

am2

Monday 12 September 2011

Symp. Room	C31 Pasteur	B11 Einstein	B31 Antigone 1	E22 Antigone 3	B32 Joffre 2
Session	<u>Mechanical Alloying</u> Elena GORDO, Universidad Carlos III Madrid	<u>Silicides and Laves</u> David MORRIS, CENIM, CSIC, Madrid	<u>Polymer nanocomposites: thermal and mechanical properties</u> Aravind DASARI, IMDEA Materials	<u>Materials for water splitting: photoelectrochemical and photocatalytic approaches</u> Sebastian FIECHTER, Helmholtz-Centre Berlin	<u>Synthetic Methods & Emerging Applications</u> Jin-Chong TAN, University of Cambridge
10:30	Sensitivity of mechanical alloying phenomena to ultra-low concentration of otherwise considered as negligible elements exemplified in Fe-C. C. Cordier-Robert (University of Lille 1, Villeneuve D'Ascq, France), J. Focf	HIGHLIGHT LECTURE A Review of the Effect of Refractory Metal Additions on the Microstructure of Nb Silicide Based Alloys P. Tsakirooulos (The University of Sheffield, Sheffield, United Kingdom)	KEYNOTE LECTURE The use of chemical nanotechnology to produce tailor made nanocomposites based on polymer matrices T. Burkhardt (0, 0), K. Friedrich	KEYNOTE LECTURE Photoelectrochemical Solar Energy Conversion L. Spiccia (Monash University, Clayton, Australia)	HIGHLIGHT LECTURE New Drug Nanocarriers Based On Porous Iron Carboxylates Mofs P. Horcajada (CNRS UMR 8180, Universite de Versailles, Versailles, France), T. Chalati, T. Baati, R. Gref, P. Couvreur, C. Serre
10:50	Lean alloys: from the design to the manufacturing process O. Raquel (Universidad Carlos III de Madrid, Leganés (Madrid), Spain), C. Mónica, T. Jose Manuel, C. Carlos	Creep behaviour of Nb-Si based alloys S. Drawin (ONERA, Chatillon, France), O. Nodin			Clean, rapid and energy-efficient synthesis of materials and molecules through mechanochemical transformations T. Friscic (University of Cambridge, Cambridge, United Kingdom)
11:10	The role of oxygen and nitrogen in the mechanical alloying mechanism of Ni-Ti powder mixtures F. Neves (CENIMAT/I3N, Caparica, Portugal), F.M. Braz Fernandes, I. Martins, J.B. Correia	Plasticity in brittle and ductile Nb-Co intermetallics S. Korte (University of Cambridge, Cambridge, United Kingdom), W.J. Clegg	HIGHLIGHT LECTURE Thermal Degradation And Fire Retardance Of Polymer Nanocomposites G. Camino (Politecnico di Torino, -, France)	Preparation and Characterization of new g-C3N4 Thin Film Photocathodes for the Hydrogen Evolution from Water T. Schedel-Niedrig (Helmholtz-Zentrum Berlin GmbH, Berlin, Germany), F. Yang, S. Orthmann, C. Merschjann, T. Tyborski, M. Lublow, S. Kubala, A. Thomas, M. Driess	A New Functional Triazine Framework Based On N-Heterocyclic Building Blocks B.V. Lotsch (Ludwig-Maximilians-Universität München, München, Germany), S. Hug, M.E. Tauchert, L. Shen
11:30	Microalloying In Sintered Steels By Mechanical Alloying: Evolution Of The Nanostructure During Attrition And Thermal Stability L. Fuentes-Pacheco (Universidad Carlos III, Leganes, Spain), M. Campos	Effect of various alloying additions on the stability of Cr2Ta Laves phase polytypes A. Bhowmik (University of Cambridge, Cambridge, United Kingdom), H. Stone	Thermal Degradation And Combustion Mechanisms Of Pmma-App/Mpp/Metal Oxide Nanoparticles A. Laachachi (CRP Henri Tudor, Esch/Alzette, Luxembourg), B. Friederich, R. Sonnier, M. Ferriol, M. Cochez, V. Toniazzo, D. Ruch	Photocatalytic properties of colloidal gold nanoparticles for PEC water splitting at WO3 photoanodes R. Solarska (Warsaw University, Warsaw, Poland), A. Majcher, S. Zoladek, T. Stefaniuk, J. Augustynski, P.J. Kulesza	The Controlled SBU Approach: A route to rational synthesis F. Mertens (Technical University Bergakademie Freiberg, Freiberg, Germany), S. Hausdorf, A. Münch, D. Rafaja
11:50	Characterization of Al-Zn-Mg-Cu/(SiC or TiB2)p Composite Powders Obtained by Mechanical Milling M.A. Jabbari Taleghani (Universidad Carlos III de Madrid, Leganes (Madrid), Spain), E.M. Ruiz Navas, M. Salehi, J.M. Torralba	Molibdenum and niobium disilicide composite fabricated by Spark Plasma Sintering D.M. Vasquez Sandoval (Politecnico di Torino, Turin, Italy), F. Deorsola, M. Pavese, S. Biamino, P. Fino, C. Badini	The effect of nanofiller on machineability of high performance nanoreinforced polymer composites J. Njuguna (Cranfield University, Bedford, United Kingdom), S. Sachse, A. Irfan, S. Michalowski, K. Pielichowski, O. Kazmina, V. Ermini, H. Zhu	Photocatalysis of Carbon-Nitride Materials for Water Splitting and CO2 Reduction B. Tuffy (LMU Munich, Munich, Germany), H. Wang, B.V. Lotsch	MOFs based on redox active-linkers: synthesis, structure and properties T. Devic (ILV CNRS UMR 8180, Versailles, France), T.L. Nguyen, A. Fateeva, C. Serre, S. Devautour-Vinot, G. Maurin, R. Demir-Cakan, M. Morcrette, J.-M. Tarascon, G. Ferey
12:10	Morphology and reactivity in nanocrystalline aluminium powders B. Andre (IM2NP, Marseille, France), M.-V. Coulet, V. Heresanu, M. Dumont, J. Rogez, R. Denoyel	Partitioning Behavior of Re in Mo-Si-B Alloys K. Yoshimi (Tohoku University, Sendai, Japan), A. Yamaguchi, S.H. Ha, K. Maruyama	Reinforcement of polymers using nanoplatelets B. Chen (Trinity College Dublin, Dublin, Ireland), J.R. Evans, C. Wan, M. Frydrych	Calcium manganate photocatalysts for the oxygen evolution reaction (OER) from water A. Ramirez Caro (Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany), P. Bogdanoff, S. Fiechter	The Structure and Properties of Amorphous Metal-Organic Frameworks T. Bennett (University of Cambridge, Cambridge, United Kingdom), J.-C. Tan, A. Cheetham, S. Moggach, D. Keen, E. Bithell

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Symp.	D22	C13	D21	E11	B13
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
Session	<u>In-situ Testing 1</u> Christian MOTZ, Austrian Academy of Sciences	<u>Metallic glasses and related composites - S1</u> K. Georgarakis, INP Grenoble, France	<u>1. In situ testing. I</u> Javier GIL SEVILLANO, University of Navarra	<u>Fuels precursors</u> Thierry LOISEAU, Ecole Nationale Supérieure de Chimie de Lille	<u>TRIP-assisted steels</u> S. Van der ZWAAG, TU Delft
10:30	KEYNOTE LECTURE Dislocation kinetics in Fe and Fe alloys investigated by in situ TEM straining experiments D. Caillard (CNRS, Toulouse, France)	Microscopic aspects of Al micro-alloying of Cu46Zr46Al8 Metallic Glass G. Evangelakis (University of Ioannina, Ioannina, Greece), G. Almyras , G. Bokas , D. Papageorgiou , C. Lekka	The deformation and fracture behaviour of multiphase steels investigated from the macro- to the micro-scale M. Kapp (Materials Center Leoben Forschung GmbH, Leoben, Austria), T. Hebesberger , O. Kolednik	Crystal engineering of uranyl and mixed uranyl-lanthanide coordination polymers with multidentate aromatic carboxylates M. Ionut (University of Lille, Villeneuve D'Ascq, France), C. Volklinger , N. Henry , T. Loiseau	KEYNOTE LECTURE Mechanical stability of retained austenite grains in TRIP steels studied by synchrotron X-ray diffraction during deformation R. Blondé (Delft University of Technology, Delft, Netherlands), E. Jimenez-Melero , N. Van Dijk , L. Zhao , J. Sietsma , J. Wright , E. Brück , S. Van Der Zwaag
10:50		Atomic structure of Cu-Zr metallic glass assessed by EXAFS method and molecular dynamics simulations J. Antonowicz (Warsaw University of Technology, Warszawa, Poland), A. Pietnoczka , T. Drobiazga , R. Bacewicz , G. Almyras , D. Papageorgiou , G. Evangelakis	Effect of crystal orientation on the active slip systems of BCC titanium alloy R. Ghisleni (EMPA, Thun, Switzerland), B. Kombaiah , C. Niederberger , K. Nowag , J. Michler	Synthesis of f elements mixed oxides of controlled morphology by metal-organic frameworks calcination T. Demars (ICSM, Bagnols-Sur-Cèze, France), C. Genre , J. Maynadié , M. Boltoeva , D. Meyer	
11:10	Source truncation and exhaustion: Insights from quantitative in-situ TEM tensile testing D. Kiener (University Leoben, Leoben, Austria), A. Minor	Thermally induced CSRO in some bulk metallic glasses O. Haruyama (Tokyo University of Science, Noda, Japan), K. Sugiyama	HIGHLIGHT LECTURE Deformation studies of a creep resistant bainitic steel using synchrotron and neutron diffraction M. Weisser (Paul-Scherrer Institut, Villigen Psi, Switzerland), A. Evans , S. Van Petegem , S. Holdsworth , H. Van Swygenhoven	Highlighting Of The Hydrodynamic Influence On The Actinide Precipitate Properties - Experimental And Numerical Hydrodynamic Study Of A Nuclear Precipitator M. Bertrand (CEA, Bagnols Sur Ceze, France), E. Plasari , N. Lamarque , O. Lebaigue , F. Ducros	Factors influencing the strain-induced transformation of residual austenite in a low-alloyed TRIP steel K. Davut (Max-Planck-Institute for Iron Research, Düsseldorf, Germany), S. Zaefferer
11:30	Mechanical characterization of superelastic effect by nano-compression and in-situ TEM tests J. San Juan (Universidad del Pais Vasco, Bilbao, Spain), M.L. Nó	Short Range Order Study of Fe-Sc Nanostructured Amorphous Solid H. Hahn (Kalsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany), A. Leon	Microstructure and deformation micromechanisms of beta-metastable Titanium alloys determined by conventional and in-situ straining TEM N. Escalé (CEMES CNRS, Toulouse, France), F. Pettinari-Sturmel , A. Coujou , J. Douin	Thermal decomposition of uranyl peroxide UO ₄ .4H ₂ O R. Thomas (Unité de Catalyse et de Chimie du Solide, Villeneuve D'Ascq, France), M. Rivenet , F. Abraham , D. Amaraggi , M. Arab , B. Morel	Ultrafine Grained Structure and Tensile Deformation Behavior of Fe-Mn-Si-C Multiphase TRIP Steel S. Lee (Postech, Pohang, Korea - south), S.K. Suragani , S.J. Lee , K. Lee , B.C. De Cooman
11:50	In-situ TEM and SEM tensile tests of sub-micron Al fibers F. Mompiou (CNRS, Toulouse, France), M. Legros , D. Caillard , D. Gianola , A. Sedlmayr , O. Kraft	KEYNOTE LECTURE Changes in atomic structure of supercooled Pd-Ni-Cu-P glass-forming liquid during in-situ vitrification on cooling established by synchrotron-radiation X-ray diffraction D. Louzguine (WPI Advanced Institute for Materials Research, Tohoku University, Sendai, Japan), K. Georgarakis , J. Antonowicz , G. Vaughan , A.R. Yavari , T. Egami , A. Inoue	In situ SEM characterization of lean duplex steels deformation behaviour during ageing. J.-Y. Maetz (MATEIS - INSA Lyon, Villeurbanne, France), S. Cazottes , C. Verdu , J. Dobransky , K. Xavier	Calcined Resin Microspheres Pelletization (CRMP): a novel process for sintered metallic oxide pellets synthesis. E. Remy (CEA Marcoule, Bagnols Sur Cèze, France), S. Picart , A. Jankowiak , T. Delahaye , N. Clavier , O. Dugne , N. Herlet , S. Grandjean , P. Blanchart , A. Ayrat	Investigation of the HSD®-Steel with a modified concentration of the aluminum content E. Klöpfer (Institute of Materials Science, Leibniz Universität Hannover, Hannover, Germany), B. Springub , M. Masimov , G. Gershteyn , F. Nümberger , F.-W. Bach

12:10 In-situ SEM micropillar compression – temperature dependent ductile to brittle transition in semiconductors
J. Michler (EMPA, Thun, Switzerland), J. Wheeler, L. Thilly, R. Ghisleni

Load distribution in fully pearlitic steel wires investigated with in-situ neutron diffraction
M. Seefeldt (K.U. Leuven, Heverlee (Leuven), Belgium), J. Tacq, M. Kriska, S. Van Petegem

HIGHLIGHT LECTURE
Contribution of the surface contamination of uranium compounds on the quantitative analysis by Electron Probe Microbeam Analysis
O. Dugne (CEA MARCOULE, Bagnols Sur Ceze , France), C. Merlet , E. Brackx , B. Pelloux , C. Gueneau , M. Gibilaro , B. Deschamps , C. Rado

(Nb,Ti)(C,N) nanoprecipitates in TRIP Assisted Multi Phase steels
G.K. Tirumalasetty (Technical University of Delft/ Materials innovation institute, Delft, Netherlands), M.A. Van Huis, C.M. Fang, Q. Xu, F.D. Tichelaar, D.N. Hanlon, J. Sietsma, H.W. Zandbergen

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Symp.	D32	E21	B12	B15	C51
Room	Joffre 5	Barthez 1	Louisville	Barthez 2	Joffre 4
	<u>Modeling at the microscale:</u> <u>mechanical behavior in metals</u> Javier SEGURADO, IMDEA Materials	<u>Kesterites and related materials</u> Susan SCHORR, Free University Berlin	<u>Nickel-Based Superalloys - I</u> Roger C. REED, U Birmingham, Tresa POLLOCK, U California Santa Barbara	<u>Microstructure and Properties</u> Heinz-Werner HÖPPEL, University of Erlangen	<u>Molten Salts</u> Marcelle GAUNE-ESCARD, Université d'Aix-Marseille
Session					
10:30	KEYNOTE LECTURE Microstructural effects in atomic scale dynamics of dislocations in metals Y. Osetskiy (ORNL, Oak Ridge, USA), R. Stoller, D. Bacon	KEYNOTE LECTURE Sustainable materials for large-scale photovoltaics: high-efficiency kesterites by hybrid solution-nanoparticle ink processing T. Todorov (IBM T.J. Watson Research Center, Yorktown Heights, USA), D.A. Barkhouse, O. Gunawan, S. Bag, T. Goislard De Monsabert, S.J. Chey, D.B. Mitzi	Creep Mechanisms in Nickel-Based Single Crystal Superalloys P. Caron (ONERA, Châtillon, France)	KEYNOTE LECTURE Mg segregations along grain boundaries in an aluminium alloy processed by SPD X. Sauvage (University of Rouen - CNRS, Saint-Etienne Du Rouvray, France), N. Enikeev, M. Murashkin	KEYNOTE LECTURE The energy implications of lithium and its salts D. Fray (University of Cambridge, Cambridge, United Kingdom)
10:50			Does gamma-prime raft rotation contribute to the high temperature creep damage mechanisms of nickel-based single crystal superalloys? J. Cormier (ENSMA - P' Institute, Futuroscope - Chasseneuil, France), Z. Hervier		
11:10	How to justify the use of periodic boundary conditions: The Raman-Born controversy in the 1940-1950's O. Hardouin Duparc (CNRS, Palaiseau, France)	Single phase kesterite for thin film solar cells P. Dale (University of Luxembourg, Belvaux, Luxembourg), M. Arasimowicz, D. Berg, R. Djemour, L. Guetay, A. Redinger, S. Siebentritt	Modeling Displacive-Diffusional Coupled Dislocation Shearing of Gamma' Precipitates in Ni-Base Superalloys Y. Wang (OSU, Columbus, USA), N. Zhou, M. Mike	Bulk mechanical alloying of Fe and Cu induced by HPT powder consolidation A. Bachmaier (Austrian Academy of Sciences, Leoben, Austria), R. Pippan	Electrolytic Production of Matrix Coated Fibres for Titanium Matrix Composites J. Gussone (German Aerospace Center, Köln, Germany), J. Hausmann
11:30	Atomic-Scale Models for Hardening in Fcc Solid Solutions S. Patinet (ESPCI, Paris, France), L. Proville	Chemical and structural characterization of new chalcogenide absorbers for next generation Photovoltaic technologies: Quantitative calibration of in-depth resolved analytical techniques A. Perez-Rodriguez (IREC: Catalonia Institute for Energy Research, Sant Adrià Del Besòs (Bar, Spain), X. Fontané, L. Calvo-Barrio, V. Izquierdo-Roca, E. Saucedo, J. Morante, A. Redinger, D. Berg, P. Dale, S. Siebentritt	Dislocations in Ni-based superalloys during high temperature creep deformation C. Rae (Cambridge University, Cambridge, United Kingdom), V. Vorontsov, R. Voskoboynikov, L. Kovarik, M. Mills	Limitation of ductility of severe plastic deformed nickel G. Rathmayr (Erich Schmid Institute, Leoben, Austria), R. Pippan	Electrodeposition of Ti from K ₂ TiCl ₆ in NaCl-KCl-NaF Melt C. Sequeira (Instituto Superior Tecnico, Lisboa, Portugal), A. Morais, I. Lucas, I. Pais, D. Santos
11:50	Modeling the effects of neutron irradiation in Fe-Cu-Ni model alloys using an atomistic approach based on artificial intelligence N. Castin (CONICET, Buenos Aires, Argentine Republic), M.I. Pascuet, L. Malerba	Photoelectron spectroscopy study of Cu ₂ ZnSnS ₄ and Cu ₂ ZnSnSe ₄ films C. Platzer-Bjorkman (Uppsala University, Uppsala, Sweden), H. Flammersberger, J. Engman, T. Ericson, J. Scragg, T. Kubart	A TEM analysis of the interfacial dislocation network during anisothermal high temperature creep of MC2 Ni-based superalloy F. Pettinari-Sturm (CEMES CNRS, Toulouse, France), M. Hantcherli, J. Douin, A. Coujou, B. Viguier	Accelerated Diffusion Driven by the Severe Plastic Deformation S. Protasova (Institute of Solid State Physics RAS, Chernogolovka, Russian Federation), B. Straumal, A. Mazilkin, B. Baretzky, S. Dobatkin, R. Valiev, E. Rabkin	SECM: Innovative Corrosion investigation technique in molten salts M. Lucas (CNRS, Paris, France), C. Slim, D. Di Caprio, S. Delpech
12:10	Spatial Arrangements Of Fragmented Phases In Nanostructured Alloys And Tm Metal Single Clusters. Md Simulation V. Polukhin (Institute of Metallurgy, Yekaterinburg, Russian Federation), R. Belyakova, L. Rigmant	Magnetic properties and cation ordering of nanopowders of the synthetic analogue of kuramite, Cu ₃ SnS ₄ D.B. Francesco (University of Florence, Sesto Fiorentino, Italy), B. Daniele, C. Andrea, F. Gabriele, I. Massimo, L. Alessandro, M. Giordano, O. Werner, P. Luca A., R. Maurizio	Coupling of Deformation Mechanisms with Phase Field and Crystal Plasticity Modeling of Polycrystalline Ni Base Superalloys at Higher Temperatures M. Mills (The Ohio State University, Columbus, USA)	In situ observations of reverse dislocation motion upon unloading in UFG Al D. Caillard (CNRS, Toulouse, France), F. Momprou, M. Legros, H. Mughrabi	Molten salts for production of functional materials S. Kuznetsov (Institute of Chemistry, Kola Science Centre RAS, Apatity, Russian Federation)

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Symp.	D31	C52	D33	Barcelone	B45
Room	Joffre B	Joffre C	Joffre D		Sully 3bis
Session	<u>Electronic, magnetic and structural properties</u> Georg HEIMEL, Humboldt-Universität zu Berlin	<u>1 - New metallurgical production process</u> Shin-Ya KITAMURA, Tohoku University	<u>Atomic scale</u> A. HARTMAIER, ICAMS, Bochum		<u>Self-Healing</u> Santiago J. GARCIA, Delft University of Technology
	10:30 HIGHLIGHT LECTURE Multiscale Modelling of Fracture Chemo-Mechanics in Brittle Materials A. De Vita (King's College London, London, United Kingdom)	Development of solid state steelmaking (S3) process Y. Sasaki (POSTECH, Pohang, Korea - south), J.-O. Park, W.-H. Kim, V.-L. Tran	Point defects and interstitial impurities in ferrite: An ab initio based microscopic description A. Udyansky (Max-Planck Institute For Iron Research, Düsseldorf, Germany), J. Von Pezold, A. Dick, J. Neugebauer		Self-healing polymer membranes based on the hierarchical and dynamic self-assembly of block copolymers P. Tyagi (European Membrane Institute (IEM), Montpellier, France), D. Quemener, S. Lagerge
	10:50 Hybrid Organic-Ferromagnetic Interfaces: New Insights from First-Principles Calculations N. Atodiresei (Forschungszentrum Jülich, Jülich, Germany)	Fabrication of Ultra High Nitrogen Austenitic Stainless steel W. Park (GIFT, POSTECH, Pohang, Korea - south)	Combined Molecular Dynamics and Dislocation Dynamics Simulation: A study of repeated dislocation nucleation at crack tips S. Brinckmann (Ruhr University Bochum, Bochum, Germany), D. Mahajan, A. Hartmaier		Ballistic Damage Initiated Self-Healing Behavior Of Ionomer Blends With Epoxydized Natural Rubber And Ethylene Vinyl Alcohol Copolymer A. Rahman (University of Brescia, Brescia, Italy), P. Maurizio, P. Isabella, R. Giorgio, D.L. Luca
	11:10 Magnetism of Covalently Functionalized Graphene E.J. Santos (Consejo Superior de Investigaciones Científicas (CSIC), San Sebastian, Spain), A. Ayuela, D. Sanchez-Portal	A new technology for production of titanium tetrachloride O. Ostrovski (University of New South Wales, Sydney, Australia), G. Zhang, M. Dewan, S. Rezan, A. Adipuri	From the electronic structure to large-scale atomistic simulations with bond-order potentials - Application to topologically close-packed phases in refractory metals T. Hammerschmidt (ICAMS, Ruhr-University Bochum, Bochum, Germany), B. Seiser, M. Cak, D.G. Pettifor, R. Drautz		Emulsion route in fabrication of micro- and nanocontainers for self-healing and self-protecting functional coatings D. Grigoriev (Max Planck Institute of Colloids and Interfaces, Potsdam, Germany), M. Haase, A. Latnikova, H. Möhwald, D. Shchukin
	11:30 Strong excitons in hydrogenated two-dimensional group-IV crystals: graphane, polysilyne and polygermyne O. Pulci (ETSF, and University of Rome Tor Vergata, Rome, Italy), P. Gori, M. Marsili, V. Garbuio, R. Del Sole, F. Bechstedt	An Experimental and Numerical Analysis of the Dieless Drawing of Nickel Titanium Alloy E. Twohig (University of Limerick, Limerick, Ireland), P. Tierman, S.A. Tofail, J. Butler	Ab-initio investigation of the influence of carbon on the mechanical properties of the sigma-5 symmetrical tilt grain boundary in molybdenum A. Tahir (Interdisciplinary center for advanced materials simulation, Bochum, Germany), R. Janisch, A. Hartmaier		From emulsions to capsular systems: design of new extrinsic self-healing materials D. Crespy (Max Planck Institute for Polymer Research, Mainz, Germany), J. Fickert, K. Landfester
	11:50 Nanographenes from Carbon and other Elements G. Seifert (Technische Universität Dresden, Dresden, Germany)	Dissolution rate of flux into steelmaking slag N. Maruoka (Tohoku University, Sendai, Japan), I. Akira, S. Hiroyuki, K. Shin-Ya	The mechanical behavior of grain boundaries as a function of the geometric degrees of freedom R. Janisch (ICAMS, Bochum, Germany), N. Ahmed, C. Kellermann, H. Dette, A. Hartmaier		Evaluation of the crack healing capacity in bacteria-based self-healing concrete V. Wiktor (TU Delft, Delft, Netherlands), H. Jonkers
	12:10 Defects and intrinsic doping of Mg ₂ X (X=Si,Ge) : an ab initio study. P. Jund (ICGM-Université Montpellier 2, Montpellier, France), R. Viennois, C. Colinet, G. Hug, J.-C. Tédénac	Dissolution Behavior of Sulfur in Ternary Silicate Slags Y.-B. Kang (GIFT-POSTECH, Pohang, Korea - south), J.-H. Park, H.-G. Lee	The Dynamics of Electron-Spin-Lattice Heat Transfer in Iron and Magnetic Transition Metals P.-W. Ma (Culham Centre for Fusion Energy, Abingdon, Oxfordshire, United Kingdom), C.H. Woo, S.L. Dudarev		BioConcrete - A novel bio-based self-healing material H. Jonkers (Delft University of Technology, Delft, Netherlands)

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Symp. Room	C31 Pasteur	B11 Einstein	B31 Antigone 1	E22 Antigone 3	B32 Joffre 1
Session	<u>Surface modification and composite powders</u> Sebastian Boris HEIN, Fraunhofer IFAN	<u>Titanium Aluminide I</u> Olivier TOUGAIT, Université de Rennes	<u>Diverse (functional) properties of organic nanocomposites (I)</u> James NJUGUNA, Cranfield University	<u>Hydrogen storage: from fundamentals to materials</u> Renata SOLARSKA, Warsaw University	<u>Thin Films, Membranes and Patterned Growth</u> Jin-Chong TAN, University of Cambridge
14:00	Advanced composite powders by the Electroless Plating technique: Synthesis and applications J. Barcena (Tecnalia Research & Innovation, Donostia - San Sebastian, Spain), R. Seddon, R. Rodriguez, E. Neubauer, S. Florez	KEYNOTE LECTURE Solid phase transformation mechanisms in TiAl-based intermetallics alloys A. Hazotte (LEM3 - UPV-M, Metz, France)	Filler Network Evolution Induced by Biopolymer Folding in Nanocomposite Hydrogels F. Carn (University Paris Diderot, Paris, France), F. Boué, M. Djabourov, N. Steunou, T. Coradin, J. Livage, E. Buhler	LiBH4 Heterogeneous Nucleation within Hierarchically structured Carbonaceous Foams: Application as Host Sites for Hydrogen Storage R. Backov (CRPP, Pessac, France), N. Brun, R. Janot, C. Sanchez, C. Gervais	HIGHLIGHT LECTURE Liquid-phase epitaxy growth of MOFs thin films on functionalized surfaces: O. Shekha (KAUST, Thuwal, Saudi Arabia)
14:20	Improvement surface properties of metallic powders by a nanocrystalline thin film – Production and application A.R. Farinha (University of Coimbra, Coimbra, Portugal), A.J. Cavaleiro, R. Mendes, M.T. Vieira		Synthesis of layered double hydroxide/MWNT nanocomposites for catalytic applications A. Garcia-Gallastegui (Imperial College, London, United Kingdom), A. Celaya Sanfiz, M. Mourad, M. Mokhtar, A. Asiri, S.N. Basahel, S.A. Al-Thabaiti, A.O. Alyoubi, N. Skipper, M. Shaffer	Nanocrystalline Magnesium Alloys for Hydrogen Storage Applications L. Röntzsch (Fraunhofer Institute IFAM, Dresden, Germany), S. Kalinichenka, C. Baehtz, T. Riedl, C. Pohlmann, T. Weißgärber, B. Kieback	Integrating functions into porous coordination polymer crystals S. Furukawa (Kyoto University, Kyoto, Japan), K. Hirai, S. Kitagawa
14:40	Synthesis of aluminum nanoparticles – Influence of organic capping agents on the morphology and oxidation state Y. Ait Atmane (ITODYS LABORATORY, Paris, France), C. Mangeney, J.-Y. Piquemal, M. Sicard, C. Masson, L. Sicard	Characterization of carbides in Ti-45Al-5Nb alloys with different carbon contents H. Gabrisch (Helmholtz-Zentrum Geesthacht, Geesthacht, Germany), A. Stark, F.-P. Schimansky, N. Schell, T. Lippmann, F. Pyczak	Graphene-nanotube composite as transparent electrodes M. SIAJ (UQAM, Montreal, Canada), T.R. Chari, A. Geurmoone, Y.-M. Chien, R. Izquierdo	Quantum Dynamics of Hydrogen Interacting Exohedrally with Single-Walled Carbon Nanotubes B. Poirier (Texas Tech University, Lubbock, USA), J. McAfee	Linker-functionalized responsive PCP thin films with layer-pillar structure D. Zacher (Ruhr-Universität Bochum, Bochum, Germany), S. Henke, D.C. Wieland, A. Bétard, H. Bux, J. Caro, C. Wöll, R.A. Fischer
15:00	Synthesis of highly active TiO ₂ nanopowders and thin layers from supercritical carbon dioxide processes A. Hertz (CEA MARCOULE, Bagnols Sur Ceze, France), J.-C. Ruiz, F. Charton	Modification of Cast TiAl for Gas Turbine Blades J. Zhang (China Iron and Steel Research Institute Group, Beijing, China), L. Xinhai, O. Helena	Relationship between atomistic arrangement and internal nanocrystal superstructure ordering within PbS-organic mesocrystals E. Rosseeva (Max Planck Institute for Chemical Physics of Solids, Dresden, Germany), P. Simon, L. Liebscher, I.A. Baburin, S.G. Hickey, A. Eychmüller, W. Carrillo-Cabrera, R. Kniep	Pelletized Composites of Melt-Spun Mg-Ni Alloys and Graphite for Hydrogen Storage Applications C. Pohlmann (Institute of materials science, TU Dresden, Dresden, Germany), L. Röntzsch, S. Kalinichenka, T. Hutsch, T. Weißgärber, B. Kieback	Facile preparation of supported MOF films of a new imidazolate based MOF (SIM-1) for catalysis and separation S. Aguado (IRCELYON-CNRS, Villeurbanne, France), J. Canivet, D. Farrusseng
15:20	Powder processing of polymer ceramic composites for bone scaffolds S. Hein (Fraunhofer IFAM, Bremen, Germany), P. Imgrund, A. Kirsch	New developments concerning the fluorine effect for TiAl-alloys A. Donchev (Dechema e.V., Frankfurt, Germany), M. Schütze, R. Yankov, A. Kolitsch	Anisotropic nanocomposite membranes tuned by magnetic orientation of the filler network for direct methanol fuel cells N. Hasanabadi (Amirkabir University of Technology, Tehran, Iran), M.M. Hasani-Sadrabadi, S.R. Ghaffarian	Pd nanofilms on Pt(111): influence of the thickness and of the substrate on hydrogen electro-insertion studied via in situ SXRD Y. Soldo-Olivier (Laboratoire d'Electrochimie et Physicochimie des Matériaux et Interfaces, Saint Martin D'Heres, France), E. Sibert, M. Lafouresse, C. Lebouin, M. De Santis	Direct-writing of metallic microstructures inside photoactive metal-organic framework single crystals R. Ameloot (K.U.Leuven, Leuven, Belgium), M. Roeyfaers, G. De Cremer, F. Vermoortele, J. Hofkens, B. Sels, D. De Vos
15:40	A Study On Solidification Characteristics Of Al-Sic Mmc Powders Atomized By Prep Process R. Yamanoglu (KOCAELI UNIVERSITY, Kocaeli, Turkey), M. Zeren	Development of creep-resistant TiAl alloys by spark plasma sintering J.-P. Monchoux (CEMES-CNRS UPR 8011, Toulouse, France), H. Jabbar, F.-P. Schimansky, F. Pyczak, A. Couret	Synthetic Calcite Spicules with Waveguiding Properties W. Tremel (Johannes Gutenberg-Universität, Mainz, Germany), F. Natalio, N. Loges, M. Panthöfer, W. Müller, H. Schröder	Hybrid materials for hydrogen storage and conversion C. Zlotea (IMCPE CNRS, Thiais, France), L. Eric, C. Fermin, L. Eric, M. Thierry, L. Michel, C. Vix-Guterl, G. Roger, G. Camelia	Zeolitic Imidazolate Framework Molecular Sieve Membranes: Status and Progress H. Bux (Leibniz University Hannover, Hannover, Germany), A. Feldhoff, A. Huang, Y. Li, J. Cravillon, M. Wiebcke, C. Chmelik, J. Kärger, M. Knauth, S. Fritzsche

