semiconductors** H. Vázquez (Sp), A.-P. Jauho, Technical University of Denmark, Lyngby (Denmark); F. Flores, Autonomous Univesity of Madrid (Spain)	**Fabricating all Organic Ambipolar FETs by Means of Organic Bulk Heterojunctions** P. Cosseddu (Sp), CNR, Modena (Italy); A. Bonfiglio, University of Cagliari (Italy); I. Salzmann, J.P. Rabe, N. Koch, Humboldt-University, Belin (Germany)		**Combined Magnetic Force Microscopy and Scanning Hall Probe Microscopy for Local Magnetization Studies of Patterned $SmCo_5$ Magnetic Thin Films** V. Neu (Sp), A. Singh, A.K. Patra, D. Meier, L. Schultz, U. Wolff, Leibniz Institute for Solid State and Materials Research Dresden (Germany)	**Main Mechanisms of Irradiation Creep in Fusion Structural Materials** A. Ryazanov (Sp), Russian Research Center"Kurchatov Institute", Moscow (Russian Federation); S. Ukai, HokkaidoUniversity, Kita-kuSapporo (Japan); A. Kohyama, Kyoto University (Japan)
17:40	**On the Effect of Equal-Channel Angular Pressing on Creep of Tempered Martensite Ferritic Steels** A. Kostka (Sp), Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); K.-G. Tak, T. Eggeler, Ruhr-University Bochum (Germany)	**F4TCNQ on Cu(111) and the Flow of Electrons** L. Romaner (Sp), G. Rangger, Graz University of Technology (Austria); G. Heimel, Georgia Institute of Technology, Atlanta, GA (USA); A. Gerlach, F. Schreiber, University of Tübingen (Germany) et al.	Highlight Lecture **Charge Carrier Transport in Ambipolar Organic Field-Effect Devices** W. Brütting (Sp), A. Opitz, S. Grecu, M. Bronner, University of Augsburg (Germany)	**Microstrucural Investgations of Thin Sol-Gel Fabricated 8YSZ Films** B. Butz (Sp), H. Störmer, D. Gerthsen, University of Karlsruhe (Germany); M. Brockmeyer, R. Krüger, P. Löbmann, Fraunhofer Institute for Silicate Research, Würzburg (Germany) et al.	**Combinatorial Methods for the Development of Magnetic and Shape Memory Thin Films** A. Ludwig (Sp), A. Savan, Stiftung Caesar, Bonn (Germany); S. Hamann, H. Brunken, S. Thienhaus, R. Zarnetta, Ruhr-University Bochum (Germany)	**Small Angle Neutron Scattering Study of ODS Martensitic/Ferritic Materials** Y. de Carlan (Sp), Commissariat à l'Energie Atomique (CEA) Saclay, Gif sur Yvette Cedex (France); M.H. Mathon, A. Alamo, Service de Recherches Métallurgiques Appliquées, Gif-sur-Yvette (France) et al.
18:00	**Mechanical Properties of Macroalloyed Single Phase Fe3Al Base Alloys of D03 Order** J. Deges (Sp), R. Rablbauer, G. Frommeyer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	**Chemisorption of PTCDA on Ag(110): Comparison of Different ab Initio Methods** R. Scholz (Sp), A. Abbasi, Technical University of München, Garching (Germany)	**Ammonia Sensing Organic Field Effect Transistor** P. Pacher (Sp), A. Lex, V. Proschek, E. Tchernychova, M. Sezen, O. Werzer, P. Frank, S. Temmel, W. Grogger, R. Resel, R. Schennach, A. Winkler, C. Slugovc, G. Trimmel, E. Zojer, Graz University of Technology (Austria)	**Nanocrystalline Ceria as Solid Oxide Fuel Cell Electrolyte?** G. Gregori (Sp), X.X. Guo, R. Merkle, J. Maier, Max Planck Institute for Solid State Research, Stuttgart (Germany)	**Application of MSM Bulk Material in a Hybrid Micro Actuator** H.H. Gatzen, Spasova (Sp), M. Wurz, Leibniz Universität Hannover, Garbsen (Germany)	**Microstructural Aspects of Radiation Damage in Materials with BCC-Lattice** V.V. Bryk, O.V. Borodin, I.M. Neklyudov, V. Voyevodin (Sp), NSC" KIPT", Kharkov (Ukraine)
18:20	**Oral Poster - Subsession** Poster 1: B22-1676 Poster 2: B22-1104 Poster 3: B22-1852	**Structural Defects in Pentacene Thin Films: Formation, Density and Influence on Hole Transport Properties** S. Verlaak, IMEC, Leuven (Belgium); C. Rolin (Sp), P. Heremans, IMEC, Leuven (Belgium)	**Hybrid Light-Emitting Polymer Devices Incorporating Metallic Nanowire Arrays** A.E. Strevens, A. Drury, W.J. Blau (Sp), Trinity College Dublin (Ireland); H.H. Hörhold, Friedrich Schiller University Jena (Germany)	**Suitability of $BaSn_{1-x}B_xO_{3-d}$ (B = La, Y, ...) Stannate Compounds for Applications in Proton Conducting Fuel Cells** Y. Wang (Sp), A. Chesnaud, E. Bevillon, G. Geneste, Ecole Centrale Paris, Chateray Malabry (France); C. Estorunes, CIRIMAT UMR, Paris (France); G. Dezanneau, Ecole Centrale Paris, Chateray Malabry (France)	**Oral Poster - Subsession** Poster 1: A23-1521 Poster 2: A23-1950 Poster 3: A23-2198	**Effect of Neutron Irradiation on the Thermal Shock Behaviour of Tungsten and Carbon Based Materials** G. Pintsuk (Sp), J. Compan, T. Hirai, J. Linke, M. Rödig, Research Centre Juelich (Germany)

Wednesday

Symposium: C11
Room: Istanbul

Solidification Processes, Microstructures and Defects

Grain Structure & Macromodellin

C.-A. Gandin, Ecole des Mines de Paris, Sophia-Antipolis (France)

Modelling the Columnar-to-Equiaxed Transition (CET) Using a Front Tracking Method: Comparisons with Existing CET Prediction Criteria
S. Mc Fadden (Sp), D.J. Browne, University College Dublin (Ireland); M. Rebow, Dublin Institute of Technology (Ireland); J. Banaszek, Warsaw University of Technology (Poland)

Investigation of the Apparent Viscosity of Magnesium Alloys for Semi-Solid Processing
R. Jenning (Sp), A. Lohmüller, M. Scharrer, C. Rauber, R.M. Hilbinger, M. Hartmann, R.F. Singer, Neue Materialien Fürth GmbH (Germany)

Analysis on Thermosolutal Convection and Segregation of Binary Alloy in the Vertical Bridgman Single Crystal Growth
B. Bai (Sp), Xi'an Jiaotong University, Xi'an City (China); J. Lu, L. Guo, Xi'an Jiaotong University, Xi'an City (China)

Study of the Role of Radiation Heat Transfer in Solidification of Semitransparent Materials
P. Lapka, P. Furmanski (Sp), Warsaw University of Technology (Poland)

Effect of a High Rotating Magnetic Field Induced Melt Flow on the Macrosegregation in Ternary Aluminium Alloy
A. Roósz (Sp), J. Kovacs, A. Ronaföldi, University of Miskolc, Miskolc, Egyetemvaros (Hungary)

Symposium: C12
Room: St.Petersburg

Solid State Transformations: Microstructure Formation and Evolution

Microstructure Associated with Deformation

J.-P. Chevalier, CNAM, Paris Cedex 3 (France)

Highlight Lecture

Comparative Hot Workability of Al, Al-¬5Mg and Al-¬5Mg-¬0.7Mn Alloys
H.J. McQueen (Sp), Concordia University, Montreal, QC (Canada); W. Blum, University of Erlangen-Nuremberg (Germany)

Grain Structure of Al-Mg-Si alloy after Severe Plastic Deformation by Asymmetric Rolling
S. Farè, M. Mazzola, D. Riamonti, Politecnico di Milano (Italy); M. Vedani (Sp), Politecnico di Milano (Italy); G. Angella, National Research Council, Milano (Italy)

Microstructure and Texture of Mg-base AZ Alloys after Heavy Deformation under Strain Path Change Conditions
A. Korbel (Sp), AGH-University Science & Technology, Crakow (Poland); J. Pospiech, J. Bonarski, Polish Academy of Sciences, Cracow (Poland); W. Bochniak, AGH-University Science & Technology, Crakow (Poland) et al.

Deformation Microstructure Evolution in Silicon Steel Bicrystals
D. Dorner (Sp), Y. Adachi, T. Suzuki, K. Tsuzaki, National Institute for Materials Science, Tsukuba (Japan)

Oral Poster - Subsession
Poster 1: C12-1350
Poster 2: C12-55

Symposium: D22
Room: Prag

Mechanical Characterisation using In Situ Methods

Thin Films and Wires

M. Göken, University of Erlangen-Nuremberg (Germany)

Numerical-Experimental Characterization of Delaminating Interfaces in Polymer Coated Metal Sheet
M. Geers (Sp), M.J. van dem Bosch, P.J.G. Schreurs, Eindhoven University of Technology (Netherlands)

Tensile Behaviour of Micro-Sized Copper Wires Studied by A Novel Fibre Tensile Module
B. Yang (Sp), University of Leoben (Austria); C. Motz, W. Grosinger, Austrian Academy of Sciences, Leoben (Austria); W. Kammrath, Kammrath & Weiss GmbH, Dortmund (Germany); G. Dehm, Austrian Academy of Sciences,

An Electrical Approach for In Situ Mechanical Property Measurement
N. Barbosa (Sp), D.T. Read, R.R. Keller, R.H. Geiss, National Institute of Standards and Technology, Boulder, CO (USA)

Oral Poster - Subsession
Poster 1: C12-1350
Poster 2: C12-55

Symposium: D31
Room: Oslo

Atomistics and ab Initio Materials Modelling

Strength and Nanostructures

L. Colombo, University of Cagliari, Monserrato (Italy)

Highlight Lecture

Effect of Normal Stress on Ideal Shear Strength of Covalent Systems
Y. Umeno, The University of Tokyo (Japan)

The Response of Trialuminides to [110] Uniaxial Loading: An AB Initio Study for Al3(Sc,Ti,V)
M. Jahnatek (Sp), University of Vienna (Austria); M. Krajci, Slovak Academy of Science, Bratislava (Slovak Republic); J. Hafner, University of Vienna (Austria)

Approximate Prediction of Theoretical Tensile Strength of Cubic Crystals
M. Cerny (Sp), J. Pokluda, Brno University of Technology (Czech Republic)

First-Principles Simulation of Iron-Chromium FCC Solid Solutions using a New Set of Thermodynamic Parameters of Stability
A. Mirzoev (Sp), M.M. Yalalov, D.A. Mirzaev, South Ural State University, Chelyabinsk (Russian Federation)

Investigation of the Atomistic Behavior of UO2 under Mechanical Load by Constant Pressure MD Simulations with Empirical Force-Fields.
M. Iannuzzi (Sp), M. Samaras, M. Zimmermann, Paul Scherrer Institute, Villigen (Switzerland)

Symposium: D34
Room: Kopenhagen

Modelling of Materials Properties at Mesoscale

Modelling of Materials Properties at Mesoscale III

Y. Le Bouar, CNRS/ONERA, Châtillon (France)

Highlight Lecture

Phase Field Modeling of the Dissolution of Alpha Precipitates with Two Morphologies in a Titanium Alloy
B. Appolaire (Sp), J. Da Costa-Teixeira, F. Bruneseaux, E. Aeby-Gautier, Ecole des Mines, Nancy (France)

Phase-Field Modeling of Zirconium-Hydrides Precipitation
L. Thuinet (Sp), LMPGM, Villeneuve d'Asq Cedex (France); Z. Zhao, A. Legris, LMPGM, VIlleneuve D'Ascq (France)

Coarsening Kinetic of Aluminium-Zirconium-Scandium Precipitates
J. Boisse (Sp), N. Lecoq, H. Zapolsky, R. Patte, University of Rouen, Saint-Etienne du Rouvray (France)

Phase Field Simulations of the Pinning Effect of Second-Phase Particles on Grain Boundaries
N. Moelans (Sp), L. Vanherpe, B. Blanpain, P. Wollants, Catholic University of Leuven (Belgium)

Phase-Field Modelling of Gamma-Gamma' Microstructural Evolution with Inhomogeneous Elasticity
G. Boussinot (Sp), A. Finel, Y. Le Bouar, ONERA, Chatillon (France)

Symposium: C51
Room: Singapur

Thin Film Technology

Characterisation and Analysis

P. Immich, RWTH Aachen University (Germany)

Thermal Properties of Polypropylene Fibres with Deposited Thin Metal Containing Layers
D. Stawski (Sp), S. Polowinski, Technical University of Lodz (Poland)

Barrier Properties of Sol-Gel Films Containing Silver Nanoparticles after Modification by Oxidizing and Reducing Low Temperature Plasmas
P. Keil (Sp), Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany); P. Kluth, The Australian National University, Canberra (Australia); P. Ebbinghaus, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf

Thin Film Oxide Layers on Metal Substrates: Intended Thermomechanical Properties Adjustment via the Solid Solution Formation
O. Boytsova (Sp), Moscow State University (Russian Federation); S.V. Samoylenkov, Russian Academy of Science, Moscow (Russian Federation); A.R. Kaul, Moscow State University (Russian Federation)

Structural Transition of Superthin Ti/Si-N Multilayers
J. Ciosek (Sp), W. Mroz, Technical Academy Military, Warsaw (Poland); M. Cwil, Industrial Institute of Electronics, Warsaw (Poland); B. Major, L. Major, PAS, Crakow (Poland) et al.

