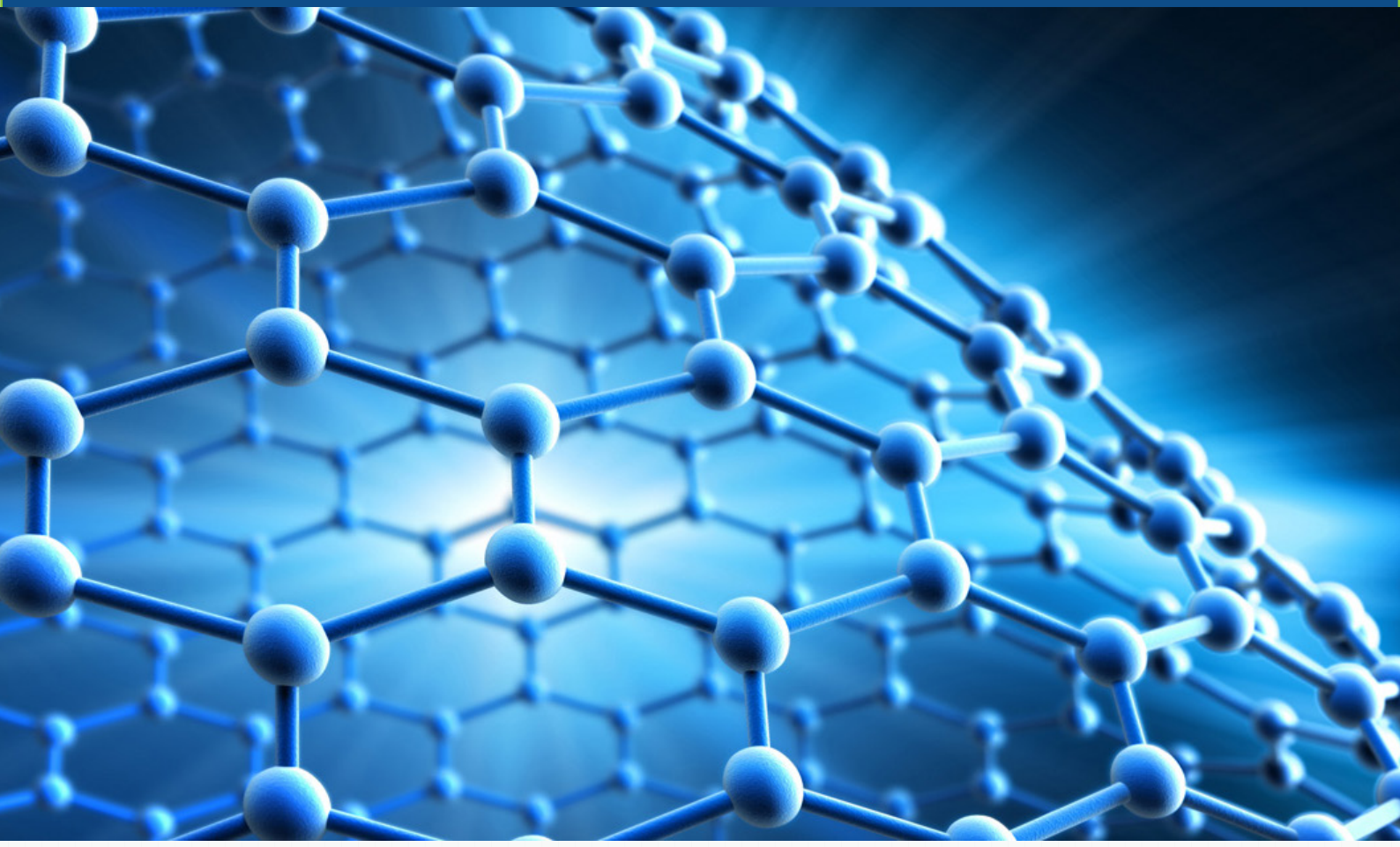
Tentative Program

19th World Congress on

Materials Science and Engineering

June 11-13, 2018 Barcelona, Spain



Interactive Sessions | Keynote Lectures | Plenary Lectures | Workshops | Exhibitors | B2B Meetings