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Symp.	D22	C13	D21	E11	B13
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
Session	<u>In-situ Testing 2</u> Cynthia VOLKERT, University of Göttingen	<u>Metallic glasses and related composites - S2</u> J. Schroers, Yale University, USA	<u>2. Testing for new alloys and processes</u> Javier GIL SEVILLANO, University of Navarra	<u>Nuclear Materials Sintering</u> Fabienne AUDUBERT, CEA Cadarache	<u>High-alloyed TRIP/TWIP steels</u> ! Wolfgang BLECK, RWTH Aachen
14:00	The deformation behavior of micron sized Copper samples: A μ Laue study C. Kirchlechner (University of Leoben, Leoben, Austria), J. Keckes, M. Kapp, C. Motz, W. Grosinger, J.-S. Micha, O. Ulrich, G. Dehm	Enhancement of plasticity and molding ability of Zr-based metallic glasses by hypoeutectic composition control. Y. Yokoyama (IMR Tohoku University, Sendai, Japan), Y. Tohru, F. Kazutaka, Y. Alain, I. Akihisa	Influence of microstructural parameters on grain boundary sliding contribution to high-temperature creep deformation of a nickel-based superalloy for turbine disc K. Thibault (ONERA, Châtillon, France), D. Locq, P. Caron, D. Boivin, Y. Renollet, Y. Bréchet	KEYNOTE LECTURE Preparation and Sintering of Actinide-based Mixed Oxides : Benefits from Hydrothermal Methods N. Clavier (ICSM, Bagnols / Cèze, France), N. Dacheux, N. Barré, M. Rivenet, F. Abraham	KEYNOTE LECTURE Dislocation-based Constitutive Model for TWIP Steel J. Kim (POSTECH, Pohang, Korea - south), Y. Estrin, S.-J. Lee, S. Kim, K.-G. Chin, B.C. De Cooman
14:20	In situ Laue micro-diffraction during compression of BCC micropillars C. Marichal (Paul Scherrer Institut, Villigen Psi, Switzerland), J. Zimmermann, H. Van Swygenhoven, S. Van Petegem, D. Grolimund	Size effect in metallic glasses studied by mechanical characterization of thin films A. Volland (Grenoble INP, St Martin D'Hères, France), S. Gravier, L. Charleux, M. Verdier, F. Momprou, J.-J. Blandin	HIGHLIGHT LECTURE Evaluation of mechanical properties of metals by laser ultrasound R. Pippan (Karl-Franzens-University of Graz, Graz, Austria), V. Kozhushko, G. Pallauf, H. Krenn, S. Scherlauer		
14:40	A synchrotron biaxial tensile device for the study of mechanical properties of nanostructured films E. Le Bourhis (CNRS - Université de Poitiers – ENSMA, Futuroscope Chasseneuil, France), B. Girault, P.-O. Renault, P. Goudeau, G. Geandier, D. Thiaudière, D. Faurie, O. Castelnau	Plasticity in small-sized metallic glasses: intrinsic versus extrinsic size effects A. Kuzmin (Un. of Groningen, Groningen, Netherlands), Y. Pei, J. Dehossan	A Combined Approach to Microstructure Mapping of an Al-Cu-Li 2050 Friction Stir Weld B. Malard (CNRS / SIMaP, Saint Martin D'Hères, France), F. De Geuser, W. Reis Santos, A. Deschamp	Microscale observation of ceramic sintering using the Environmental Scanning Electron Microscope at high temperature R. Podor (ICSM, Bagnols Sur Cèze, France), N. Clavier, J. Ravoux, L. Claparède, N. Dacheux	HIGHLIGHT LECTURE In-situ investigation of high-alloyed austenitic stainless cast steels with varying austenite stability at different temperatures in a scanning electron microscope A. Weidner (Institute of Materials Engineering, Freiberg, Germany), J. Solarek, H. Biermann
15:00	Effect of specimen size on tensile strength of WC-Co hard metal T. Klünsner (Materials Center Leoben Forschung GmbH (MCL), Leoben, Austria), S. Wurster, P. Supancic, R. Ebner, M. Jenko, J. Glätzle, A. Püschel, R. Pippan	Strong and light metal matrix composites with metallic glass particulate reinforcement K. Georgarakis (INP Grenoble, Saint-Martin-D'Hères, France), A. Inoue, A.R. Yavari	The Effect of Microstructure on Bauschinger Softening for Reverse Straining of X65 Steels J.-P. Tovee (University of Birmingham, Birmingham, United Kingdom), C. Davis, M. Strangwood	Cationic diffusion in full dense and homogeneous U0.55Pu0.45O2-x ceramics S. Noyau (CEA, Saint Paul Lez Durance, France), F. Audubert, A.-C. Robisson, A. Maitre	Investigations on the martensitic transformation behavior in nanostructured austenitic steels using in-situ synchrotron diffraction P. Schloth (EPFL, Lausanne, Switzerland), S. Periyasamy, S. Sarma, M. Heilmaier, S. Van Petegem, H. Van Swygenhoven
15:20	Deformation mechanisms in aluminium and aluminium-silicon freestanding thin films uncovered through on-chip testing M. Coulombier (UCL, Louvain-La-Neuve, Belgium), L. Ryelandt, H. Idrissi, B. Wang, A. Boé, D. Schryvers, J.-P. Raskin, T. Pardoen	Nanoindentation study of Zr-Cu based metallic glasses and determination of the shear-banding activation volume S. Brossard (CNRS, Thiais, France), S. Nowak, Y. Champion	D21-0-2-5	Microstructure evolution of titanium carbide monoliths sintered by SPS and HP under extreme conditions of temperature and irradiation M. Gherrab (IPNL/MATEIS, Villeurbanne, France), N. Millard-Pinard, S. Gavarini, V. Garnier, Y. Jorand, C. Gaillard, C. Peaucelle, S. Cardinal	Low Temperature Mechanical Properties of Austenite-Base High Mn Steels Y. Ha (POSTECH/GIFT, Pohang, Korea - south), K.H. Kwon, Y. Il-Cheol, N.J. Kim
15:40	An in-situ experimental-numerical approach for interface delamination characterization J. Hoefnagels (Eindhoven University of Technology, Eindhoven, Netherlands), N. Murthy Kolluri, J. Van Dommelen, M. Geers	HIGHLIGHT LECTURE Progress in the understanding of shear banding in metallic glasses J.F. Löffler (ETH Zurich, Zurich, Switzerland), D. Klaumünzer, R. Maaß	Deformation and recrystallization mechanisms in Cu alloys studied by neutron diffraction V. Klosek (CEA, Gif-Sur-Yvette, France), S. Melusson, S. Zhong, E. Tcharkhtchi, M.-H. Mathon	Consolidation and mechanical properties of nano-SiC/carbon nanotubes composite ceramics sintered by SPS F. Lomello (Commissariat à l'énergie atomique, Gif-Sur-Yvette, France), G. Bonnefont, Y. Leconte, G. Fantozzi, V. Garnier, Y. Jorand, M. Pinault, M. Mayne-L'Hermite, S. Le-Gallet, F. Bernard	An original way for producing a 2.5 GPa strength ductile steel by rolling of martensite J.-P. Masse (ArcelorMittal, Maizières-Lès-Metz, France), B. Chéhab, D. Embury, H. Zurob, X. Wang, O. Bouaziz

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Symp.	D32	E21	B12	B15	C51
Room	Joffre 5	Barthez 1	Louisville	Barthez 2	Joffre 4
Session	<u>Modeling at the microscale: Grain boundaries and phase transformations</u> Javier SEGURADO, IMDEA Materials	<u>Chalcopyrites</u> Phillip DALE, University of Luxembourg	<u>Nickel-Based Superalloys - 2</u> Roger C. REED, U Birmingham, Tresa POLLOCK, U California Santa Barbara	<u>Microstructure and Properties II</u> Christian RENTENBERGER, University of Vienna	<u>Molten Salts / Ionic Liquids</u> Marcelle GAUNE-ESCARD, George Z. CHEN
14:00	Coupled Migration and Shear of Grain Boundaries A. Serra (<i>Universitat Politècnica Catalunya, Barcelona, Spain</i>), <i>H. Khater, R. Pond</i>	HIGHLIGHT LECTURE In/Ga intermixing in Cu(In,Ga)Se ₂ thin films for solar cells: a real-time X-ray diffraction study H. Rodriguez-Alvarez (<i>Helmholtz Zentrum Berlin, Berlin, Germany</i>), <i>R. Mainz, R. Caballero, C.A. Kaufmann, S.E. Gledhill, M. Klaus, C. Genzel, H.-W. Schock</i>	Parametric study of TCP-phase precipitates in the MC2 nickel base single crystal superalloy and induced microstructural evolutions J.-B. Le Graverend (<i>Onera, Châtillon, France</i>), <i>J. Cormier, P. Caron, S. Kruch, F. Gallerneau, J. Mendez</i>	Influence of back-pressure during equal channel angular pressing (ECAP) on the monotonic and the fatigue behaviour of Cu99.5 and AA5754 H.W. Höppel (<i>Institute I, Erlangen, Germany</i>), <i>A. Böhner, R. Lapovok, M. Göken</i>	Thermodynamic investigation on CsBr-CeBr ₃ , CsBr-LaBr ₃ and CsBr-TbBr ₃ systems W. Gong (<i>Central South University, Changsha, China</i>), <i>Y. Wu, M. Gaune-Escard</i>
14:20	The mechanisms of displacive phase transformations V. Paidar (<i>Institute of Physics, Praha, Czech Republic</i>), <i>O. Hardouin Duparc, O. Khalfallah</i>	Hierarchical study of sodium addition into Cu(In,Ga)Se ₂ thin-film solar cells from mesoscopic to atomic scale T. Liu (<i>Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany</i>), <i>O. Cojocarcu-Mirédin, P.-P. Choi, D. Raabe, R. Wuerz</i>	Optimal Precipitate Shapes in Nickel-Base Superalloys P. Tresa (<i>University of California, --, France</i>), <i>V.S. Jason</i>	Influence of fine precipitates and solute elements on microstructure evolution and mechanical behavior of ultrafine grained Al-Zn-Mg alloy produced by equal channel angular pressing (ECAP) X. He (<i>RWTH Aachen University, Aachen, Germany</i>), <i>Z. Liu, W. Hu, G. Gottstein</i>	Change of electrochemical and corrosion titanium behavior in the result of tungsten carbide electroplating V. Malyshev (<i>Institute of General and Inorganic Chemistry, Kyiv, Ukraine</i>), <i>A. Gab, D. Shakhnin, M. Gaune-Escard</i>
14:40	Atomistic modeling of the anisotropic recrystallization of amorphous silicon. I. Martin-Bragado (<i>IMDEA Materials, Madrid, Spain</i>)	Inhomogeneities in Chalcopyrite Thin Films and the role of Cu _x Se secondary phase studied by Spatially Resolved Photoluminescence J. Larsen (<i>University of Luxembourg, Belval, Luxembourg</i>), <i>L. Gütay, S. Siebentritt</i>	Understanding the stability of tcp phases J.-M. Joubert (<i>CNRS, Thiais, France</i>), <i>J.-C. Crivello, K. Yaqoob</i>	Stability Of Ultrafine Grained Microstructure In Arb Processed Al-Cu-Si Alloy W. Wahdat Ullah (<i>IIT Kanpur, Kanpur, India</i>), <i>G. Gouthama</i>	Comparison of optical properties of glass surface layer modified by surface ion exchange and chemical etching O.N. Sidelnikova (<i>Institute of Solid State chemistry and Mechanochemistry, Novosibirsk, Russian Federation</i>), <i>G.A. Pozdnyakov, A.N. Salanov</i>
15:00	Coupled grain boundary motion in a nanocrystalline grain boundary network M. Velasco (<i>Paul Scherrer Institut, Villigen Psi, Switzerland</i>), <i>V.S. Helena, B. Christian</i>	The X-rays single crystal structure determination, a powerful tool to investigate Cu-poor CIGSe compounds A. Lafond (<i>Institut des Matériaux Jean Rouxel, Nantes, France</i>), <i>C. Guillot-Deudon, M. Souilah, X. Rocquefelte, S. Harel</i>	A novel method for the characterisation of directionally solidified dendritic structures N. Warnken (<i>University of Birmingham, Birmingham, United Kingdom</i>), <i>R.C. Reed</i>	Mechanical spectroscopy of ultrafine grained copper and AZ31 I. Golovin (<i>National Research Technological University MISiS, Moscow, Russian Federation</i>)	Electrical Conductivity of the Molten Electrolytes Having Anions of Different Nature A. Redkin (<i>Institute of high Temperature Electrochemistry, Yekaterinburg, Russian Federation</i>)
15:20	Atomic Density Function modeling of reconstructive phase transitions M. Certain (<i>GPM, Saint Etienne Du Rouvray, France</i>), <i>H. Zapolsky, A.G. Khachaturyan</i>	Order-disorder structural phase transition in non-stoichiometric chalcopyrite compound semiconductors C. Stephan (<i>Helmholtz-Zentrum Berlin fuer Materialien und Energie, Berlin, Germany</i>), <i>S. Schorr, H.-W. Schock</i>	On the misfit and phase stability of Nickel-base superalloys S. Neumeier (<i>University of Erlangen, Erlangen, Germany</i>), <i>A. Heckl, F. Pyczak, R.F. Singer, M. Göken</i>	The evolution of strength and homogeneity in a magnesium alloy processed by high-pressure torsion at different temperatures. Y. Huang (<i>Federal University of Minas Gerais, Belo Horizonte, Brazil</i>), <i>R. Figueiredo, T. Langdon</i>	Structure and Dynamics of Imidazolium-based Ionic Liquids M.-L. Saboungi (<i>CEMHTI, Orleans, France</i>), <i>B. Aoun, M.A. González, A. Goldbach, S. Kohara, M. Russina, D.L. Price</i>
15:40	Stable Formation of Helical Multi-Shell Gold Nanobridge W.-J. Lee (<i>National center for high performance computing, Tainan, Taiwan</i>), <i>C.-W. Pao, J.-G. Chang</i>	Oral presentation of posters E21-P-1-07, E21-P-1-08, E21-P-1-12, E21-P-1-33, E21-P-1-35 S. Schorr (<i>Grenoble INP/CNRS, Saint Martin D'Hères, France</i>)	The precipitation of topologically close-packed phases in Ni-Re-W alloys F. Li (<i>University of Cambridge, Cambridge, United Kingdom</i>), <i>H. Pang, N. Warnken, C. Rae</i>	Study Of Carbon Influence In Ultrafine Steels R. Rodriguez-Baracaldo (<i>UNIVERSIDAD NACIONAL DE COLOMBIA, Bogotá D.C, Colombia</i>), <i>J.A. Benito, J.M. Cabrera</i>	IoNanofluids: New generation of heat transfer fluids for thermal efficiency design C. Nieto De Castro (<i>Faculdade de Ciências da Universidade de Lisboa, Lisboa, Portugal</i>), <i>M.J. Lourenço, S.M. Murshed, S.C. Vieira, J.M. França, C.S. Queirós, A.P. Ribeiro</i>

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Symp.	D31	C52	D33	B45
Room	Joffre B	Joffre C	Joffre D	Barcelone
Session	<u>Hybrid methods for large-scale simulations</u> Claudia AMBROSCH-DRAXL, Montanuniversität Leoben	<u>2 - Inclusions and metal quality</u> Oleg OSTROVSKI, University of New South Wales	<u>Multiscale mechanisms I</u> R. SPATSCHEK, Max-Planck-Institut für Eisenforschung, Düsseldorf	<u>Self-Healing & Self-Cleaning</u> Sybrand VAN DER ZWAAG, Delft University of Technology
14:00	KEYNOTE LECTURE Ab initio based modeling of structural materials with superior properties: From a predictive thermodynamic description to tailored mechanical properties J. Neugebauer (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), B. Grabowski, F. Körmann, J. Von Pezold, T. Hickel	Grain refinement of solidification structure of steels using inclusion particles J. Park (University of Ulsan, Ulsan, Korea - south)	Martensitic transformation in NiTiCu shape memory alloy. Lagrangian dynamics simulation O. Shchyglo (ICAMS, Interdisciplinary Centre for Advanced Materials Simulation, Bochum, Germany), O.U. Salman, A. Finel	Self-Healing In Glassy Materials L. Montagne (University of Lille 1, Villeneuve D'Ascq, France), F. Méar, D. Coillot, S. Castanie, R. Podor
14:20		Effect of Electromagnetic Force on the Distribution of Inclusions Removed from Liquid Aluminium by a Ceramic Foam Filter M.W. Kennedy (NTNU, Trondheim, Norway), R. Fritsch, S. Akhtar, J.A. Bakken, R.E. Aune	Development of a Mesoscale Model for the Machining of Cellular Metals R. Guerra (Technische Universität Dresden, Dresden, Germany), A. Nestler, U. Teicher	Self-healing anticorrosive organic coating based on the release of a reactive Silyl Ester: use of local electrochemical techniques S. Garcia (Delft University of Technology, Delft, Netherlands), H. Fischer, Y. Gonzalez-Garcia, A. Mol, T. Hughes
14:40	SIBCN materials for high-temperature applications: Atomistic origin of electrical conductivity S. Kos (University of West Bohemia, Plzen, Czech Republic), J. Houska	Phase relations and thermodynamic properties of the MnS-FeS-Cu ₂ S system at 1473K Y. Lei (the University of Tokyo, Tokyo, Japan), T. Yoshikawa, K. Morita	Dislocation sources within a continuum theory of curved dislocations - modelling and comparison with DDD S. Sandfeld (Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany), D. Weygand, T. Hochrainer, P. Gumbsch	KEYNOTE LECTURE Biomimetics: Lessons from Nature B. Bhushan (The Ohio State University, Columbus, USA)
15:00	Dynamics of irradiation: from molecules to nano-objects and from material science to biology E. Suraud (Univ. P. Sabatier Toulouse 3, Toulouse, France), M. Dinh, P.-G. Reinhard	Liquid metal processing and anisotropic materials preparation by using a strong magnetic field: case of hypereutectic Al-Cu alloys Z. Sun (Katholieke Universiteit Leuven, Leuven, Belgium), M. Guo, J. Vleugels, O. Van Der Biest, B. Blanpain	Towards an Ab Initio Based Understanding of Deformation Mechanisms in High-Manganese Steels A. Dick (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), T. Hickel, J. Neugebauer	
15:20	Reciprocal-space cluster expansions for complex alloys with long-range interactions R. Besson (Centre National de la Recherche Scientifique, Villeneuve D'Ascq, France), L. Holliger	Statistical analysis of the influence of ferroalloy impurities and ferroalloy addition sequence on ultra low carbon (ULC) steel cleanliness M. Pande (Katholieke Universiteit Leuven, Heverlee, Belgium), M. Guo, S. Devisscher, B. Blanpain, P. Wollants	Effect of the spatial heterogeneity of the initial dislocation density on the stress-strain behaviour of a BCC iron single crystal D. Gonzalez (CEIT, University of Navarra, San Sebastian, Spain), J.M. Martinez-Esnaola, S. Allain, J. Gil Sevillano	Wetting Transitions on Self-Cleaning Surfaces E. Bormashenko (Ariel University Center of Samaria, Ariel, Israel), R. Pogreb, G. Whyman
15:40	Structural stability of "AB ₂ " phases in the La-Mg-Ni system J.-C. Crivello (CNRS, Thiais, France), J. Zhang, M. Latroche	Formation mechanism of fine complex inclusion particles in steel R. Inoue (Tohoku University, Sendai, Japan), T. Nishi, T. Ariyama	Fracture as a pattern formation process R. Spatschek (Max-Planck Institut für Eisenforschung, Düsseldorf, Germany), M. Fleck, D. Pilipenko, E. Brener	Nanostructured Hypertransparent Superhydrophobic Self-Cleaning Coatings Y. Jiang (nGimat Co., Atlanta, USA), Y. Smalley, H. Harris, A. Hunt

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Symp.	C31	B11	B31	E22	B32
Room	Pasteur	Einstein	Antigone 1	Antigone 3	Joffre 1
	<u>Ceramic powders synthesis I</u> Jan KAZIOR, Technical University of Cracow	<u>Titanium Aluminide II and Cobalt alloys</u> K. YOSHIMI, Tohoku University	<u>Diverse (functional) properties of organic nanocomposites (II)</u> Aravind DASARI, IMDEA Materials	<u>Rechargeable batteries: novel materials, electrode design and characterization techniques</u> Laure MONCONDUIT, Montpellier University	<u>Computational Studies</u> Jin-Chong TAN, University of Cambridge
Session					
16:40	A New Sol-Gel Route to Synthesize Morphology-Controlled NaNbO ₃ Particles Using Immiscible Liquid-Liquid Systems M. Tanaka (Keio University, Tokyo, Japan), S. Fujihara	HIGHLIGHT LECTURE Deformation Mechanisms in PST-TiAl Micro-Pillars -Experiment and Modelling F.D. Fischer (Montanuniversität Leoben, Leoben, Austria), H. Clemens, G. Dehm, C. Kirchlechner, M. Rester, T. Schmoelzer	3-dimensional imaging of nanostructured organic/inorganic hybrid materials by transmission electron tomography. Links with the mechanical properties. F. Dalmas (ICMPE, Thiais, France), E. Leroy	Solid state electrochemical cells based on fluoride ion transfer A.R. Munnangi (Karlsruhe Institute of Technology, Karlsruhe, Germany), R. Witter, S. Büschel, H. Hahn, M. Fichtner	First principles derived force fields for MOFs: parameterization and application R. Schmid (Ruhr-University Bochum, Bochum, Germany)
17:00	Self-organization in PT and PZT powders produced by hydrothermal route: highlights for the comprehension of mesocrystals formation to oriented attachment growth C. Ribeiro (Brazilian Agricultural Research Corporation - EMBRAPA, Sao Carlos, Brazil), C. Barrado, E. Camargo, E. Longo, E. Leite	Plane strain compression of PST TiAl K. Kishida (Kyoto University, Kyoto, Japan), K. Goto, H. Inui	Ag-based conductive UV-curable acrylic inks for resistor fabrication: beyond the dissipative region A. Chiolerio (Politecnico di Torino, Torino, Italy), I. Roppolo, M. Sangermano	Electrochemical Properties of MnO ₂ -Carbon Composite Electrodes for Li Ion Batteries I. Perez (Univ. of California, Irvine, Irvine, USA), P.G. Collins, B.L. Corso	MOFs as materials for gas storage, gas sieving and microelectronics H. Hermann (Technische Universitaet Dresden, Dresden, Germany), G. Seifert, B. Assfour
17:20	Synthesis of barium titanate for the purpose of texturing by colloidal processing in a strong magnetic field. M. Özen (University of Antwerpen, Wilrijk, Belgium), M. Mertens, J. Luyten, F. Snijkers, P. Cool	In-situ surface structuring of TiAl- intermetallics via the fluorine effect for drag reduction D. Alexander (Dechema e.V., Frankfurt Am Main, Germany), R.E. Pflumm, S. Michael	Toughening of epoxies and epoxy composites with reduced single-walled carbon nanotubes S. Benoit (National Research Council Canada, Ottawa, Canada), M.-R. Yadienka, A. Behnam, G. Jingwen, M. Vahid, Z. Yunfa, B. Orson, K. Christopher, H. Pascal, J. Andrew	Lab-scale study of the electrochemical response of Li-ion electrode materials to emulated photovoltaic electrochemical constrains A. Soares (Institut Charles Gerhardt, Montpellier, France), G. Loïc, I.-B. Costana M., T. Yaël, S. Lorenzo, G. Christian, M. Laure	HIGHLIGHT LECTURE Ab initio Modeling of Metal-Organic Frameworks: Insights on Structure-Property Relationships B. Civaleri (University of Torino, Torino, Italy)
17:40	Shock waves as method for producing ceramic nanoparticles P. Gibot (Institut franco-allemand de recherches de Saint Louis (ISL), Saint Louis, France), J. Mory, F. Quesnay, F. Schnell, E. Fousson, D. Spitzer	High temperature Internal Friction in a Ti-46Al-1Mo-0.2Si Intermetallic M. Castillo-Rodriguez (Universidad del Pais Vasco, Bilbao, Spain), M.L. Nó, J.A. Jimenez, O.A. Ruano, J. San Juan	Mechanical properties and deformation behavior of load-bearing parts from the exoskeleton of the crab Cancer pagurus E.S. Karsten (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), H. Fabritius, D. Raabe	Inelastic x-rays scattering as a powerful tool for the study of battery materials L. Simonelli (European Synchrotron Radiation Facility, Grenoble, France), N.L. Saini, G. Monaco	Van der Waals Forces in Perfluorinated Metal-Organic Frameworks B.K. Chang (University of Cambridge, Cambridge, United Kingdom), N. Bristowe, P. Bristowe, A. Cheetham
18:00	Elaboration of pre-alloyed SiC/Al ₂ O ₃ /Y ₂ O ₃ by plasma pyrolysis C. Giraudeau (cea, Gif Sur Yvette, France), H. Maskrot, Y. Atmane, B. Guizard, L. Chaffron	The effect of alloying elements (Ti, Ta, Hf) on the thermodynamic stability of the ?'-Co ₃ (Al,W) phase S. Kobayashi (National Institute for Materials Science, Tsukuba, Japan), Y. Tsukamoto, T. Takasugi	Novel two-step approach toward ordered ternary nanoparticle/block copolymer composites A. Horechyy (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany), B. Nandan, N.E. Zafeiropoulos, P. Formanek, N. Bigall, A. Eychmueller, M. Stamm	Spatially resolved modeling of rechargeable battery microstructures E. Garcia (Purdue University, West Lafayette, USA)	DFT Characterization of Dense Hybrid Framework Materials M. Kosa (ETH, Lugano, Switzerland)
18:20	Aluminium And Iron Spinel Pigments By Solution Combustion Synthesis M.D. Palacios (Instituto de Tecnología Cerámica, Castellón, Spain), S. Mestre, P. Agut	Effects of Quaternary Element Addition on Phase Stability of E21' type Co ₃ AlC _{0.5} Y. Kimura (Tokyo Institute of Technology, Yokohama, Japan), S. Hiromichi, N. Ryosuke, Y.-W. Chai, Y. Mishima	Impact of synergy between carbon nanotubes and carbon black on the rheological and electrical properties of an EPDM rubber M. Charman (EMAC, Mauleon, France), F. Leonardi, C. Bissuel, C. Derail	Microstructure and ionic conductivity in Nasicon-type Li _{1+x} Al _x Ti _{2-x} (PO ₄) ₃ Glass-ceramics A.C. Rodrigues (Universidade Federal de São Carlos, São Carlos, Brazil), J.L. Narvaez-Semanate	Structure Directing Role of Substituted Linkers in Zeolitic Imidazolate Frameworks (ZIF): Towards the Control of Their Energy Landscape R. Galvelis (University College London, London, United Kingdom), B. Slater, A.K. Cheetham, C. Mellot-Draznieks