Symposium: D22
Room: Seoul

Mechanical Characterisation using In Situ Methods

Plasticity and Fracture II

G. Dehm, University of Leoben (Austria)

Propagation of Microcracks in Superalloys
M. Marx (Sp), W. Schäf, H. Vehoff, Saarland University, Saarbrücken (Germany)

Elastic and Plastic Deformation Behaviour of Diamond-Like Carbon Coatings
J. Schaufler (Sp), K. Durst, M. Göken, University of Erlangen-Nuremberg (Germany); O.K. Massler, Oerlikon Balzers Coating AG, Liechtenstein (Liechtenstein)

Determination of the Flow Behaviour of the Constitutive Phases of TRIP-Assisted Multiphase Steels
P.J. Jacques, Catholic University of Louvain, Louvain-la-Neuve (Belgium)

In-Situ Investigations in a New Extended View Scanning Electron Microscope
H.W. Höppel (Sp), R. Nolte, M. Göken, University of Erlangen-Nürnberg (Germany)

Thermo-Mechanical Properties of High Mn TWIP Steels
H. Kim (Sp), S. Birosca, L. Chen, B.C. De Cooman, Pohang University of Science and Technology (Korea, Republic)

Symposium: C54 Room: Shanghai	Symposium: X42 Room: Neu-Delhi	Symposium: B32 Room: Lubljana	Symposium: A41 Room: Zagreb	Symposium: Y11 Room: Hongkong	Symposium: Room:	
Industrial Applications	**Bioactive Materials, Surfaces and Coatings**	**Monitoring and Chemistry of Cementitious Materials**	**Carbon Nanotubes: Catalysis, Growth and Integration**	**Teaching and Learning of Materials Science and Engineering**		
Applications in Surface Technology	Coatings	Concrete and Corrosion	Growth and Integration of Nanotubes II	What we teach		
S. Rosiwal, University of Erlangen-Nuremberg (Germany)	E. Verné, Politecnico di Torino (Italy)	A. Buchwald, Bauhaus-University Weimar (Germany)	Y.W. Park, Seoul National University (Korea, Republic)	R. Hambleton, International Iron and Steel Institute, Brussels (Belgium)		
Magnetron-Sputtered nc-ZrC/a-C:H Nanocomposite Coatings for the Application in Hydrostatic Displacement Units K. Bobzin, R. Nickel, N. Bagcivan, N. Goebbels (Sp), RWTH Aachen University (Germany)	Highlight Lecture **Electrophoretic Deposition of Carbon Nanotubes for Nanostructured Bioactive Coatings** A.R. Boccaccini, Imperial College of Science, Technology and Medicine, London (UK)	**Adsorption of Superplasticizer Admixtures on Alkali-Activated Slag Pastes** P. Bowen (Sp), STI IMX LTP, Lausanne (Switzerland); Y. Houst, Swiss Federal Institute of Technology, Lausanne (Switzerland); M. Palacios, F. Puertas, Eduardo Torroja Institute, Madrid (Spain)	Highlight Lecture **Tunnelling Conduction of Charged Solitons in Polyacetylene Nanofibers and the Device Applicability of Carbon Based Nanostructures** Y.W. Park, Seoul National University (Korea, Republic)	**Teaching Materials Science with Focus on Functional Materials** L. Alff (Sp), H. von Seggern, J. Brötz, Technical University of Darmstadt (Germany)		**17:00**
Photocatalytic Activity of Atomic Layer Deposited (ALD) TiO2 Coatings on Austenitic Stainless Steels and Copper Alloys R. Ilola (Sp), H. Kawakami, L. Straka, S. Papula, J. Romu, H. Hänninen, Helsinki University of Technology, Espoe (Finland); R. Mahlberg, VTT Technical Research Centre of Finland, Espoo (Finland) et al.	**Suppression of Nickel Leaching and Enhancement of Bioactivity of Porous Nickel Titanium Shape Memory Alloy Using Plasma Surface Treatment** S.L. Wu, X.M. Liu, City University of Hong Kong (China); Y.L. Chan, The University of Hong Kong (China); C.Y. Chung, P.K. Chu, C.L. Chu, City University of Hong Kong (China) et al.	**Modelling of Reinforcement Corrosion** M. Raupach, J. Warkus (Sp), RWTH Aachen University (Germany)	**Dispersing BN Nanotubes with DNA and Its Applications** C. Zhi (Sp), Y. Bando, C. Tang, Advanced Materials laboratory and Nanomaterials Laboratory, Tsukuba, Ibaraki (Japan); H. Kuwahara, Innovation Research Institute, Teijin Ltd. . Yamaguchi (Japan) et al.	**The UK Student Learning Experience in Materials** T. Bullough, University of Liverpool (UK)		**17:20**
Friction and Wear of Patterned Surfaces in a Flat-Flat Micro Contact D. Paulkowski (Sp), S. Achilles, R. Bandorf, Fraunhofer Institute for Surface Engineering and Thin Films, Braunschweig (Germany)	**Bioactive Silicon Substituted Hydroxyapatite Coatings Obtained by Pulsed Laser Deposition** E.L. Solla (Sp), P. Gonzalez, J. Serra, B. Leon, University of Vigo (Spain)	**Modeling Stable Pitting Corrosion of Stainless Steel as Diffusion-Controlled Dissolution Process with a Sharp Moving Boundary** C. Hellmich (Sp), S. Scheiner, VIenna University of Technology (Austria)	**Characterization of Carbon Nanotube Field Effect Transistor (CNTFET) Fabrication Process by Atomic Force Microscopy (AFM) and Conductive-AFM** F. Wessely (Sp), T. Ruland, L. Rispal, U. Schwalke, Technical University of Darmstadt (Germany)	**Materials Science Education Inspired by a New Model for Engineering Education, CDIO** M. Knutson Wedel, Chalmers University of Technology, Gothenburg (Sweden)		**17:40**
Increasing Lubricant Lifetime by Grooving Periodical Patterns Using Laser Interference Metallurgy M. Duarte Guigou (Sp), Universidad de Alicante (Spain); R. Giovanelli, A. Lasagni, Saarland University, Saarbrücken (Germany); J. Narciso, E. Louis, Universidad de Alicante (Spain) et al.	**Novel Techniques for the Surface Modification of Poly(Dimethylsiloxane): Microscale Bioactive Patterning** N. Patrito (Sp), S. Faria, J. McLachlan, P.R. Norton, University of Western Ontario, London, ON (Canada); N.O. Petersen, National Institute of Nanotechnology, Edmonton, AB (Canada)	**Natural Stone Waste Powders Applied to Concrete Mix Design** M. Hunger (Sp), H.J.H. Brouwers, University of Twente, Enschede (Netherlands)	**EELS Investigation of Carbon Nanotubes in the Role of Catalysts** C. Hébert (Sp), Vienna University of Technology (Austria); M. Schuster, J. Zhang, D. Wang, FHI-Berlin (Germany); P. Pongratz, Vienna University of Technology (Austria); D.S. Su, FHI-Berlin (Germany)	**The Philosophy and Design of an On-Line Quiz Database in Materials Science and Engineering** P. Howell, The Pennsylvania State University, Philadelphia, PA (USA)		**18:00**
A Reliable Tool for the Improvement of Micro Moulds Made of Steel for Micro Powder Injection Moulding A. Kienzler (Sp), B. Okolo, V. Schulze, A. Wanner, D. Löhe, University of Karlsruhe (Germany)	**Oral Poster - Subsession** Poster 1: X42-1043 Poster 2: X42-444 Poster 3: X42-1641 Poster 4: X42-1574	**Oral Poster - Subsession** Poster 1: B32-177 Poster 2: B32-1836 Poster 3: B32-939	**Covalent Surface Chemistry of Single-Walled Carbon Nanotubes** S. Wong, State University of New York, Stony Brook, NY (USA)	**Strategies for Incorporating Transferable Skills into the Undergraduate Materials Curriculum** D. McPhail, Imperial College, London (UK)		**18:20**