For available speaker slots

19th World Congress on Materials Science and Engineering

June 11-13, 2018 Barcelona, Spain

Program at A Glance

Day 1

Morning Sessions	Reception/Registration	08.00-09.00	
		Time	General Session
	3 Keynote/Plenary Talks	09.00-09.15	Inaugural Address
		09.15-09.45	Keynote/Planery talk 1
		09.45-10.15	Keynote/Planery talk 2
		10.15-10.45	Keynote/Planery talk 3
	Panel Discussions/Group Photo		
	Coffee/Tea Break 10.45-11.00 (Networking)		
	11.00-12.40	➢ Materials Science and Engineering	
Evening Sessions			
	Lunch Break 12.40-13.30		
	13.30-15.30	➢ Physics and Chemistry of Materials	
	Coffee/Tea Break 15.30-15.45 (Networking)		
	15.45-17.25	Workshop	

Materials Congress 2018

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Day 2

		Time	Session 1	Session 2
Morning Sessions	09.00-10.40		Keynote Forum	
	Coffee/Tea Break 10.40-10.55 (Networking)			
	10.55-12.35		Materials for Energy and Environmental Sustainability	Polymer Science and Technology
Evening Sessions	**Lunch Break 12.35-13.25**			
	13.25-15.05		Nanomaterials and Nanotechnology	Ceramics and Composite Materials
	Coffee/Tea Break 15.05-15.20 (Networking)			
	15.20-17.00		Mechanics, Characterization Techniques and Equipments	Entrepreneurs Investment Meet

Materials Congress 2018

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19th World Congress on Materials Science and Engineering

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Day 3

	Time	Session 1	Session 2
Morning Sessions	09.00-10.40	Keynote Forum	
	Coffee/Tea Break 10.40-10.55 (Networking)		
	10.55-12.35	Biomaterials and Medical Devices	Ceramics and Composite Materials
	Lunch Break 12.35-13.25		
Evening Sessions	13.25-15.05	Emerging Smart Materials	Metals, Metallurgy and Materials
	Coffee/Tea Break 15.05-15.20 (Networking)		
	15.20-17.00	Nanomaterials and Nanotechnology	Electronic, Optical and Magnetic Materials

Poster presentation @ 17.00-18.00

Awards & Closing Ceremony

NOTE: Program Schedule is subject to change with final allotment of the speaker slots

Conference Highlights

- Materials Science and Engineering
- Nanomaterials and Nanotechnology
- Biomaterials and Medical Devices
- Polymer Science and Technology
- Ceramics and Composite Materials
- Electronic, Optical and Magnetic Materials
- Emerging Smart Materials
- Materials for Energy and Environmental Sustainability
- Physics and Chemistry of Materials
- Metals, Metallurgy and Materials
- Mechanics, Characterization Techniques and Equipments
- Entrepreneurs Investment Meet

For detailed sessions, please visit: http://materialsscience.conferenceseries.com/europe/

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Glimpses of Materials Congress 2017