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Symp.	D22	C13	D21	E11	B13
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
	<u>Small-scale Testing 1</u> Daniel CAILLARD, CNRS Toulouse	<u>Metallic glasses and related composites - S3</u> J. Antonowicz, Warsaw, Poland	<u>3. Testing and modelling</u> Javier GIL SEVILLANO, University of Navarra	<u>Nuclear Materials Properties</u> Olivier DUGNE, CEA Marcoule	<u>High-alloyed TRIP/TWIP steels</u> // Horst BIERMANN, Technische Universität Bergakademie Freiberg
16:40	KEYNOTE LECTURE Mechanical Behavior of Au Nanowires C. Volkert (University of Göttingen, Göttingen, Germany), B. Roos, B. Kapelle, G. Richter	Thermodynamic Origin of the Glass Transition R. Tournier (CNRS, Grenoble, France)	HIGHLIGHT LECTURE Ridging and roping of aluminium alloys: mesoscopic analysis using EBSD followed by mechanical modelling P. Van Houtte (Katholieke Universiteit Leuven, Leuven, Belgium), L. Qin, M. Seefeldt, T. Bennet, R. Petrov	Study of the U-Pu-O system for IVth generation nuclear fuels T. Truphemus (CEA, Saint- Paul-Lez-Durance, France), R.C. Belin, J. Rogez	HIGHLIGHT LECTURE Characterization of High-Mn Steels by New Numerical and Experimental Tools A. Saeed-Akbari (RWTH Aachen University, Aachen, Germany), W. Bleck
17:00		Effect of Cooling Rate on the Mechanical and Structural Properties of Magnesium-based Metallic Glass J. Scicluna (The University of New South Wales, Sydney, Australia), K. Laws, J. Daniels	Line Broadening due to Elastic Mechanical Stresses M. Koker (Max Planck Institute for Metals Research, Stuttgart, Germany), U. Welzel, E. Mittemeijer	Effect of the oxygen potential on the U1-yAmyO2-x (y=0.10; 0.15; 0.20) microstructure D. Prieur (CEA, Bagnols-Sur- Cèze, France), A. Jankowiak, N. Herlet, P. Dehaut, J. Lechelle, P. Martin, P. Blanchart	Microstructure based flow curve computation of TRansformation Induced Plasticity (TRIP) steels with inhomogeneous morphology H. Quade (RWTH Aachen, Aachen, Germany), U. Prahl, B. Wolfgang
17:20	Mechanical properties of Cu nanohisker by in situ bending experiments G. Richter (MPI für Metallforschung, Stuttgart, Germany), C. Schopf	Phase constitution and glass formation in a Au-based alloy G. Fiore (Università degli Studi di Torino, Torino, Italy), L. Battezzati	Measuring Creep Parameters Using Nanoindentation and Finite Elements J. Dean (Cambridge University, Cambridge, United Kingdom), A. Bradbury, T.W. Clyne	Lattice location of helium in uranium dioxide single crystals T. Belhabib (CEMHTI, Orleans, France), P. Desgardin, M.-F. Barthe, T. Sauvage, H. Erramli, F. Garrido, G. Carlot	In-situ Neutron Diffraction Study on Deformation Behavior of Austenite-Base High Mn Steels K.H. Kwon (Graduate Institute of Ferrous Technology, POSTECH, Pohang, Korea - south), J.-S. Jeong, K.-P. Hong, S.-I. Baek, J.-K. Choi, T. Yo, N.J. Kim
17:40	Tensile testing at the nano-scale L. Bergers (Eindhoven University of Technology, Eindhoven, Netherlands), J. Hoefnagels, E. Dekkers, M. Geers	Structural study of Fe-Nb-B metallic glasses by XRD, ND, EXAFS and RMC I. Kaban (IFW Dresden, Dresden, Germany), P. Jování, M. Stoica, J. Bednarcik, B. Beuneu, N. Mattern, J. Eckert	Structural-Scaling Transitions And Constitutive Modelling Of Solid With Mesodeflects O. Naimark (Institute of Continuous Media Mechanics UB RAS, Perm, Russian Federation)	Multi parametric study of Th1- xUxO2 oxides: relationship between structure, microstructure and dissolution properties A. Mesbah (Marcoule Institute for Separative Chemistry, Bagnols/Cèze, France), N. Clavier, L. Claparède, J. Ravaux, S. Szenknect, N. Dacheux	Martensite Strain Induced Phase Transformation of AISI 201 and AISI 304 Austenitic Stainless Steels Applied on Piston Rings V. Morais (MAHLE Metal Leve, Jundiaí, Brazil)
18:00	Size effects in micropillar compression of LiF single crystals fabricated without exposure to ion irradiation J.M. Molina-Aldareguia (IMDEA Materials Institute, Madrid, Spain), R. Soler, J. Segurado, V. Orera, J. Llorca	HIGHLIGHT LECTURE Effect of Mo Addition on Glass- forming Ability, Soft-magnetic and Mechanical Properties of Fe- and Co-based Bulk Glassy Alloys B. Shen (Chinese Academy of Sciences, Ningbo, China), J. Zhang, H. Sun, A. Makino, A. Inoue	Measurement and modeling of the elastic strain around nanoprecipitates. M. Le Fournier (CEMES, Toulouse, France), J. Douin, C. Gatel, F. Pettinari-Sturmel, P. Donnadieu	Combination of experimental (EXAFS, TEM) and ab initio studies to characterize xenon bubbles behaviour in titanium nitride at high temperature C. Gaillard (Institut de Physique Nucléaire de Lyon, Villeurbanne, France), R. Bès, N. Millard- Pinard, S. Gavarini, Y. Pipon, P. Martin, S. Cardinal, A. Malchère, A. Perrat-Mabillon, C. Peaucelle	Stress-Temperature- Transformation(STT) and Deformation-Temperature- Transformation(DDT) Diagrams of austenitic CrMnNi as-cast Steel for Characterization of TRIP/TWIP Effect A. Kovalev (TU Bergakademie Freiberg, Freiberg, Germany), A. Jahn, A. Weiß, S. Wolf, P.R. Scheller
18:20	Microscale shear experiments on single crystal copper S. Brinckmann (Ruhr University Bochum, Bochum, Germany), J. Pfezting-Micklich, S. Dey, F. Otto, G. Eggeler	Crystallization behavior of ferromagnetic Fe74Mo4P10C7.5B2.5Si2 bulk metallic glass M. Stoica (IFW Dresden, Dresden, Germany), N. Van Steenberge, D. Ruiz Romero, G. Vaughan, J. Eckert	Thermal stability of nanocomposite metals: In situ observation of anomalous residual stresses relaxation during annealing under synchrotron radiation J.-B. Dubois (Université de Poitiers, Futuroscope Chasseneuil, France), L. Thilly, P.-O. Renault, F. Lecouturier, M. Di Michiel	HIGHLIGHT LECTURE The ZrC-C eutectic structure and melting behaviour: a high- temperature radiance and Raman spectroscopy study D. Manara (European Commission, Karlsruhe, Germany), H. Jackson, C. Perinetti Casoni, K. Boboridis, F. De Bruycker, L. Luzzi, P. Ossi, W. Lee	Cyclic deformation behaviour of powder metallurgy TRIP-steel/Mg- PSZ composite material A. Glage (TU Bergakademie Freiberg, Freiberg, Germany), C. Weigelt, A. Yanina, A. Weidner, S. Guk, R. Kawalla, C.G. Aneziris, H. Biermann

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Symp. Room	D32 Joffre 5	E21 Barthez 1	B12 Louisville	B15 Barthez 2	C51 Joffre 4
Session	<u>Modeling at the microscale: non metallic materials</u> Javier SEGURADO, IMDEA Materials	<u>Materials for nanowire base core shell heterostructures and dye solar cell applications</u> Jaan HIIIE, Tallin University of Technology	<u>Nickel-Based Superalloys - 3</u> Roger C. REED, U Birmingham, Tresa POLLOCK, U California Santa Barbara	<u>Intermetallics and nanocomposites</u> Xavier SAUVAGE, University of Rouen	<u>Ionic Liquids</u> George Z. CHEN, University of Nottingham
16:40	Modeling the interactions between water and graphitic materials: a molecular dynamics study G. Scocchi (iCIMS-SUPSI, Manno, Switzerland), D. Sergi , C. D'Angelo , A. Ortona	Elemental distribution in InGaN nanowires studied by synchrotron radiation nanoprobe J. Segura-Ruiz (ESRF, Grenoble, France), G. Martinez-Criado , J.A. Sans , R. Tucoulou , P. Cloetens , C. Denker , J. Malindretos , A. Rizzi , M. Gomez-Gomez , N. Garro	Modelling of heat treatment of nickel based superalloys F. Cosentino (University of Birmingham, Birmingham, United Kingdom), J.-C. Gebelin , N. Warnken , R.C. Reed	HIGHLIGHT LECTURE Formation and stability of nanoscaled and amorphous structures induced by severe plastic deformation of intermetallics C. Rentenberger (Faculty of Physics, University of Vienna, Wien, Austria), C. Gammer , D. Geist , A. Findeisen , H.P. Karnthaler	HIGHLIGHT LECTURE Functionalization of the ionic liquids and their applications to green homogeneous catalysis W. Sa-Sa (East China Normal University, Shanghai, China), Y. Liu , J. Zhang
17:00	A coarse-grained model for molecular dynamics simulations of native cellulose J. Wohler (Royal Institute of Technology, Stockholm, Sweden)	Synthesis and physical properties of ZnO nanowire-based type II heterostructures for solar cells V. Consonni (CNRS - Grenoble INP, Grenoble, France), G. Rey , J. Bonaimé , B. Doisneau , H. Roussel , S. Renet , D. Bellet	Grain Texture Evolution And Grain Selection Behavior In Sprial Grain Selector During The Preparation Of Ni-Based Single Crystal Superalloys L. Liu (Northwestern Polytechnical University, Xi'An, China), S. Gao , N. Wang , J. Zhang , H. Fu	The Grain Refinement In Tini Based Alloys Under Warm Multiple Pass Rolling L. Aleksandr (Institute of Strength Physics and Materials Science of the Siberian Branch of RAS, Tomsk, Russian Federation), G. Victor , B. Anatoly , G. Natalya , K. Konstantin , Z. Dorzhima	Physicochemical Properties of Ionic Liquids (x)1-Butyl-1-methylpyrrolidinium Chloride-(1-x) K2TaF7 O. Babushkina (CEST Centre of Electrochemical Surface Technology, Wiener Neustadt, Austria)
17:20	Atomistic simulation of fracture in uranium dioxide P. Fossati (CEA, Gif-Sur-Yvette, France), L. Van Brutzel	About the potential contribution of nanostructured ZnO for optimizing the dye sensitized solar cells E. Puyoo (LMGP, Grenoble, France), G. Rey , V. Consonni , A. Muthukumar , N. Karst , E. Appert-Botzung , D. Bellet	Stochastic analysis of grain selection during single crystal investment casting J.-C. Gebelin (The University of Birmingham, Birmingham, United Kingdom), N. Warnken , R.C. Reed	High strength, high conductivity Cu matrix nanostructured composite wires processed by large plastic deformation V. Pansyrny (Bochvar Institute for Inorganic Materials, Moscow, Russian Federation), V. Brobishev , N. Khlebova , N. Beliakov , S. Sudiev , M. Polikarpova , V. Zinoviev , I. Potapenko , O. Kukina	Tailor Made Deep-Eutectic Solvents Suitable for Frontal Polymerization J.D. Mota-Morales (Cinvestav-Instituto de Ciencia de Materiales de Madrid, Queretaro, Mexico), M.C. Gutiérrez , I.C. Sanchez , G. Luna-Bárceñas , F. Del Monte
17:40	Ferroelectric domain switching dynamics in polycrystalline thin films E. Garcia (Purdue University, West Lafayette, USA)	E21-O-3-4	The Impact Of Liquid Metal Cooling On The Thermal Gradient In Investment Castings M. Franke (University of Erlangen, Erlangen, Germany), M. Hilbinger , R. Singer	Cu/Nb nanocomposite wires processed by severe plastic deformation: effects of the multi-scale microstructure on the mechanical properties J.-B. Dubois (Université de Poitiers, Futuroscope Chasseneuil, France), L. Thilly , F. Lecouturier , V. Vidal , P. Olier , P.-O. Renault	Ionogels : confined ionic liquids for new drug delivery system L. Viau (Institut Charles Gerhardt, Montpellier, France), C. Tourné-Péteilh , A. Vioux , J.-M. Devoisselle
18:00	Discrete mechanical model of complex crystal lattice: diamond and sphalerite structure O. Loboda (St. Petersburg State Polytechnical University, St. Petersburg, Russian Federation)	Controlling the structure of the TiO2 electrode in dye-sensitized solar cells for improved efficiency R. Caruso (The University of Melbourne, Melbourne, Australia), D. Chen , L. Cao , F. Huang , Y.-B. Cheng	Influence of Direct Laser Fabrication Process Parameters on the Microstructural Development in INCONEL-718 L.L. Parimi (University of Birmingham, Birmingham, United Kingdom), M.M. Attallah , R.A. Swamy , D. Clark , X. Wu	Strength and conductivity of graded Cu-particle reinforced aluminium processed by accumulative roll bonding C.W. Schmidt (Universität Erlangen-Nürnberg, Erlangen, Germany), M. Ruppert , P. Knödler , H.W. Höppel , M. Göken	Liquid metal salts K. Binnemans (K.U.Leuven, Heverlee, Belgium), N.R. Brooks , S. Schaltin , J. Fransaer
18:20	Self-assembly of optoelectronic nanostructures: Simulation strategies to bridge from the atomistic to the mesoscopic scale L. Lymparakis (max-Planck-Institut fuer Eisenforschung, Duesseldorf, Germany), J. Neugebauer	Photosensitive Titanium Oxide Based Sols And Gels As Intermediate Band Gap Absorber M. Richard-Plouet (Institut des Matériaux Jean Rouxel, Nantes, France), Z.A. Umrani , L. Brohan	Boride precipitation during transient liquid phase bonding of nickel-base superalloys S. Steuer (University Erlangen, Erlangen, Germany), S. Piegert , R.F. Singer	Ultra-fine grained Al-10%SiC Metal Matrix Composite by ECAE G. Sivaswamy (Indian Institute of Technology, Kanpur, India, Kanpur, India), P. V	Study of pyrrolidinium-based ionic liquid for high energy lithium ion battery application Y.S. Fung (Hong Kong University, Hong Kong, China), D. Zhu , T. Ma , J. Zheng , Y. Yang

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Symp. Room	D31 Joffre B	C52 Joffre C	D33 Joffre D	B41 Barcelone	B45 Sully 3bis
	<u>Transport properties and biomaterials</u> Joerg NEUGEBAUER, Max-Planck Insitute for Iron Research	<u>3 - Slag properties and slag valorization</u> Yasushi Sasaki, POSTECH	<u>Multiscale mechanisms II</u> D. JOHANSSON, Lund University	<u>Natural systems</u> Cordt ZOLLFRANK, University of Erlangen-Nürnberg	<u>Self-Cleaning</u> Bharat BHUSHAN, The Ohio State University
Session					
16:40	KEYNOTE LECTURE Engineering thermal transport from first-principles N. Marzari (University of Oxford, Oxford, United Kingdom)	Valorization of EAF steelmaking slag J. Lee (Korea University, Seoul, Korea - south), J. Jung , J.S. Ki , J.I. Hwang	Open Cell Metal Foams: Phase Field Simulations of Heat Propagation A. August (Hochschule Karlsruhe, Karlsruhe, Germany), B. Nestler , F. Wendler , M. Selzer , A. Kneer	HIGHLIGHT LECTURE Structure/function relations of a diamond-based photonic crystal structure in scales of the weevil <i>Entimus imperialis</i> (Curculionidae) X. Wu (Max Planck Institute for Iron Research GmbH, Düsseldorf, Germany), A. Erbe , H. Fabritius , D. Raabe	Modification of polycarbonate surfaces for self cleaning applications R. Fateh (Institut für Technische Chemie, Hannover, Germany), R. Dillert , D. Bahnemann
17:00		Effect of alkaline oxide (R2O, R=Na, K) on the viscous behaviour in the ironmaking slag system with high Al2O3 concentration D.J. Min (YONSEI University, Seoul, Korea - south), W.H. Kim , H. Kim , I. Sohn	Laser peen forming E. Daniel (Metal Improvement Company, Amilly, France), O. Higounenc	The structure of keratin in the tail feathers of peacocks – an X-ray diffraction study S. Pabisch (University of Vienna, Vienna, Austria), S. Puchegger , H. Kirchner , I. Weiss , H. Peterlik	Super-hydrophobic Chitosan Composite Coatings Based on Polymer-Stabilized Alumina Layers S. Höhne (Leibniz-Institut für Polymerforschung Dresden e.V., Dresden, Germany), C. Blank , R. Frenzel , M. Thieme , F. Simon , H. Worch
17:20	Structural fluctuations and charge carrier mobilities in organic semiconductors: a first-principle based approach S. Radke (Dresden University of Technology, Dresden, Germany), R. Gutierrez , C. Gollub , S. Avdoshenko , G. Cuniberti	Theoretical investigation of the effect of the slag basicity on the sulfide capacity in the metallurgical processes A. Bogusz (TU Bergakademie Freiberg, Freiberg, Germany), P.J. Masset	Applying linear elastic fracture mechanics to the atomistic scale D. Johansson (Mechanical engineering, Lund University, Lund, Sweden), P. Hansson , S. Melin , C. Persson	Functional branching morphology of arborescent monocotyledons and columnar cacti – Inspiration for biomimetic fibre-reinforced composites H. Schwager (TU Dresden, Dresden, Germany), T. Haushahn , C. Neinhuis , T. Speck , T. Masselter	Fabrication of Conductive Superhydrophobic Intepenetrating Polymer Network Carbon Nanotube Composites I. Bayer (Italian Institute of Technology, Lecce, Italy), A. Steele , E. Loth , A. Athanassia
17:40	Lithium Insertion in Si/CNT Hybrid Nanostructures: a First-Principles Study V. Kulish (School of Materials Science and Engineering, Nanyang Technological University, Singapore), M.-F. Ng , Z. Chen , P. Wu	The ROMA project –Resource Optimization and Recovery in the Material Industry E. Ringdalen (SINTEF, Trondheim, Norway), M. Tangstad	Dielectric properties of p-type porous silicon by Drude-Lorentz R. Outemzabet (University, Algiers, Algeria), M. Kadi , A. Moussi , E.-M. Media , H. Gueddaoui	Hydro-actuated unfolding of ice plant seed capsules K. Razghandi (Max-Planck-Institute of Colloids and Interfaces, Potsdam, Germany), M.J. Harrington , P. Fratzl , C. Neinhuis , I. Burgert	Surface Modification of Biomaterials by Phosphonate Based Antibacterial Nanocoatings Releasing Bactericidal Species. G. Guerrero (Institut Charles Gerhardt Montpellier, Montpellier Cédex 5, France), J. Amalric , D. Laurencin , P.H. Mutin , V. Flaud , A. Ponche , J.-P. Lavigne , M. Mathieu , D. Noel
18:00	DNA Translocation through Nanopores and the Sequencing Problem: A Theoretical Study. S. Avdoshenko (TUD, Dresden, Germany), D. Nozaki , C. Gomes Da Rocha , R. Gutierrez , G. Cuniberti	Natural agglomeration in industrial FeMn furnaces D. Slizovskiy (NTNU, Trondheim, Norway), M. Tangstad , P.A. Eidem	Plastic flow modelling at high temperature through a modified one-parameter model of strain hardening G. Angella (Consiglio Nazionale delle Ricerche, Milano, Italy)	Influence of hierarchical microstructural features on the mechanical properties of macadamia nutshells C. Fleck (Technische Universität Berlin, Berlin, Germany), P. Schüler , R. Seidel , P. Keller , P. Zaslansky	Inorganic glaze coatings with metallic aspect and hydrophobic characteristics J.J. Reinoso (CERAMIC AND GLASS INSTITUTE, Madrid, Spain), P. Jaquotot , M.Á. Bengochea , J.F. Fernández
18:20	Modeling soft matter electronic transport: The link between experiment and ab initio F. Ortman (Catalan Institute of Nanotechnology, Barcelona, Spain)	Slag Entrainment in Continuous Casting Process R. Hagemann (Institut of Iron and Steel Technology Freiberg, Freiberg, Germany), P.R. Scheller	Long-range elastic interactions in hexagonal/trigonal systems: application to coherent hydride precipitation in zirconium R. Besson (Centre National de la Recherche Scientifique, Villeneuve D'Ascq, France), L. Thuinet	Oral Poster presentation A. Studart (Grenoble INP/CNRS, Saint Martin D'Hères, France)	New insights in the natural super-hydrophilicity of sol-gel derived nanocomposites thin films and their enhanced cleanliness C. Holtzinger (LMGP - Grenoble-INP, Grenoble, France), M. Houmard , G. Berthome , J.-C. Joud , M. Langlet

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Tuesday 13 September 2011

Symp. Room	C31 Pasteur	B11 Einstein	B31 Antigone 1	E22 Antigone 3	B32 Joffre 1
Session	<u>Ceramic powders synthesis II</u> Catherine CORDIER-ROBERT, Université de Lille1	<u>Iron Aluminides</u> Panos TSAKIROPOULOS, Sheffield University	<u>Metal-matrix composites: processing and properties</u> T. W. CLYNE, Cambridge University	<u>Solid oxide fuel cells: materials and design</u> Maximilian FICHTNER, Inst. Technol. Karlsruhe	<u>Adsorption, Storage and Triggerred Delivery</u> Jin-Chong TAN, University of Cambridge
10:30	In-Situ Carburization Of Silicon In An Inductively Coupled Plasma Syntesis Process C. Jaeggi (<i>Empa, Thun, Switzerland</i>), M. Leparoux , C. Deschenaux , C. Delval , D. Nelis , S. Put	HIGHLIGHT LECTURE Microstructure and mechanical properties of iron aluminides processed by Laser Engineered Net Shaping J. Bystrzycki (<i>Military University of Technology, Warsaw, Poland</i>), T. Durejko , M. Polanski , M. Kwiatkowska , I. Kunce , D. Zasada , T. Plocinski , K. Karczewski , Z. Zaranski , Z. Komorek	KEYNOTE LECTURE Fatigue Crack Growth in Ti/SiC at room and elevated temperature P. Withers (<i>University of Manchester, Manchester, United Kingdom</i>)	Efficiency of gadolinia-doped ceria as thin buffer layer for Intermediate Temperature - Solid Oxide Fuel Cells (IT-SOFC) G. Constantin (<i>Laboratoire d'Electrochimie et de Physico- chimie des Matériaux et des Interfaces (UMR 5279), Saint Martin D'Hères Cede, France</i>), C. Rossignol , J.-P. Barnes , E. Djurado	KEYNOTE LECTURE Metal organic frameworks - Towards applications in medicine R. Morris (<i>University of St Andrews, St Andrews, United Kingdom</i>)
10:50	Organosoluble and reactive oxide nanoparticles ready for nanocomposite B. Boury (<i>Université Montpellier 2, Montpellier, France</i>), A. Aboulaich , H. Mutin	Machining of iron-aluminum alloys J.-H. Stiffel (<i>Institute of Production Engineering and Machine Tools, Garbsen, Germany</i>), B. Denkena , J. Köhler , A.I. Moral		Chemical Kinetics and Diffusion in Oxides for Energy Conversion J. Shi (<i>Technische Universitaet Braunschweig, Braunschweig, Germany</i>), K.D. Becker	
11:10	Microwave synthesis of monodisperse Y2O3:Eu and Y2- xGdxO3:Eu particles: mechanism, morphology and luminescent properties A. Vanetsev (<i>Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russian Federation</i>), I. Chuvashova , O. Gaitko , G. Kopitsa	Effect of different ternary elements on hydrogen embrittlement of Fe3Al intermetallics M. Zamanzade (<i>Saarland University, Saarbruecken, Germany</i>), A. Barnoush , H. Vehoff	Evaluation of the mechanical behaviour of aluminium- nanodiamond-composites prepared by SPS (FAST) for armour applications C. Terner (<i>ISL, Saint Louis , France</i>), E. Barraud , S. Lemonnier , F. Moitrier	Advanced thin YSZ electrolyte for SOFC operating at intermediate temperature N. Bailly (<i>LEPMI, Saint Martin D'Hères, France</i>), E. Djurado , S. Georges	Materials Assembly using Supramolecular Chemistry, formation of Porous Gels, Crystalline Coordination Polymers and Metalloccycles with impact on Gas Separation and Storage. G. Lloyd (<i>University of Cambridge, Cambridge, United Kingdom</i>)
11:30	Phase Evolution and Dielectric Properties of Fe Substituted BaTiO3 Ceramics. N. Neelam Maikhuri (<i>DELHI TECHNOLOGICAL UNIVERSITY, Delhi, India</i>), A. A. K. Jha	Dry Sliding Wear of Two-Phase Fe30Ni20Mn20Al30 Alloy I. Baker (<i>Dartmouth College, Hanover, USA</i>), X. Wu , P. Munroe	Evolution of the titanium carbide reinforcement during solid-state processing of steel/TiC metal matrix composites A. Courleux (<i>LMI, Villeurbanne , France</i>), O. Dezellus , J.-C. Viala , M. Mourou , M. Dehmas , E. Aeby Gautier , S. Lay , O. Martin , N. Karnatak	Mechanically Flexible Metal- Supported SOFC G.M. Choi (<i>POSTECH, Pohang, Korea - south</i>), H.J. Cho	Structural transition of MOF materials under pressure R. Denoyel (<i>CRNS, Marseille, France</i>), I. Beuroires , B. Kuchta , P. Llewellyn , C. Serre
11:50	Synthesis of morphologically different TiO2-anatase and the study of its photocatalytic properties. V. Mendonça (<i>Universidade Federal de São Carlos, São Carlos, Brazil</i>), C. Ribeiro	The oxidation behavior of Fe3Al and FeAl with Nb and Zr rich precipitates D. Janda (<i>Darmstadt University of Technologie, Darmstadt, Germany</i>), K. Barth , M. Heilmaier	Self-organized porous anodic oxide matrix and nanocomposite materials on their base N. Iakovleva (<i>KSPA, Petrozavodsk, Russian Federation</i>), A. Kokatev , H. Pettersson , O. Savchenko , A. Iakovlev , E. Chupakhina , K. Suomolajnen , K. Stepanova , E. Khanina	Fabrication of metal-supported Micro-SOFC Y. Lee (<i>POSTECH, Pohang, Korea - south</i>), G.M. Choi	Putting the SQUEEZE on MOFs S. Moggach (<i>The University of Edinburgh, Edinburgh, United Kingdom</i>)
12:10	Glass batch reactions observed at the granular scale J. Grynberg (<i>laboratoire "Surface du Verre et Interfaces" CNRS/Saint-Gobain, Aubervilliers, France</i>), E. Gouillart , M.-H. Chopinet , M. Toplis	Phase-Equilibria And Physical Characterization In The System Al-Fe-Si-Ti M.C. Marker (<i>University of Vienna, Vienna, Austria</i>), L.I. Duarte , C. Leinenbach , K.W. Richter	Elaboration and evaluation of semi-industrial Al/nanoSiCp extruded bars S. Gourdet (<i>EADS France, Suresnes, France</i>), T. Bize , J.-D. Lulewicz , N. Lochet , N. Karnatak , D. Boulay	Production And Characterization Of Micro-Tubular Solid Oxide Fuel Cells M. Casarin (<i>University of Trento, Italy, Trento, Italy</i>), R. De La Torre Garcia , V.M. Sglavo	Mixed-metal based MOFs: Effect on sorption and structural properties F. Nouar (<i>Institut Lavoisier de Versailles, Versailles, France</i>), T. Devic , P. Horcajada , C. Serre , A. Vimont , M. Daturi , E. Gibson , G. Clet