	Symposium: B22 Room: Kiew	Symposium: A11 Room: Riga	Symposium: A13 Room: Budapest	Symposium: A62 Room: Stockholm	Symposium: A21 Room: Krakau	Symposium: B43 Room: Lubljana
	High Temperature Metallic and Intermetallic Materials	**Fundamental Properties of Organic Semiconductors and Materials for Solid State Memories**	**Molecule-based Electronics**	**Solid Oxide Fuel Cells**	**Hard and Soft Magnetic Materials**	**Materials for advanced Fission Applications**
	Specific Microstructures, loading Conditions and Geometries A. Dlouhy, Academy of Sciences, Brno (Czech Republic)	Fundamental Properties of Organic Semiconductors E.J. List, Graz University of Technology (Austria)	Single Molecule Transport M. Calame, University of Basel (Switzerland)	Cathode H. Yokokawa, National Institute of Advanced Industrial Science and Technology, Tsukuba (Japan)	Hard Magnetic Materials I.R. Harris, The University of Birmingham (UK)	Overviews M.A. Pouchon, Paul Scherrer Institute, Villigen (Switzerland)
11:00	**Highlight Lecture** **Work Hardening and Creep of Submicrocrystalline Metals** W. Blum, University of Erlangen-Nuremberg (Germany)	**Organic Superconducting Materials** H. Müller, European Synchrotron Radiation Facility, Grenoble (France)	**Highlight Lecture** **Inelastic Transport and Noise in Single-Molecule Junctions** H. Weber, University of Erlangen-Nuremberg (Germany)	**Transmission Electron Microscope Analysis of Cathode – Electrolyte Interfaces** S. Uhlenbruck (Sp), Research Centre Juelich (Germany); T. Moskalewicz, AGH University of Science and Technology, Krakow (Poland); N. Jordan, J. Penkalla, H.P. Buchkremer, Research Centre Juelich (Germanv)	**Particles Analysis and Properties of Mechanically Alloyed Nd16Fe76-xTixB8** J. Jakubowicz, Poznan University of Technology (Poland)	**Highlight Lecture** **Irradiation Behaviour of Structural Materials for Advanced Reactors** A. Alamo, Commissariat a l' Energie Atomique, Gif sur Yvette (France)
11:20	**Creep Behavior of Thin High Temperature Materials** R. Hüttner (Sp), R. Völkl, U. Glatzel, University of Bayreuth (Germany)	**Self-Consistent Model of Injection in Organic Semiconductors: Analytical and Numerical Results** Y. Genenko (Sp), F. Neumann, C. Melzer, S.V. Yampolskii, H. von Seggern, Darmstadt University of Technology (Germany)	**Characterization of Metallic Contacts to Alkane Dithiol Molecules** S. Verleger, S. Bächle, A. Erbe (Sp), E. Scheer, University of Konstanz (Germany)	**Thin Film Cathodes for Micro Solid Oxide Fuel Cells** D. Beckel (Sp), ETH Zürich, Zurich (Switzerland); U.P. Muecke, J.L.M. Rupp, ETH Zürich (Switzerland); A. Infortuna, ETH Zurich, Zürich (Switzerland); A. Bieberle-Hütter, ETH Zürich (Switzerland) et al.	**The Recycling on NdFeB-Type Magnets Using Hydrogen** M.J. Zakotnik, R. Harris (Sp), A.J. Williams, University of Birmingham (UK)	**Highlight Lecture** **Irradiation Behaviour of Structural Materials for Advanced Reactors** A. Alamo, Commissariat a l' Energie Atomique, Gif sur Yvette (France)
11:40	**Characterisation of High Temperature Brazed Joints on DS and SX Nickel Based Superalloys** S. Piegert (Sp), J. Rösler, Technical University Braunschweig (Germany)	**Characterization of Organic Semiconductor Materials for Light Emitting Device Applications by Cathodoluminescence** P. Wellmann (Sp), U. Karl, S. Kleber, H. Schmitt, University of Erlangen-Nuremberg (Germany)	**Molecular Modeling of IETS of Single Molecular Junctions** Y. Luo, Royal Institute of Technology, Stockholm (Sweden)	**Ba1-xSrxCo1-yFeyO3-Delta Perovskite Bulks and Thin Films: Phase Compositions and Electrical Conductivity** Z. Yang (Sp), A. Infortuna, L.J. Gauckler, ETH Zürich (Switzerland)	**Stress-Induced Anisotropy, Magnetic Domain Structure and Spin-Reorientation Transitions in R(Fe,Co)11Ti Single Crystals (R=Dy, Tb)** Y. Pastushenkov (Sp), K. Skokov, Tver State University (Russian Federation); T. Ivanova, Moscow State University (Russian Federation); M. Lyakhova, E. Semenova, S. Smirnov, Tver State University (Russian Federation)	**Materials for Helium Cooled Gas Reactors - Research and Development Activities within the 5th & 6th EU Framework Programmes** D. Buckthorpe (Sp), M. Davies, J. Baker, AMECNNC Ltd., Knutsford, Sheshire (UK); I. Hugon, Y. Lejeail, CEA, Grenoble (France) et al.
12:00	**Thermal Stability of Nanocrystalline Al – Diamondoid Alloys Produced by Cryomilling** J. Earthman (Sp), K. Maung, R.K. Mishra, L.C. Lai, F.A. Mohamed, University of California, Irvine, CA (USA)	**Highlight Lecture** **Surface Enhanced Raman Scattering of Single Conjugated Polymer Molecules as a Probe of Organic Semiconductors at Metallic Surfaces** J. Lupton, University of Utah, Salt Lake City, UT (USA)	**Addition Energies, Vibrational Fine Structure and Spin-States in a Single Molecule Junction** E.A. Osorio (Sp), K. O'Neill, H.S.J. van der Zant, Delft University of Technology (Netherlands)	**Oxygen Reduction Kinetics and Transport Properties of (Ba,Sr)(Co,Fe)O3-d SOFC Cathode Materials** L. Wang (Sp), R. Merkle, F.S. Baumann, Max Planck Institute for Solid State Research, Stuttgart (Germany); J. Fleig, Vienna University of Technology (Austria) et al.	**Structure and Properties of Ferrites of the System Sr-Fe-O** D. Seifert, J. Töpfer (Sp), University of Applied Sciences, Jena (Germany)	**Experimental Program on Materials Qualification for Heavy Liquid Metal Cooled Transmutation Systems** C. Fazio (Sp), Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany); A. Almazouzi, Centre D'Étude de L'Éneng. Nucléaire, Mol (Belgium); Y. Dai, Paul Scherrer Institute, Villigen (Switzerland) et
12:20	**On the Role of Grain Boundary Character in Creep Strength of FeCr Alloys** K.-G. Tak (Sp), U. Schulz, G. Eggeler, Ruhr-University Bochum (Germany)	**Donor-Acceptor Charge-Transfer Complexes of MEH-PPV: Tuning the Bandgap, Enhanced Photostability, and Mechanisms of Charge Photogeneration** V.V. Bruevich, D.S. Martyanov, I.V. Golovnin, A.E. Ozimova, S.G. Elizarov, Moscow State University (Russian Federation); E.M. Nechvolodova, Institute of Chemical Physics, Moscow (Russian Federation) et al.	**Self-Consistent GW Calculations of Quantum Transport in Nano-Scale Contacts** K. Thygesen (Sp), Technical University of Denmark, Lyngby (Denmark); A. Rubio, Departamento de Fisica de Materiales, Quimicas (Spain)	**Electronically Conducting Oxides for Solid Oxide Fuel Cells** H. Wood (Sp), A. Berenov, A. Atkinson, Imperial College London (UK)	**Direct Observation of Twin Boundary and Magnetic Domain Dynamics in Bulk Ni-Mn-Ga** R.Y.W. Lai (Sp), J. McCord, N. Scheerbaum, O. Gutfleisch, R. Schäfer, L. Schultz, Leibniz Institute for Solid State and Materials Research Dresden (Germany)	**SINQ Target Irradiation Program: Its Characteristics and Applications** Y. Dai, Paul Scherrer Institut, Villigen (Switzerland)

pm1 ↓

Thursday

Symposium: C11 Room: St.Petersburg	Symposium: C12 Room: Istanbul	Symposium: A51 Room: Zagreb	Symposium: D31 Room: Oslo	Symposium: D34 Room: Kopenhagen	Symposium: C51 Room: Shanghai	Symposium: D22 Room: Seoul
Solidification Processes, Microstructures and Defects	**Solid State Transformations: Microstructure Formation and Evolution**	**Polymer-Nanoparticle-Blend s and their Applications**	**Atomistics and ab Initio Materials Modelling**	**Modelling of Materials Properties at Mesoscale**	**Thin Film Technology**	**Mechanical Characterisation using In Situ Methods**
Segregation	Recristallisation/Ultrafine Grains	Polymer Nanocomposite Processing	New Methods, Bioapplications, Glass	Modelling of Materials Properties at Mesoscale IV	Characterisation and Analysis	Advanced Diffraction Techniques
A. Roósz, University of Miskolc, Miskolctapolca (Hungary)	H. McQueen, Concordia University, Montreal (Canada)	S. Förster, Universität Hamburg (Germany)	Y. Umeno, The University of Tokyo (Japan)	Y. Le Bouar, CNRS/ONERA, Châtillon (France)	R. Nickel, RWTH Aachen University (Germany)	H. Van Swygenhoven, Paul Scherrer Institute, Villigen (Switzerland)
Highlight Lecture	**Highlight Lecture**	**Highlight Lecture**	**Keynote Lecture**	**Keynote Lecture**	**Mechanical and Tribological Characterization of Me(Nb,Ti)-DLC Films Grown by PVD - Closed Field Unbalanced Magnetron Sputtering Method** D. Ugur (Sp), Bogazici University, Istanbul (Turkey); I. Efeoglu, Ataturk University, Erzurum (Turkey); S. Altintas, Bogazici University, Istanbul (Turkey)	**Update on I12: The Joint Engineering, Environmental and Processing Beamline at the Diamond Light Source** T. Connolley (Sp), M. Drakopoulos, T.P. Hill, Diamond Light Source, Chilton, DIDCOT (UK)
Simulation of Segregation during Continuous Casting by In-Situ Observations S. Aminorroaya (Sp), R. Dippenaar, University of Wollongong (Australia)	**Abnormal Grain Growth of Nanocrystalline and Ultra Fine Grained Materials: In Situ Investigation in the SEM** M. Marx (Sp), A. Noll, J. Zimmermann, H. Vehoff, Saarland University, Saarbrücken (Germany)	**High Performance Polyamide Nanocomposites - Engineering at the Nanoscale** G. Oenbrink (Sp), H. Häger, Degussa GmbH, Marl (Germany); R. Richter, Degussa GmbH, Darmstadt (Germany)	**Error-Controlled Multiscale Modeling Approaches to Surface Chemistry and Catalysis** K. Reuter, Fritz-Haber-Institut, Berlin (Germany)	**Dislocation Mean Free Path and Strain Hardening in FCC Crystals** B. Devincre (Sp), L. Kubin, LEM/CNRS, Chatillon Cédex (France); T. Hoc, Ecole Centrale Paris (France)		
On Chemical Heterogeneity Measurement and Evaluation in CC Steel Slab J. Dobrovska (Sp), VSB-Technical University of Ostrava (Czech Republic); F. Kavicka, Brno University of Technology (Czech Republic); L. Dobrovsky, VSB-Technical University of Ostrava (Czech Republic) et al.	**Attainable Grain Sizes for Fully Recrystallised Very Low Carbon Steels after ECAE** J.-P. Chevalier (Sp), C. Cabus, F. Monternbault, CNAM, Paris (France); S. Guérin, ICMPE, Thiais (France); O. Bouaziz, Arcelor Research SA, Maizières (France)	**Polymer-Nanoparticle-Comp osites: Processing, Properties and Applications** T. Hanemann (Sp), J. Böhm, E. Ritzhaupt-Kleissl, B. Schumacher, J. Haußelt, Forschungszentrum Karlsruhe GmbH (Germany)			**Study of Copper Alloys/Carbon Interfaces** A. Veillere (Sp), M. Lahaye, J.M. Heintz, D. Michau, J.F. Silvain, ICMCB-CNRS, Pessac (France)	**Plasticity and Fracture of Ultra Thin Cu Films Revealed by a New Synchrotron-Based Technique** P. Gruber (Sp), A. Wanner, University of Stuttgart (Germany); R. Spolenak, ETH Zurich (Switzerland); E. Arzt, University of Stuttgart (Germany)
Influence of Fe, Si and Mn on the Solidification Structures of Al-Fe-Mn-Si Alloys Y. Li (Sp), T. Furu, Hydro Aluminium, Sunndalsöra (Norway); K. Marthinsen, NTNU, Sunndalsora (Norway)	**In-Situ EBSD Recrystallisation of IF Steel** A. Wauthier (Sp), H. Regle, Arcelor Research, Maizieres-les-Metz (France)	**Generation of Bulk Amorphous Polymers and Their Nanocomposites by a Multiscale Simulation Approach** Y. Han (Sp), D. Antypov, J. Elliott, University of Cambridge (UK)	**A Hybrid Method for the Structural Evolution of Stepped Surfaces** H. Emmerich, M. Radke de Cuba, J. Kundin, RWTH Aachen University (Germany); S. Gemming (Sp), FZ Dresden-Rossendorf (Germany)	**Incipient Plastic Shear Banding in Porous Materials at Vanishingly Small Porosities** F. Willot, Y.P. Pellegrini (Sp), CEA, Bruyères le Chatel (France); M. Idiart, P. Ponte Castañeda, Ecole Polytechnique, Palaiseau (France)	**Work of Adhesion and Crack Propagation at Rough Polymer-Metal Interfaces** W.P. Vellinga (Sp), A. Fedorov, J.T.M. De Hosson, University of Groningen (Netherlands)	**In-Situ Laue Diffraction Providing a New View on Micro-Compression** R. Maaß (Sp), S.V. Petegem, H. Van Swygenhoven, P.M. Derlet, D. Grolimund, Paul Scherrer Institute, Villigen (Switzerland); C.A. Volkert, Forschungszentrum Karlsruhe GmbH (Germany)
A Multi-Phase Micro-Segregation Model Coupled to a Thermodynamically Consistent Macro-Model S. Benke (Sp), ACCESS e.V., Aachen (Germany); B. Pustal, RWTH Aachen University (Germany); S. Benke, ACCESS e.V., Aachen (Germany); G. Laschet, A. Bührig-Polaczek, RWTH Aachen University (Germany)	**Investigation of the Influence of Homogenization Parameters on the Mechanical Properties of 5083 Alloy after Hot Rolling** P. Sherstnev (Sp), C. Sommitsch, M. Hacksteiner, Christian Doppler Laboratory for Materials Modelling, Leoben (Austria)	**Conductivity of Transparent ITO Nanoparticle/Polymer Composite Layers** N. Mechau (Sp), Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany); A. Prodi-Schwab, Degussa AG, Marl (Germany); R. Schmechel, Forschungszentrum Karlsruhe GmbH.	**Atomistic Simulation of the Crystallisation and Growth of Calcium Carbonate** D. Cooke (Sp), University of Cambridge (UK); C.L. Freeman, J.H. Harding, University of Sheffield (UK); J.A. Elliott, University of Cambridge (UK); D. Duffy, University College, London (UK)	**Dislocation Dynamics in Ice Single Crystals Deformed by Torsion** J. Chevy (Sp), INPG, Saint Martin d´Hères (France); M. Fivel, CNRS, Grenoble (France); C. Fressengeas, Paul-Verlaine University in Metz (France); A.J. Beaudoin, University of Illinois, Urbana, IL (USA) et al.	**High Temperature Oxidation Behavior of the Y or Zr Doped TiAlN Coatings with Various Aluminum Content** H. Takaoka (Sp), E. Nakamura, A. Osada, MItsubishi Materials Corporation, Naka-Ibaraki (Japan)	**In Situ Tensile Experiment for TRIP Steel Using Synchrotron X-Rays** J.-H. Jung (Sp), Z.G. Xu, B.C. Decooman, H.S. Kim, S. Birosca, Pohang University of Science and Technology (Korea, Republic)
Experiences from Analysis of Cast Metallurgical and Solar Grade Silicon by Glow Discharge Mass Spectrometry A.L. Dons (Sp), SINTEF, Trondheim (Norway); M. di Sabatino, NTNU, Trondheim (Norway); J. Hinrichs, Thermo Fisher Scientific Corp., Bremen (Germany); H. Tathgar, SINTEF, Trondheim (Norway) et al.		**Thermodynamics of Polymer Adsorption: From a Flat Surface to a Solution of Interacting Nanoparticles** D. Antypov (Sp), J. Elliott, A. Windle, University of Cambridge (UK)	**Molecular Dynamics Simulation of Plasticity in Oxide Glass** A. Takada, Asahi Glass Co. Ltd., Yokohama (Japan)	**Modelling of Threading Dislocations Reduction in GaN** D. Holec (Sp), C.J. Humphreys, University of Cambridge (UK)	**Structural and Optical Properties of Titanium-Fullerite and Cuprum-Fullerite Films** S. Chertopalov (Sp), A. Bazhin, V. Stupak, A. Trotsan, Donetsk National University (Ukraine); V. Glazunova, Donetsk Institute for Physics and Engineering (Ukraine)	**Size Effect in the Plasticity of Multiscale Nanofilamentary Cu/Nb Composite Wires during In-Situ Tensile Tests under Neutron Beam** V. Vidal, CEMES, Toulouse (France); L. Thilly (Sp), University of Poitiers, Futuroscope Chasseneuil (France); S. Van Petegem, Paul Scherrer Institute, Villigen (Switzerland); F. Lecouturier, CNRS, Toulouse (France) et al.