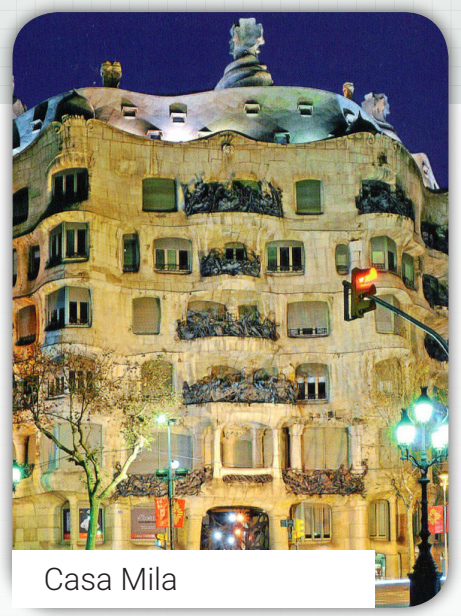




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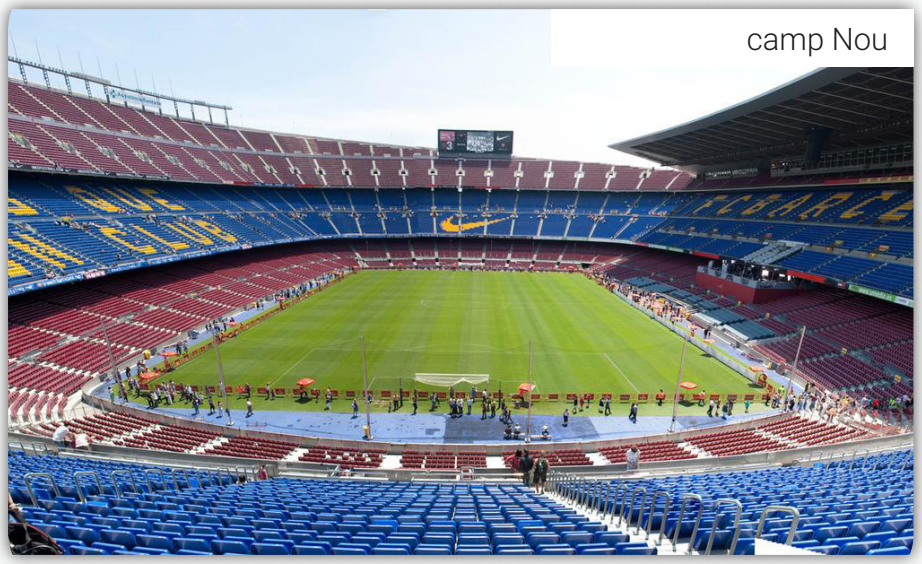
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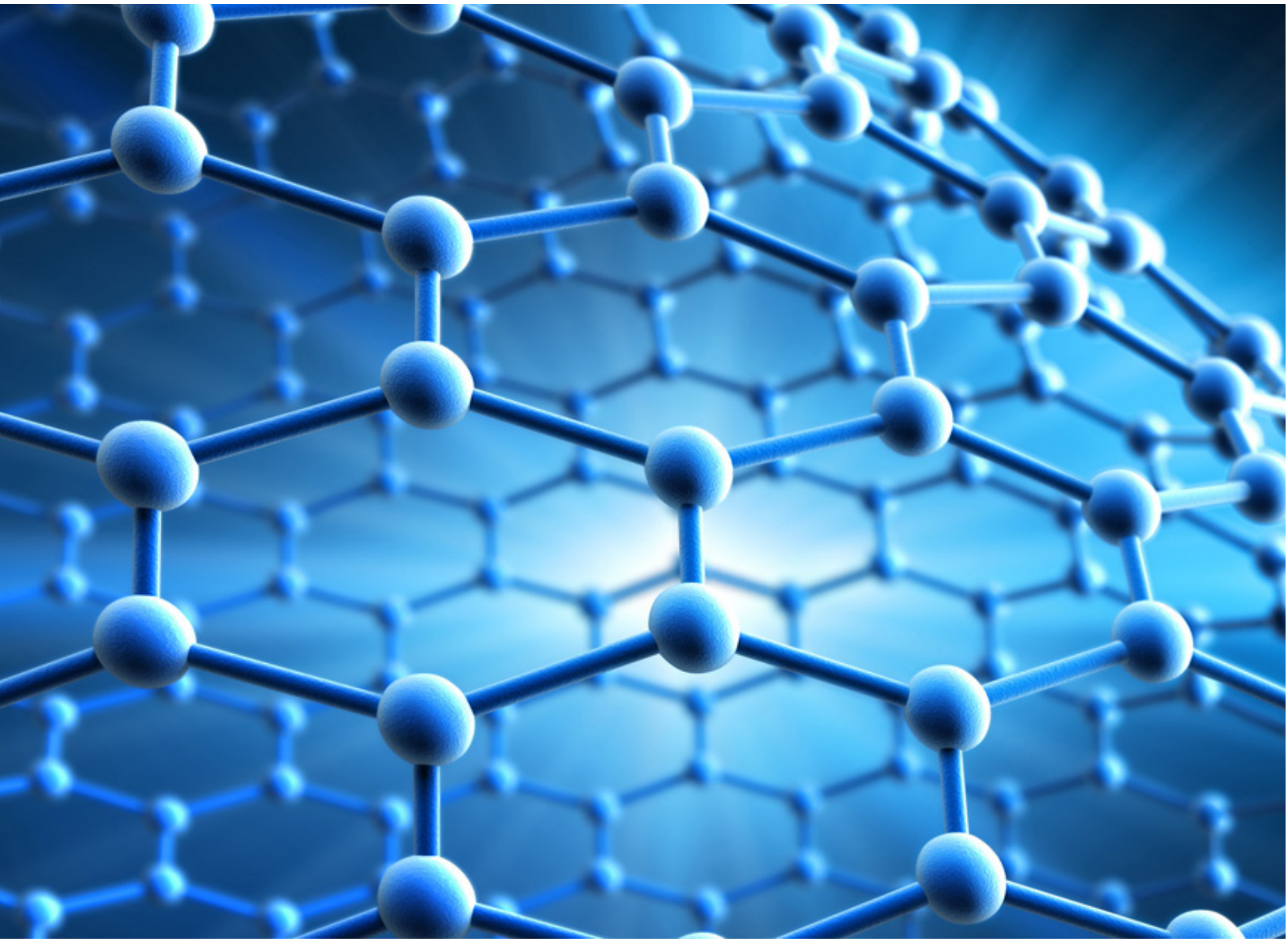
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Scientific Program