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Tuesday 13 September 2011

Symp. Room	D22 Rondelet	C13 Sully 2	D21 Sully 1	E11 Sully 3	B13 Joffre A
Session	Small-scale Testing 2 Yannick CHAMPION, CNRS Thiais	Metallic glasses and related composites - S4 M. Stoica, IFW Dresden, Germany	4. In situ testing. II Javier GIL SEVILLANO, University of Navarra	Alloys for Fission Reactors Alexander LANDA, Lawrence Livermore National Laboratory	Modern steels Ulrich MARTIN, Technische Universität Bergakademie Freiberg
10:30	Critical thickness theory applied to micromechanical testing. D. Dunstan (<i>Queen Mary University of London, London, United Kingdom</i>)	Synthesis of functional porous metallic material from metallic glass composites precursor by powder metallurgy route M.H. Lee (<i>Korea Institute of Industrial Technology, Incheon, Korea - south</i>)	KEYNOTE LECTURE 3D Characterisation of Fatigue Damage Mechanisms In Structural Materials Using Synchrotron X-rays J.-Y. Buffiere (<i>INSA Lyon, Villeurbanne, France</i>), <i>W. Ludwig, M. Herbig, H. Proudhon, I. Sinclair</i>	Structural and chemical investigations of the oxides formed on 316L alloy in PWR environment. R. Soulas (<i>EDF/SIMaP, Saint Martin D'Hères, France</i>), <i>L. Legras, Y. Brechet, C. Domain</i>	Microstructure and Bauschinger Effect of a 0.4wt%C Martensitic Steel G. Badinier (<i>The University of British Columbia, Vancouver, Canada</i>), <i>X. Sauvage, S. Allain, C. Sinclair</i>
10:50	How to describe semi-brittle fracture of μm -sized samples employing single crystalline tungsten as a model material S. Wurster (<i>Austrian Academy of Sciences, Leoben, Austria</i>), <i>C. Motz, R. Pippan</i>	Spark plasma sintering for processing metallic glasses L. Perrière (<i>ICMPE - CNRS UMR7182, Thiais, France</i>), <i>S. Brossard, M. Blétry, P. Ochin, Y. Champion</i>		Replacement of Co-based alloys for nuclear applications : properties of Norem02 PTA welds for FE modeling G. Beaurin (<i>EDF R&D, Moret-Sur-Loing, France</i>), <i>J.-P. Mathieu, D. Nelias, M. Coret</i>	Towards lighter steel sheets: a novel composite concept based on silicon nitride nanoprecipitation in a ferrite matrix H. Van Landeghem (<i>Institut Jean Lamour, Nancy, France</i>), <i>M. Gouné, A. Redjaimia</i>
11:10	Grain Boundary Strength in SiC system V. Bhakhri (<i>Imperial College London, London, United Kingdom</i>), <i>G. Finn</i>	Influence of process variables upon twin-roll strip casting ability of Cu-Zr-based bulk metallic glasses K.S. Lee (<i>Korea Institute of Materials Science, Changwon, Korea - south</i>), <i>D.H. Yoon, Y.S. Lee</i>	Study of the fracture properties of NiAl by in-situ micro-cantilever tests J. Ast (<i>University Erlangen/Nürnberg, Erlangen, Germany</i>), <i>F. Iqbal, M. Goeken, K. Durst</i>	High-resolution analytical characterization of stress corrosion cracking in stainless steels K. Kruska (<i>University of Oxford, Oxford, United Kingdom</i>), <i>T. Yamada, T. Terachi, D.W. Saxey, G.D. Smith, S. Lozano-Perez</i>	Density and surface tension of liquid CrMnNi steels T. Dubberstein (<i>TU Bergakademie Freiberg, Freiberg, Germany</i>), <i>M. Hötzel, R. Hagemann, P. Heller, P. Scheller</i>
11:30	Thermo Mechanical Properties and Plastic Deformation of Gold Nanolines and Gold Thin Films S. Olliges (<i>ETH Zurich, Zurich, Switzerland</i>), <i>S. Frank, P. Gruber, V. Auzelyte, H. Solak, R. Spolenak</i>	De-alloying of Rapidly Solidified Amorphous Au Alloys F. Scaglione (<i>Università degli Studi di Torino, Torino, Italy</i>), <i>L. Battezzati</i>	A new testing rig for SEM in-situ fatigue testing J. Reiser (<i>Montanuniversität Leoben, Leoben, Austria</i>), <i>C. Motz, R. Pippan, C. Guster</i>	Interfacial Segregation and Precipitation in Long Term Thermally Aged High Copper, High Nickel Model RPV Steel Welds P. Styman (<i>University of Oxford, Oxford, United Kingdom</i>), <i>J. Hyde, K. Wilford, G. Smith</i>	Properties of hot pressed MgO-PSZ / TRIP-steel composite A. Yanina (<i>TU BAF, Freiberg, Germany</i>), <i>S. Guk, R. Kawalla</i>
11:50	Micromechanical testing at elevated temperatures and in vacuum S. Korte (<i>University of Cambridge, Cambridge, United Kingdom</i>), <i>R.J. Stearn, W.J. Clegg</i>	KEYNOTE LECTURE Bulk Metallic Glasses Form Like Plastics S. Mukherjee (<i>Yale University, New Haven, USA</i>), <i>G. Kumar, J. Schroers</i>	Local damage initiation mechanisms of a DP steel: Surface observations vs. mid-plane deformation H. Ghadbeigi (<i>The University of Sheffield, Sheffield, United Kingdom</i>), <i>C. Pinna, S. Celotto</i>	KEYNOTE LECTURE Further basic studies needed to specify materials for sodium cooled fast reactors E. Horowitz (<i>EDF, Montrouge, France</i>)	On the cyclic softening mechanisms of reduced activity ferritic/martensitic steels F. Giordana (<i>Instituto de Fisica Rosario, Rosario, Argentine Republic</i>), <i>I. Alvarez-Armas, A. Armas</i>
12:10	Casting and testing of aluminium microsamples J. Krebs (<i>EPFL, Lausanne, Switzerland</i>), <i>C. Miko, A. Mortensen</i>		Virtual tensile tests of BCC iron single crystals S. Allain (<i>CEIT, University of Navarra, San Sebastian, Spain</i>), <i>D. Gonzalez, J.M. Martinez-Esnaola, J. Gil Sevillano</i>		Microstructure Characterization of Friction Stir Spot Welded TRIP Steel T. C. Lomholt (<i>Technical University of Denmark, Lyngby, Denmark</i>), <i>Y. Adachi, A. Bastos, K. Pantleon, M. A.J. Somers</i>

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Tuesday 13 September 2011

Symp.	D32	D13	B12	B15	E31
Room	Joffre 5	Barthez 1	Louisville	Barthez 2	Joffre 4
	<u>Modeling at the microscale:</u> <u>Discrete Dislocation methods</u> Javier SEGURADO, IMDEA Materials	<u>Fundamental/ laser instrumentation</u> Didier BLAVETTE, Université de Rouen	<u>Nickel-Based Superalloys - 4</u> Roger C. REED, U Birmingham, Tresa POLLOCK, U California Santa Barbara	<u>Advanced SPD-methods and alloys</u> Reinhard PIPPAN, Erich Schmid Institute of Materials Science, Leoben	<u>Composite Materials and Structures</u> Kambiz KAYVANTASH, CALD
Session					
10:30	KEYNOTE LECTURE Plasticity in thin metallic wires under torsion: a three-dimensional discrete dislocation dynamics investigation D. Weygand (Karlsruhe Institute of Technology†, Karlsruhe, Germany), J. Senger, O. Kraft, P. Gumbsch	KEYNOTE LECTURE Applications of ultraviolet laser atom probe K. Hono (NIMS, Tsukuba, Japan), O. Tadakatsu	Free-machining Nickel Alloys Based on Alloy 625 B. Zahra (TU Braunschweig, Braunschweig, Germany), F. Depentori, C. Siemers, J. Roesler	Mechanical properties and microstructure fragmentation of ultra-fine grained CuZr polycrystals processed by high-pressure torsion O. Srba (KFM MFF UK, Prague, Czech Republic), D. Milan, J. Miloš, C. Jakub	KEYNOTE LECTURE Composites in Transportation - Potential and Costs A. Herrmann (Fibre Institute, Bremen, Germany, Bremen, Germany)
10:50			Production of open-cell superalloy membranes with custom-made pore size and porosity B. Hinze (TU Braunschweig, Braunschweig, Germany), J. Rösler	Improved Mechanical Behavior of Ultrafine Grained Nb-1Zr after Severe Plastic Deformation G. Yapici (Ozyegin University, Istanbul, Turkey), I. Karaman, H. Maier	
11:10	New insights into small-scale plasticity and size-effects by 3-D discrete dislocation dynamics simulations C. Motz (Austrian Academy of Sciences, Leoben, Austria), D. Weygand, P. Gumbsch	Influence of the wavelength on the spatial resolution of pulsed-laser atom probe tomography B. Gault (The University of Sydney, The University Of Sydney, Australia), Y. Chen, T. Okhubo, K. Hono, S.P. Ringer	Modelling of Extrusion of Superalloys for Compressor Blade Applications Y.-P. Lin (University of Birmingham, Birmingham, United Kingdom), T.A. Dean, J. Lin, R.C. Reed	Electrochemical corrosion behavior of surface nanocrystallised stainless steel: effect of phase transformation (?/a) T. Roland (INSA strasbourg, Strasbourg, France), L. Waltz, D. Retraint	Hybrid carbon fibre reinforced poly (butylene terephthalate) with NiTi Shape Memory Alloy wires for biaxial impact applications I. Ortiz De Mendibil (Mondragon Unibertsitatea-MGEP, Mondragon, Spain), A. Agirregomezkorta, L. Aretxabaleta, M.A. Sarrionandia, J. Aurrekoetxea
11:30	A constitutive model for single crystal silicon derived from Dislocation Dynamics simulations E. Gorostegui-Colinas (CEIT, San Sebastian, Spain), B. Devincere, R. Elizalde, J. Gil Sevillano	Direct excitation mechanism of Laser Assisted Field Evaporation from Insulating Oxides M. Tsukada (Tohoku University, Sendai, Japan), H. Tamura, K. Mckenna	Modelling of the Linear Friction Welding of Nickel-Based Superalloys F. Schroeder (University of Birmingham, Birmingham, United Kingdom), M. Ward, M.M. Attallah, R. Turner, J.-C. Gebelin, R.C. Reed	Evolution of low-carbon steel structure and properties under severe plastic deformation. A. Zavadovev (Donetsk Institute for Physics and Engineering NAS of Ukraine, Donetsk, Ukraine), E. Pashinska, V. Varyukhin, V. Stolyarov	An experimental investigation on localised low velocity impact loading on glass fibre-reinforced polyamide automotive product J. Njuguna (Cranfield University, Bedford, United Kingdom), Z. Mouti, D. Long, K. Westwood
11:50	Simulation of size effects in the growth of cylindrical voids by means of dislocation dynamics and molecular dynamics S. Javier (Polytechnic University of Madrid & IMDEA-Materials, Madrid, Spain), C. Hyung-Jun, R. Oscar, M. Beatriz, L. Javier	Optical properties of Silicon under high electric field by tomographic atom probe investigation N. Sevelin-Radiguet (Université de Rouen, Saint Etienne Du Rouvray, France), A. Vella, F. Vurpillot, B. Deconihout	Multi-pass supersolvus forging of INCONEL 718 J. De Jaeger (Ecole Centrale Paris, Châtenay Malabry, France), D. Solas, T. Baudin, J.-H. Schmitt, C. Rey	Multistage Pack Rolling And Thermomechanical Processing As A Technique To Produce Ultrafine Grained Structure G. Kodzhaspirov (St.Petersburg State Polytechnical University, St.Petersburg, Russian Federation), A. Rudskoy	Analysis Of High Strain Rate Loading on Composite Panels A. Goodarzi (Amirkabir University of Tech., Tehran, Iran), H. Taylor
12:10	Dislocation dynamics simulations of Cr precipitate strengthening in Fe-Cr steels G. Monnet (EDF, Moret-Sur-Loing, France)	Optimization of laser conditions for atom probe analyses of oxides M. Kodzuka (University of Tsukuba, Tsukuba, Japan), Y. Chen, H. Sepehri-Amin, T. Okhubo, H. Kazuhiro	B12-0-4-6	Grain Refinement by Dynamic Plastic Deformation: Microstructure and Mechanical Properties L. Farbaniec (LSPM, CNRS, UPR 3407, Institut Galilée, Université Paris 13, Villeteaneuse, France), A. Abdul-Latif, G. Dirras	Functionalization Of Multiwall Carbon Nanotubes With Amino Groups And Production Of Epoxy Matrix Composites S. Pezzin (UDESC, Joinville, Brazil), B. Mariana

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Tuesday 13 September 2011

Symp. Room	D31 Joffre B	C52 Joffre C	D33 Joffre D	B41 Barcelone	E23 Sully 3bis
Session	<u>Molecular materials for optoelectronics</u> Nicola MARZARI, University of Oxford	<u>4 - Processing and characterizing techniques</u> Philippe RUSSO, ArcelorMittal	<u>Multiscale Processes</u> T. PEREZ-PRADO, Polytechnic University / IMDEA, Madrid	<u>Biomaterialization</u> André R. STUDART, ETH Zurich	<u>Thermoelectrics - 1</u> Anke WEINDENKAFF, EMPA
10:30	KEYNOTE LECTURE Tuning opto-electronic properties of light-emitting peapods C. Ambrosch-Draxl (Montanuniversität Leoben, Leoben, Austria), M. Milko, P. Puschnig	Recent advances in handheld XRF E. Nummi (Bruker Elemental, Kennewick, USA)	Multi-phase field simulation toolkit OpenPhase for advanced microstructure evolution simulations O. Shchyglo (ICAMS, Interdisciplinary Centre for Advanced Materials Simulation, Bochum, Germany), D. Medvedev, R. Darvishi Kamachali, S. Gladkov, M. Zeng, R. Spatschek, I. Steinbach	KEYNOTE LECTURE Autonomous and Intrinsic Behaviors in Non-living Biological Materials M. Harrington (Max Planck Institute of Colloids and Interfaces, Potsdam, Germany)	KEYNOTE LECTURE Effect of the structure on the thermoelectric properties of Ti _{0.37} Zr _{0.37} Hf _{0.26} NiSn half Heusler compounds S. Populoh (Empa, Duebendorf, Switzerland), M. Aguirre, Z. Sagarna Zudaire, K. Galazka, O. Brunko, M. Trottmann, Y. Lu, A. Weidenkaff
10:50		Valorization of Automotive Shredder Residues N.-E. Menad (BRGM, Orléans, France), M. Save, F. Bodenan, S. Guignot, P. Russo, J. Kleihauer, N. Kanari, E. Silvente, >. Fabien	Molecular Dynamics Simulations of Bimetallic Nanostructured Materials. H. Barron (University of Texas at San Antonio, San Antonio, Texas, USA), D. Sandhu, M. Mariscal, M. Jose-Yacamán		
11:10	Microscopic simulations of charge transport in disordered organic semiconductors D. Andrienko (Max Planck Institute for Polymer Research, Mainz, Germany)	New Developments In Sand Reclamation Technologies R. Danko (AGH University of Science and Technology, Cracow, Poland), J. Danko, M. Holtzer	Multiscale modeling of cold rolling in FCC and HCP metallic alloys T. Pérez-Prado (Polytechnic University of Madrid / IMDEA Materials Institute, Madrid, Spain), J. Llorca, J. Segurado	Synthetic Calcite Spicules with Waveguiding Properties W. Tremel (Johannes Gutenberg-Universität, Mainz, Germany), F. Natalio, N. Loges, M. Panthöfer, W. Müller, H. Schröder	Structural phase transition modeling in half-Heusler – Heusler solid solutions E. Hill (CNRS, Grenoble, France), V. Romaka, Y. Stadnyk, L. Romaka, D. Fruchart
11:30	Toward reliable structure-property relationships in self-assembled monolayers G. Heimel (Humboldt-Universität zu Berlin, Berlin, Germany)	Purification of post-consumer steel scrap D. Ginsel (ReSteel International B.V., Sliedrecht, Netherlands), F. Vandenbroeck	Contribution to Multiscale Modeling of Inorganic Fiber Reinforced Ceramic Matrix Composites B. Tomkova (Technical University of Liberec, Liberec 1, Czech Republic)	Cell Networks and Bone Tissue Architecture W. Wagermaier (Max-Planck-Institute of Colloids and Interfaces, Potsdam, Germany), M. Kerschitzki, P. Roschger, R. Shahar, G.N. Duda, P. Fratzl	Development of hot-stacked textured Ca ₃ Co ₄ O ₉ materials for generators: anisotropy of thermoelectric properties D. Kenfau (Laboratoire CRISMAT, UMR 6508 ENSICAEN/CNRS, Caen, France), B. Lenoir, B. Ouladidaf, D. Chateigner, M. Gomina, J.G. Noudem
11:50	Time-Dependent Versus Static Density Functional Theory Approaches in Quantum Transport T. Niehaus (University of Regensburg, Regensburg, Germany)	Thermodynamic approach to high temperature processing of iron and steel dusts H. Jalkanen (Aalto University, Espoo, Finland), Y. Xiao	Thermodynamic Modeling of Slag Surface Tension C. Schmetterer (TU Bergakademie Freiberg, Freiberg, Germany), P. Masset	High spatial resolution EBSD reveals a novel microstructure of the nanocrystalline primary layer of carbonate shelled marine organisms W. Schmahl (LMU Munich, Munich, Germany), A. Goetz, D. Steinmetz, E. Griesshaber, R. Dierk, Z. Stefan	Thermoelectric waste heat recovery in light duty trucks G. Vidiella (ROM Innovation & Stratégie, Paris, France), D. Magnetto
12:10	Anchor group versus conjugation: towards the gap-state engineering of functionalized ZnO surface for photovoltaic applications A. Cattellani (CNR -Istituto Nanoscienze, Centro S3, Modena, Italy), A. Calzolari, A. Ruini	Micro Porosity Development in Directionally Solidified A356 Castings Doped with Anodized Plates and Sintered Aluminium S. Akhtar (NTNU, Trondheim, Norway), S. Robiul Haque, A. Ragnhild E	High temperature static and LCF characterization and modelling of a SiMoCr ductile cast iron A. Vercelli (Politecnico di Torino, Torino, Italy), C. Delprete, R. Serra, R. Leroy	Nanomechanism of Calcite Mineralisation on Bacterial Surface-Layer Proteins P. Simon (Max Planck Institute, Dresden, Germany), D. Knobloch, E. Rosseeva, K. Ostermann, G. Rödel	TiGaTe ₂ and TlInSe ₂ materials with quasi-one-dimensional crystal structure: band structure, optical transitions, and thermoelectric properties N. Mamedov (Institute of Physics, Baku, Azerbaijan Republic), Y.G. Shim, K. Wakita, K. Mimura, K. Khalilova, Z. Jahangiri, G. Orudzhev

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Tuesday 13 September 2011

Symp. Room	A24 Pasteur	B11 Einstein	B31 Antigone 1	E22 Antigone 3	B32 Joffre 1
Session	<u>Magnetic Switching (I)</u> Bernrd RELLINGHAUS, Dresden, Germany	<u>Nickel base alloys and coatings</u> Ian BAKER, Dartmouth College, USA	<u>Metal-matrix composites: tribology, coatings and CNT reinforcements</u> Aravind DASARI, IMDEA Materials	<u>PEM fuel cells: novel membranes and characterization techniques</u> Alejandra RAMIREZ-CARO, Helmholtz-C. Berlin	<u>Structure-Property Correlations and Characterization Methods</u> Jin-Chong TAN, University of Cambridge
14:00	KEYNOTE LECTURE Towards electron holography of magnetic fields in nanometer-sized crystals in the transmission electron microscope R. Dunin-Borkowski (Forschungszentrum Jülich, Jülich, Germany), T. Kasama, M. Beleggia, T. Hansen, J. Wagner	HIGHLIGHT LECTURE Dislocation Dissociation in L12-Ordered Intermetallic Compounds with a Negative Temperature Dependence of Yield Stress at Low Temperatures H. Inui (Kyoto University, Kyoto, Japan)	Mechanical and tribological properties of Fe/Cr-Al ₂ O ₃ nano/micro hybrid composites prepared by Spark Plasma Sintering C. Laurent (Université de Toulouse, Toulouse, France), J. Gurt Santanach, C. Estournès, A. Weibel, G. Chevallier, A. Peigney	KEYNOTE LECTURE Characterization of catalytically-active Pt-alloy surfaces and core-shell nanoparticles using atom probe tomography P. Bagot (University of Oxford, Oxford, United Kingdom), T. Li, E. Marquis, E. Tsang, G. Smith	HIGHLIGHT LECTURE Energy landscapes of imidazolate-based MOFs: routes to understanding structures and optimizing properties L. Stefano (Dresden University of technology, Dresden, Germany), B. Igor, A. Bassem, S. Gotthard
14:20		Processing and properties of NiAl-based eutectic composites M. Srdjan (IMDEA Materials, Madrid, Spain), C. Rubens, S. Andre, F. Georg	Electrodeposited cobalt-matrix nanocomposite coatings containing Y(OH) ₃ /Y ₂ O ₃ phases E. Pellicer (Universitat Autònoma de Barcelona, Bellaterra, Spain), K. Sivaraman, S. Pané, O. Ergeneman, K. Shou, S. Suriñach, M.D. Baró, J. Sort, B. Nelson		An assessment of the potential of transmission electron microscopy for microstructural characterisation of hybrid framework materials E. Bithell (University of Cambridge, Cambridge, United Kingdom), T. Alagasarmy, T. Bennett, J.-C. Tan, H. Yeung, A. Cheetham
14:40	Imaging of the switching process in antidot arrays by XPEEM C. Castán (ICMA (U. Zaragoza, CSIC), Zaragoza, Spain), J. Sesé, K. Merazzo, M. Vázquez, J. Herrero, F. Kronast, J. Bartolomé, F. Bartolomé, L.M. García	Intermetallics formation on Ni-based substrates from an aluminization process using micro-sized aluminium powders. B. Rannou (Laboratoire d'Etudes des Matériaux en Milieux Agressifs (LEMMA), La Rochelle, France), J. Balmain, G. Bonnet, V. Kolarik, F. Pedraza	Electrodeposition of zinc-silica composite coating for intelligent corrosion protection T.R. Khan (Max Planck Insitute for Iron Research, Duesseldorf, Germany), V. Ashok, R. Michael	Polymer Electrolyte Membranes based on Proton Conducting Ionic Liquids for High Temperature Polymer Electrolyte Membrane Fuel Cells (PEMFC) R. Sood (LEPMI-Grenoble, Grenoble, France), C. Iojoiu, E. Espuche, H. Mendil-Jakani, G. Gerard, F. Gouarve	Mechanical behaviour of the MIL-47(V) & MIL-53(Cr) Metal Organic Frameworks: A joint experimental-modeling approach P. Yot (Institut Charles Gerhardt Montpellier, Montpellier, France), M. Quintian, A. Haines, T. Devic, C. Serre, Q. Yang, C. Zhong, G. Férey, G. Maurin
15:00	HIGHLIGHT LECTURE Characterization Of Magnetization Switching In Synthetic Antiferromagnets Using First Order Reversal Curves L. Spinu (University of New Orleans, New Orleans, USA), D. Lenormand, A. Rotaru, G. Ju, X. Zhu, A. Stancu	Microstructures and Properties of Sputter Deposited NiAl-Cr-(Zr,Hf) Intermetallics for High Temperature Applications J. Alfano (The University of Alabama, Al, USA), M. Weaver	Metal Coated Carbon Nanotube reinforced Mg AZ91 composites Q. Li (ZMP, University of Erlangen-Nuremberg, Fuerth, Germany), R. Singer	Nanostructured and functional polymers based materials for energy systems D. Ruch (CRP Henri Tudor, Esch Sur Alzette, Luxembourg)	Investigating the structure of layered organic-inorganic materials by a combination of X-ray Diffraction, Computational Modelling and NMR Crystallography D. Laurencin (Institut Charles Gerhardt de Montpellier, Montpellier, France), A. Van Der Lee, C. Gervais, L. Di Carlo, M. Reinholdt, C. Bonhomme, M. Smith, W. El Malti, G. Guerrero, H. Mutin
15:20	Magnetic switching fields of individual Co nanoislands S. Ouazi (Max Planck Institute for Microstructure Physics, Halle (Saale), Germany), S. Wedekind, G. Rodary, H. Oka, M. Corbetta, J. Borme, Y. Nahas, D. Sander, J. Kirschner	Assessment of toughness by nanoindentation techniques of novel intermetallic coatings growth on medical stainless steel E. Frutos (CENBIM-CSIC, Madrid, Spain), A. Cuevas, J.L. Gonzalez-Carrasco, F. Martín, N. Vilaboa	Tribological behaviour at high temperature metal matrix composites produced by SPS K. Delbé (École Nationale d'Ingénieurs de Tarbes, Tarbes, France), S. Orozco Gomez, A. Benitez, J.-Y. Paris, J. Denape, J.-P. Monchoux, A. Couret	Preparation, stabilization and adapting of (metal loaded) carbon black dispersions C. Eisermann (University Erlangen Nuremberg, Erlangen, Germany), C. Damm, M. Schonert, W. Peukert	Bipyridine based hybrid materials for applications in photonics J. Graffion (CNRS, Montpellier, France), S.S. Nobre, X. Cattoën, R.A. Ferreira, M. Wong Chi Man, L.D. Carlos

15:40	Magnetic Hysteresis of a single Fe nanocube M. Farle (Universität Duisburg-Essen, Duisburg, Germany), N. Friedenberger, S. Stienen, C. Möller, Z.-A. Li	Microwave Assisted Combustion Synthesis Of Aluminides: Multiphysics Simulation R. Rosa (University of Modena and Reggio Emilia, Modena, Italy), E. Colombini, P. Veronesi, G. Poli	CNT-reinforced metal matrix composites J. Stein (EADS, Munich, Germany), B. Lenczowski, N. Fréty, E. Anglaret	Hybrid Membranes of SPEEK and Phosphonated Copolysilsesquioxanes for Application in PEMFCs S. Pezzin (UDESC, Joinville, Brazil), K. De Aguiar, L. Coelho, A. Ramos	Phase Equilibrium and Multi-Component Ligand Solid Solution in Hybrid Framework Materials: Investigations into the system Li ₂ (succinate)-Li ₂ (malate)-Li ₂ (methylsuccinate) H. Yeung (Cambridge University, Cambridge, United Kingdom), P. Saines, E. Bithell, D. Sashidhar, T. Koester, C. Grey, A. Cheetham
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pm1

Tuesday 13 September 2011

Symp.	D22	C13	D21	E11	B13
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
Session	<u>Fracture, Interfaces and Modelisation</u> Daniel KIENER, University of Leoben	<u>Metallic glasses and related composites - S5</u> J. Löffler, ETH Zürich, Switzerland	<u>5. Fracture and fatigue</u> Javier GIL SEVILLANO, University of Navarra	<u>Alloys for Fission & Fusion Reactors</u> Dario MANARA, Institute of TransUranium elements	<u>Steel-matrix composites</u> Piotr R. SCHELLER, Technische Universität Bergakademie Freiberg
	14:00 Modulus Mapping of Nanoscale Interfaces in a Deep Sea Sponge I. Zlotnikov (Max Planck Institute of Colloids and Interfaces, Potsdam, Germany), H. Drezner, D. Shilo, B. Aichmayer, Y. Dauphin, E. Zolotoyabko, P. Fratzl	On the design of β Ti-based biocompatible alloys from ab-initio calculations C. Lekka (University of Ioannina, Ioannina, Greece), G. Bokas, G. Evangelakis	D21-0-5-1	Ab Initio Study of Advanced Metallic Nuclear Fuels for Fast Breeder Reactors A. Landa (Lawrence Livermore National Laboratory, Livermore, Ca, USA), P. Soderlind, P. Turchi, A. Ruban, L. Vitos	Strain rate and temperature sensitive compressive flow behaviour of crash absorbing TRIP-steel/zirconia honeycomb structures D. Ehinger (TU Bergakademie Freiberg, Freiberg, Germany), L. Krüger, U. Martin, S. Martin, C. Weigelt, C.G. Aneziris
	14:20 Fracture analysis of small scale interfaces D. Kupka (Helmholtz-Zentrum Geesthacht, Geesthacht, Germany), E. Lilleodden	Enhanced mechanical properties and in-vitro corrosion behavior of amorphous and devitrified Ti40Zr10Cu38Pd12 metallic glass J. Fornell Beringues (UAB, Bellaterra, Spain), N. Van Steenberge, A. Varea, E. Rossinyol, E. Pellicer, S. Suriñach, D. Baró, J. Sort	In-Situ Observation of Crack Propagation in Novel Alumina-Based Refractories E. Skiera (Forschungszentrum Jülich, Jülich, Germany), J. Malzbender, J. Mönch, R.W. Steinbrech, C.G. Aneziris, S. Dudczig	A systematic approach for the study of radiation-induced segregation/depletion at grain boundaries in steels E. Marquis (University of Michigan, Ann Arbor, USA), R. Hu, T. Rousseau	Processing and mechanical behaviour of TRIP-matrix composites L. Krüger (TU Bergakademie Freiberg, Freiberg, Germany), S. Wolf, S. Martin, U. Martin, C. Weigelt, A. Yanina
	14:40 Investigations Of Pinning Theory In Thin Films With Textured Interface L. Alzate (CNRS / Saint-Gobain, Paris, France), D. Dalmas, E. Barthel, S. Patinet	Design and properties of metastable nanostructured Ti-based alloys with potential for biomedical applications M. Calin (IFW Dresden, Dresden, Germany), J. Köhler, A. Helth, W. Xu, M. Zehetbauer, J. Eckert	Liquid metal embrittlement fracture mechanisms in the 316L-Hg system T. Auger (CNRS, Chatenay-Malabry, France), I. Guillot, L. Medina-Almazan, Z. Hamouche-Hadjem	In situ neutron diffraction during tensile mechanical loading of oxide dispersion strengthened steels: effect of the material's microstructure A. Froideval (Paul Scherrer Institute, Villigen Psi, Switzerland), S. Van Petegem, V. Davydov, M.A. Pouchon, H.J. Leber, J. Chen	Strain-rate-dependence of a Mg-PSZ reinforced TRIP matrix composite produced by spark plasma sintering S. Decker (TU Bergakademie Freiberg, Freiberg, Germany), L. Krüger, S. Richter, S. Martin, U. Martin, H.-J. Seifert
	15:00 Quantitative determination of the interfacial fracture strength of hydrogenated amorphous carbon coatings by in-situ micro-cantilever bending tests C. Schmid (University Erlangen-Nürnberg, Erlangen, Germany), J. Schaufler, V. Maier, M. Göken, K. Durst	HIGHLIGHT LECTURE Towards the industrial upgrade of bulk metallic glasses: challenges to overcome N. Van Steenberge (OCAS NV, Zelzate, Belgium), D. Ruiz Romero, M. Stoica, G. De Vos, S. Claessens	Determination of the fracture resistance of thin sheet fibre composites – Paper as a model material J. Zechner (Materials Center Leoben Forschung GmbH, Leoben, Austria), O. Kolednik	HIGHLIGHT LECTURE French investigation of a new V-4Cr-4Ti grade J.-B. Dubois (CEA, Gif Sur Yvette, France), V. Duquesnes, M. Le Flem	Cracks propagation and interfacial cohesion in new steel matrix composite Z. Hamouche (CNAM, Paris, France), J.-P. Chevalier
	15:20 Strain field induced in Silicon by an array of lines: Finite element and analytical modelling Y. Ezzaidi (IM2NP, Marseille, France), G. Gaudeau, S. Escoubas, O. Thomas, P. Morin	BMGs as implant materials R. Aune (Defence Research Agency, Linköping, Sweden), S.J. Savage, D. Persson	Influence of nitriding on the thermo-mechanical fatigue behaviour of a duplex stainless steel R. Kalmorgen (TU Bergakademie Freiberg, Freiberg, Germany), H. Biermann, H.-J. Spies	Material performance of tungsten coatings for applications in nuclear fusion devices C. Thomser (FZ Juelich, Juelich, Germany), A. Buerger, J. Linke, T. Loewenhoff, G. Matthews, V. Riccardo, A. Schmidt, V. Vasechko	Study of phase transformations in a steel matrix composite by Mechanical Spectroscopy A. Paula (UNIVERSITY CARLOS III MADRID, Leganes Madrid, Spain), M. Daniele, G. Elena
	15:40 Crystal plasticity of titanium quantified through orientation informed nanoindentation and crystal plasticity finite element simulation C. Zambaldi (MPI für Eisenforschung, Düsseldorf, Germany), Y. Yang, T.R. Bieler, F. Roters, D. Raabe	Hydrogen permeation properties of in-situ Ti-based BMG composite membranes T. Geiller (KIST, 136-791, Korea - south), E. Fleury, M.-H. Kim, H.-S. Chin, J.-Y. Suh, Y.-C. Kim	D21-0-5-6	Simultaneous deuterium implantation and ion beam microanalyses in CFC used as a first wall material in fusion tokamaks E. Bernard (CEA Saclay, Gif Sur Yvette, France), H. Khodja, B. Pégourié, C. Martin, C. Pardanaud	A feasibility study on manufacturing of functionally graded structures using SiC ceramic powder in a steel based matrix by Gas Tungsten Arc Welding (GTAW) S. Herbst (Cranfield University, Cranfield, United Kingdom), S. Williams, S. Ganguly