Symposium: C55 Room: Singapur	Symposium: X41 Room: Neu-Delhi	Symposium: X42 Room: Prag	Symposium: A42 Room: Helsinki	Symposium: A43 Room: Hongkong	Symposium: Room:	
Coatings for High Temperature Applications	**Biomedical Materials: Tissue Engineering and Drug Delivery**	**Bioactive Materials, Surfaces and Coatings**	**Semiconducting Nanowires: Catalysis, Growth and Integration**	**Metal Nanowires and Novel Interconnect Materials**		
High Temperature Coatings	Natural and Artificial Polymers	Interactions with Biological Environment	Semiconductor Nanowires I	Cu low-k Interconnects		
A. Scrivani, Turbocoating s.p.a., Rubbiano di Solignano (Italy)	A.R. Boccaccini, Imperial College, London (UK)	T. Keller, Friedrich Schiller University Jena (Germany)	J. Holmes, University College Cork (Ireland)	S. Schulz, Chemnitz University of Technology (Germany)		
Keynote Lecture **Surface Treatments and Coatings for Applications in Energy Production** U. Bardi, University of Florence, Sesto Fiorentino (Italy)	**Inserting Drug Release into Textile Long-Bone Implants by Coating the PCL-Thread with Antibiotics Incorporated into a PLA- and PLGA-Matrix** A. Breier (Sp), Leibniz Institute of Polymer Research Dresden (Germany); A. Hofmann, C. Rentsch, Technical University of Dresden (Germany); B. Schulz, Catgut GmbH, Markneukirchen (Germany)	Highlight Lecture **Polymer Nanocomposites for Lung Cell Culture Applications** M. Lewis (Sp), S. Lamoriniere, J. Steinke, A. Bishop, M. Shaffer, A. Bismarck, Imperial College, London (UK)	Keynote Lecture **Synthetic Routes to Silicon and Germanium Nanowires and Carbon Nanotubes in Organic Solvents** H.-Y. Tuan, D.C. Lee, D.K. Smith, B.A. Korgel (Sp), University of Texas, Austin, TX (USA)	Highlight Lecture **EBSD and Micro-XRD Study of Cu Microstructure for Sub-µm Structures** I. Zienert (Sp), M.A. Meyer, P. Hofmann, H. Geisler, H. Prinz, A. Preusse, E. Zschech, AMD Saxony LLC & Co. KG, Dresden (Germany)		11:00
	Carbon Nanotube Reinforced and Activated Polyurethane Scaffolds A. Bismarck (Sp), L. Safina, R. Verdejo Marquez, G. Jell, M.M. Stevens, M. Shaffer, Imperial College London (UK)	**Bioactivation of Cellulose Fibers in the Presence of Strontium** H. Brandt (Sp), F.A. Müller, P. Greil, K.A. Schlegel, F.W. Neukam, E. Nkenke, C. von Wilmowsky, University of Erlangen-Nuremberg (Germany)		**Characterization of Chemical Bonding in Low-K Dielectric by XAS** D. Schmeißer (Sp), P. Hoffmann, Brandenburg Technical University, Cottbus (Germany); D. Chumakov, E. Zschech, AMD Saxony LLC & Co KG, Dresden (Germany)		11:20
Mechanical and Wear Properties Determination for Thick Thermal Barrier Coatings for Diesel Engines Pistons C. Baciu (Sp), I. Rusu, Technical University "Gh. Asachi" of Iasi (Romania); A. Buzaianu, S.C. METAV-R&D S.A., Bucharest (Romania)	**Polymer/Ceramic Nanocomposites for Regenerative Medicine** M. El Fray (Sp), A. Piegat, Szczecin University of Technology (Poland); A.R. Boccaccini, Imperial College London (UK)	**Electrosynthesis of EGMP Containing Coatings on Titanium Substrates for the Development of Bioactive Interfaces** E. De Giglio (Sp), S. Cometa, L. Sabbatini, University of Bari (Italy); M. Mattioli-Belmonte, K. Kyriakidou, G. Biagini, Polytechnical University of Marche, Ancona (Italy)	**A Study of Plasma-Enhanced CVD Growth of Si Nanowires Catalyzed by Indium** F. Iacopi (Sp), P.M. Vereecken, M. Schaekers, M. Caymax, IMEC, Leuven (Belgium); C. Detavernier, University of Gent (Belgium); H. Griffiths, Oxford Instruments, Bristol (UK)	**Copper Thin Films Grown via ALD of Copper Oxide from a Cu(I) Beta-Diketonate Precursor** T. Waechtler (Sp), A. Jakob, N. Roth, Chemnitz University of Technology (Germany); S. Oswald, Leibniz Institute for Solid-State and Materials Research, Dresden (Germany) et al.		11:40
Al-Mn CVD-FBR Protective Coatings for Supercritical Steam Corrosion Applications S.A. Tsipas (Sp), F.J. Bolivar, L. Sanchez, M.P. Hierro, F.J. Perez, Complutense University of Madrid (Spain)	**In Vitro Culturing of Chondrocytes in a Three Dimensional Gelatin Scaffold for Cartilage Tissue Engineering** O. Pullig (Sp), N. Kroeger, I. Stonans, M. Aurich, Waldkrankenhaus Rudolf Elle gGmbH, Eisenberg (Germany); J. Mollenhauer, University of Tuebingen (Germany); J. Anders, Waldkrankenhaus Rudolf Elle	**PTFE Coatings on Titanium Alloys for Reduction of Cell Adhesion** H. Griffiths (Sp), C. Hopwood, A.E. Markaki, J.A. Curran, C.S. Dunleavy, University of Cambridge (UK); D. Power, M. Khalid, Selly Oak Hospital, Birmingham (UK); T.W. Clyne, University of Cambridge (UK)	**Silicon Nanowire Synthesis by Chemical Vapour Deposition on Glass Substrates** T. Stelzner (Sp), G. Andrä, F. Falk, G. Schwotzer, S. Christiansen, Institute for Physical High Technoloy, Jena (Germany)	**Electrical Characterization of Air Gap Structures: Impact of Film Thickness and Film Permittivity on Effective Dielectric Constant** K. Schulze (Sp), S.E. Schulz, T. Gessner, Chemnitz University of Technology (Germany)		12:00
Effect of Ball Milling on Microstructure and Properties of TiN Particle-Reinforced Al Alloy-Based MMC Coatings fabricated by Cold Spraying C. Coddet (Sp), Université de Technologie de Belfort-Montbéliard (France); W.Y. Li, M. Cherigui, O. Elkedim, G. Zhang, X.P. Guo, H. Liao, LERMPS, Belfort (France)	**The Effect of Cell Seeding Density on Bone Histogenesis Potential in Compressed Dense Collagen Matrices** M. Bitar (Sp), V. Salih, A. Kidane, University College of London (UK); R.A. Brown, Tissue Repair & Engineering Centre, London (UK); S.N. Nazhat, McGill University, Montreal, QC (Canada)	**Adhesion and Growth of Human Osteoblast-like Cells on Polyamide - Polysiloxane -Hydroxyapatite Composites** L. Bacakova (Sp), Academy of Sciences and Institute of Chemical Technology, Prague (Czech Republic); B. Vagaska, K. Balik, Z. Sucharda, T. Suchy, Academy of Sciences of the Czech Republic, Praaue (Czech Republic) et al.	**Chemical Modification Effects in Semiconductor Nanowires** G. Fagas (Sp), M. Nolan, J.C. Greer, Tyndall National Institute, Cork (Ireland); T. Frauenheim, University of Bremen (Germany)	**Influence of pH on the Channel Cracking Rate of Organosilicate Films in Wet Ambients** F. Iacopi (Sp), IMEC, Leuven (Belgium); C. Elia, IMEC and Istituto Universitario degli Studi Superiori di Pavia (Italy); T. Fournier, IMEC and Génie des Matériaux Université Aix-Marseille III (France) et al.		12:20