9th World Congress on

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Olimpica 1

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Opening Ceremony

Keynote Forum

Introduction

New ways of vision: Protein structures in translational medicine and business development - My experience
Robert Huber, Nobel Laureate, Chemistry 1988

Nanogenerators for self-powered systems and piezotronics for artificial intelligence
Zhong Lin Wang, Georgia Institute of Technology, USA

Sessions: Materials Science and Engineering | Metals, Metallurgy and Materials

Session Chair: Nekane Guarrotxena, Spanish National Research Council (CSIC), Spain
Session Co-Chair: Augusto Di Gianfrancesco, Consultant, Rome Area, Italy

Session Introduction

Title: Building up smart optical "organic-inorganic" nanosystems
Nekane Guarrotxena, Spanish National Research Council (CSIC), Spain

Title: Materials for advanced ultra-super critical power plants
Augusto Di Gianfrancesco, Consultant, Rome Area, Italy

Networking & Refreshments Break

Title: Helical light induced chiral surface relief in azo-polymer thin film
Takashige Omatsu, Chiba University, Japan

Title: Multi-scale deformation analysis in a thermoplastic polyurethane
Alexander M Korsunsky, University of Oxford, UK

Title: Proposed link between the periodic table and the standard model
John Roberts, University of Liverpool, UK

Title: Fine-controlled subano-metal particles in a dendrimer reactor
Kimihisa Yamamoto, Tokyo Institute of Technology, Japan

Title: Structure and dynamics of polymer materials at the single molecule scale studied by novel fluorescence microscopy techniques
Hiroyuki Aoki, Japan Atomic Energy Agency, Japan

Title: Development of highly stretchable conductive fiber and fiber-based electronic sensors for textile electronics
Taeyoon Lee, Yonsei University, Republic of Korea

Lunch Break

Title: Finite-element analysis of velocity mode transition of crack propagation in rubber materials
Atsushi Kubo, University of Tokyo, Japan

Title: Light driven directional mass transport of azo-benzene containing materials for complex tri-dimensional structures on surfaces
Stefano L. Oscurato, University of Naples Federico II, Italy

Title: Enhancing the photocatalytic activity for pollutant degradation and H_2 evolution by modifying ZrO_2 with nanoclusters of $BiVO_3$, Ag_3PO_4, $SrTiO_3$ and WO_3: A first-principles study
Francis Opoku, University of Johannesburg, South Africa

Sessions: Nanomaterials

Session Chair: Hikaru Kobayashi, Osaka University, Japan
Session Co-Chair: Marzia Quaglio, Italian Institute of Technology, Italy

Session Introduction

Title: Si nanopowder for internal hydrogen generation materials
Hikaru Kobayashi, Osaka University, Japan
Title: N-doped carbon-based nanofibers as oxygen reduction reaction catalysts
Marzia Quaglio, Italian Institute of Technology, Italy
Title: Controlled synthesis of vertical and planar graphenes using plasma-enhanced chemical vapor deposition
Mineo Hiramatsu, Meijo University, Japan
Title: Rational clustering and fractionation of "SERS hot-spot" plasmonic nanoparticles
Nekane Guarrotxena, Spanish National Research Council (CSIC), Spain