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Tuesday 13 September 2011

Symp.	D32	D13	B12	D12	E31
Room	Joffre 5	Barthez 1	Louisville	Barthez 2	Joffre 4
	<u>Modeling at the microscale:</u> <u>Continuum approaches</u> Javier SEGURADO, IMDEA Materials	<u>Other 3D techniques</u> Frank MUECKLICH, Univ. Saarbrücken	<u>Nickel-Based Superalloys - 5</u> Roger C. REED, U Birmingham, Tresa POLLOCK, U California Santa Barbara	<u>Tomography: extending contrast mechanisms</u> Alexander RACK, European Synchrotron Radiation Facility - ESRF	<u>Metals I</u> Dirk LEHMHUS, Universität Bremen
Session					
14:00	Residual stress prediction by considering dislocation density advection in 3D applied to single-crystal bending C. Kords (Max-Planck-Institute for Iron Research, Düsseldorf, Germany), T. Jäpel, P. Eisenlohr, F. Roters	HIGHLIGHT LECTURE 3D analysis extended: A combined study including μ -XRF, EDS, EBSD and AFM/MFM M. Falke (Bruker Nano GmbH, Berlin, Germany), J. Berlin, A. Käppel, T. Salge, S. Scheller, D. Goran, G. Nolze, I. Nemeth, R. Tagle, U. Waldschläger	On the Mechanical Behaviour of a New Single Crystal Superalloy for Industrial Gas Turbine Applications A. Sato (University of Birmingham, Birmingham, United Kingdom), R. Reed, J. Moverare, M. Hasselqvist	KEYNOTE LECTURE 3D imaging of complex materials: the case of cements G. Artioli (Università di Padova, Padova, Italy), M. Parisatto, M.C. Dalconi, G. Ferrari	Development of Boron-Modified Titanium Alloys for lightweight applications S. Gourdet (AMC, Farnborough, United Kingdom), L. Ropars, J. Silk, T. Bize
14:20	Constitutive Modelling of high temperature fatigue behaviour of a cast aluminium alloy P. Osmond (Centre des matériaux, Ecole des Mines de Paris, Evry, France), L. Rémy, L. Nazé	3D distribution of pores in continuously cast steel slabs investigated by multi-scale X-ray computed tomography B. Harrer (FH OOE Forschungs-Entwicklungs GmbH, Wels, Austria), H.P. Degischer, G. Requena, G. Xia, S. Ilie, J. Kastner	Strain effect on the γ' dissolution at high temperatures of a Nickel-based single crystal superalloy R. Giraud (Turbomeca/ENSMA, Bordes, France), Z. Hervier, J. Cormier, G. Saint Martin, F. Hamon, N. Wojtowicz, X. Milhet, J. Mendez		Influence of microstructure on tensile properties in Ti 17 alloy. B. Denand (Institut Jean Lamour, Nancy, France), E. Aeby-Gautier, J. Teixeira, M. Dehmas, B. Appolaire, A. Settefrati
14:40	Assessment of a crystal plasticity model of deformation twinning based on EBSD analysis S. Dancette (iMMC, UCL, Louvain La Neuve, Belgium), L. Delannay	3D analysis of ink propagation in polymer foam using X-ray micro computed tomography D. Salaberger (FH OOE Forschungs & Entwicklungs GmbH, Wels, Austria)	Transmission Electron Microscopy of Nickel 718Plus After Single and Double Aging L. Whitmore (Christian Doppler Laboratory for the Early Stages of Precipitation, Leoben, Austria)	Laboratory based Submicron and Nanotomography systems versus Synchrotron based Hard x-ray tomography systems S.H. Lau (Xradia Inc, Pleasanton, USA), L. Hunter, T. Fong, A. Gu, J. Gelb, M. Feser, W. Yun	Enhancing the high temperature capability of Ti-alloys A. Donchev (Dechema e.V., Frankfurt, Germany), M. Schütze, A. Kolitsch, R. Yankov
15:00	Modeling of micro structure evolution in a cold-drawn wire using a rate independent crystal plasticity model K.N. Rengarajan (Nanyang Technological University, Nanyang Avenue, Singapore), S. Idapalapati, S. Subbiah, R. Ramanujan	High Resolution Limited Angle Computed Tomography with Electron Probe Micro Analyzer R. Hanke (Julius-Maximilians-University Wuerzburg, Wuerzburg, Germany), T. Ebensperger, F. Nachtrab, F. Sukowski, N. Uhlmann	Microstructure, Oxidation and Mechanical Properties of new γ/γ' Strengthened Cobalt-Base Superalloys M. Göken (University Erlangen-Nürnberg, Erlangen, Germany), S. Neumeier	X-ray grating interferometry for imaging of natural and man-made materials T. Weitkamp (Synchrotron Soleil, Gif-Sur-Yvette, France), I. Zanette, M. Bech, F. Pfeiffer, G. Schulz, B. Müller, S. Rutishauser, C. David, J. Kenntner, T.H. Jensen	Electron Beam Melting of high niobium containing TiAl alloy M. Terner (Politecnico di Torino, Torino, Italy), S. Biamino, A. Penna, S. Sabbadini, M. Pavese, P. Fino, C. Badini
15:20	Multiscale size effects in the indentation behavior of metallic films: from molecular dynamics to continuum crystal plasticity D. Esque-De Los Ojos (Universitat Politècnica de Catalunya, Barcelona, Spain), J. Ocenasek, R. Dalmau, L. Galceran, J. Alcalá	Three dimensional characterization of nickel electrodeposits A. Hossein (Technical University of Denmark, Kgs. Lyngby, Denmark), B.D. Alice, A.S. Marcel, P. Karen	Effect of thermal exposure on the microstructure and hold-time fatigue resistance of superalloys Allvac 718Plus and Alloy 718 L. Viskari (Applied Physics, Goteborg, Sweden), M. Hömqvist, K. Stiller	Synchrotron And Neutron Laminography For Three-Dimensional Imaging Of Flat Material Specimens L. Helfen (Karlsruhe Institute of Technology, Karlsruhe, Germany), F. Xu, T. Morgeneyer, M.N. Mavrogordato, I. Sinclair, B. Schillinger, T. Baumbach	Multiscale modeling of a foundry aluminum alloy R. Martinez (CNRS, Thiais, France), I. Guillot, G. Caillaud, C. Saudemont, D. Massinon
15:40	Microstructure based flow curve modeling of high-Mn TWIP steels by means of Representative Volume Element Technique R. Twardowski (RWTH Aachen, Aachen, Germany), U. Prahl, D. Steinmetz, W. Bleck	Contribution of different electron and ion 3D techniques for the microstructural analysis of composites and heterogeneous materials K. Masenelli-Varlot (INSA-Lyon, Villeurbanne, France), A. Bogner-Van De Moortèle, Y. Liu, A. Malchère, J. Ferreira, T. Epicier	B12-O-5-6	Grain Growth anomaly in SrTiO ₃ : Combined approach of three dimensional grain structure reconstruction by diffraction contrast tomography and grain growth modelling D. Weygand (Karlsruhe Institute of Technology, Karlsruhe, Germany), M. Syha, M. Bäurer, W. Rheinheimer, W. Ludwig, E. Lauridsen, P. Gumbsch	Design Criteria and Mechanical Testing for the Use of Cellular Metals as Car Seat Components S. Nestic (University of Applied Sciences Osnabrueck, Osnabrück, Germany), K. Unruh, W. Michels, U. Krupp

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Tuesday 13 September 2011

Symp. Room	A23 Joffre B	B14 Joffre C	C32 Joffre D	B41 Barcelona	E23 Sully 3bis
Session	<u>Amorphous and nanocrystalline magnetocaloric materials</u> Karl SANDEMAN, Imperial College	<u>Phase Formation and Casting</u> Karl Ulrich KAINER, Helmholtz-Zentrum Geesthacht, Geesthacht	<u>Sintering and alternative densification routes</u> Christophe L. MARTIN, Grenoble INP	<u>Bioinspired films & composites</u> Richard WEINKAMER, MPI Golm	<u>Thermoelectrics - 2</u> Sabine SCHLECHT, FU-Berlin
14:00	KEYNOTE LECTURE The magnetocaloric effect in amorphous and multiphase materials: phenomenological models to describe its field dependence V. Franco (Sevilla University, Sevilla, Spain), A. Conde	HIGHLIGHT LECTURE Phase formation in advanced Mg alloys predicted from thermodynamic calculations R. Schmid-Fetzer (Clausthal University of Technology, France), J. Groebner, A. Kozlov, M. Hampf	Modelling of sintering stress evolution during vapour phase and liquid phase sintering of single-phase and multi-phase materials F. Delannay (UCLouvain, Louvain-La-Neuve, Belgium), J.-M. Missiaen	HIGHLIGHT LECTURE Bio-inspired Design of Hierarchically Structured Adhesives E. Peter A (Indian Institute of Technology Kanpur, Kanpur, India), A. Ghatak	Synthesis and Electron Holography Studies of Single Crystalline Nanostructures of Clathrate-II phases $KxGe_{136}$ and $NaxSi_{136}$ P. Simon (Max Planck Institute, Dresden, Germany), W. Carrillo-Cabrera, K. Chion, B. Böhme, M. Baitinger, H. Lichte, Y. Grin, T. Zhongjia, A.M. Guloy
14:20		The effect of strontium addition on the microstructure and mechanical properties of squeeze cast Mg-6Al-0.3Mn-0.3Ti alloy H. Sevik (Sakarya University, Sakarya, Turkey), C. Kurnaz	Alumina/mullite composite materials from silica sols: structure and thermal properties V.K. Atanga (Otto-von-Guericke-Universitaet, Magdeburg, Germany), V. Reschke, M. Kappa, M. Scheffler	Large-Scale Nacre-Mimetic Hybrid Films and Paper via Rapid Self-Assembly A. Walther (DWI at the RWTH Aachen, Aachen, Germany), L. Berglund, O. Ikkala	Study of structural properties and of doping of higher manganese silicides for thermoelectric applications E. Ruiz (ICGM, Université Montpellier 2 et CNRS, Montpellier, France), C. Yacou, D. Ravot, R. Viennois, J.-C. Tedenac, S. Pailhès
14:40	Magnetocaloric effect of Fe-based metallic glasses A. Waske (IFW Dresden, Dresden, Germany), B. Schwarz, N. Mattern, J. Eckert	Influence of Al-Ti-B Grain Refiners on Reducing Hot Tearing Susceptibility of AZ91E Magnesium Alloy C. Ravindran (Ryerson University, Toronto, Canada), A. Elsayed, B. Murty	UO ₂ nuclear fuel: model powders to analyse the microstructure formation during sintering and resulting mechanical behaviour A. Ndiaye (CEA, Saint-Paul-Les-Durance, France), C.P. Carry, J.-M. Chaix, J. Lechelle, P. Somay	The structural efficiency of the skeleton of Euplectella Aspergillum as foundation for the development of novel design concepts for composite aerospace structures D. Bacheva (University of Bristol, Bristol, United Kingdom), R. Trask	Comparison of the structural and thermoelectric properties of ball-milled and co-reduced Bi _{1-x} Sb _x Nanoalloys B. Landschreiber (Justus-Liebig-University, Giessen, Germany, Giessen, Germany), E. Günes, G. Homm, C. Will, S. Petznick, S. Schlecht, P.J. Klar, A. Sesselmann, E. Müller
15:00	Unusual oxidation state gives reversible room temperature magnetocaloric effect in SrFe _{0.5} Co _{0.5} O ₃ perovskite-related oxides O. Toulemonde (ICMCB / Université de Bordeaux, Pessac, France), C. Yin, M. Chennabasappa, J. Abel, E. Gaudin	Study of Defects in Direct Chill Magnesium Castings Using X-Ray Tomography D. Mackie (University of Manchester, Manchester, United Kingdom), J. Robson, P. Withers, M. Turski, T. Wilks	Fabrication of miniaturized CCTO-based ceramic capacitors by inkjet printing F. Rossignol (CNRS, Limoges, France), N. Bouvier, M. Lejeune, C. Dossou-Yovo, M. Mougnot, R. Noguera, S. Guillemet-Fritsch, J. Sarrias	Control of Anisotropic Particle Suspensions for Bioinspired Composite Technology R. Erb (ETH-Zürich, Zürich, Switzerland), A. Studart	Bismuth-substituted lead telluride-based thermoelectric nanocomposites S. Schlecht (Justus-Liebig-University Giessen, Giessen, Germany), D. Petri, M. Nebe, U. Schürmann, L. Kienle, G. Homm, M. Piechotka, P.J. Klar
15:20	Influence of chemical substitution and external pressure on the magnetocaloric properties of YFe ₂ (H,D) _{4.2} compounds V. Paul-Boncour (ICMPE / CNRS, Thiais, France), O. Isnard, T. Mazet, C.V. Colin, J.-C. Crivello, Z. Arnold, M. Phejar	Prediction of local material properties of magnesium high pressure die castings S. Tewes (Foundry Institute RWTH Aachen University, Aachen, Germany), E. Hepp, A. Bührig-Polaczek	Fast sintering pressureless processes : microwave and induction densification of Al ₂ O ₃ – ZrO ₂ composites, Ni and stainless steel A. Guyon (SIMaP, Saint Martin D'Hères, France), S. Charmond, J.-M. Chaix, C.P. Carry, D. Bouvard	Bio-inspired design criteria for damage-resistant -. -. -Kolednik (Austrian Academy of Sciences, Leoben, Austria), J. Predan, D.F. Fischer, P. Fratzl	Microwave sintering of Ge-doped In ₂ O ₃ thermoelectric ceramics processed by slip-casting E. Combe (Laboratoire CRISMAT, Caen, France), E. Guilmeau, F. Boschini, S. Marinel, R. Cloots
15:40	Magnetocaloric compounds evidenced in the ternary system Gd-Co-Si B. Chevalier (ICMCB, CNRS, Pessac, France), C. Mayer, S. Tence, E. Gaudin, S. Gorsse	Interfacial phenomena in carbon fibre reinforced magnesium alloys processed by squeeze casting and thixomolding. H.-M. Montrieux (University of Liege, Sart Tilman, Belgium), A. Mertens, J. Halleux, F. Delannay, J. Lecomte-Beckers	Field Assisted Sintering Technique (FAST) compaction of ultra-fine grained and nanocrystalline WC based hard metals M. Dopita (Technical University of Freiberg, Freiberg, Germany), D. Chmelik, A. Salomon, H. Seifert, D. Rafaja	Inorganic nanotube formation from cellulose nanocrystals S. Gruber (University of Erlangen-Nürnberg, Erlangen, Germany)	Solution Synthesis of New Thermoelectric Antimonide Nanophases and Their Structure Determination Using Automated Electron Diffraction Tomography W. Tremel (Johannes Gutenberg-Universität, Mainz, Germany), C. Birkel, G. Kieslich, M. Panthöfer, T. Gorelik, E. Mugnailoi, U. Kolb, S. Jürgen, C. Tania, H. Rapahael

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Tuesday 13 September 2011

Symp. Room	A24 Pasteur	C11 Einstein	A21 Antigone 1	E22 Antigone 3	A32 Joffre 1
	Magnetic Switching (II) Michael FARLE, Duisburg, Germany	Dendritic structures / Transparent Peter GALENKO, DLR	Soft magnetic materials for high frequency applications Marcos F. DE CAMPOS, Instituto Nacional de Metrologia, Normalização, e Qualidade Indústria, Brazil	Hydrogen evolution, hydrogen separation and materials for bio-fuel cells Bill POIRIER, Texas Tech University, USA	Beyond mesoporous materials - 1 David GROSSO, Université Pierre et Marie Curie
Session					
16:40	Magnetic structures studied on the nm-scale combining liquid nitrogen free EDS and aberration corrected STEM EELS M. Falke (Bruker, Berlin, Germany), A. Mogilatenko, W. Neumann, C. Brombacher, H. Rohrmann, M. Kratzer, M. Albrecht, A. Bleloch	KEYNOTE LECTURE In Situ and Real-Time Synchrotron X-Ray Imaging of Grain Structure Formation in Solidification Processing of Metallic Alloys B. Billia (CNRS, Marseille, France), H. Nguyen-Thi, N. Mangelinck-Noël, G. Reinhart, N. Bergeon, A. Bogno, A. Buffet, J. Baruchel, T. Schenk	Electric current induced magnetization reversal and domain wall motion in soft magnetic microwire A. Chizhik (Universidad del Pais Vasco, San Sebastian, Spain), J. Gonzalez, A. Zhukov	Designing Carbonaceous Foams Electrodes for Efficient Enzymatic Biofuel Cells R. Backov (CRPP, Pessac, France), V. Flexer, N. Brun, N. Mano	KEYNOTE LECTURE Mesoporous silica particles (MSNPs) as an attractive platform for targeted drug delivery and enhanced therapeutic efficacy. C. Sahlgren (Åbo Akademi, Turku, Finland)
17:00	Examination of the switching field distribution and the shape anisotropy constant of Nickel nanorods P. Bender (Universität des Saarlandes, Saarbrücken, Germany), A. Günther, F. Krämer, A. Tschöpe, R. Birringer		How to Retrieve More Information on Magnetic Films from Microwave Permeability Measurements A. Bonneau-Brault (CEA, Monts, France), S. Dubourg, O. Acher, V. Dubuget	Tubular Anodic Alumina Membrane for Hydrogen Separation J. Wu (Industrial Research Limited, Lower Hutt, New Zealand), G. Smith, I. Brown	
17:20	The influence of frequency and waveform on the structure and magnetic properties of cobalt nanowires produced by AC electrodeposition F. Nasirpour (Sahand University of Technology, Tabriz, Iran), S. Peighambari	Influence of Cr on solidification morphologies in Al-Zn alloys G. Kurtuldu (Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland), P. Jarry, M. Rappaz	Low Tc Fe-Nb-Cr-B glassy alloys with enhanced soft magnetic properties N. Lupu (National Institute of Research and Development for Technical Physics, Iasi, Romania), H. Chiriac, S. Corodeanu, G. Ababei	Amorphous and nanocrystalline alloys as electrocatalysts for hydrogen evolution T. Spassov (University of Sofia, Sofia, Bulgaria), L. Mihailov, I. Tsvetanov, I. Kanazirski	Mesoporous silica nanoparticles as drug delivery systems for targeted inhibition of Notch signaling in cancer J. Rosenholm (Åbo Akademi University, Turku, Finland), V. Mamaeva, L.T. Bate-Eya, L. Bergman, E. Peuhu, S. Landor, L.E. Fortelius, D.M. Toivola, M. Lindén, C. Sahlgren
17:40	Spin transfer torque induced magnetic vortex non-linear oscillations in nanopillar K. Gusliyenko (Universidad del Pais Vasco, San Sebastian, Spain), G.R. Aranda, J. Gonzalez	A new metal core filler wire for welding ferritic stainless steel used for exhaust manifolds manufacturing V. Villaret (LMGC UMR 5508 / AIR LIQUIDE CTAS, Nimes, France), F. Deschaux-Beaume, F. Januard, G. Fras, J.-M. Fortain, S. Rouquette	Electromagnetic properties regulation in MnZn-polyaniline composites V. Babayan (Tomas Bata University in Zlin, Zlin, Czech Republic), N. Kazantseva, R. Moucka, J. Vilcakova, P. Saha, I. Sapurina, J. Stejskal	Oxygen semi-permeation, surface exchanges and bulk diffusion of La1-xSrxFe1-yGayO3-d perovskite membrane A. Vivet (SPCTS, Limoges, France), P.-M. Geffroy, J. Fouletier, P. Del Gallo, N. Richet, T. Chartier	Size-variable mesoporous microbeads for controlled hormone delivery in programmed animal reproduction I. Rintoul (Universidad Nacional del Litoral - Consejo Nacional de Investigaciones Científicas y Técnicas, Santa Fe, Argentine Republic), J. Badano, R. Grau
18:00	Atomic scale modeling of nanostructures formation in Fe-Ga alloys with giant magnetostriction: cascade ordering and decomposition J. Boisse (INSA Lyon France, Villeurbanne, France), A.G. Khachatryan, H. Zapolsky	Grain boundary effects during the solidification of a dilute alloy J. Aveson (University of Cambridge, Cambridge, United Kingdom), G. Reinhart, N. Mangelinck-Noël, H. Nguyen-Thi, T. Lafford, H. Stone	Y-type hexagonal ferrites for high-frequency multilayer inductors J. Töpfer (Univ. Appl. Sciences Jena, Jena, Germany), S. Bierlich	Hydrogen separation: A ceramic membrane for fuel cell applications N. Donzel (ICGM-AIME, Montpellier, France), D. Jones, M. Marrony, J. Roziere	Mesoporous Silica Nanoparticles for Photodynamic Therapy J.-O. Durand (ICGM-UM2, Montpellier, France), L. Raehm, S. Richeter, P. Maillard, A. Morere, M. Gary-Bobo, M. Garcia, M. Blanchard-Desce, O. Mongin, D. Brevet
18:20	Assembly of Nanoscale Building Blocks to control the Collective Magnetic Behavior V. Salgueirino (Universidade de Vigo, Vigo, Spain), A.B. Davila-Ibañez, N. Fontaiña-Troitiño	Solute trapping in rapid solidification of a binary diluted alloy P. Galenko (German Aerospace Center, Cologne, Germany), E. Abramova, D. Danilov, V. Lebedev, D. Herlach	Ni-Fe-X-Y nanocrystalline soft magnetic powders obtained by mechanical alloying routes I. Chichinas (Technical University of Cluj-Napoca, Cluj-Napoca, Romania), B.V. Neamtu, O. Isnard, F. Popa, C.V. Prica, T.F. Marinca, V. Pop	Charge carrier injection and transport in nano-scale metal oxides D. Friedrich (Helmholtz-Zentrum Berlin, Berlin, Germany), L. Valdecabres, M. Kunst	Functional mesoporous silica materials structured using functionalizing PIC micelles: application as drug delivery systems C. Gerardin (Institut C Gerhardt, Montpellier, France), J. Warnant, G. Layrac, T. Cacciaguerra, C. Jerome

pm2

Tuesday 13 September 2011

Symp.	D22	C12	D21	E11	C21
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
Session	<u>Nanocrystalline Materials and Nanocomposites</u> Eric Le BOURHIS, Université de Poitiers	<u>Modeling: from atomic to mesoscale</u> Benoît APPOLAIRE, ONERA	<u>6. Thin films, materials in electronics and MEMS.</u> <u>contacts</u> Javier GIL SEVILLANO, University of Navarra	<u>Radwaste Matrices & Targets</u> Nicolas CLAVIER Inst. of Separative Chem. Marcoule	<u>Wetting & Reactivity</u> Shun-Ichiro TANAKA, Tohoku University, Sendai
16:40	Elastic-plastic Transition in Nanostructured Materials: Definition and Effect of Internal Stress on Microplastic Regime L. Thilly (University of Poitiers, Futuroscope, France), S. Van Petegem, J.-B. Dubois, F. Lecouturier, P.-O. Renault, H. Van Swygenhoven	Kinetic study of phase transformation in a Fe-25%Cr alloy at 500°C : Monte Carlo simulation versus experiments C. Pareige (Université de Rouen, Saint Etienne Du Rouvray, France), M. Roussel, S. Novy, V. Kuksenko, P. Olsson, C. Domain, P. Pareige	HIGHLIGHT LECTURE Interface delamination in stretchable electronics; an in-situ SEM study J. Hoefnagels (Eindhoven University of Technology, Eindhoven, Netherlands), J. Neggers, O. Van Der Sluis, P. Timmermans, M. Geers	Cocktail hohraums prepared by multitarget sputtering R. Gateau (CEA - DAM, Is Sur Tille, France), J. Nazon, C. Van Vosthuyse, S. Le Tacon, F. Durut, M. Theobald, O. Legaie	KEYNOTE LECTURE The wetting mechanism in the TiB ₂ /Me (Me = Cu, Au) systems M. Aizenstein (NRCN, Lehavim, Israel), N. Froumin, N. Frage
17:00	Effect on Film Thickness on Fatigue Properties of Nanocrystalline Nickel Films K. Tanaka (Meijo university, Nagoya, Japan), M. Sakakibara, H. Tanaka, H. Kimachi	Atomistic simulations of decomposition kinetics in iron chromium alloys O. Senninger (CEA, Gif Sur Yvette, France), E. Martinez, F. Soisson	Size-effects in time-dependent mechanics of Al-Cu MEMS L. Bergers (Eindhoven University of Technology, Eindhoven, Netherlands), J. Hoefnagels, M. Geers	Study of the structural part on the alteration behavior of rare earth aluminosilicate glasses for nuclear waste storage N. Pellerin (CNRS, Orléans, France), R. Omnee, M. Allix, P. Simon, C. Corbel, C. Jegou, V. Montouillout, D. Massiot	
17:20	Microplasticity in nanocrystalline metals S. Van Petegem (Paul Scherrer Institut, Villigen Psi, Switzerland), P. Ghosh, J. Zimmermann, A.H. Chokshi, H. Van Swygenhoven	3D Microstructures and elastic effects at the atomic scale : Monte Carlo simulations under the Lattice Statics formalism C. Varvenne (ONERA, Chatillon, France), A. Finel, M. Fèvre, Y. Le Bouar	Planar crack front propagation in heterogeneous brittle materials for finite size samples S. Patinet (ESPCI, Paris, France), J. Frelat, V. Lazarus, D. Vandembroucq	Impact of pore size and pore wall composition on the dynamics of confined water in highly ordered silica porous material I. Matar Briman (CEA MArcoule, Bagnols Sur Cèze, France), D. Rebiscoul, O. Diat, G. Laurent, S. Gin	Diffusion brazing of Nickel Aluminides using ternary Al-Ge-Ni alloys L.I. Duarte (Empa, Swiss Federal Laboratories for Materials Science and Technology, Duebendorf, Switzerland), T.L. Reichmann, Y. Plevachuk, K.W. Richter, C. Leinenbach
17:40	Nanomechanical Characterization in Nanorubber-Modified Epoxies S. Moody (The University of Sydney, Sydney- Nsw, Australia), B. Marouf, Y.-W. Mai	Phase field modeling of dissolution of precipitates after and during plastic shear B. Appolaire (Onera, Chatillon, France), K. Ammar, G. Cailletaud, S. Forest	Brittle Ceramic Coatings vs. Polymer-Derived Ceramic (PDC) Coatings: A Highly Resilient Coating A. Taylor (Erich Schmid Institute, Leoben, Austria), V. Edlmayr, S. Grasser, K. Terauds, R. Raj, G. Dehm	Synthesis and characterization of Th _{1-x} U _x SiO ₄ solid solutions D.T. Costin (CEA, Bagnols Sur Ceze, France), A. Mesbah, N. Clavier, N. Dacheux, C. Poinsot, J. Ravaux	Control of interfacial reactivity in transition metal diborides brazing processes F. Valenza (CNR - IENI, Genova, Italy), M.L. Muolo, R. Novakovic, C. Artini, G. Cacciamani, A. Passerone
18:00	High Resolution Mechanical and Chemical Characterization of Nanocomposite Materials M. Trudeau (Hydro-Quebec Research Institute, Varennes, Quebec, Canada), L. Rodrigue, R. Veillette, A.-M. Serventi, R. Gauvin	Modelling of multi-phase solid state reactions by example of intermetallic growth. M. Pawelkiewicz (EMPA, Dübendorf, Switzerland), M. Danielewski, J. Janczak-Rusch	Prediction of Catastrophic Silicon Wafer Breakage J. Garagorri (CEIT, San Sebastin, Spain), E. Gorostegui-Colinas, D. Allen, P. McNally, M. Fossati, K. Bowen, B. Tanner, J. Wittge, A. Danilewsky, R. Elizalde	HIGHLIGHT LECTURE A Family of Phosphates of NaZr ₂ (PO ₄) ₃ and Langbeinite Structure. Crystal-Chemical Aspect of Radioactive Waste Immobilization A. Orlova (Lobachevsky State University of Nizhni Novgorod, Nizhni Novgorod, Russian Federation), A. Koryttseva	Mechanical performance and failure of advanced reactive air brazed (RAB) metal ceramic joints C. Li (Research Centre Juelich, Jülich, Germany), J. Brandenburg, B. Kuhn, T. Beck
18:20	Dislocations dynamics explain deformation in copper with small grain size. Y. Champion (CNRS, Thiais, France), Y. Bréchet	The Microstructure Evolution of Heat treated Hot Work Tungsten Tool Steel M. Nurbanasari (The University of Sheffield, Sheffield, United Kingdom), P. Tsakiroopoulos, E. J. Palmiere	Study of Wear by In-situ Transmission Electron Microscopy K. Anantheshwara (India Institute of Science, Bangalore, India), M.S. Bobji, A.J. Lockwood, B.J. Inkson	Development of new apatite phases for the confinement of radioactive Iodine D. Laurencin (Institut Charles Gerhardt de Montpellier, Montpellier, France), R. Delorme, L. Campayo, A. Grandjean	Wetting of grain boundaries by the second solid or amorphous phase B. Straumal (Institute of Solid State Physics RAS, Chernogolovka, Russian Federation), S. Protasova, A. Mazilkina, P. Straumal, O. Kogtenkova, P. Zieba, B. Baretzky, S. Dobatkin, J. Dutta Majumdar, I. Manna