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	Symposium: B22 Room: Kiew	Symposium: A11 Room: Riga	Symposium: A13 Room: Budapest	Symposium: A62 Room: Stockholm	Symposium: A22 Room: Krakau	Symposium: B43 Room: Lubljana
	High Temperature Metallic and Intermetallic Materials	**Fundamental Properties of Organic Semiconductors and Materials for Solid State Memories**	**Molecule-based Electronics**	**Solid Oxide Fuel Cells**	**Magnetic Nanoparticles and Nanowires**	**Materials for advanced Fission Applications**
	Modelling across Scales	Materials for Solid State Memories	Self-Assembly	Anode	Magnetic Nanoparticles	Metals and Ceramics
	A. Hartmaier, University of Erlangen-Nuremberg (Germany)	T. Mikolajick, Technical University of Freiberg (Germany)	S.J. van der Molen, University of Leiden (Netherlands)	A. Bieberle-Hütter, ETH Zurich (Switzerland)	B. Rellinghaus, Leibniz Institute for Solid State and Materials Research Dresden (Germany)	J. Canel, Commissariat à l'Energie Atomique, Gif sur Yvette Cedex (France)
14:40	Highlight Lecture **Ab Initio Study of the Anomalous Volume-Composition Effect in Fe-Al and Fe-Ga Alloys** M. Friak (Sp), J. Neugebauer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	**Organic Ferroelectrica for Non-Volatile Memory Devices** K. Müller (Sp), D. Mandal, K. Henkel, B. Seime, D. Schmeißer, Brandenburg Technical University, Cottbus (Germany)	**Scanning Tunnelling Spectroscopy Studies of Single Molecules** A. van Houselt (Sp), N. Oncel, A.-S. Hallbäck, B. Poelsema, H.J.W. Zandvliet, University of Twente, Enschede (Netherlands)	**Reduction and Oxidation Study of Anode Supported Solid Oxide Fuel Cell** A. Faes (Sp), A. Hessler-Wyser, C. Monachon, Swiss Federal Institute of Technology, Lausanne (Switzerland); M. Zahid, EDF-EifER, Karlsruhe (Germany); E. Tagliaferri, HT Ceramix SA, Yverdon (Switzerland) et al.	**Soft Magnetic Property of High Density Fe-Co Alloy Cluster-Assemblies for High Frequency Use** K. Sumiyama (Sp), D.L. Peng, H. Yamada, K. Kumagai, T. Hihara, Nagoya Institute of Technology (Japan)	**Effect of the Chemical Composition on the Mechanical and Microstructural Behaviour of Fe-9Cr of Ferritic/Martensitic Steels after N-Irradiation** M. Matijasevic, A. Almazouzi (Sp), SCK.CEN, Mol (Belgium)
15:00	**Elements in Modeling the Plastic Response of Solids Strengthened by Obstacles** G. Daehn, The Ohio State University, Columbus, OH (USA)	**Transmission Electron Microscopy Study of the Current-Induced Structural Transformation in Phase Change Materials** R. Ghadimi (Sp), F. Merget, A. Schwedt, T. Weirich, J. Mayer, RWTH Aachen University (Germany)	**Ab Initio Calculations of Molecular Conductance: Absorbing Boundary Conditions and Relation to Experiment** A. Bagrets (Sp), A. Arnold, F. Evers, Forschungszentrum Karlsruhe GmbH, Eggenstein-Leopoldshafen (Germany)	**An Investigation into the Direct Electrochemical Oxidation of CO in an Intermediate Temperature SOFC** G. Offer (Sp), A. Atkinson, N.P. Brandon, Imperial College London (UK)	**Polymer-Based Soft Magnetic Nanocomposites as Core Materials for High-Frequency Devices** H. Greve, V. Zaporojtchenko, F. Faupel (Sp), University of Kiel (Germany); A. Gerber, caesar, Bonn (Germany); E. Quandt, F. Hettstedt, R. Knöchel, University of Kiel (Germany)	**The Risk of Liquid Metal Embrittlement of the T91 Martensitic Steel Evidenced by Small Punch Test** I. Serre (Sp), J.B. Vogt, Université de Lille 1, Villeneuve d'Ascq (France)
15:20	**Experimental and Modelling Investigations on NiAl-Composites Reinforced by Single Crystalline Al2O3-Fibers** W. Hu, H. Chen, Y. Zhong, G. Gottstein, J. Song (Sp), RWTH Aachen University (Germany)	**A Non-Volatile Memory Based on III-V Semiconductor Quantum Dots** A. Marent (Sp), M. Geller, D. Feise, K. Pötschke, D. Bimberg, Technical University of Berlin (Germany)	**Interface Dipoles and Work Functions of Self-Assembled Monolayers on Metal Surfaces** P.C. Rusu, University of Twente, Enschede (Netherlands); G. Giovannetti, Leiden University (Netherlands); G. Brocks (Sp), University of Twente, Enschede (Netherlands)	**Polarisation Effects in Anode-Supported Solid Oxide Fuel Cells** A. Leonide (Sp), V. Sonn, A. Weber, E. Ivers-Tiffee, University of Karlsruhe (Germany)	**Structure, Dielectric and ESR Studies of Nano-Composite Fe2O3: BaTiO3 Prepared by Sol-Gel Techniques** I.K. Battisha, National Research Centre, Cairo (Egypt)	**From Microstructure to Nanostructure with ODS Alloy PM 2000** G. Korb (Sp), G. Kladler, Austrian Research Centers GmbH, Seibersdorf (Austria)
15:40	**Modelling the Partitioning of Rhenium between Gamma and Gamma Prime Phase in Single Crystal Superalloys** R. Rettig (Sp), R.F. Singer, University of Erlangen-Nuremberg (Germany)	**Self-Aligned Growth of Organometallic Layers for Non-Volatile Memory Application** T. Erlbacher (Sp), University of Erlangen-Nuremberg (Germany); M.P.M. Jank, A.J. Bauer, Fraunhofer Institute of Integrated Systems and Device Technology, Erlangen (Germany); L. Frey, Technical University of Freiberg (Germany) et	**Versatile Molecular Junction Networks from Colloid Arrays** M. Calame (Sp), J. Liao, L. Bernard, S.J. van der Molen, M. Mangold, C. Schoenenberger, University of Basel (Switzerland)	**Carbon Deposition and Sulfur Poisoning in Biosyngas Operated SOFC** K. Girona (Sp), J. Meugin, J. Laurencin, M. Petitjean, F. Lefebvre-Joud, CEA, Grenoble (France)	**Shape Selective Synthesis and Guided Assembly of Superparamagnetic Iron Oxide Nanocrystals** L. Bergström (Sp), A. Ahniyaz, Stockholm University (Sweden); C. Johansson, Imego Institute, Göteborg (Sweden)	**Modelling Fission Materials - Structural and Fuels** R. Iglesias (Sp), M. Samaras, B. Bako, M. Iannuzzi, M. Zimmermann, M. Victoria, W. Hoffelner, Paul Scherrer Institute, Villigen (Switzerland)
16:00	**The Effect of Impact Damage on the Mechanical Behaviour of Gamma TiAl** S. Gebhard (Sp), German Aerospace Center (DLR), Cologne (Germany); P.W.M. Peters, German Aerospace Center - DLR, Cologne (Germany); D. Roth-Fagaraseanu, Rolls-Royce Deutschland Ltd & Co KG, Blankenfelde-Mahlow (Germanv) et	**Characterisation of the Atomic Structure of Crystalline and Amorphous GeSb2Te4** G. Laptyeva (Sp), T.E. Weirich, J. Mayer, H. Dieker, M. Wuttig, RWTH Aachen University (Germany)	**Electron Tunneling through Alkanedithiol Self-Assembled Monolayers in Large-Area Molecular Junctions** H.B. Akkerman (Sp), R.C.G. Naber, B. Jongbloed, A.J. Kronemeijer, P.W.M. Blorn, University of Groningen (Netherlands); D.M. de Leeuw, Philips Research Laboratories, Eindhoven (Netherlands) et al.	**Effect of a NaAlSi3O8 Glass Sealing on a Solid Oxide Electrolyser Cell Ni/YSZ Electrode** S.H. Jensen (Sp), A. Hauch, S. Ebbesen, M. Mogensen, Risø National Laboratory, Roskilde (Denmark)	**The Templating Effect of Regular Protein Crystals on the Arrangement of Gas-Phase Prepared FePt Nanomagnets** U. Queitsch (Sp), F. Schäffel, E. Mohn, B. Rellinghaus, L. Schultz, Leibniz Institute for Solid State and Materials Research Dresden (Germany); A. Blüher, M. Mertig, Technical University of Dresden (Germanv)	**Structural Evolution of SiC Nanostructured and Conventional Ceramics under Irradiation** Y. Leconte (Sp), CEA Saclay, Gif sur Yvette (France); I. Monnet, CEA Saclay, Caen (France); M. Levalois, X. Portier, SIFCOM-ENSICAEN (France); L. Thome, CSNSM, Orsay (France) et al.

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Thursday

Symposium: C11
Room: St.Petersburg

Solidification Processes, Microstructures and Defects

Mushy Zone Rheology and Defects / Remelting

M. Rappaz, Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Highlight Lecture

Quantification of the Mushy Zone Permeability in Industrial Aluminium Alloys

K. Ellingsen (Sp), M. M'Hamdi, Ø. Nielsen, A. Mo, SINTEF, Oslo (Norway)

Melt Stirring during Directional Solidification Using Modulated Magnetic Fields

B. Willers, S. Eckert (Sp), Forschungszentrum Dresden-Rossendorf e.V. (Germany); P.A. Nikrityuk, K. Eckert, Technical University of Dresden (Germany)

The Role of Tramp Elements in Hot Tearing of Steels in the Continuous Casting Process

J. Reiter (Sp), R. Pierer, C. Bernhard, University of Leoben (Austria); S. Ilie, voestalpine Stahl, Linz (Austria)

Pressure Solidification for Homogeneous Plastic Parts – The Isothermal Verification

N. Rudolph (Sp), I. Kühnert, E. Schmachtenberg, University of Erlangen-Nuremberg (Germany)

Microstructural Evolution in Semi-Solid A356 Alloy during Partial Remelting

G. Timelli (Sp), E. Della Rovere, F. Bonollo, S. Lupi, University of Padova, Vicenza (Italy)

Symposium: D33
Room: Prag

Process Modelling of Metallic Alloys

Materials Design

Y. Bréchet, University of Grenoble, Saint Martin d'Hères (France)

Modeling of Precipitation Hardening in Aluminum Alloys Containing Needle-Shaped Precipitates

A. Bahrami (Sp), A. Miroux, L. Kestens, Delft University of Technology (Netherlands)

Structure-Property Optimization of Ultrafine Grained Dual Phase Steels Using a Microstructure Based Strain Hardening Model

T. Pardoen (Sp), Catholic University of Louvain, Louvain-la-Neuve (Belgium); M. Delince, P.J. Jacques, Université catholique de Louvain, Louvain-la-Neuve (Belgium); J.D. Embury, Mc Master University, Hamilton (Canada) et al.

Highlight Lecture

A Physically Based Multi-Scale Model for Martensite Transformation Plasticity in Advanced Steels

V. Kouznetsova (Sp), M.G.D. Geers, Eindhoven University of Technology (Netherlands)

Prediction of Tensile Strength and Uniform Elongation for DP Steels

C. Thomser (Sp), U. Prahl, RWTH Aachen University (Germany); H. Vegter, Corus RD&T, IJmuiden (Netherlands); W. Bleck, RWTH Aachen University (Germany)

Simulation of Recrystallization Textures in a Commercial Aluminium Alloy with a Cellular Operator Model

C. Schäfer (Sp), V. Mohles, M. Loeck, G. Gottstein, RWTH Aachen University (Germany)

Symposium: A52
Room: Zagreb

Polymers as Functional Electronic, Dielectric and Energy related Materials

Polymers for Fuel Cells, Batteries and Photovoltaic Cells

H. Riel, IBM Research, Rüschlikon (Switzerland)

Molecular Modelling of Morphology and Proton Transport in Perfluorosulphonic Acid Membranes

J. Elliott (Sp), University of Cambridge (UK); S.J. Paddison, University of Alabama, Huntsville, AL (USA)

Nanostructured Multifunctional Polymer Composites for Power Storage Devices

N. Shirshova (Sp), M. Shaffer, J.H.G. Steinke, E. Greenhalgh, P. Curtis, A. Bismarck, Imperial College London (UK)

Photoluminescence Quenching, Charge Transfer and Photovoltaic Activity Studies of Organic Polymer/Inorganic Nanomaterial Composites

D. Rickard, S. Giordani, J. Coleman, W.J. Blau (Sp), Trinity College Dublin (Ireland)

Prediction of Tensile Strength and Uniform Elongation for DP Steels

C. Thomser (Sp), U. Prahl, RWTH Aachen University (Germany); H. Vegter, Corus RD&T, IJmuiden (Netherlands); W. Bleck, RWTH Aachen University (Germany)

The Effect of Steam on the Ionic Conductivity in Acid Doped High Temperature Polymer Electrolytes

N. Gourdoupi (Sp), Advent Technologies SA, Platani, Rio, Achaia (Greece); J.K. Kallitsis, S.G. Neophytides, University of Patras (Greece)

Polymeric Ruthinium(II)-Tris-2,2'-Bipyridine Complex produced via Atom Tranfer Radical Polymerization and their Application in Solar Cells

E. Pefkianakis (Sp), N.P. Tzanetos, University of Patras (Greece); A.I. Philippopoulos, P. Falaras, Institute of Physical Chemistry, Athens (Greece); J.K. Kallitsis, University of Patras (Greece)

Symposium: D31
Room: Oslo

Atomistics and ab Initio Materials Modelling

Phase Diagrams

A. Mirzoev, South Ural State University, Chelyabinsk (Russian Federation)

Cluster Expansions to Assess Binary Phase Diagrams

L. Holliger (Sp), A. Legris, R. Besson, LMPGM, Villeneuve d'Asq (France)

Multiscale Modeling of Laves Phases in Chromium Alloys

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

Highlight Lecture

Theory-Guided Design of Ti-Based Binaries for Human Implants

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

Ab Initio Prediction of Structural and Thermodynamic Properties of Magnetic Shape Memory Alloys

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

Total Energies in Ordered Metallic Alloys: Testing the Charge Excess Functional (CEF) Method vs. ab Initio Calculations

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

Symposium: D34
Room: Kopenhagen

Modelling of Materials Properties at Mesoscale

Modelling of Materials Properties at Mesoscale V

B. Devincre, LEM/CNRS, Chatillon Cédex (France)

Highlight Lecture

Modeling and Simulation of Transformation-Induced Plasticity in Multiphase Steels at Micro- and Macro-Scale Level

D. Tjahjanto (Sp), S. Turteltaub, A.S.J. Suiker, S. van der Zwaag, Delft University of Technology (Netherlands)

Micromechanical Modeling of High-Strength Steels Using Self-Consistent Models

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

Phase Field Modelling of Rafting in Ni Base Superalloys

A. Gaubert (Sp), A. Finel, Y. Le Bouard, ONERA, Chatillon (France)

Modelling of Elastoplastic Behaviour of Metallic Materials with a Two-Level Homogenisation Approach

J. Fajoui (Sp), D. Gloaguen, B. Courant, R. Guillen, Université de Nantes, Saint Nazaire (France)

Application of a Phenomenological Approach to Mechanical Twinning in Crystal Plasticity Finite Element Modeling of High-Mn Steel

L. Hantcherli (Sp), P. Eisenlohr, F. Roters, D. Raabe, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)

Symposium: C51
Room: Shanghai

Thin Film Technology

Functional Coating Concepts

H.-G. Fuss, CemeCon AG, Würselen (Germany)

SiN(C) Precursor Coatings for Protection of Metals against Corrosion and Oxidation

M. Günthner (Sp), University of Bayreuth (Germany); A. Dierdorf, Clariant GmbH, Sulzbach a.T. (Germany); G. Motz, University of Bayreuth (Germany)

Boroaluminide Protective Coatings on Ferritic-Martensitic Steels Deposited by Pack Cementation

S.A. Tsipas (Sp), Complutense University of Madrid (Spain); H. Omar, M.L.G. Ilis, G. Heresan, Aristoteles University of Thessaloniki (Greece); F.J. Perez, Complutense University of Madrid (Spain) et al.