Networking & Refreshments Break

Title: The nanophotonic behaviors of wideband diluted magnetic semiconductor nanostructures
Bing Suo, Beijing institute of Technology, China
Title: Fabrication of nanoporous graphene membranes for nanofiltration applications
Marco Laurenti, Politecnico di Torino, Italy
Title: Noble metal nanostructures
Sarmiza Elena Stanca, Leibniz Institute of Photonic Technology, Germany
Title: Fabrication and characterization of carbon nanotube–recycled polyethylene terephthalate nanocomposites
Ravindra Reddy Chowreddy, Norner AS, Norway
Title: Adatom's Berry phase as a classification toolkit and responsible for enhanced lifetimes of degenerated ground states
Marta Prada, University of Hamburg, Germany
Title: Nanostructured Mn_xO_y as catalyst for oxygen reduction reaction
Angelica Chiodoni, Italian Institute of Technology, Italy

Panel Discussion

Day 2 June 13, 2017

Olimpica 1

Keynote Forum

An approximate semi-classical method that uses real valued trajectories for time dependent tunneling calculations
Michael F. Herman, Tulane University, USA
Implementation of new magnesium sheets into application from laboratory to service
Karl Ulrich Kainer, Helmholtz-Zentrum Geesthacht, Germany
Towards the growth of 3D forests of carbon nanotubes: Selective height control using reservoirs and overlayers
Gilbert Daniel Nessim, Bar Ilan University, Israel

Sessions: Nanomaterials | Mechanics, Characterization Techniques and Equipments

Session Chair: Kyuman Cho, Sogang University, South Korea
Session Co-Chair: Olga Barrera, University of Oxford, UK

Session Introduction

Title: Photoelectron spectra of GexSb20Se80-x Glasses
Li Wang, Beijing University of Technology, China
Title: Nanocellulose based flexible, environment-friendly nonvolatile resistive switching memory
Kazuki Nagashima, IMCE Kyushu University, Japan

Networking & Refreshments Break

Title: 2D material fluid nanocomposites for reconfigurable integrated optoelectronics and Si photonics
Anna Baldycheva, University of Exeter, UK

Title: Supporting titanium on silica, graphene, epoxy graphene and carbon nanotubes: A first-principles study
Penny Govender, University of Johannesburg, South Africa
Title: Nanostructure Layered Double Hydroxides (LDH): synthesis, characterization and possible applications
Maria Richetta, University of Rome "Tor Vergata", Italy
Title: Nanocrystalline cellulose from abaca fibers
Anniver Ryan P. Lapuz, Forest Products Research and Development Institute, Philippines
Title: A high resolution, multi-purpose scanning I/Q-interferometer scheme for material diagnostics
Kyuman Cho, Sogang University, South Korea
Title: Coupling diffusion and mechanics modeling for hydrogen embrittlement (HE)
Olga Barrera, University of Oxford, UK

Lunch Break

Title: Effects of plasticity and pressure on the morphology and propagation of blisters: formation of croissant and donut-like buckles
Jérôme Colin, University of Poitiers, France
Title: Rational design of organic electrode materials: New advances and tools
Christine Frayret, Université de Picardie Jules Verne, France
Title: Computational investigation of the kneading process of bread dough
Natalie German, Technical University of Munich, Germany
Title: Materials characterization by X ray diffraction techniques
Aitor Larrañaga Varga, University of the Basque Country, Spain
Title: Internal stress and friction measurements during MoS_2-nickel electrodeposition
Ebru Saraloglu Güler, Baskent University, Turkey
Title: In-situ measurement for ablation geometry during impinging of plume with laser triangulation method
Juhwan Lim, Agency for Defense Development, South Korea

Networking & Refreshments Break

Title: Chemically bonded aramid-MWCNTs nano-composites: Morphology and thermal-mechanical properties
Zahoor Ahmad, Kuwait University, Kuwait
Title: The fate, behaviour and effect of WO_3 nanoparticles on the functionality of an aerobic treatment unit
Sandile Simelane, University of Johannesburg, South Africa
Title: Flexible synthesis of anatase TiO_2 nanocrystallines for dye-sensitized solar cells applied at regular sunlight and room light conditions
Yu-Ling Guo, National Cheng Kung University, Taiwan
Title: Single particle spectroscopic studies on two-photon photoluminescence of plasmon coupled gold nanotriangle dimers
Monalisa Garai, National University of Singapore, Singapore
Title: Fiber networks modified with graphene for durable and versatile flexible electronics
Pietro Cataldi, Italian Institute of Technology, Italy
Title: Mechanical and thermal properties of propylene glycol extended and paper waste sludge modified polyurethane foams
Agne Kairytė, Vilnius Gediminas Technical University, Lithuania