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Tuesday 13 September 2011

Symp.	G11	D13	B33	D12	E31
Room	Joffre 5	Barthez 1	Louisville	Barthez 2	Joffre 4
	<u>Material Science and Engineering Education for 2020s - 1</u> Maria-Dolorés BARO, Universitat Autònoma Barcelona	<u>Nanosciences and microelectronics</u> B. GAULT, University of Sydney	<u>Properties and Characterization 1</u> Paolo COLOMBO, University of Padova	<u>Tomography: Methods & Applications I</u> John BANHART, Helmholtz-Zentrum Berlin - HZB	<u>Metals II</u> Kambiz KAYVANTASH, CALD
Session					
16:40	Glass and Ceramic Composites for High Technology Applications (GlaCERCo), Marie Curie Initial Training Network (ITN) M. Salvo (Politecnico di torino, Torino, Italy), M. Ferraris , C. Contardi , T. Glacerco	HIGHLIGHT LECTURE Prospects for Atom Probe Tomography of Semiconductor Devices D. Larson (Cameca, Madison, USA), D. Lawrence , D. Olson , T. Prosa , R. Ullig , P. Clifton , J. Bunton , D. Lenz , L. Renaud , T. Kelly	KEYNOTE LECTURE in situ experiments in tomography for the study of the physics and mechanics of porous materials E. Maire (mateis, Villeurbanne, France), S. Deville , A. Lasalle , J. Adrien , O. Caty	HIGHLIGHT LECTURE Neutron Strain Tomography Using Bragg-Edge Transmission B. Abbey (Melbourne University, Parkville, Australia), S.-Y. Zhang , N. Baimpas , F. Hofmann , A. Korsunsky	Microstructures and properties for multiphase steels and formability P. Biasin (University of Udine, Udine, Italy), D. Ceotto , A. Dimatteo , M. Merklein , R. Valentini , F. Miani
17:00	The power of board games to teach Materials Science P. Fernández (University Complutense, Madrid, Spain)	Three dimensional characterization of advanced microelectronic transistors for the 22-nm-node and beyond A. Grenier (CEA, Grenoble, France), J.-P. Barnes , D. Cooper , F. Bertin , T. Ernst , S. Duguay , F. Vurpillot , D. Blavette , A. Chabli , N. Gambacorti		Laboratory 3D micro XRF - micro CT imaging system P. Bruyndonckx (SkyScan, Kontich, Belgium), A. Sasov , X. Liu	Fatigue behavior of dual-phase and TWIP steels for lightweight automotive structures P. Matteis (Politecnico di Torino, Torino, Italy), G. Scavino , F. D'Aiuto , D. Firrao
17:20	Quality Assurance For Course Assessment In Higher Education Of Iraq T. Alshimmari (Technology Projects Management Development OFF., Sharjah, United Arab Emirates)	Atom Probe Tomography on Compound Semiconductors M. Mueller (University of Oxford, Oxford, United Kingdom), G. Smith , C. Grovenor	Improvement of the aluminium integral foam moulding process by numerical simulation J. Hartmann (Institute of Science and Technology of Metals (WTM), Erlangen, Germany), C. Körner	Studying root-canal treatment outcomes and qualities by synchrotron-based phase contrast-enhanced micro CT P. Zaslansky (Max-Planck Institute for Colloids and Interfaces, Potsdam, Germany), H. Shemesh , A. Rack , P. Fratzl	TIG Welding of Dissimilar Joints Between TWIP and Automotive Commercial HSLA Steels S. Dos Santos Vales (Universidade de São Paulo, São Carlos, Brazil), J. Aparecida Rodrigues , O. Maluf , E. Lima , H. Pinto
17:40	MaMaSELF: a EMMC connecting Universities, Industries and Large Scale Facilities W. Paulus (Université Rennes 1, Rennes, France), C. Lamberti , W. Petry , W. Schmahl	Laser-assisted atom probe tomography of self-organized surface layers G. Schmitz (Westfälische Wilhelms Universität Münster, Münster, Germany), A. Stoffers	Monofilament entangled materials' behavior under compressive loading L. Courtois (MATEIS laboratory, Villeurbanne, France), E. Maire , M. Perez , Y. Brechet , D. Rodney	High Resolution Computed Tomography for Non-Destructive Materials Analysis: Advances and Comparison with Synchrotron-Based CT T. Hemberger (GE Inspection Technologies SCS, Limonest, France), J. Lübbehüsen , O. Brunke	Function of Molybdenum Precipitations in High Temperature Ductile Cast Iron S. Michel (Clausthal University of Technology, Clausthal-Zellerfeld, Germany), L. Dekker , B. Tonn , A. Scholz , C. Berger
18:00	Attracting students to materials science via research projects Y. Bréchet (Grenoble INP, Saintmartin D'Hères, France)	Atom Probe Tomography analysis of Nickel Silicide contact on N-MOS transistor F. Panciera (IM2NP-STMICROELECTRONICS, Marseille, France), K. Hoummada , M. Gregoire , M. Juhel , N. Bicais , D. Mangelinck	Local tomography study of the fracture of an ERG metal foam T. Zhang (Université de Grenoble, Saint Martin D'Hères, France), E. Maire , J. Adrien , P. Onck , L. Salvo	Characterization of Open Foam Structures based on 3D Image Data A. Liebscher (TU Kaiserslautern, Kaiserslautern, Germany), C. Redenbach	Elaboration and mechanical behaviour of Mg based composites containing gamma-Mg17Al12 complex metallic phases S. Benrahem (SIMAP, Saint Martin D'Hères, France), P. Donnadieu , C. Tassin , J.-J. Blandin
18:20	Teach of Materials Science and Materials Selection in a design course: a Brazilian experience with a focus on sustainability A. Canal Marques (Universitat Politècnica de Catalunya, Barcelona, Spain), C. Malfatti , J.M. Cabrera Marrero	Characterization of internal interfaces in Cu(In,Ga)Se2 thin-film solar cells using Atom Probe Tomography O. Cojocaru-Mirédin (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), P.-P. Choi , R. Würz , D. Raabe	Macrocellular silicon carbide decorated with silicon nitride nanowires M. Fukushima (National Institute of Advanced Industrial Science and Technology (AIST), Nagoya, Japan), P. Colombo	Microstructural Characterization of CFC Materials by X-ray Microtomography I. Tiseanu (National Institute for Lasers, Plasma and Radiation Physics NILPRP, Bucharest-Magurele, Romania), T. Craciunescu , M. Rubel , G. De Temmerman , C. Dobrea , A. Sima	Selection of aluminium matrix composition in composites reinforcement with carbon fibres M. Dyzia (Silesian University of Technology, Katowice, Poland), A. Dolata-Grosz , J. Sleziona

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Tuesday 13 September 2011

Symp. Room	A23 Joffre B	B14 Joffre C	C32 Joffre D	A41 Barcelona	E23 Sully 3bis
Session	<u>Comprehensive characterisation of magnetocaloric materials</u> V. FRANCO, Uni Sevilla	<u>Twin Roll Casting and Wrought Alloys</u> Rainer SCHMID-FETZER, Clausthal-University of Technology	<u>Spark Plasma Sintering</u> Omer Van der BIEST, K. U. Leuven	<u>Biopolymers and biocomposites - 1</u> Lars BERGLUND, Royal Inst of Technology	<u>Thermoelectrics - 3</u> Sylvie HEBERT,
16:40	Magnetic and structural entropy change in materials with magneto-volume phase transition V. Basso (Istituto Nazionale di Ricerca Metrologica, Torino, Italy), C.P. Sasso	Twin Roll Casting of Magnesium D. Letzig (Helmholtz-Zentrum Geesthacht, Geesthacht, Germany), Y. Sangbong, K. Gerrit, B. Jan	HIGHLIGHT LECTURE Sintering mechanisms of a TiAl alloy processed by SPS J.-P. Monchoux (CEMES-CNRS UPR 8011, Toulouse, France), H. Jabbar, A. Couret	Properties Of Chicken Feathers Based Polylactic Acid Biocomposites F. Carrillo (UPC, Terrassa, Spain), N. Garrido, J. Aymerich, X. Colom, F.J. Cañavate, J. Macanás, M.D. Álvarez, G. Molins	New doping attempts and lattice dynamic study of compounds with anti-Th3P4 for improving their thermoelectric properties D. Berthebaud (ICGM, Université Montpellier 2 et CNRS, Montpellier, France), R. Viennois, J.-C. Tedenac, D. Ravot, M. Koza
17:00	Correlating the magnetocaloric properties – delta-T, delta-S, Cp – in La(Fe,Si)13 alloys J. Moore (IFW Dresden, Dresden, Germany), K. Skokov, M. Krautz, J. Liu, O. Gutfleisch	Deformation Behavior of Twin-Roll Cast Mg-4Zn-1Gd Alloy Sheet B.-C. Suh (POSTECH, Pohang, Korea - south), J.H. Bae, D.-W. Kim, M.-S. Shim, N.J. Kim	Physical characterization of silver material sintered by SPS technique used as material connection in power electronics. N. Alayli (LSPM, Villetaneuse, France), F. Schoenstein, A. Girard, P.-R. Dahoo, K.-L. Tan	Bionanocomposites prepared by interfacing proteins with vanadium and tungsten oxides through a complex coacervation process N. Steunou (UVSQ, Versailles Cedex, France), I. Baroudi, F. Carn, C. Simonnet, B. Fayolle, G. Mosser, E. Cadot	Thermoelectric properties of InAs/InP nanostructures S. Salman (INSA Rennes, Rennes, France), H. Folliot, J. Le Pouliquen, N. Chevalier, T. Rohel, C. Paranthoen, A. Le Corre
17:20	A calorimetric investigation of the consequences of irreversibility on out-of-equilibrium magnetocaloric effects M. Bratko (Imperial College, London, United Kingdom), K. Morrison, A. De Campos, S. Gama, L. Cohen, K. Sandeman	Influence of strain rate on the flow behaviour of magnesium-sheets produced by twin-roll casting F. Schwarz (TU Bergakademie Freiberg, Freiberg, Germany), L. Krüger	Deformation-related microstructure evolution and mechanical properties of SPS-processed Ni G.-D. Kollo (laboratory LSPM CNRS, 93430 Villetaneuse, France), D. Tingaud, P. Langlois, G. Dirras	Magnetic field responsive nanostructured biocomposites: preparation and mechanical properties under controlled magnetic field A. Ponton (CNRS & University Paris Diderot Paris 7, Paris, France), C. Galindo-Gonzalez	Thermoelectric properties of zinc and antimony sequential UPD deposited film on Au electrode modified by pentacene M.-C. Record (IM2NP, Marseille, France), L. Wang
17:40	Direct determination of the magnetocaloric effect in compounds containing the Fe14 molecular cluster E. Palacios (University of Zaragoza, Zaragoza, Spain), M. Evangelisti, L. Tocado, S. Elkatlawy, R. Burriel, E.J. Mc Innes	Asymmetric rolling of a wrought magnesium alloy: effect of processing parameters on texture and microstructure M.C. Forget (SIMaP Laboratory, Saint Martin D'Hères, France), G. Kapelski, E.F. Rauch, J.-J. Blandin	Spark Plasma Sintering of copper powders with different particle size S. Diouf (University of Trento, Trento, Italy), C. Menapace, A. Molinari	Controlled Deposit Of Polymer Nanoparticles Onto A Conductive Solid Substrate And Its Functionalization By A Protein B. Damien (CRPP-CNRS, Pessac, France), C. Sébastien, F. Hélène, L. Chantal, F. Chrystel	Thermoelectric properties of Mg2Si investigated by Density-Functional Theory : from bulk materials to thin films P. Boulet (University of Aix-Marseille, Marseille, France), M.-C. Record
18:00	Dynamics of the magnetic field-induced phase transition of La(Fe-Co-Si)13 compounds C.P. Sasso (INRIM, Torino, Italy), V. Basso, M. Kuepferling	HIGHLIGHT LECTURE Control of Asymmetry in Wrought Magnesium Extrusions J. Robson (University of Manchester, Manchester, United Kingdom), N. Stanford, M. Barnett	Spark Plasma Sintering of alumina : parameters study, formal sintering analysis and hypotheses about the mechanism(s) involved in densification and grain growth J. Gurt Santanach (Université de Toulouse, Toulouse, France), A. Weibel, C. Estournès, Q. Yang, C. Laurent, A. Peigney	Feasibility Study: Simultaneous Microfabrication And Enzyme Immobilisation In Su-8 Films For Fluorescence-Based Glucose Biosensors S. Psoma (École Polytechnique Fédérale de Lausanne (EPFL), Neuchâtel, Switzerland), P. Van Der Wal, N. De Rooij	Laser Deposition and Characterization of Amorphous Thermoelectric Films G. Wilks (Air Force Research Laboratory, Wright-Patterson Afb, U.S.A.), T. Murray, S. Fairchild, N. Gothard, J. Spowart
18:20	Experimental considerations when measuring the magnetocaloric effect: Potential pitfalls with calorimetric methods K. Morrison (Imperial College, London, United Kingdom), D. Caplin, L. Cohen	Design strategy for high-strength and simultaneously highly ductile magnesium alloys A. Sologubenko (ETH Zurich, Zurich, Switzerland), P.J. Uggowitzer, P. Gunde, A.C. Haenzi, M. Schinhammer	The use of Spark Plasma Sintering to co-sinter porous titanium and bulk cobalt alloy in a near-net-shape N. Vicente Junior (University of Trento, Trento, Italy), F. Casari, F. Bucciotti, P. Robotti, A. Molinari	Synthesis And Characterization Of Multifunctional Bionanocomposite Films From Poly(Lactic Acid), Cellulose Nanocrystals And Silver Nanoparticles E. Fortunati (University of Perugia, Terni, Italy), I. Armentano, A. Iannoni, E. Saino, L. Visai, Q. Zhou, J.M. Kenny	Huge Seebeck Coefficient in V-TcNE thin films A. Chamoire (Ohio State University, Columbus, USA), C. Jaworsky, C.-Y. Kao, J. Heremans, A. Epstein

am2

Wednesday 14 September 2011

Symp.	A24	C11	A21	C41	A32
Room	Pasteur	Einstein	Antigone 1	Antigone 3	Joffre 1
	<u>Biomedical Applications (I)</u> Francisco SANCHEZ, La Plata, Argentina	<u>Dendritic structures / Transparent</u> Bernard BILLIA, Univ. Marseille	<u>Soft magnetic materials for sensors and nanotechnology</u> Shashank N. KANE, University of Indore	<u>Process optimization and new development</u> Teodoro VALENTE, Università di Roma "La Sapienza"	<u>Beyond mesoporous materials -2</u> David GROSSO, Université Pierre et Marie Curie
Session					
10:30	Dendritic and Phosphonate Approaches to Develop Smart Iron Oxide Based Contrast Agent for MRI: in-vitro and in-vivo studies S. Begin-Colin (IPCMS, Strasbourg, France), D. Felder-Flesch , B. Basly , G. Pourroy , P. Perriat , C. Billotey	HIGHLIGHT LECTURE Phase-field simulations and geometrical characterisation of cellular solidification fronts M. Plapp (CNRS/Ecole Polytechnique, Palaiseau, France), Y. Ma	Magnetic properties of inkjet printed UV-cured films containing magnetic nanoparticles A. Chiolerio (Politecnico di Torino, Torino, Italy), M. Paola , D.G. Paola , P. Paolo , C. Marco , S. Marco , S. Lorenza , T. Paola , A. Paolo	Enhanced and adjustable mechanical, magnetic and thermal properties of nanocrystalline Cu-Ni films by fine-tuning the exact alloy composition during electrodeposition J. Sort (Universitat Autònoma de Barcelona, Bellaterra, Spain), E. Pellicer , A. Varea , K. Sivaraman , S. Pané , S. Suriñach , D. Baró , J. Nogués , B. Nelson	HIGHLIGHT LECTURE Fine tuning of bioactivity of bioceramics through porosity engineering: a soft chemistry approach J.-M. Nedelec (IUF - Clermont Université, Aubiere, France), J. Soulie , J. Lao , E. Jallot
10:50	Magnetic pH-responsive Nanogel as Multifunctional Delivery Tool for small interfering RNAs (siRNAs) A. Curcio (Italian Institute of Technology (IIT), Genova, Italy)	Quantitative Phase-Field Modelling of Coupled Thermo-Solutal Growth at High Lewis Number A. Mullis (University of Leeds, Leeds, United Kingdom), P. Jimack , J. Rosam	Soft Magnetic Thin Films for MEMS Applications C. Ruffert (Leibniz Universität Hannover, Garbsen, Germany), J. Chen , L. Rissing	Nanometric conductive coatings based on different carbon polymorphous obtained by sol-gel E. Enríquez (INSTITUTO DE CERÁMICA Y VIDRIO, Madrid, Spain)	
11:10	Fe ₃ O ₄ -POLYETHYLENGLYCOL COATED NANOPARTICLES ACHIEVED BY UV-THIOL-ENE ADDITION OF PEG-DITHIOL ON VINYL FUNCTIONALIZED MAGNETITE NANOPARTICLES J. Amici (Politecnico di Torino, Torino, Italy), P. Allia , P. Tiberto , M. Sangermano	Solute trapping in phase field modelling of alloy solidification with asymmetric solute diffusivities Y. Xie (University of Leicester, Leicester, United Kingdom), H. Dong , J. Dantzig	Magnetostriction of Epitaxial Fe(100) Single Crystal Film T. Kawai (Chuo University, Tokyo, Japan), O. Mitsuru , O. Shouhei , F. Masaaki	HIGHLIGHT LECTURE Advanced developments in atmospheric plasmas CVD devices and processing J. Dutroncy (AcXys Technologies, St Martin Le Vinoux, France), E. Jouvét , T. Sindzingre	Strong, tough, nanofibrillated cellulose based membranes with high porosity and high surface area H. Sehaqui (Royal Institute of Technology, Stockholm, Sweden), Q. Zhou , L. Berglund
11:30	Synthesis and Surface modification of Fe ₃ O ₄ Magnetic Nanoparticles for Neural Guidance C. Pilar (Instituto de Nanociencia de Aragón, Zaragoza, Spain), S. Beatriz , A. Idoia , T. Teobaldo E. , I. M. Ricardo , G. Gerardo F	In situ and real time characterization of 3D interface microstructure in alloy solidification: microgravity experiments in the DECLIC-Directional Solidification Insert on ISS L. Chen (IM2NP - CNRS, Marseille, France), A. Ramirez , N. Bergeon , B. Billia , J. Gu , R. Trivedi	Microstructural Evaluation OF 5%NI AND 10%NI steel sheets with Magnetic Barkhausen Noise M.F. De Campos (Universidade Federal Fluminense, Volta Redonda RJ, Brazil), E. Monlevade , F. Franco , J. Caposanchez , H. Goldenstein , L. Padovese	Investigations on Silicon Nitride Thin Films Deposited by PECVD C. Ruffert (Leibniz Universität Hannover, Garbsen, Germany), F. Pape , L. Rissing	Monodisperse Mesoporous Silica Nanospheres with Radial Porosity and their Efficiency in Catalytic Esterification and Controlled Drug Release J. Nyalosaso Likoko (UNIVERSITE OF MONTPELLIER 2, Montpellier, France), L. Zongxi , A. Hwang , D. Ferris P. , S. Yang , G. Derrien , L.-C. De Menorval , C. Charnay , J. Zink I. , J. Zajac
11:50	Magnetic capsules for NMR imaging: Effect of magnetic nanoparticles spatial distribution and aggregation. P. De La Presa (Instituto de Magnetismo Aplicado, Las Rozas, Spain), A.Z. Abbasi , L. Gutiérrez , L.L. Del Mercato , F. Herranz , O. Chubykalo-Fesenko , S. Veintemillas-Verdaguer , W.J. Parak , M.P. Morales , A. Hernando	Maximal curvature and crystal orientation on inclined directionally solidified dendrites M. Georgelin (Aix-Marseille Université, Marseille, France), A. Pocheau , J. Deschamps	Influence of film thickness on the structure and the magnetic properties of bcc-Co films grown on GaAs single-crystal substrates with different orientations M. Ohtake (Chuo University, Tokyo, Japan), N. Yusuke , M. Futamoto	Electro-colloidal lithography: a new surface patterning technique C. Faure (CBMN, Pessac, France), D. Bazin , C. Larpent , H. Saadaoui	Hexagonally Ordered Mesoporous Carbons Synthesized Using Aromatic And Cyclodextrin Precursors And Their Uses In Aqueous Catalysis A. Ponchel (University of Artois, Lens, France), N. Gokulakrishnan , N. Kania , B. Léger , C. Lancelot , D. Grosso , E. Montflier

12:10	Magnetic Nanoparticles as MRI Contrast Agents and for Selective Targeting of Cells W. Tremel (Johannes Gutenberg-Universität, Mainz, Germany), T. Schladt, K. Schneider, B. Heiko, N. Bahar, N. Tahir	Simulation of spherulite structure in high pressure polymer crystallization based on three dimensional cellular automaton - finite element modeling S.A. Boyer (PPRIME-P' INSTITUTE, Futuroscope Chasseneuil, France), T. Carozzani, H. Digonnet, C.-A. Gandin	Development of a magnetoelastic sensor for on-line status assessment of lubricant oils I. Bravo-Imaz (Tekniker, Eibar, Spain), A. García-Arribas, E. Gorritxategi, M. Hernaiz, J. Terradillos	Grafting of phosphonate monolayers on calcium carbonate particles W. El Malti (Institut Charles Gerhardt Montpellier, Montpellier, France), G. Guerrero, D. Laurencin, C. Gervais, P. Mutin	Preparation of zeolites with controlled mesoporosity using recyclable structuring agents R. Chal (ICGM, Montpellier, France), T. Cacciaguerra, D. Minoux, S. Van Donk, C. Gerardin
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am2

Wednesday 14 September 2011

Symp.	A42	C12	A31	A54	C21
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
Session	<u>Functional Polymeric Hybrid Materials -1</u> Jean-François GERARD, INSA de Lyon - UMR CNRS 5223	<u>Martensites I</u> Frédéric DANOIX, Université de Rouen/CNRS	<u>Carbon nanotube-based composites</u> Brigitte VIGOLO, CNRS Nancy	<u>SMA Processing and Characterization</u> Ausonio TUISSI, National Research Council, CNR IENI Lecco , Italy	<u>Interfaces & Brazing</u> Boris STRAUMAL, Institute of Solid State Physics, Chernogolovka
10:30	KEYNOTE LECTURE Inorganic-Organic Class II Sol-Gel Hybrids - ORMOCER@s – Multifunctionality for Tuning of Properties and Better Processing M. Popall (Fraunhofer-Institute for Silicate Research, ISC, Würzburg, Germany)	KEYNOTE LECTURE Where are the Carbon Atoms in Martensite? G. Smith (Oxford University, Oxford, United Kingdom)	HIGHLIGHT LECTURE Carbon Nanotube - Ceramic composites : review of achievements and perspectives A. Peigney (CIRIMAT, Université Paul Sabatier, Toulouse , France), A. Weibel, C. Laurent	Thermomechanical processing and mechanical properties of high purity 150 mm in diameter EB melted Ni-Ti SMA J. Otubo (Istituto Tecnológico de Aeronautica - ITA, S. J. Campos - Sp, Brazil), A. S. Antunes, J.P. V. Tosetti	HIGHLIGHT LECTURE Anisotropy of wetting and spreading in binary metallic systems: experimental facts and MD modeling P. Protsenko (Lomonosov Moscow State University, Moscow, Russian Federation), V. Timoshenko, V. Bochenkov
10:50			Influence of the alignment of carbon nanotubes on the percolation threshold of epoxy/MWNT nanocomposites S. Pezzin (UDESC, Joinville, Brazil), C. Risi, I. Hattenhauer, C. Luiz, A. Ramos	KEYNOTE LECTURE The increase of the martensitic deformation during shape memory effect in deformed TiNi G. Firstov (G. V. Kurdyumov institute for Metal Physics, National Academy of Sciences of Ukraine, Kiev, Ukraine), Y. Koval, A. Lotkov, V. Grishkov, J. Van Humbeeck	Preliminary investigation on joining performance of Ti/Ti and Ti/Steel joints using copper film deposited by PVD technique A. Elrefaey (LWT, TU Dortmund, Dortmund, Germany), L. Wojarski, W. Tillmann
11:10	Photoactive organic-inorganic hybrid nanocomposites based on titanium oxo-species L. Rozes (Université Pierre et Marie Curie, Paris, France), J. Peron, R. Rahal, P. Gorbovy, M. Traore, L. Museur, A. Kanaev, C. Sanchez	Investigations of a martensitic stainless steel after quenching and partitioning L. Yuan (Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), D. Ponge, D. Raabe	Double-Walled Carbon Nanotube – Copper Composites C. Laurent (Université de Toulouse, Toulouse, France), C. Guiderdoni, A. Peigney, A. Weibel, V. Turq, C. Estournès		Brazing of SiC-SiC composites with a silicon based brazing alloy for high temperature applications: influence of the atmosphere on interfacial reactivity V. Chaumat (CEA, Grenoble, France), F. Audubert
11:30	Covalent Linking of Siloxane Cages via Rigid Organic Groups: Toward Crystalline Hybrid Porous Materials A. Shimojima (The University of Tokyo, Tokyo, Japan), W. Chaikittisilp, A. Sugawara, T. Okubo	Characterisation by Atom Probe Tomography of martensite islands in a microalloyed Dual-Phase steel P. Maugis (Aix-Marseille University, Marseille, France), K. Hoummada, M. Dumont, C. Philippot, D. Mangelinck, V. Hebert, J. Drillet	Processing Non-Conventional Cnt/Polymer Based Composites With Improved Properties For Applications In Space C. Pereira (INEGI - University of Porto, Porto, Portugal)	The Superelasticity And Shape Memory In Binary Tini Based Alloys With Ultrafine Grained Structures Produced By The Warm Severe Plastic Deformation G. Victor (Institute of Strength Physics and Materials Science of the Siberian Branch of RAS, Tomsk, Russian Federation), L. Aleksandr, K. Yuri, B. Anatoly, F. George, T. Victor, Z. Dorzhima, G. Natalya	Joining of Cf/SiC ceramics to Nimonic alloys K. Mergia (NATIONAL CENTRE FOR SCIENTIFIC RESEARCH "DEMOKRITOS", Aghia Paraskevi, Athens, Greece), C. Jimenez, N. Moutis, X. Aziproz, C. Wilhelmi, T. Speliotis, S. Messoloras
11:50	Low Power Sensitized Upconverting Nanoparticles Y. Simon (Adolphe Merkle Institute, Université de Fribourg, Marly 1, Switzerland), C. Weder	The martensitic transformation of Cu-Al-Ni shape memory alloys studied by Adiabatic Calorimetry A. López-Echarri (Universidad del País Vasco. UPV/EHU, Bilbao, Spain), J. Rodríguez-Aseguinolaza, I. Ruiz-Larrea, M. Nó, J. San Juan	CNT reinforced aluminum matrix composites by hybrid PM process A. Kawasaki (Tohoku University, Sendai, Japan), H. Kwon, H. Kurita	Correlation between drawing process and functional properties of thin NiTi wires for shape memory actuators R. Casati (CNR IENI, Lecco, Italy), S. Arnaboldi, C. Dickinson, S. Belochapkine, S.A. Tofail, A. Tuissi	Melting point depression of brazing filler metals in a nanolayer system J. Janczak-Rusch (Empa, Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland), V. Bissig, M. Parlinska-Wojtan, O. Sereda, A. Neels
12:10	Flexible, self-standing and selective UV-VIS-NIR optical filters based on polymer infiltration of nanoparticle layers M. Calvo (Instituto de Ciencia de Materiales de Sevilla, Sevilla, Spain), H. Míguez, O. Sánchez-Sobrado	Toward a new interpretation of the mechanical behaviour of martensitic steels S. Allain (CNRS, Saint-Etienne Du Rouvray, France), F. Danoix, M. Goune, O. Bouaziz	Electrical properties of CNT-based polymeric matrix nanocomposites A. Chiolerio (Politecnico di Torino, Torino, Italy), M. Giorelli, M. Castellino, P.V. Jagdale, A. Tagliaferro	Influence of the chemical composition and the pre-heating temperature on martensitic transformations and mechanical properties of porous TiNi alloys produced by self-propagating high-temperature synthesis N. Resnina (Saint-Petersburg State University, Saint-Petersburg, Russian Federation), S. Belyaev, A. Krivosheev, A. Voronkov	Interfaces between Ag-Cu brazing filler films and AlN from first principles: origin of melting point depression A. Antusek (Faculty of Materials Science and Technology, Trnava, Slovak Republic), D. Passerone, C.A. Pignedoli, J. Janczak-Rusch, M. Parlinska-Wojtan