Hybrid Pulsed Laser Deposition and Diagnostics of Gradient TiN and TiCN Coatings for Biomedical Applications

B. Major (Sp), Polish Academy of Sciences, Krakow (Poland); J. Morgiel, R. Major, Polish Academy of Sciences, Cracow (Poland); F. Buckert, Technical University of Grenoble (France) et al.

Development and Evaluation of Coatings for Lubricant Free Forming of High Strength Aluminium

B. Wielage, A. Wank, C. Rupprecht (Sp), Chemnitz University of Technology (Germany); J. Leopold, G. Schmidt, S. Stark, Fraunhofer Institute for Machine Tools and Forming Technology, Chemnitz (Germany)

Symposium: D22
Room: Seoul

Mechanical Characterisation using In Situ Methods

Microcompression Tests

G. Dehm, University of Leoben (Austria)

Keynote Lecture

Nanostructured Metals: Simulations and In-Situ XRD Mechanical Testing

H. Van Swygenhoven (Sp), S. Brandstetter, S. Van Petegem, P.M. Derlet, Paul-Scherrer-Institute, Villigen (Switzerland)

In Situ Plastic Deformation of Gallium Arsenide Micropillars in a Scanning Electron Microscope

F. Östlund (Sp), J. Michler, K. Wasmer, Swiss Federal Laboraties for Materials Testing and Research, Thun (Switzerland); K. Leifer, Uppsala University (Sweden)

FIB Damage of Copper and Possible Consequences for Miniaturized Mechanical Tests

D. Kiener (Sp), University of Leoben (Austria); C. Motz, M. Rester, Austrian Academy of Sciences, Leoben (Austria); M. Jenko, Institute of Metals and Technology, Ljubljana (Slovenia); G. Dehm, University of Leoben (Austria)

In Situ Compression Tests on Micron Sized Silicon Pillars Using Scanning Electron Microscopy and Raman Microscopy

K. Wasmer (Sp), Swiss Federal Laboraties for Materials Testing and Research, Thun (Switzerland); T. Wermelinger, R. Spolenak, ETH Zurich (Switzerland); J. Michler, EMPA, Thun (Switzerland)

Symposium: C55 Room: Singapur	Symposium: X41 Room: Neu-Delhi	Symposium: X41 Room: Istanbul	Symposium: A42 Room: Helsinki	Symposium: A43 Room: Hongkong	Symposium: Room:	
Coatings for High Temperature Applications	**Biomedical Materials: Tissue Engineering and Drug Delivery**	**Biomedical Materials: Tissue Engineering and Drug Delivery**	**Semiconducting Nanowires: Catalysis, Growth and Integration**	**Metal Nanowires and Novel Interconnect Materials**		
Modelling and Characterisation	Bioceramics and Glasses	New Experimental Approaches and Modelling	Semiconductor Nanowires II	Metal Nanowires		
C. Leyens, Brandenburg Technical University, Cottbus (Germany)	H. Fischer, RWTH Aachen University (Germany)	T. Clyne, University of Cambridge (UK)	S. Mathur, Saarland University, Saarbrücken (Germany)	F. Iacopi, IMEC, Leuven (Belgium)		
Modelling and Experimental Study of the Sintering Kinetics of Plasma-Sprayed Zirconia TBCs A. Cipitria (Sp), I.O. Golosnoy, T.W. Clyne, University of Cambridge (UK)	**Freeze Gelation - A New Fabrication Technique of Porous Calcium Phosphate/Silica Ceramics for Bone Tissue Engineering** M. Pulkin (Sp), D. Koch, G. Grathwohl, University of Bremen (Germany)	**Keynote Lecture** **Magneto-Mechanical Stimulation of Early Bone Growth into Surface Layers on Implants** A.E. Markaki (Sp), University of Cambridge (UK); H.J. Griffiths, T.W. Clyne, Cambridge University (UK)	**Highlight Lecture** **Lateral and Vertical Silicon Nanowire Field-Effect Transistors** W. Riess (Sp), M. Björk, O. Hayden, J. Knoch, E. Lörtscher, H. Riel, H. Schmid, IBM Research GmbH, Rüschlikon (Switzerland)	**Highlight Lecture** **In-Situ Growth of Cu-Pt Nanowires with a Chain of Nanoparticles Morphology** B.J. Inkson (Sp), The University of Sheffield (UK); G. Dehm, University of Leoben (Germany); Y. Peng, The University of Sheffield (UK)		**14:40**
Adhesion Degradation of a YPSZ EBPVD Layer in Two Thermal Barrier Coating Systems P.-Y. Thery (Sp), M. Poulain, ONERA, Chatillon (France); M. Dupeux, M. Braccini, SIMAP, Grenoble (France)	**Biocompatible Ceramic Foams for 3d Cell Cultures in a Perfusion Reactor** A. Berthold (Sp), Technical University of Berlin (Germany); G. Driemel, V. Goralczyk, A. Bischof, H. Schubert, TU Berlin (Germany); A. Haibel, Hahn-Meitner-Institute, Berlin (Germany); U.M. Gross, FU Berlin (Germany) et al.		**Fabrication and Characterisation of Nanoscale Schottky-S/D-MOSFETs and Gated Nanowire Devices on Ultra Thin Body SOI Material** F. Wessely (Sp), T. Ruland, U. Schwalke, Technical University of Darmstadt (Germany)	**Grain-Size Control in Electrodeposited Cu Nanowires** P. Vereecken (Sp), IMEC, Leuven, Heverlee (Belgium); K. de Keyser, University Gent (Belgium); J.M. Vico, IMEC, Leuven, Heverlee (Belgium); C. Detavernier, University Gent (Belgium)		**15:00**
B2-RuAl, a New Material with Outstanding Properties for High Temperature Applications K. Woll (Sp), F. Mücklich, Saarland University, Saarbrücken (Germany)	**Polymer Coated 45S5 Bioglass®-Derived Scaffolds for Bone Tissue Engineering** O. Bretcanu, Q. Chen, S.K. Misra, Imperial College of Science, Technology and Medicine, London (UK); I. Roy, University of Westminster, London (UK); C. Vitale Brovarone, E. Verne, Politecnico of Torino (Italy) et al.	**Experimental and Theoretical Poro-Micromechanics of Natural, Man-Made, and Tissue-Engineered Bone Materials** C. Hellmich (Sp), A. Fritsch, Vienna University of Technology (Austria); W. Swieszkowski, Warsaw University of Technology (Poland); V. Komlev, F. Rustichelli, Marche Polytechnik University, Ancona (Italy) et al.	**Control of Conductivity and Photoconductivity of Individual Semiconductor Nanowires Inside Anodized Aluminium Oxide Matrix** D. Erts (Sp), P. Birjukovs, K. Didriksone, B. Polyakov, University of Latvia, Riga (Latvia); N. Petkov, J. Xu, J.D. Holmes, National University of Ireland, Cork (Ireland)	**Gold Nanostructures through Directional Eutectoid Transformation** Y. Chen (Sp), S. Milenkovic, A.W. Hassel, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)		**15:20**
Comparison of Coated and Uncoated Gamma-TiAl Alloy after High-Temperature Cyclic Loading in a Water Vapor Atmosphere T. Heckel (Sp), Universität Siegen (Germany); M. Möllenhoff, L. Niewolak, L. Singheiser, Research Centre Juelich (Germany); H.-J. Christ, University of Siegen (Germany); W.J. Quadakkers, Research Centre Juelich (Germany)	**Mechanisms Underlying the Stimulatory Effect of Shock Waves on Mg63 Human Osteoblasts Colonizing Glass-Cerami Scaffolds** G. Martinasso, R. Frairia, G. Muzio, S. Saracino, C. Vitale-Brovarone, L. Berta, R.A. Canuto, University of Turin, Torino (Italy); E. Verné (Sp), Politecnico di Torino (Italy)	**Modeling of the Mechanical Behavior of Bone at Submicron Scale through Mean-Field Homogenization** S. Nikolov (Sp), C. Sachs, A. Counts, H. Fabritius, D. Raabe, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	**Integration of Semiconductor Nanowires in Silicon CMOS Technology: Compatibility Study** P. Vereecken (Sp), IMEC, Leuven, Heverlee (Belgium); M. Björk, IBM Research GmbH, Zürich (Switzerland); S. Brongersma, F. Iacopi, IMEC, Leuven, Heverlee (Belgium); H. Riel, W. Ries, IBM Research GmbH. Zürich	**Self-organised Metallic Nanostructures via Directional Solidification of Eutectics** S. Milenkovic (Sp), A.J. Smith, A.W. Hassel, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)		**15:40**
Measurement of Remaining Adhesion Strength between Ceramic Coating and Bond Coat of a Thermal Barrier Coating System J. Xu, Rolls-Royce Deutschland Ltd & CO KG, Dahlewitz (Germany)	**Manufacturing of Osseoinductive Bone Substitute Implants Made of BMP-2 Coated Bioresorbable Ceramics** H. Fischer (Sp), C. Bergmann, RWTH Aachen University (Germany); K. Zurlinden, M. Laub, H. Jennissen, University of Duisburg-Essen (Germany); R. Telle, RWTH Aachen University (Germany)	**Oral Poster - Subsession** Poster 1: X41-910 Poster 2: X41-173 Poster 3: X41-52 Poster 4: X41-1267 Poster 5: X41-1725	**Ultimate-Strength of Germanium Nanowires** L. Ngo, D. Almecija (Sp), Trinity College Dublin (Ireland); J. Sader, University of Melbourne (Australia); B. Daly, N. Petkov, J. Holmes, University College Cork (Ireland); D. Erls, University of Latvia, Riga (Latvia) et al.	**Nanowires** M. Maas (Sp), J.E. ten Elshof, D.H.A. Blank, University of Twente, Enschede (Netherlands)		**16:00**