am2

Wednesday 14 September 2011

Symp.	G11	D13	B33	D12	E31
Room	Joffre 5	Barthez 1	Louisville	Barthez 2	Joffre 4
	<u>Material Science and Engineering Education for 2020s - 2</u> Werner PAULUS, Université Rennes 1	<u>Theory of APT/modeling/ data mining</u> N. WANDERKA, Helmholtz-Zentrum Berlin	<u>Properties and Characterization 2</u> Carolin Körner, University of Erlangen-Nuernberg	<u>Tomography for design and development</u> Timm WEITKAMP, Synchrotron Soleil - Orsay	<u>Joining</u> Dirk LEHMUS, Universität Bremen
10:30	Towards an Education for Balanced Gender Career Evolution in Materials Science and Engineering Institutions L. M.A. Gialampouki , (University of Ioannina, Ioannina, Greece), . G.B.Bokas, Ch. E. Lekka, . J. Sujanova, J.Stefankova, . M. Cambal, D. Caganova, . G.Dallafontana, P.Rizzi, . E. Pellicer, M. D. Baro, . U. Wolff, M. Calin	HIGHLIGHT LECTURE Combining TEM and APT Data for Improved Reconstruction D. Haley (Oxford Materials, Oxford, United Kingdom), T. Petersen, G.D. Smith	HIGHLIGHT LECTURE Lithography-based Additive Manufacturing of Cellular Ceramic and Composite Structures J. Stampfl (TU Wien, Vienna, Austria), G. Mitteramkogler, S. Springer, A. Ovsianikov, R. Liska	KEYNOTE LECTURE Neutron imaging in materials research N. Kardjilov (Helmholtz-Zentrum Berlin (HZB), Berlin, Germany), I. Manke, A. Hilger, M. Strobl, W. Scott, J. Banhart	Development Of Innovative Transition Structures For Frp-Aluminium Compounds K. Schimanski (Stiftung Institut für Werkstofftechnik, Bremen, Germany), A. Lang, V. Wottschel, V. Bitykov, P. Schiebel, A. Von Hehl, A. Herrmann, F. Vollertsen, F. Jablonski
10:50	Teaching Materials Science for Nuclear engineering E. Ferrié (SIMAP, Saint Martin D'Hères, France), Y. Brechet	State-of-the-Art Atom Probe Tomography Analysis of Solute Clustering R. Marceau (Max-Planck-Institut für Eisenforschung GmbH, Düsseldorf, Germany), L. Stephenson, M. Moody, A. Ceguerra, B. Gault, D. Haley, L. Yao, S. Ringer	Uniformly Porous MgTi2O5 with Narrow Pore-Size Distribution: In Situ Processing, Microstructure and Thermal Expansion Behavior Y. Suzuki (University of Tsukuba, Tsukuba, Japan)		Mechanical properties, microstructure and corrosion behavior of friction stir welded AZ91/AA5454-joints O. Klag (Institute of Materials Science and Engineering / University of Kaiserslautern , Kaiserslautern, Germany), G. Wagner, D. Eifler
11:10	EUROMAT survey on Education. A comparative study 2009-2011 M.D. Baro (Grenoble INP/CNRS, Saint Martin D'Hères, France), L. Battezzati	Modelling image distortions in laser assisted atom probe tomography of AuMn nanoparticles in Cr matrix M. Gruber (Universite de Rouen, St Etienne Du Rouvray, France), F. Vurpillot, E. Folcke, R. Lardé, J.-M. Le Breton, B. Deconihout	Influence of cell morphology on ceramic foams effective thermal conductivity A. Ortona (ICIMSI-SUPSI, Manno, Switzerland), S. Pusterla, C. D'Angelo, M. Barbato	Three-dimensional registration for quantification in biomaterials science B. Müller (University of Basel, Basel, Switzerland), G. Schulz, T. Weitkamp, F. Beckmann, A. Lareida, T. Bormann, J.Y. Yoon, M. De Wild, F. Pfeiffer	Study of Fatigue Crack Propagation in Spot Welded Tensile Shear Specimens of Advanced High Strength Steels G. Weber (BAM Federal Institute for Materials Research and Testing, Berlin, Germany), H. Gaul, M. Rethmeier
11:30	HIGHLIGHT LECTURE Round Table - Materials Education: The View Of Representatives Of Materials Societies And Course Organizers At Various Universities E. Pellicer (Grenoble INP/CNRS, Saint Martin D'Hères, France)	Serial characterization of alloys by Atom probe Tomography and aberration corrected Scanning Transmission Electron Microscopy W. Lefebvre (GPM CNRS UMR 6634, Saint Etienne Du Rouvray, France), M. Bachhav, F. Cuvilly, M. Dubey, C. Genevois	Production and Properties of Thick Sheets Composed of Aligned Ultra-fine Alumina Fibres V. Su (University of Cambridge, Cambridge, United Kingdom), M. Terehov, T. Clyne	Non-destructive three-dimensional characterization of cyclic deformation and microgaps in dental implants with tapered Titanium joints S. Zabler (University of Wuerzburg, Wuerzburg, Germany), T. Rack, A. Rack, K. Nelson	Intergranular stress corrosion cracking of Friction Stir Welded nugget of aluminium alloy 2050 M. Dhondt (Université de Bordeaux, Talence, France), I. Aubert, N. Saintier, J.-M. Olive
11:50		Impact of directional walk on atom probe microanalysis F. Danoix (CNRS, Saint-Etienne Du Rouvray, France), B. Gault, K. Hoummada, D. Mangelinck, H. Leitner	Plasma Electrolytic Oxidation of Al Foam to form a Metal-Cored Ceramic Composite Hybrid Material J. Curran (Keronite International Ltd, Cambridge, United Kingdom), C. Dunleavy, B. Clyne	Compact in-situ x-ray imaging of solidification processes. C. Baumbach (TU Dresden, Dresden, Germany), C. Rakete, A. Goldschmidt, C. Schroer, F. Breede, C. Stenzel, G. Zimmermann, Y. Houtz, C. Lockowandt, O. Scenonius	Mechanical properties and stress corrosion cracking behavior depending on the local microstructure for 2050 aluminium-lithium alloy structures joined by Friction Stir Welding V. Proton (CIRIMAT - ENSIACET, Toulouse, France), J. Alexis, E. Andrieu, C. Blanc, J. Delfosse, J. Graneix, G. Odemer
12:10	G11-O-2-6	Multi-scale modeling of field evaporation in 3DAP based on the natural neighbour method C. Oberdorfer (University of Münster, Münster, Germany), G. Schmitz	Templating techniques to control the pores within metal oxide materials R. Caruso (The University of Melbourne, Melbourne, Australia), D. Chen, L. Cao, G. Drisko, M. Chee Kimling, X. Wang	An analytical framework for the microtomographic study of a nanocrystalline material for nuclear applications and porous Be for fusion reactors C. Ferrero (ESRF, Grenoble , France), R. Pteritz, J. Spino, P. Vladimirov	Surface functionalising for coating high-performance polymers C. Rupprecht (Chemnitz University of Technology, Chemnitz, Germany), I. Scharf, G. Paczkowski, B. Wielage, T. Lampke

am2

Wednesday 14 September 2011

Symp. Room	A23 Joffre B	B14 Joffre C	C32 Joffre D	A41 Barcelona	B42 Sully 3bis
Session	<u>Heusler and 5-4-type alloys</u> V. BASSO, INRIM Turino	<u>Wrought Alloys and Deformation</u> Joe ROBSON, University of Manchester	<u>Titanium and steel powder processing</u> Alberto MOLINARI, University of Trento	<u>Biopolymers and biocomposites - 2</u> Lars BERGLUND, Royal Inst of Technology	<u>Analytical methods and execution technique</u> Antonio SGAMELLOTTI, University of Perugia
10:30	Ab-initio simulations of the exchange constants of Heusler Ni-Mn-X (X = Ga, In, Sn, Sb) alloys V. Buchelnikov (Chelyabinsk State University, Chelyabinsk, Russian Federation), V. Sokolovskiy, M. Zagrebina, S. Taskaev, P. Entel	The effect of rare earth elements on the stacking fault energy of magnesium: theory and experiment D. Raabe (Max-Planck-Institut für Eisenforschung, Düsseldorf, Germany), S. Sandlöbes, M. Friak, S. Zaeferrer, A. Dick, S. Yi, J. Neugebauer	KEYNOTE LECTURE From Titanium to Magnesium – Processing by Advanced Metal Injection Moulding K.U. Kainer (Helmholtz-Zentrum Geesthacht B14, Geesthacht, Germany), T. Ebel	Structural relations between biomimetic and human calcite statoliths: Otoconia as functional material P. Simon (Max Planck Institute , Dresden, Germany), W. Carrillo-Cabrera, Y.-X. Huang, J. Buder, H. Borrmann, R. Cardoso-Gil, E. Rosseeva, Y. Yari, T. Zahnert, R. Kniep	Securing the future of our past: Lasers in the service of Cultural Heritage C. Fotakis (IESL-FORTH, Heraklion, Crete, Greece), P. Pouli, D. Anglos, V. Tornari, K. Melessanaki
10:50	Calorimetric determinations of the magnetocaloric parameters in the Heusler alloy Ni ₅₀ Mn ₃₆ Co ₁ Sn ₁₃ G.F. Wang (University of Zaragoza, Zaragoza, Spain), E. Palacios, J. Bartolomé, R. Burriel, K.P. Skokov	KEYNOTE LECTURE In-situ analysis of deformation and recrystallization mechanisms M.T. Pérez-Prado (Michigan State University, East Lansing, USA), C. Boehlert, J. Llorca, I. Gutierrez-Urrutia		Mechanical properties, porosity and microstructure of nanofibrous chitin nanopaper N. Ezekiel Mushi (Royal Institute of Technology, Stockholm, Sweden), N. Butchaso Robles, Q. Zhou	Non-invasive investigation vs micro-destructive analysis: the case of Mondrian's Victory Boogie Woogie. C. Milliani (CNR-ISTM, Perugia, Italy), M. Vagnini, F. Rosi, K.J. Van Den Berg, M. Van Bommel, B. Brunetti, A. Sgamellotti
11:10	Magnetocaloric and thermal properties of Ni ₂ 15Fe _{0.06} Mn _{0.79} Ga and Ni ₂ 20Fe _{0.01} Mn _{0.79} Ga Heusler alloys melt-spun ribbons A. Aliev (Amirkhanov Institute of Physics of DSC RAS, Makahchkala, Russian Federation), A. Batdalov, V. Koledov, V. Shavrov, J. Garcia, V.M. Prida, B. Hernando		Processing of titanium porous structures by emulsion templating. O. Van Der Biest (K. U. Leuven, Belgium), B. Neirinck, A. Braem, T. Mattheys, J. Vleugels	Bio-inspired chitin-silica nanocomposites through self-assembly E. Belamie (Ecole Pratique des Hautes Etudes, Montpellier, France), T. Cacciaguerra, B. Alonso	Multi-scale characterization of nano-structured ancient materials using q-SAXS imaging: artificially heated bone, a case study. A. Gourrier (Laboratoire de Physique des Solides - UMR 8502 CNRS, Orsay, France), O. Bunk, K. Mueller, I. Reiche
11:30	Hysteretic aspects of the inverse magnetocaloric effect in martensitic Ni-Mn-based alloys I. Titov (University Duisburg-Essen, Duisburg, Germany), D. Gonzalez-Alonso, M. Acet, T. Krenke, L. Manosa, A. Planes	Optimizing the formability of Mg AZ31 sheets during the incremental sheet forming with laser heating L. Mosecker (RWTH Aachen University, Aachen, Germany), A. Saeed-Akbari, J. Bültmann, A. Göttmann, G. Bergweiler, W. Bleck	Thermomechanical Processing of Particulate Reinforced Titanium Metal Matrix Composites J.-B. Fruhauf (ENSMSSE, Saint-Etienne, France), S. Saunier, C. Desrayaud, F. Montheillet	Liquid Biocompatible Polymers as Reactants in Self-Healing Materials D. Döhler (Martin-Luther-University Halle-Wittenberg, Halle, Germany), M. Schunack, W. Binder, M. Philipp	Defining A Methodology To Gold Leaf Analysis A.P. Bidarra (Aveiro University, Aveiro, Portugal), J. Coroado, F. Rocha
11:50	A study of magnetocaloric Gd ₅ Si ₂ Ge ₂ -based alloys G. Yan (IJS, Ljubljana, Slovenia), Z. Fang, B. Zhao, J. Shi, P. McGuinness	Microstructure and Deformation Behavior in Thermomechanically Processed Magnesium Alloys K. Cooper (Naval Research Laboratory, Washington, USA), R. Goswami	C32-O-3-5	New trends of the Anionic Chemical Modification of Aliphatic Polyesters. Rapid Synthesis Routes to New Degradable Copolymers for Biomedical Applications J. Coudane (CNRS-UM1, Montpellier, France), B. Nottelet, S. Blanquer, S. El Habnoui, V. Darcos, X. Garric	New strategies for employing Surface-Enhanced Raman Spectroscopy (SERS) in the detection of high performance synthetic organic pigments: Quinacridones C. Domingo (Instituto de Estructura de la Materia, CSIC, Madrid, Spain), E. Del Puerto, S. Sanchez-Cortes, J.V. Garcia-Ramos
12:10	Effect of Raising the Si/Ge Ratio on the Electrical Resistivity of Ho ₅ (SixGe _{1-x}) ₄ Compounds A. Pereira (IFIMUP-IN, Porto, Portugal), J. Sousa, J. Peixoto, M. Braga, P. Algarabel, L. Morellon, C. Magen, M. Ibarra, J. Araujo	Microstructure And Mechanical Properties Of Mg-Y ₂ X-Zn _x Alloys Reinforced With Long-Period Ordered Structures E. Oñorbe (CENIM-CSIC, Madrid, Spain), G. Garcés, P. Pérez, P. Adeva	Influence of Tempering on Mechanical Properties of 3Cr-0.5Mo Sintered Steel S. Hatami (Chalmers University of Technology, Gothenburg, Sweden), M. Andersson, L. Nyborg	The mesocrystallinity of sea urchin teeth: a crystallographic, chemical and material properties characterization E. Griesshaber (LMU Munich, Munich, Germany), A. Goetz, J. Deuschle, R. Abel, L. Howard, W. Schmahl	Study of the blackening process of lead white: the case of Cimabue's paintings in Assisi C. Milliani (CNR-ISTM, Perugia, Italy), M. Vagnini, R. Viviani, O. Viscuso, I.L. Fragalà, A. Sgamellotti

pm1

Wednesday 14 September 2011

Symp.	A24	C11	A21	C41	A32
Room	Pasteur	Einstein	Antigone 1	Antigone 3	Joffre 1
Session	<u>Biomedical Applications (II)</u> Maria del Puerto MORALES, CSIC Madrid	<u>Eutectic / Intermetallic structures</u> Janin EIKEN, ACCESS	<u>Soft magnetic materials for high efficiency and energy saving applications</u> Nicoleta LUPU, National Institute of Technical Physics, Iasi	<u>Microstructure</u> Teodoro VALENTE, Universita di Roma "La Sapienza"	<u>Beyond mesoporous materials -3</u> David GROSSO, Université Pierre et Marie Curie
14:00	KEYNOTE LECTURE Preparation And Characterization Of Core/Shell Self-Assembled Multifunctional Nanoparticles B. Martinez (ICMAB - CSIC, Bellaterra, Spain), C. Martinez-Boubeta, L. Balcells, R. Cristofol, C. Sanfeliu, F. Sandiumenge, J. Santiso, D. Serantes, D. Baldomir, C. Monty	HIGHLIGHT LECTURE Effect Of Dopant Species On Primary Graphite Growth – Characterization And Simulation J. Lacaze (CIRIMAT, Toulouse, France), K. Theuwissen, I. Bleskov, D. Connetable, L. Laffont	KEYNOTE LECTURE New Nanocrystalline Soft Magnetic FeSiBPCu Alloys for Energy-saving and Conserving Earth's Resources A. Makino (Tohoku University, Sendai, Japan), T. Kubota, A. Urata, H. Matsumoto	HIGHLIGHT LECTURE Nanocrystalline diamond films deposited on WC-based ternary and quaternary nanocomposite layers M. Walock (University of Alabama at Birmingham, Birmingham, Al, USA), Y. Zou, C. Nouveau, A. Stanishevsky	HIGHLIGHT LECTURE Novel Silica/Enzyme-Based Hybrid Foams Bearing Unprecedented catalytic properties R. Backov (CRPP, Pessac, France), N. Brun, A. Babeau-Garcia, H. Deleuze, C. Sanchez, O. Babot, G. Laurent
14:20		Experimental and numerical study of the effects of interphase-boundary anisotropy on eutectic microstructures G. Faivre (CNRS - UPMC, Paris, France), S. Akamatsu, S. Bottin-Rousseau, M. Serefoglou		Enhancement of Nucleation of Nanocrystalline Diamond Thin Films via Surface Modification of the Substrate by Sputtering I. Buijnsters (KULeuven, Leuven, Belgium)	
14:40	Temperature dependence of SAR in self-regulating hyperthermia mediators near Tc E. Natividad (ICMA (UZ-CSIC), Zaragoza, Spain), M. Castro, R. Epherre, S. Mornet, G. Goglio, E. Duguet, A. Mediano	Theoretical and numerical analysis of three-phase patterns in a model ternary eutectic system. A. Choudhury (Institute of Materials and Processes, Karlsruhe, Germany), M. Plapp, B. Nestler	Soft magnetic properties of Fe-P rolled sheet alloy S. Jafari Chamkavi (National institute for materials Science, Tsukuba, Japan), T. Ohkubo, R. Gopalan, K. Hono	Synthesis of nanocrystalline Ni-B alloy by electroless deposition and effect of heat treatments on their structural state. V. Vitry (University of Mons, Mons, Belgium), A.-F. Kanta, F. Delaunois	Aerosol Route to Functional Nanostructured Inorganic and Hybrid Porous Materials C. Boissiere (CNRS - UPMC, Paris, France)
15:00	Cellular uptake of gold covered maghemite superparamagnetic nanoparticles and their effects on mouse melanoma B16 cells M. Avram (IMT - Bucharest, Bucharest, Romania), M. Volmer, I. Petrescu, A. Avram	Three dimensional characterisation of β -Al ₅ FeSi intermetallic phases nucleated and grown in AlSi alloys by fluid flow P. Mikolajczak (German Aerospace Centre, Cologne, Germany), L. Ratke, M. Kolbe	Magnetic and Mechanical Properties of 6.5 wt% Si Steel Produced by Twin Roll Casting Process T. Trang (Graduate Institute of Ferrous Technology, Pohang University of Science and Technology, Pohang, Korea - south), B. Kim, N.J. Kim	Effect of substrate on surface morphology and photocatalysis of large scale TiO ₂ thin films L. Lopez Vanegas (Monash University, Churchill, Australia), W.A. Daoud, D. Dutta	Functionalization by click chemistry of ink-jet printed mesoporous silica microdot arrays for serological diagnosis O. De Los Cobos (SPCTS, Limoges, France), F. Rossignol, B. Soulestin, C. Carrion, M. Wong Chi Man, X. Cattoën, J.-O. Durand, C. Boissiere, C. Sanchez, M. Lejeune
15:20	Design of superparamagnetic MFe ₂ O ₄ (M = Fe, Co, Mn) nanoparticles through a novel co-precipitation route C. Pereira (Faculty of Sciences, University of Porto, Porto, Portugal), A.M. Pereira, C. Fernandes, M. Rocha, R. Mendes, L.S. Fernandes, P.B. Tavares, J.P. Araújo, C. Freire	Intermetallics formation in the Fe-Al system at 973 K G. Pasche (EPFL, Lausanne, Switzerland), A. Hessler-Wyser, R. Schäublin	Thermotime Preparation Of Liquid Alloys Before Rapidly Quenched – The Basis For Optimum Annealing Of The Received Amorphous Ribbons V. Tsepelev (Federal State Autonomous Educational Institution of Higher Professional Education "Ural Federal University named after the first President of Russia B.N. Yeltsin", Ekaterinburg, Russian Federation), V. Konashkov, S. Lepichin, V. Lichtenstein, V. Belozherov, Y. Starodubtsev	Investigation of freestanding Aluminum-Scandium thin films produced by DC magnetron sputtering J. Kovac (Stiftung Institut fuer werkstofftechnik (IWT), Bremen, Germany), H.-R. Stock	Silica-titania mesoporous materials from spray-dried oxide-chitin nano-composites M. Boltoeva (CNRS - MACS - ICGM, Montpellier, France), T. Cacciaguerra, Y. Ke, E. Belamie, B. Alonzo

15:40	ZnxFe3-xO4 nanoparticles and ferrofluids study in the frame of a potential magnetic fluid hyperthermia therapy F.H. Sánchez (Universidad Nacional de La Plata - CONICET, La Plata, Argentine Republic), C. Laborde, I. Bruvera, P. Mendoza Zélis, G. Pasquevich, S. Jacobo, J. Apestheguy, M. Fernández Van Raap	Improvement of the Cost-Performance Ratio of Modern Piston Alloys Substituting Nickel with Combined Addition of Iron and Carbon in Alloy A 332 A. Wüstenhagen (Clausthal University of Technology, Clausthal-Zellerfeld, Germany), B. Tonn	Ab initio study of Fe1-xAlx (x ? 50 %) lattice parameters, magnetic moments and electronic properties: effect of B and C addition A. Kellou (University of USTHB, Algiers, Algeria), J.-M. Raulot, T. Grosdidier	Microstructure And Properties Of Fecual-Al Coatings Deposited By Means Of Supersonic Cold Gas Spray J. Kusinski (AGH-The University of Sciences and Technology, Krakow, Poland), S. Kac, P. Matteazzi, J. Fernandez, C. Jean-Pierre, P. Radu	Supercritical Fluid Electrodeposition: A new technique for producing complex nanostructures in mesoporous templates D. Smith (University of Southampton, Southampton, United Kingdom), J. Ke, W. Su, S.M. Howdle, M.W. George, D. Cook, P.N. Bartlett, F. Cheng, W. Levason, G. Reid
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Wednesday 14 September 2011

Symp.	A42	C12	A31	A54	C21
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
Session	<u>Functional Polymeric Hybrid Materials -2</u> Jean-François GERARD, INSA de Lyon - UMR CNRS 5224	<u>Martensites II</u> George SMITH	<u>Carbon nanotube synthesis</u> Alain PEIGNEY, Univ. Paul Sabatier Toulouse	<u>Cu Based Shape Memory Alloys</u> Sergey KUSTOV, Universitat de les Illes Balears Palma de Mallorca, Spain	<u>Materials Processing</u> Christian LEINENBACH, EMPA, Laboratory for Joining and Interface Technology, Dübendorf
14:00	HIGHLIGHT LECTURE Layer-by-Layer Assembled Hybrid Nanoscale Coatings G. Decher (Université de Strasbourg and, Strasbourg, France)	HIGHLIGHT LECTURE Shock induced alpha-epsilon martensitic transition in iron modeled by phase field with reaction pathways C. Denoual (CEA, DAM, DIF, Arpajon, France)	HIGHLIGHT LECTURE Towards large scale aligned carbon nanotubes production by aerosol-assisted CCVD P. Boulanger (CEA, Gif Sur Yvette, France), L. Belkadi , S. Patel , M. Pinault , E. Hibert , M. Mayne L'Hermite , C. Reynaud	Shape memory and superelasticity in polycrystalline Cu-based microwires S. Ueland (Massachusetts Institute of Technology, Cambridge, USA), Y. Chen , C. Schuh	HIGHLIGHT LECTURE Measured Residual Stress Tensor Distribution around Brazed Ceramic/Metal Interfaces S.-I. Tanaka (Tohoku University, Sendai, Japan)
14:20	Role of surface defects in the photoluminescence spectra of a layer by layer assembled hybrid film T. Virgili (IFN, Milano, Italy), I. Suarez-Lopez , F. Tassone , B. Vercelli , G. Angella , G. Zotti	Atomic density function simulations of phase transformations in Fe-based and Ni-based H. Zapolsky (University of Rouen, Saint-Etienne Du Rouvray, France), M. Certain , J. Boisse	HIGHLIGHT LECTURE Kilogram-scale production of single wall carbon nanotubes by RF induction thermal plasma C. Kingston (National Research Council Canada, Ottawa, Canada), K.S. Kim , B. Simard	Study of a CuAlBe shape memory alloy by neutron diffraction M. Dubois (CEA Saclay, Gif-Sur-Yvette, France), M.-H. Mathon , V. Klosek , A. Lodini	Study of Au-In Interdiffusion for Transient Liquid Phase Bonding L. Deillon (EPFL, Lausanne, Switzerland), T. Hessler , M. Rappaz , A. Hessler-Wyser
14:40	Environment-sensitive Polylon Complex micelles for the preparation of functional hybrid nanostructured materials for biomedical applications C. Gerardin (Institut C Gerhardt, Montpellier, France), J. Warnant , J. Reboul , G. Layrac , T. Cacciaguerra , M. In , P. Lacroix Desmazes , C. Jerome	Phase transformation in Fe-27.5%Ga alloys by application of a thermomagnetic processing E. Wang (Northeastern University, P. R. China, Shenyang, China), X. Zuo , Y. Li , L. Zhang , J. He	Aligned Carbon Nanotubes On Carbon Fibres: Growth Optimization-By Injection-Cvd Process And Functionalization S. Patel (CEA, Gif Sur Yvette, France), Y. Magga , M. Delmas , M. Pinault , G. Deniau , D. Porterat , C. Reynaud , M. Mayne-L'Hermite	HIGHLIGHT LECTURE Cu-Al-Ni Shape Memory Alloys for intermediate temperature actuators J. San Juan (Universidad del Pais Vasco, Bilbao, Spain), I. Lopez-Ferreño , T. Breczewski , I. Ruiz-Larrea , A. Lopez-Echarri , M.L. Nó	Capillarity-driven infiltration of alumina foams with an Al-Mg alloy: Processing, microstructure and properties R. Gil (University of Nottingham, Nottingham, United Kingdom), A. Kennedy
15:00	Cardanol/furfural magnetic resins useful to oil spill cleanup F. Gomes De Souza Jr (Federal University of Rio de Janeiro, Rio De Janeiro, Brazil), A. Varela , T. Delazare , M.A. Silva Costa , L.C. Santa Maria , R. Cunha Michel , G. Esperandio De Oliveira	Effects of Cr and V on a "secondary hardening" of a tempered medium-carbon low alloyed steel M. Hantcherli (Ecole des Mines de St-Etienne, St-Etienne, France), J. Cholewa , F. Danoix , A. Fraczkiwicz	A31-O-2-4	Investigation on high temperature CuZr shape memory alloy C.A. Biffi (CNR IENI, Lecco, Italy), S. Arnaboldi , S. Pittaccio , A. Tuissi	Processing of carbon fibers reinforced Mg matrix composites via pre-infiltration with Al A. Mertens (Université catholique de Louvain, Louvain-La-Neuve, Belgium), H.-M. Montrieux , J. Halleux , J. Lecomte-Beckers , F. Delannay
15:20	Capillary scale micro-reactors incorporating immobilised palladium/platinum nanodendrites on porous polymer monoliths for selected redox reactions. D. Connolly (Dublin City University, Dublin, Ireland), P. Floris , B. Paull	Characterisation of Phase Transformation Kinetics in Austempered Ductile Iron (ADI) by In-Situ Neutron Diffraction L. Meier (TU München, Garching, Germany), M. Hofmann , H. Hoffmann	Ni Crystal Rotation during Carbon Nanotube Growth T. Visart De Bocarmé (ULB, Brussels, Belgium), N. Kruse , M. Moors	SMA's (Cu-based, NiTi) for use in damping: The implications of reliability for long time applications and aging behaviour. A. Isalgue (Polytechnical University Catalonia (UPC) and University of Barcelona, Barcelona, Spain), C. Auguet , G. Carreras , V. Torra	Influence of Si content in steel on coatability of its surface by Zn alloy A. Koltsov (ArcelorMittal Research Maizières, Maizières-Lès-Metz, France), J. Diawara , M.-L. Giorgi , D. Loison
15:40	Design And Fabrication Of Piezoelectric Polyvinylidene Fluoride Membranes For Fouling Mitigation T. Darestani Farahani (University of Sydney, Sydney, Australia), .H. Coster , T.C. Chilcott	Phase field modeling of heterogeneous precipitation of carbides in steel J. Boisse (INSA Lyon France, Villeurbanne, France), M. Perez , T. Epicier	Influence Of The Substrate And The Oxidizing Conditions During Carbon Nanotubes Growth By Cvd P. Evellin (ONERA, Chatillon, France), L. Patout , R. Arenal , J. Dijon , A. Loiseau	Effects of quenching in Cu-Al-Fe shape memory alloys V. Sampath (IIT Madras, Chennai, India), T.N. Raju	Influence of thermal pre-treatment on interface reactions and properties of soldered Ti-Al2O3 joints C. Leinenbach (Empa - Swiss Federal Labs for Materials Science and Technology, Dübendorf, Switzerland), N. Weyrich , H.R. Elsener , D. Eifler

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Symp.	D34	D13	B33	D12	B42
Room	Joffre 5	Barthez 1	Louisville	Barthez 2	Joffre 4
Session	Lithium ion batteries Hans J. SEIFERT, Karlsruhe Institute of Technology	Metallurgy W. LEFEBVRE, Université de Rouen	Processing Juergen Stampfl, TU Wien	Tomography: Methods & Applications II Simon ZABLER, University Wuerzburg	Degradation and conservation Antonio SGAMELLOTTI, University of Perugia
14:00	Calorimetric investigation of Cu-Sn, Co-Sn, Li-Sn, Cu-Li and Cu-Li-Sn H. Flandorfer (University of Vienna, Wien, Austria), S. Fuertauer, E. Tserenjav, A. Elmahfoudi, I. Herbert	HIGHLIGHT LECTURE Atomic level analysis of interfaces in both engineering alloys and model systems using atom probe tomography P. Felfer (The University of Sydney, Camperdown, Australia), S. Ringer, J. Cairney	HIGHLIGHT LECTURE Polymer Derived nanostructured non oxide porous Ceramics P. Miele (IEMM - UMR 5635, Montpellier, France), S. Bernard, U. Demirci, M. Bechelany, J. Alauzun, O. Majoulet	HIGHLIGHT LECTURE X-ray phase contrast and fluorescence nanotomography and nanolaminography for material studies H. Suhonen (ESRF, Grenoble, France), F. Xu, L. Helfen, P. Cloetens	Acrylic Protective Coatings Modified with TiO ₂ Nanoparticles for Cultural Heritage Applications D. Scalzone (University of Torino, Torino, Italy), F. Baratta, O. Chiantore
14:20	Experimental Determination of Thermodynamic Key Data for Electrode Materials of Advanced Lithium Ion Batteries using Knudsen Effusion Mass Spectrometry T. Markus (Forschungszentrum Jülich, Jülich, Germany)	Early stages of decomposition within the gamma-prime phase of a Ni-Al-Ti model alloy F. Vogel (Helmholtz Zentrum Berlin, Berlin, Germany), N. Wanderka, J. Banhart	The production of closed cell stainless steel foams by mechanical aeration of metal powder slurries X. Lin (University of Nottingham, Nottingham, United Kingdom), A. Kennedy	In situ 3-D X-ray microtomography study of the behaviour of granular materials under external stimuli S. McDonald (University of Manchester, Manchester, United Kingdom), D. Harris, W. Lionheart, P. Withers	Patina stability under different environmental conditions L. Brambilla (Politecnico di Milano, Milano, Italy), L. Toniolo, P. Fermo, S. Goidanich
14:40	HIGHLIGHT LECTURE Phase-Field model for charge transfer in Li-Ion batteries U. Preiss (Ruhr-University Bochum, Bochum, Germany), I. Steinbach	Triple junction and grain boundary diffusion in the Ni/Cu system R.M. Chellali (Westfälische Wilhelms Universität Münster, Münster, Germany), Z. Balogh, G. Schmitz	Multicomponent Composite Materials Consisting of Open-Cell Aluminium Foams with Plasma Electrolytic Oxidation (PEO) Coatings T. Abdulla (THE UNIVERSITY OF SHEFFIELD, Sheffield, United Kingdom), R. Goodall, A. Yerokhin	Imaging of grain level orientation and strain in thicker metallic polycrystals by high energy transmission micro-beam Laue (HETL) diffraction techniques F. Hofmann (University of Oxford, Oxford, United Kingdom), B. Abbey, L. Connor, X. Song, N. Baimpas, A.M. Korsunsky	Degradation Process of Lead Chromate in paintings by Vincent van Gogh studied by means of Synchrotron X-ray Spectromicroscopy and related methods. The role of sulfate anions L. Monico (Università degli Studi di Perugia, Perugia, Italy), G. Van Der Snickt, K. Janssens, W. De Nolf, C. Miliani, M. Cotte, J. Verbeeck, H. Tian, H. Tan
15:00	Phase field modeling of Li-intercalation dynamics in LiFePO ₄ -cathodes for rechargeable Li-ion battery application M. Fleck (University of Bayreuth, Bayreuth, Germany), H. Emmerich	Ordering transformation and its microstructural characterization in Ni ₂ (Cr _{0.5} Mo _{0.5}) alloy N. Wanderka (Helmholtz-Zentrum Berlin GmbH, Berlin, Germany), A. Verma, N. Lazarev, M. Sundararaman, J. Banhart	Controlling of properties in the processing of hollow polymeric and ceramic micro- and nanospheres derived from preceramic polymers V. Reschke (Otto-von-Guericke University Magdeburg, Magdeburg, Germany), M. Scheffler	Phase Contrast Imaging - a new imaging tool for materials science C. Kottler (CSEM SA, Zurich, Switzerland), V. Revol, R. Kaufmann, I. Jerjen, C. Urban	Ageing processes of polyurethane foam in Gaetano Pesce's UP7 E. Gómez Sánchez (Staatliche Museen zu Berlin, Berlin, Germany), F. Nuria, S. Simon
15:20	Bulk acoustic wave resonator based micro calorimetric technique for detection of phase transitions H. Wulfmeier (Clausthal University of Technology, Goslar, Germany), M. Schulz, A. Bund, H. Fritze	Characterization of Sr-modified AlSi alloys using FIB tomography and atom probe tomography M. Engstler (Saarland University, Saarbrücken, Germany), F. Mücklich	Ice-templating of ceramics – an alternative technology to produce micro-monoliths M. Klotz (Saint-Gobain CREE, Cavailon, France), I. Amirouche, C. Guizard, C. Viazzi, S. Deville	Comparative study on morphology and mechanics of bone scaffolds fabricated by rapid prototyping J.Y. Yoon (Biomaterials Science Center, Lenzburg, Switzerland), B. Müller, H. Deyhle, U. Gbureck, E. Vorndran, F. Beckmann	Relationships between internal properties and durability in the "Molasse du Midi" limestone (South-East of France) J. Berthonneau (BRGM, Marseille, France), P. Bromblet, D. Dessandier, J.-M. Vallet, O. Grauby, A. Baronnet
15:40	Thermodynamic assessment of the Cu-Fe-O system A. Khvan (TU Bergakademie Freiberg, Freiberg, Germany), F. Olga, S. Hans J.	Understanding Microstructures on the Nanometre Scale Using Atom Probe Tomography M. Thuvander (Chalmers University of Technology, Goteborg, Sweden), H.-O. André, K. Stiller	Hierarchically Porous Metal and Metal Oxide Materials prepared through Nanocasting of Silica Monoliths J.-H. Smätt (Åbo Akademi University, Turku, Finland), F. Maddox Saylor, A. Grano, M.G. Bakker, M. Lindén	Synchrotron based refraction enhanced micro-CT for non-destructive characterisation of biological materials B.R. Müller (BAM German Federal Institute for Materials Research and Testing, Berlin, Germany), A. Lange, M. Harwardt	Historical Route Of The Defensive Lines Of Torres. The Forts' Construction Techniques And Materials A.R. Santos (LNEC - National Laboratory for Civil Engineering, Lisboa, Portugal), M.D. Veiga, A.S. Silva, M. Tavares

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Symp. Room	A23 Joffre B	B14 Joffre C	C32 Joffre D	A41 Barcelona	C54 Sully 3bis
Session	<u>Towards Application</u> Oliver GUTFLEISCH, IFW Dresden	<u>Microstructure</u> <u>Evolution/Corrosion</u> C. Ravi RAVINDRAN, Ryerson University, Toronto	<u>Tailored microstructures,</u> <u>Selective Laser Melting</u> Francis DELANNAY, Université Catholique de Louvain	<u>Biopolymers and</u> <u>biocomposites - 3</u> Lars BERGLUND, Royal Inst of Technology	<u>Additive Manufacturing 1</u> Cooper KHERSHED
14:00	HIGHLIGHT LECTURE A high frequency rotary active magnetic regenerator device K. Engelbrecht (Risoe Laboratory for Sustainable Energy, Roskilde, Denmark), C. Bahl, D. Eriksen, R. Bjørk, P. Nini, N. Kaspar	Design of Precipitation Hardening Mg-Zn-Ce Alloys B. Langelier (University of Waterloo, Waterloo, Canada), S. Esmaeili	HIGHLIGHT LECTURE Synthesis and characterization of a W/CuCrZr FGM joint for extreme thermal applications A. Zivelonghi (Max-Planck-Institut für Plasmaphysik, EURATOM Association, Garching By Munich, Germany), S. Nawka, A. Brendel, M. Sheel, M. Di Michiel, A. Larrue, J. Riesch, T. Schubert, Y. Jeong-Ha, B. Kieback	KEYNOTE LECTURE Cellulose nanofibril-modified wood adhesive bonds W. Gindl-Altmutter (BOKU-University of Natural Resources, Vienna, Austria), S. Veigel	KEYNOTE LECTURE Three-dimensional printing of MAX phase ceramics X. Yin (Northwestern Polytechnical University, Xi'an, China), N. Travitzky, P. Greil
14:20		Enhancement of precipitation hardening of Mg-Ca alloys by microalloying K. Hono (National Institute for Materials Science, Tsukuba, Japan), C. Mendis, J. Jayaraj, K. Oh-Ishi, T. Ohkubo	Pseudoplastic Deformation of Thin Nanostructured Porous Ceramic Films H. Hofmann (EPFL, Lausanne, Switzerland), A. Tourvielle De Labrouhe		
14:40	Magnetocaloric effect and thermal stability of hydrogenated melt-spun La(Fe,Si) ₁₃ -compounds M. Krautz (IFW Dresden, Dresden, Germany), K. Skokov, J. Moore, J. Liu, L. Schultz, O. Gutfleisch	HIGHLIGHT LECTURE Corrosion and Biocompatibility of Biodegradable Alloys P.K. Gill (Florida International University, Miami, USA), N. Munroe, E. Daniels	Cracking due to Laser Powder Bed Fabrication of Nickel-Base Superalloys: Characterisation and Mitigation L. Carter (University of Birmingham, Birmingham, United Kingdom), M. Attallah, X. Wu	New Route For Preparation And Surface Modification Of Cellulose Nanocrystals M. Salajkova (KTH, Stockholm, Sweden), L. Berglund, Q. Zhou	The Development of a Method for the Production of Aluminium Aerospace Components Using Powder Bed Manufacturing M. Attallah (Aero Engine Controls, Birmingham, United Kingdom), K. Beard, L. Carter
15:00	Application of La(Fe, Co) ₁₃ -xSix materials in magnetic refrigeration: practical aspects M. Balli (University of Applied Sciences of Western Switzerland, Yverdon-Les-Bains, Switzerland), C. Mahmed, L. Zamni, J. Forchelet, O. Sari	Influence of Ca on the Creep Properties of AZ91 Magnesium Alloy D. Amberger (University Erlangen-Nürnberg, Erlangen, Germany), P. Eisenlohr, M. Göken	Tailoring microstructure of sintered ceramic porous electrodes C.L. Martin (CNRS, Saint-Martin D'Hères, France), X. Liu, T. Reynier, D. Bouvard, C.P. Cary	Natural Polymers Based Multifunctional Nanocomposite Fibres S. Rahatekar (University of Bristol, Bristol, United Kingdom), C. Zhu, A. Patil, S. Mann, K. K	Microstructure evolution of a glass ceramic material produced by laser slurry deposition (LSD) C.M. Gomes (BAM Federal Institute for Materials Research and Testing, Berlin, Germany), J. Günster, J. Heinrich
15:20	(Mn,Fe) ₂ (P,Si) materials - High potential candidate for efficient magnetic cooling F. Seeler (BASF SE, Ludwigshafen, Germany)	Reduction of impurity effects on the corrosion resistance of AZ and AM based magnesium alloys K.U. Kainer (HZG, Geesthacht, Germany), C. Blawert, D. Fechner, D. Höche, V. Heitmann, W. Dietzel, P. Živanovic, C. Scharf, A. Ditze	Tailoring shape memory properties by selective laser melting T. Bormann (University of Basel, Basel, Switzerland), R. Schumacher, B. Müller, M. De Wild	New Pmma- Based Composites As An Antibiotic Delivery Devices G. Giavaresi (Istituto Ortopedico Rizzoli, Bologna, Italy), M. Sartori, F. Salamanna, E. Bertazzoni Minelli, A. Benini, M. Fini	Fabrication and evaluation of 3D-micro-structures produced using two-photon-induced photopolymerization (TPIP or 2PP) by means of optical assessment and FTIR-spectroscopy K. Cicha (Vienna University of Technology, Vienna, Austria), Z. Li, A. Mautner, K. Stadlmann, J. Torgersen, N. Pucher, R. Markut-Kohl, R. Liska, J. Stampfl
15:40	Design and construction issues regarding the geometry of parallel plate active magnetic regenerators K. Nielsen (Technical University of Denmark, Roskilde, Denmark), K. Engelbrecht, N. Pryds	Corrosion Behaviors of Melt-spun Mg-based Metallic Glass in Artificial Sweat Y. Wang (Nanyang Technological University, Singapore, Singapore), M.-J. Tan, A. Jarfors	Characterization Of Titanium Based Materials For Endosseous Applications Obtained By Selective Laser Melting T. Marcu (Technical University of Cluj Napoca, Cluj Napoca, Romania), D. Leordean, M. Todea, P. Berce, C. Popa	A Life Cycle Analysis of Domesticated Silkworm Silk R. Carter (Oxford University, Oxford, United Kingdom), F. Vollrath	Macro-cellular SiC reactors for a non-stationary combustion under piston engine-like conditions L. Schlier (University of Erlangen-Nuernberg, Erlangen, Germany), W. Zhang, N. Travitzky, J. Cypris, M. Weclas, P. Greil

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Symp.	A24	C11	A21	C41	A32
Room	Pasteur	Einstein	Antigone 1	Antigone 3	Joffre 1
Session	Nanoparticles (I) Gregory THOMPSON, Tuscaloosa, USA	Hot tearing Jean-Marie DREZET, EPFL	Hard magnets : bulk / films Thomas George WOODCOCK, IFW Dresden	Film characterization Teodoro VALENTE, Universita di Roma "La Sapienza"	Beyond mesoporous materials -4 David GROSSO, Université Pierre et Marie Curie
16:40	Combining magnetic, optical and interfacial anisotropy: Superparamagnetic Janus particles with tailored plasmonic properties R. Klupp Taylor (University of Erlangen-Nuremberg, Erlangen, Germany), V. Lobaz, H. Bao, J. Klinga, D. Ibragimova, A. Hirsch, W. Peukert	HIGHLIGHT LECTURE Tensile behaviour of Al-Cu alloys in the semi-solid state : 3D imaging with in situ continuous micro-tomography B. Mireux (Université de Grenoble, Saint Martin D'Hères, France), L. Salvo, M. Suéry, E. Boller	Microstructure of high coercivity ultrafine grained Nd-Fe-B sintered magnet H. Sepehri-Amin (NIMS, Tsukuba, Japan), Y. Une, T. Ohkubo, K. Hono, M. Sagawa	Elimination of surface nano-flaws on carbon fiber with VDP polyimide coating T. Naganuma (National Institute for Materials Science, Ibaraki , Japan)	KEYNOTE LECTURE Scaling Beyond Lithographic Limits – Polymer Self-Assembly Mediated Sub-10 nm M. Morris (University College Cork, Cork, Ireland)
17:00	Gd substituted Zn-Fe ferrite nanoparticles as high T2 MRI agents B. Behdadfar (Isfahan University of Technology, Isfahan, Iran), A. Kermanpur, H. Sadeghi-Aliabadi, S. Veintemillas-Verdaguer, M.D. Morales, J. Ruiz Cabello , M. Mozaffari	Numerical modelling of tensile testing in the mushy state based on an in situ and real-time 3D X- ray microtomography J.-F. Zaragoci (Materials Processing center, Valbonne, France), L. Silva, M. Bellet, C.-A. Gandin	MFM study of the evolution of interaction domains from different demagnetized states in hot- deformed NdFeB magnets J. Thielsch (IFW Dresden, Dresden, Germany), H. Stopfel, U. Wolff, V. Neu, L. Schultz, O. Gutfleisch	Electrochemical preparation and characterization of Ni/CNT composite coatings G.-U. Itziar (CIDEDEC, San Sebastian, Spain), G.-L. Eva, S. Asier, D. Jose Antonio	
17:20	Superparamagnetic Iron Oxide Nanoparticles for bioimaging: Chemical modification of the surfactant F. Herranz (UCM, Madrid, Spain), B. Salinas, M. Benito, M. Desco, J. Ruiz-Cabello	A 3D mesoscale granular model for the rheological behavior of metallic alloys during solidification M. Sistaninia (Computational Materials Laboratory, Ecole Polytechnique Fe de rale de Lausanne, Lausanne, Switzerland), J.-M. Drezet, A.B. Phillion, M. Rappaz	Effect of grain size and intergranular state on the coercivity in Nd-coated Nd2Fe14B films K. Koike (Yamagata University, Yonezawa, Japan), K. Takanao, O. Daisuke, U. Jin, M. Takamichi, M. Yoshiyuki, K. Hiroaki	Dependence of hydrophobic properties versus the chemical composition in a AlCoCrCuFeNi high entropy alloy. V. Dolique (GREMI University of Orleans, Orleans, France), L. Bedra, A.-L. Thomann, P. Brault	Titanosilicate mesoporous Pillared Planar Nanochannels (PPN) for lab-on-ship applications C. Sinturel (CRMD, Orléans , France), D. Grosso, M. Faustini, M. Vayer, H. Amenitsch
17:40	New route for magnetic air stable FeBi nanoparticles F. Pelletier (LCC Toulouse, Toulouse, France)	Quantification of the solidification structure of steels using a newly developed digital image processing software R. Pierer (University of Leoben, Leoben, Austria), S. Griesser, M. Hadler, C. Bernhard	Influence of buffer and capping layers on the mechanical and magnetic properties of Nd-Fe-B films Y. Zhang (Institut Néel - CNRS, Genoble, France), D. Givord, N.M. Dempsey	HIGHLIGHT LECTURE High-temperature stability and oxidation resistance of amorphous Me-Si-N and Si-B-C- N coatings P. Zeman (University of West Bohemia, Plzen, Czech Republic), J. Vizek, J. Musil	Self-organized gold nano- particles based on smart amphiphilic block copolymer mask: from the dot-pattern creation with supercritical CO2 and colloidal solution to the essence of nanocrystal growth S.A. Boyer (PPRIME-P' INSTITUTE, Futuroscope Chasseneuil, France), C. Iwamoto, R. Nakagawa, H. Yoshida
18:00	Shifted loops and coercivity from field imprinted high energy barriers in ferritin and ferrihydrite nanoparticles O. Iglesias (Universitat de Barcelona, Barcelona, Spain), N.J. Silva, V. Amaral, A. Urtizberea, R. Bustamante, A. Millán, F. Palacio, E. Kampert , U. Zeitler, S. De Brion	Microstructure influence on hot cracking of AA 6061 in TIG welding. A. Niel (LMGC UMR 5508, Montpellier, France), F. Deschaux-Beaume , C. Bordreuil, G. Fras	Effect of Nd-Cu layer on the magnetic properties for Nd-Fe-B single and multilayer films T. Shima (Tohoku Gakuin University, Tagajo, Japan), S. Suzuki, Y. Hatayama, H. Iwama	Raman spectroscopy as a tool to measure the erosion rate of amorphous carbon films C. Pardanaud (Universite de Provence-CNRS, Marseille, France), E. Areou, C. Martin, T. Angot, P. Roubin, C. Hopf, T. Schwarz-Selinger, W. Jacob	Sol-gel derived ordered heterogeneous Inorganic Nanopatterns: the "bottom-up" approach for a new multifunctional platform. M. Faustini (LCMCP, Paris, France)
18:20	Diverging Geometric and Magnetic Size Distributions of Iron Oxide Nanocrystals B. Erné (Utrecht University, Utrecht, Netherlands), B. Luigjes, A. Philipse	Hot Tearing Behaviour of Cast AlZnMgCu alloys in Permanent Moulds H. Zak (Institute of Metallurgy, Clausthal-Zellerfeld, Germany), B. Tonn	Evaluation of Exchange Coupling in a-Fe/Nd2Fe14B Interfaces D. Ogawa (Tohoku University, Sendai, Japan), K. Koike, T. Miyazaki, S. Mizukami, M. Oogane, Y. Ando, H. Kato	Superhydrophilic multi-walled carbon nanotubes -modified TiO2 thin films as a visible-light response photocatalyst Z. Sadeghian (Research Institute of Petroleum Industry, Tehran, Iran), M. Rezazadeh, A. Nemati	Surface stress-induced dimensional changes in nanoporous metals E. Detsi (University of Groningen, Groningen, Netherlands), S. Punzhin, P.R. Onck, J. De Hosson

pm2

Wednesday 14 September 2011

Symp.	A42	C12	A31	A54	F12
Room	Rondelet	Sully 2	Sully 1	Sully 3	Joffre A
	<u>Functional Polymeric Hybrid</u> <u>Materials -3</u> Jean-François GERARD, INSA de Lyon - UMR CNRS 5225	<u>Phase transformations/mechanics</u> <u>coupling</u> Ernst GAMSJÄGER, Montanuniversität Leoben	<u>Properties of carbon nanotube networks</u> Chris KINGSTON, CNRC Ottawa	<u>SMA Modelling and Simulation</u> Carmine MALETTA, University of Calabria, Italy	<u>Nanobiomaterials and thin coatings</u> Joao F. MANO, Universidade do Minho
Session					
16:40	HIGHLIGHT LECTURE Photodegradation processes in polymeric materials: from the chemistry to the properties J.-L. Gardette (Université Blaise Pascal, Aubière, France), A. Rivaton, S. Thérias, P.-O. Bussière	HIGHLIGHT LECTURE Revisiting the microstructure changes during rapid hardening of an Al-Cu-Mg alloy using in-situ synchrotron Small angle X-ray Scattering and Nuclear Magnetic Resonance A. Deschamps (SIMAP, Grenoble INP, St Martin D'Hères, France), T. Bastow, F. De Geuser, A. Hill, C. Hutchinson	KEYNOTE LECTURE Selective elimination of metal catalyst from single walled carbon nanotube samples B. Vigolo (Institut Jean Lamour, Vandoeuvre-Lès-Nancy, France), G. Mercier, C. Herold, J.-F. Mareche, S. Cahen	HIGHLIGHT LECTURE Ab initio study of pressure-induced structural transitions with hysteresis in NiTi D. Holec (University of Leoben, Leoben, Austria), M. Friák, A. Dlouhý, J. Neugebauer	Innovative approaches for the improvement of tissue engineering scaffold vascularisation T.R. Hammer (Hohenstein Institutes, Boennigheim, Germany), M. Mueller, P. Nooeaid, A.R. Boccaccini, D. Hoefler
17:00	A42-O-3-2	Influence of stress and plastic deformation on variant selection in Fe-30%Ni S. Godet (Université Libre de Bruxelles, Bruxelles, Belgium), L. Malet		Micromechanical modeling of three-phase, n-variant martensitic transformations in NiTi R. Heinen (ThyssenKrupp Steel Europe, Duisburg, Germany), S. Miro	HIGHLIGHT LECTURE Development of Gold Nanoparticles Bioconjugates for Potential Biomedical Applications I. Ojea (Catalan Institute of Nanotechnology, Cerdanyola Del Vallés, Spain), L. García, J. Lorenzo, V. Puntès
17:20	The Effects of Temperature, Strain and Moisture on Degradation of Thermoplastic Polyurethane C. Slater (University of Birmingham, Birmingham, United Kingdom), C. Davis, M. Strangwood	Phase field modeling of the morphological evolution of a misfitting precipitate in an inhomogeneous hexagonal/trigonal system - Application to the precipitation of zêta hydrides in zirconium alloys L. Thuinet (UMET, Villeneuve D'Ascq, France), A. Debacker, A. Legris	Efficient silencing of metallic carbon nanotubes: a route to low cost semiconducting CNT P. Chenevier (CEA, Gif-Sur-Yvette, France), G. Schmidt, L. Darchy, A. Filoramo, J.-P. Bourgoin, V. Derycke	Technological and numerical advances in smart composite structures embedding SMA actuators P. Bettini (Politecnico di Milano, Milan, Italy), M. Riva, F.M. Zerbi, G. Sala, L. Di Landro	Bioinspired active transport of nanoparticles into polymeric vesicles probed by photon correlation spectroscopy K. Jaskiewicz (Max planck Institute for Polymer Research, Mainz, Germany), A. Kroeger, I. Lieberwirth, A. Larsen, G. Fytas, K. Landfester
17:40	An overview on photooxidation of polymer nanocomposites S. Therias (LPMM, Aubière, France), J.-L. Gardette	A Phase Field Model with inhomogeneous viscoplasticity M. Cottura (ONERA/CNRS, Chatillon, France), Y. Le Bouar, A. Finel	Optimization of Structural Parameters in Single-Wall Carbon Nanotube Networks for Improving Thin Film Transistors Y. Asada (AIST/Japan, Tsukuba, Japan), F. Nihey, S. Ohmori, T. Saito	Fatigue Behaviour Characterization Of Nitinol For Peripheral Stents L. Petrini (Politecnico di Milano, Milano, Italy), E. Dordoni, A. Tettamanzi, F. Migliavacca, G. Pennati	Multifunctional bacterial cellulose/chitin nanocomposite materials fabricated by an in-situ process N. Butchosa (Royal Institute of Technology, Stockholm, Sweden), Q. Zhou, L.A. Berglund
18:00	Nano-clay/Polymer Coating Systems for Masonry Materials Performance Enhancement and Protection from Water Attacks Z. Zhongyi (University of Portsmouth, Portsmouth, United Kingdom), R. Eric, M. James, D. Hom, B. Nick	Nucleation and successive microstructure evolution involving dislocation dynamics via phasefield and phasefield crystal method H. Emmerich (University of Bayreuth, Bayreuth, Germany)	Transparent and conductive films of carbon nanotubes A. Catheline (CRPP - CNRS, Pessac, France), A. Pénicaud	What about the shape memory alloys fracture behaviour C. Lexcelent (Université de Franche-Comté, Besançon, France), V. Taillebot, R. Laydi	Conception of a new coating system for MRI visualisation of medical devices X. Garric (IBMM-CNRS-UM1, Montpellier, France), O. Guillaume, S. Blanquer, V. Letouzey, L. Lemaire, R. De Tayrac, J. Coudane
18:20	Barrier effect of flame retardant systems in Poly(methyl methacrylate): Study of the efficiency of the surface treatment by octylsilane of silica nanoparticles in combination with phosphorous fire retardant additives C. Longuet (Ecole des Mines, Alès, France), Y. Quach, N. Cinausero, R. Sonnier, J.-M. Lopez-Cuesta	Phase Field Modeling of Thermo-Shock in Composite Materials D. Pilipenko (Universität Bayreuth, Bayreuth, Germany), H. Emmerich	Towards carbon nanotubes photonics N. Izard (IEF/UPS11, Orsay, France), E. Gaurès, X. Le Roux, A. Beck, D. Marris-Morini, E. Cassan, L. Vivien	Modelling of hysteresis of superelastic shape memory alloy wires subjected to low-velocity impact L. Aretxabaleta (Mondragon Unibertsitatea-MGEP, Mondragon, Spain), J. Aurrekoetxea, J. Zurbitu, M. Materos	Tree- and torrent-frog like adhesives for wet and flooded environments D.-M. Drotlef (Max-Planck institute, Mainz, Germany)