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	Symposium: B22 Room: Kiew	Symposium: A51 Room: Lubljana	Symposium: A13 Room: Riga	Symposium: A62 Room: Stockholm	Symposium: A21 Room: Budapest	Symposium: A22 Room: Krakau
	High Temperature Metallic and Intermetallic Materials	**Polymer-Nanoparticle-Blend s and their Applications**	**Molecule-based Electronics**	**Solid Oxide Fuel Cells**	**Hard and Soft Magnetic Materials**	**Magnetic Nanoparticles and Nanowires**
	Processing and Properties of High Temperature Materials J. Earthman, University of California, Irvine (USA)	Polymer Nanocomposite Properties S. Förster, Universität Hamburg (Germany)	Molecular Devices B. de Boer, University of Groningen (Netherlands)	Stacks and Systems R. Steinbrech, Research Centre Juelich (Germany)	Soft Magnetic Materials V. Neu, Leibniz Institute for Solid State and Materials Research Dresden (Germany)	Magnetic Nanoparticles and Nanowires K. Sumiyama, Nagoya Institute of Technology (Japan)
17:00	Highlight Lecture **High Temperature Strength of Co-Al-W Alloys** A. Suzuki, T.M. Pollock (Sp), University of Michigan, Ann Arbor, MI (USA)	**Vapor Phase Deposition of Polymer Nanocomposites for Functional Applications** V. Zaporojtchenko, U. Schürmann, H. Takele, V.S.K. Chakravadhanula, F. Faupel (Sp), University of Kiel (Germany)	Keynote Lecture **Charge Transport Investigations through Single Molecules** E. Lörtscher, H. Riel (Sp), IBM Research, Rüschlikon (Switzerland)	Highlight Lecture **SOFC Stacks for Automotive Applications – Results of the ZeuS II Project** H.P. Buchkremer (Sp), Research Centre Juelich (Germany); H. Bittner, Rhodius, Weißenburg (Germany); A. Fickler, Liebherr, Lindenberg (Germany); A. Friedrich, German Aerospace Center - DLR, Stuttgart (Germany) et al.	**Magnetic Losses Dependence on Microstructure for a 17 Weight pct Chromium Stainless Steel Devoted to Electromagnetic Actuation** N. Meyer (Sp), SIMAP-INP Grenoble, Saint Martin d´Hères (France); O. Geoffroy, Laboratoire Louis Néel, Grenoble (France); Y. Bréchet, INP Grenoble, Saint Martin d'Hères (France) et al.	**In-Flight Optical Annealing of FePt Nanoparticles** E. Mohn (Sp), D. Pohl, F. Schäffel, L. Schultz, B. Rellinghaus, Leibniz Institute for Solid State and Materials Research Dresden (Germany)
17:20	**Mechanical Properties of Centrifugally Cast Al-Rich TiAl Alloys** D. Sturm, H. Saage, M. Heilmaier (Sp), Otto-von-Guericke-University Magdeburg (Germany); M. Paniski, G.J. Schmitz, ACCESS e.V., Aachen (Germany) et al.	**Epoxy Resin/Silica Hybrid Material Manufactured by Sol-Gel Process with Acid Anhydride** W. Araki (Sp), S. Wada, T. Adachi, Tokyo Institute of Technology (Japan)		Highlight Lecture **SOFC Stacks for Automotive Applications – Results of the ZeuS II Project** H.P. Buchkremer (Sp), Research Centre Juelich (Germany); H. Bittner, Rhodius, Weißenburg (Germany); H. Fickler, Liebherr, Lindenberg (Germany); A. Friedrich, German Aerospace Center, Stuttgart (Germany) et al.	**The Technology of Temperature-Time Preparing of Amorphous Materials** V.S. Tsepelev (Sp), B. Baum, G. Tjagunov, V. Vjuhin, Urals State Technical University, Ekaterinburg (Russian Federation)	**Control of Structural and Magnetic Characteristics on Core (FePt)-Shell (Fe3O4) Nanoparticles** S. Mourdikoudis (Sp), K. Simeonidis, I. Tsiaoussis, M. Angelakeris, C. Dendrinou-Samara, O. Kalogirou, Aristotle University, Thessaloniki (Greece)
17:40	**On-Line Microstructural Integrity Assessment of Cast Mg-Based Automotive Components** N. Marchand, Computed Materials Corp., Montreal, QC (Canada)	**Nanocomposites Based on Sillicone Rubber** V. Rabova, The Institute of Chemical Technology, Prague (Czech Republic)	**Orbital Theory of Transport through Molecules** M. Ernzerhof, University of Montreal, QC (Canada)	**A Micro-Solid Oxide Fuel Cell System for Battery Replacement** A. Bieberle-Hütter (Sp), D. Beckel, A. Infortuna, U.P. Mücke, J.L.M. Rupp, L.J. Gauckler, ETH Zurich (Switzerland); S. Rey-Mermet, P. Muralt, Swiss Federal Institute of Technology, Lausanne (Switzerland) et al.	**Element-Resolved Magnetic and Structural Study of Fe-Cr Alloys** A. Froideval (Sp), R. Iglesias, Paul Scherrer Institute, Villigen (Switzerland); S. Schuppler, P. Nagel, Forschungszentrum Karlsruhe GmbH (Germany) et al.	**Magnetic Properties of Core-Shell FeCo Nanostructures at Surfaces** S. Ouazi (Sp), G. Moulas, S. Rusponi, H. Brune, Swiss Federal Institute of Technology, Lausanne (Switzerland)
18:00	**Microstructures Evolution and Room Temperature Deformation of a Unidirectionally Solidified Nb-22Ti-3Ta-2Hf-7Cr-3Al-16 Si (at.%) Alloy** L.L. He (Sp), G.M. Cheng, Y.X. Tian, L.Z. Zhou, Chinese Academy of Sciences, Shenyang, Liaoning (China)	**Tailored Polymer - Metal Nanocomposites for Optical Applications** S.V. Roth (Sp), DESY; HASYLAB, Hamburg (Germany); A. Veligzhanin, Kurchatov Institute, Moscow (Russian Federation); G. Jakopic, Joanneum Graz, Weiz (Austria); H. Walter, CSEM SA, Zurich (Switzerland) et al.	**Understanding Conductance Histograms of Single Molecular Junctions** T. González (Sp), R. Huber, S. Wu, S.J. van der Molen, C. Schöneberger, M. Calame, University of Basel (Switzerland)	**Modelling of the Electrochemical Performance of Fuel Cell Electrodes by Discrete Simulations** C.L. Martin (Sp), L.C.R. Schneider, Y. Bultel, D. Bouvard, SIMAP, Saint Martin d´Hères (France)	**Low Temperature Sintering of MnZn Ferrites** R. Karmazin (Sp), D. Götsch, R. Männer, R. Matz, S. Walter, Siemens AG, München (Germany)	**Cobalt-Doped ZnO Nanorods: Wet Chemical Synthesis and Structural as well as Magnetic Characterization** T. Büsgen (Sp), M. Hilgendorff, caesar research center, Bonn (Germany); D. Goll, G. Schütz, Max Planck Institute for Metals Research, Stuttgart (Germany); F. Wilhelm, A. Rogalev, ESRF, Grenoble (France) et al.
18:20	**Oral Poster - Subsession** Poster 1: B22-1225 Poster 2: B22-1010 Poster 3: B22-208 Poster 4: B22-152	**Oral Poster - Subsession** Poster 1: A51-682 Poster 2: A51-1704 Poster 3: A51-1287	**Electrical and Optical DNA Detection with Gold Nanoparticle Arrays** T. Nagaoka (Sp), H. Shiigi, S. Tokonami, Y. Nishide, Osaka Prefecture University, Sakai (Japan)	**Determination of Residual Stresses in Planar Solid Oxide Fuel Cells** J. Malzbender, W. Fischer, R.W. Steinbrech (Sp), Research Centre Juelich (Germany)	**Tuning Spin-Polarized Conductivity** L. Alff (Sp), Y. Krockenberger, Technical University of Darmstadt(Germany); K. Mogare, M. Reehuis, M. Jansen, Max Planck Institute for Solid State Research, Stuttgart (Germany) et al.	**Room Temperature Ferromagnetism in 1-Dimensional Mn Doped Ge Nanostructures** J. Kulkarni (Sp), University College Cork (Ireland); O. Kazakova, National Physical Laboratory, Teddington (UK); J. Holmes, University College Cork (Ireland)

Symposium: C11 Room: St.Petersburg	Symposium: D33 Room: Prag	Symposium: A52 Room: Zagreb	Symposium: D31 Room: Oslo	Symposium: D34 Room: Kopenhagen	Symposium: C51 Room: Shanghai	Symposium: D22 Room: Seoul
Solidification Processes, Microstructures and Defects	**Process Modelling of Metallic Alloys**	**Polymers as Functional Electronic, Dielectric and Energy related Materials**	**Atomistics and ab Initio Materials Modelling**	**Modelling of Materials Properties at Mesoscale**	**Thin Film Technology**	**Mechanical Characterisation using In Situ Methods**
Remelting / Numerical Methods	Process Design	Polymers as Dielectric Materials and Insulators	Extended Defects II	Modelling of Materials Properties at Mesoscale VI	Developments in Thin Film Technology	Novel Techniques
M. Apel, ACCESS e.V., Aachen (Germany)	T. Pardoen, Catholic University of Louvain, Louvain-la-Neuve (Belgium)	M. Gazicki-Lipman, Technical University of Lodz (Poland)	M. Friak, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)	M. Plapp, Ecole Polytechnique, Palaiseau Cedex (France)	C. Mitterer, University of Leoben (Austria)	S. Zaefferer, Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf (Germany)
Diffusion Processes during Melting and Solidification E. Gamsjäger (Sp), University of Leoben (Austria); J. Svoboda, ASCR, Brno (Czech Republic); F.D. Fischer, University of Leoben (Austria)	Highlight Lecture **An Integrated Approach of Precipitation and Local Mechanical Properties in Friction Stir Welds in Aluminium Alloy 6005A-T6** A. Simar (Sp), University of Louvain, Louvain-la-Neuve (Belgium); Y. Bréchet, LTPCM-INPG, Grenoble (France); B. de Meester, University of Louvain, Louvain-la-Neuve (Belgium); A. Denquin, ONERA, Paris (France) et	**Molecular Dynamics in Nanometric Thin Films of Polymers Having Different Macromolecular Architectures** F. Kremer (Sp), A. Serghei, University of Leipzig (Germany)	Highlight Lecture **Atomic-Scale Investigation on Failure Strength of Silicon Carbide Containing Nanovoids** L. Colombo (Sp), M. Ippolito, A. Mattoni, University of Cagliari, Monserrato (Italy)	Highlight Lecture **Molecular Dynamics Simulations for Calibrating a Phase-Field Model of Solidification in Ni-Zr Alloys** B. Nestler (Sp), M. Selzer, D. Danilov, University of Applied Sciences, Karlsruhe (Germany); H. Guerdane, H. Teichler, University of Goettingen (Germany)	**Electrostatic Spray Deposition of Tantalum Oxide Thin Films for Microelectronic Technology** A. Lintanf (Sp), LEPMI/SIMAP; Institut National Polytechnique,, Saint Martin d'Hères (France); E. Djurado, LEPMI; Institut National Polytechnique, Grenoble (France)	**Changes in the Thermoelectric Power of Pure Metals Due to Uniaxial Tension** P. Roux (Sp), X. Kleber, M. Morin, CNRS UMR 5510, Villeurbanne (France)
Keynote Lecture **Meshless Approach for Solution of Phase Change Problems** B. Sarler (Sp), R. Vertnik, I. Kovacevic, G. Kosec, University of Nova Gorica (Slovenia)	**Influence of Coiling and Straightening Operations between Successive Drawing Steps of Tungsten Wires** M. Rodriguez Ripoll (Sp), H. Riedel, Fraunhofer Institute for Mechanics of Materials, Freiburg (Germany)	**Relaxation Study in Poly Ethylene Terephtalate Glycol / Montmorillonite Nanocomposites** H. Couderc (Sp), University of Rouen, Saint Etienne du Rouvray (France); A. Saiter, University of Rouen, St Etienne (France); N. D'Souza, University of North Texas, Denton, TX (USA) et al.	**Oxygen in Grain Boundaries of Nanocrystalline-Aluminum: A Molecular Dynamics Study** A. Elsener (Sp), Paul Scherrer Institute, Villigen (Switzerland); O. Politano, University of Bourgogne, Dijon (France); P.M. Derlet, H. Van Swygenhoven, Paul Scherrer Institute, Villigen (Switzerland)	**Mesoscale Modelling of Solidification Processes by Dissipative Particle Dynamics** J. Czerwinska, IPPT PAN, Warsaw (Poland)	**Microstructure Design and Tribological Properties of Ti/TiN, Cr/CrN and TiN/CrN Multilayer Films** L. Major (Sp), J. Morgiel, M. Szczerba, B. Major, Polish Academy of Sciences, Krakow (Poland); J.M. Lackner, Joanneum Research Forschungsgesellschaft mbH, Leoben (Austria) et al.	**Characterisation of the Cyclic Deformation Behaviour of Metastable Austenitic Steels Using In-Situ Magnetic Measurements** M. Smaga (Sp), F. Walther, D. Eifler, University of Kaiserslautern (Germany)
	A Multiscaled Model for Simulation of the Welding Distortions during Laser Beam Welding N. Doynov (Sp), R. Ossenbrink, V. Michailov, BTU Cottbus (Germany)	**Electrical and Mechanical Properties of Acrylonitrile Rubber and Linear Low Density Polyethylene in the Vicinity of the Percolation Threshold** A.S.A. Reffaee, D.E. El Nashar, S. Abd-El-Messieh (Sp), K.N. Abd-El Nour, National Research Center, Dokki (Egypt)	**Oxidation of Transition Metal Surfaces and Nanoparticles** N. Seriani (Sp), F. Mittendorfer, G. Kresse, University of Vienna, Wien (Austria)	**Grains and Bubbles: Phase-Field Modeling with Volume Constraints** F. Wendler (Sp), University of Applied Sciences, Karlsruhe (Germany); B. Nestler, University of Karlsruhe (Germany)	**Hot Uniaxial Pressing of Ru-Doped NiCoCrAlYTa Powder** F. Juarez Lopez (Sp), Centro de Investigacion e Innovacion Tecnologica, Mexico (Mexico); C. Vahlas, CIRIMAT UMR, Toulouse (France); D. Jaramillo, Centro de Investigacion e Innovacion Tecnoloaica. Mexico (Mexico) et al.	**Fatigue Behaviour and Fatigue Life Calculation of the Quenched and Tempered Steel SAE 4140** P. Starke (Sp), F. Walther, D. Eifler, University of Kaiserslautern (Germany)
Advanced Numerical Method for Quantitative Phase-Field Simulation of Non-Isothermal Free Dendritic Growth of Binary Alloy J. Rosam (Sp), A. Mullis, P. Jimack, University of Leeds (UK)	**Neural Network Modeling of the Phase Volume Fraction of Ti Alloy under Nonisothermal Hot Forging Condition** J.H. Kim (Sp), J.T. Yeom, D.-G. Lee, N.K. Park, Korea Institute of Machinery and Materials, Changwon (Korea, Republic)	**Polymer Composite Materials Containing Conductive Phase on Dielectric Support** G. Elyashevich (Sp), I.S. Kuryndin, M.A. Smrinov, Russian Academy of Sciences, Saint-Petersburg (Russian Federation)	**On the Effect of Grain Boundaries on the Local Mechanical Properties as Investigated by Nanoindentation and MD Simulations** K. Durst (Sp), T. Schilling, O. Franke, M. Göken, A. Hartmaier, University of Erlangen-Nuremberg (Germany)	**Temporal Coarse-Graining Applied to Viscoplastic Behaviour in Anisotropic Solids** M. Hütter (Sp), T.A. Tervoort, ETH Zurich (Switzerland)	**Kinetics of Grain Growth in Nanocrystalline Copper Thin Films** S. Simões (Sp), Universidade do Porto (Portugal); R. Calinas, Universidade de Coimbra (Portugal); P.J. Ferreira, University of Texas, Austin, TX (USA); F. Viana, M.F. Vieira, Universidade do Porto (Portugal) et al.	**Tuning Fork Based System for Determination of Mechanical Properties and Force Interactions In Situ** J. Andzane (Sp), University of Latvia, Riga (Latvia); A. Löhmus, Tartu University (Estonia); J. Prikulis, University of Latvia, Riga (Latvia); S. Kubatkin, Chalmers University of Technology, Göteborg (Sweden) et al.
Special Dynamic Allocation Memory Techniques for a Three-Dimensional Cellular Automaton – Finite Element Model B. Amarouchene (Sp), C.-A. Gandin, CEMEF, Sophia Antiopolis (France)	**NADIA: New Automotive Components Designed for and Manufactured by Intelligent Processing of Light Alloys** S. Odorizzi, N. Gramegna (Sp), EnginSoft SpA, Trento (Italy)	**Cellular Polypropylene Ferroelectret Piezoelectrics for the Air-Coupled Ultrasonics** J. Döring, V. Bovtun (Sp), J. Bartusch, U. Beck, Federal Institute for Materials Research and Testing, Berlin (Germany); M. Wegener, Fraunhofer Institute for Applied Polymer Research, Potsdam (Germanv) et al.	**Magnetic Properties of Pd-Films on Piezoelectric Substrates** V. Pankoke (Sp), S. Gemming, Forschungszentrum Dresden-Rossendorf (Germany)	**Optimum Grain Size for Superplastic Deformation** V.N. Chuvil'deev (Sp), A.V. Schavleva, M.Y. Gryaznov, A.N. Sysoev, Nizhny Novgorod State University (Russian Federation)	**Development of Wear Resistant Pressing Moulds for the Production of Diamond Composites** W. Tillmann, E. Vogli, M. Gathen, S. Momeni (Sp), University of Dortmund (Germany)	**Evaluation of Stress in Advanced Materials by Photoacoustic Microscopy** A. Glazov (Sp), Physical-Technical Institute, St. Petersburg (Russian Federation); K.L. Muratikov, Physical-Technical Institute of RAS, St. Petersburg (Russian Federation)

Symposium: C55 Room: Singapur	Symposium: X41 Room: Neu-Delhi	Symposium: X41 Room: Istanbul	Symposium: A42 Room: Helsinki	Symposium: A43 Room: Hongkong	Symposium: Room:	
Coatings for High Temperature Applications	**Biomedical Materials: Tissue Engineering and Drug Delivery**	**Biomedical Materials: Tissue Engineering and Drug Delivery**	**Semiconducting Nanowires: Catalysis, Growth and Integration**	**Metal Nanowires and Novel Interconnect Materials**		
New Materials and Characterisation	Novel Biomaterial Systems	Biomimetics and Nanomaterials	Semiconductor Nanowires III	Porous Templates and CNT Interconnects		
C. Coddet, Université de Technologie de Belfort-Montbéliard (France)	C. Hellmich, Vienna University of Technology (Austria)	A. Tampieri, National Research Council, Faenza (Italy)	B. Korgel, University of Texas , Austin (USA)	P. Vereecken, Interuniversity Microelectronics Center, Leuven, Heverlee (Belgium)		
New Ceramic Material for Thermal Barrier Coatings M.-A. Prévost (Sp), M. Fevre, R. Mevrel, ONERA, Châtillon (France)	**Development of a Phenomenological Model to Preview the Alginate Scaffolds Behavior for Tissue Engineering** A. Mendes (Sp), P. Bártolo, P. Rezende, R.M. Filho, Leiria Polytechnic Institute (Portugal)	**Biomimetic Hybrid Composites to Repair Osteochondral Lesions** A. Tampieri (Sp), M. Sandri, E. Landi, National Research Council, Faenza (Italy); D. Pressato, FINCERAMICA SpA, Faenza (Italy)	Highlight Lecture **One-Dimensional Oxide Nanostructures: Growth, Applications and Devices** S. Mathur (Sp), S. Barth, Leibniz-Institut für Neue Materialien gem. GmbH, Saarbrücken (Germany), University of Wuerzburg (Germany); F. Hernandez-Ramirez, A. Romano-Rodriguez, University of Barcelona (Spain)	**Fabrication and Characterisation of Silver/Polyaniline Composite Nanowires in Anodic Alumina Membranes** A. Drury (Sp), Trinity College, Dublin (Ireland); S. Chaure, University of London (UK); M. Kröll, Degussa AG, Hanau (Germany); N. Chaure, University of Sheffield (UK); V. Nicolosi, Trinity College, Dublin (Ireland) et al.		**17:00**
High Temperature Oxidation Behaviour of the HVOF-Sprayed CoNiCrAlY and FeCrAlY Coatings D. Maghet, G. Marginean, W. Brandl (Sp), University of Applied Sciences Gelsenkirchen (Germany); I. Mitelea, University "Politehnica" Timisoara (Romania)	**Mechanical Properties of Hyaline and Repair Cartilage Studied by Nanoindentation** M. Göken (Sp), K. Durst, V. Maier, O. Franke, University of Erlangen-Nuremberg (Germany); K. Gelse, University of Erlangen-Nuernberg (Germany)	**Comparison between Bone and Chitosan/Calcium Phosphate Nanohybrids Obtained by Biomimetic Method** C.A. Bertran (Sp), S. Bertazzo, G. Pires, I.V.Y. Pagotto, State University of Campinas (Brazil)	**Synthesis and Characterization of Metal-Oxide-Metal (MOM) Heterojunction Nanowires** E. Herderick (Sp), J.S. Tresback, A.L. Vasiliev, N.P. Padture, The Ohio State University, Columbus, OH (USA)	**A New Route for the Formation of Self-Organized Porous Aluminum Oxide Templates** S. Berger (Sp), H. Tsuchiya, R. Hahn, P. Schmucki, University of Erlangen-Nuremberg (Germany)		**17:20**
Thermal Conductivity of EB-PVD Thermal Barrier Coatings U. Schulz (Sp), B. Saruhan-Brings, H.-J. Rätzer-Scheibe, A. Flores-Renteria, German Aerospace Center - DLR, Cologne (Germany)	**Adhesion and Proliferation of Human Mesenchymal Stem Cells on Powder Metallurgically Fabricated NiTi-SMA** T. Habijan (Sp), Ruhr-University Bochum (Germany); M. Köhl, Research Centre Juelich (Germany); O. Bremm, S.A. Esenwein, Universitätsklinik Bergmannsheil, Bochum (Germany); D. Stöver, Research Centre Juelich (Germany) et	**Novel Nano-Composite Biomaterial for Ostheochondral Tissue Engineering** R. Quarto, University of Genova (Italy); M. Marcacci, E. Kon, S. Zaffagnini, M. Delcogliano (Sp), R. Giardino, M. Fini, Orthopaedic Institute Rizzoli, Bologna (Italy); D. Pressato, Fin-Ceramica S.p.a, Faenza (Italy) et al.	**Integration of Perpendicularly Aligned Semiconductor Nanorods on-Chip at 3 nm Separation** K. Ryan, University of Limerick (Ireland)	**Polymer Thin Film Used in a Lithrographic Style Templated Deposition of Metallic Nanoparticles and Single Molecular Magnets** J. O'Callaghan (Sp), T. Fitzgerald, University College Cork (Ireland); M.T. Shaw, Intel (Ireland) Ltd., Co. Kildare (Ireland); P.F. Nealey, University of Wisconsin, Madison, WI (USA) et al.		**17:40**
Durable Boron Nitride Coating for the Aluminum Industry - The Elastic Coating for Higher Productivity K. Uibel (Sp), C. Klöpfer, ESK Ceramics GmbH & Co. KG, Kempten (Germany)	**Mechanical Properties of Bioactive Cellulose-Apatite Composite Fibers** D. Haas (Sp), I. Hofmann, A. Eckert, University of Erlangen-Nuremberg (Germany); H. Rüf, H. Firgo, Lenzing AG (Austria); D.J. Kim, Sung Kwon Kwan University, Suwon (Korea, Democratic People's Republic) et al.	**Bio-Functionalization and Use of Silica and Zeolithe Nanoparticles** O. Carion, V. Souplet, C. Maillet, C. Olivier, N. Ollivier, X. Duburcq, O. El Mahdi, O. Melnyk, UMR, Lille (France); F. Chaid, C. Roux, H.F. Hildebrand, UPRES EA, Lille (France); W. Braun, University of Würzburg (Germany) et al.	**Formation and Properties of Extremely High Aspect Ratio of TiO2 Nanotubes Layers** S.P. Albu (Sp), A. Ghicov, J.M. Macak, P. Schmuki, University of Erlangen-Nuremberg (Germany)	**Chemical Vapour Deposition-Grown Linear anf Branched Carbon Nanotubes for Free-Space Interconnects** R.W. Leahy, W.J. Blau (Sp), Trinity College Dublin (Ireland)		**18:00**
A Study on Boridizing of a Ti6Al4V Alloy E. Atar, Gebze Institute of Technology (Turkey); E.S. Kayali, H. Cimenoglu (Sp), Istanbul Technical University (Turkey)	**Oral Poster - Subsession** Poster 1: X41-1542 Poster 2: X41-172 Poster 3: X41-137	**TiO2 Nanotubes: A Potential Surface Structuring Method for Implants Based on Titanium** S. Bauer (Sp), J. Park, K. v.d. Mark, P. Schmuki, University of Erlangen-Nuremberg (Germany)	**Oriented Mesoporous Channel Systems in Anodic Alumina Membranes for the Stabilization of Nanowires** B. Platschek, A. Keilbach, L.A. Mühlstein, R. Köhn, M. Döblinger, T. Bein (Sp), LMU, München (Germany)	**Oral Poster - Subsession** Poster 1: A43-200 Poster 2: A43-1342 Poster 3: A43-1690 Poster 4: A43-746 Poster 5: A43-1627		**18:20**