Break-out Session Day 2 @ Olimpica 3

Sessions: Biomaterials and Medical Devices | Polymer Science and Technology | Ceramics and Composite Materials

Session Chair: Bing Lu, Wanhua Chemical Group Co. Ltd., China
Session Co-Chair: Loubat Cédric, Specific Polymers, France

Session Introduction

Title: New development and applications of polyurethane materials
Bing Lu, Wanhua Chemical Group Co. Ltd., China

Title: Specific Polymers – Alkoxysilane and phosphonic acid functional groups to improve compatibility between inorganic surfaces and polymers
Loubat Cédric, Specific Polymers, France
Title: Improving separation of polymers by size-exclusion and liquid chromatography on the background of the theoretical model
Miloš Netopilík, Academy of Sciences of the Czech Republic, Czech Republic
Title: Sticky degradable bioelastomers
Richard Vendamme, Flemish Institute for Technological research, Belgium

Special Session on:

Title: Physics versus non-physical ISO/NIST standards in nano, micro and the numerous macro-techniques are detrimental for daily life: what can be done?
Gerd Kaupp, University of Oldenburg, German

Lunch Break

Title: Fabrication of Co-Cr alloys for biomedical applications by implementing rapid solidification
Julio Juarez Islas, Instituto de Investigaciones en Materiales, Mexico
Title: An enzymatic-based process for the extraction of fibers from diss stems with for composites reinforcement
Antonio Zuorro, Sapienza" University of Rome, Italy
Title: Flexible and soft bioelectronics for the biotic/abiotic interface
Damia Mawad, University of New South Wales, Australia
Title: Strategies for enhancing interfacial adhesion between chicken feather filler and thermoplastic matrices in biocompositess
Jorge Macanás de Benito, UniversitatPolitècnica de Catalunya, Spain
Title: Geometry and size dependent structural reversibility of sub-micrometer polymer structures
Hong Yee Low, Singapore University of Technology and Design, Singapore
Title: Perlite metal syntactic foam (PMSF) in impact engineering
Thomas Fiedler, University of Newcastle, Australia

Networking & Refreshments Break

Title: Synthesis and characterization of titanium carbide nanofibers using a modified carbothermal reduction process
Kanchan Mondal, Southern Illinois University, USA
Title: Highly dispersed zinc based sorbents for hot gas desulphurization: Synthesis and application
David Lokhat, University of KwaZulu-Natal, South Africa
Title: Melt infiltration casting of alumina, silicon carbide and boron carbide reinforced aluminium matrix composites
Ali Kalkanli, Middle East Technical Univeristy, Turkey
Title: Biomaterial surface modification to control inflammation: Effect of nanotopography and surface chemistry on protein adsorption and cell response
Rahul Madathiparambil Visalakshan, University of South Australia, Australia
Title: High performance rubber concrete
Samaneh Pourmohammadimojaveri, Western Sydney University, Australia
Title: Investigation of the microstructure and oxidation properties of NbB2-SiC-GNP composites
Burak Cagri Ocak, Istanbul Technical University, Turkey

Poster Presentations (Session 1)

MSE01	**Title: Optoelectronic studies on hybrid perovskites films for solar cells applications** **Mauricio Solis de la Fuente,** Lawrence Berkeley National Laboratory, USA
MSE02	**Title: Valorization of feather wastes as useful and environmental friendly materials** **Marta Casadesús,** Universitat Politècnica de Catalunya, Spain
MSE03	**Title: Manufacturing of gasket sheet using paper manufacturing process without organic solvent** **Yoonjong Yoo,** Korea Institute of Energy Research, Republic of Korea

MSE04	**Title: Visible light driven photo-active nano Ag-TiO_2 for coating applications** **Jia Liang Cheng, Temasek Polytechnic, Singapore**
MSE05	**Title: Preparation of leucite from analcime by ion exchange process: An experimental study** **Qianqian Chang,** China University of Geosciences, China
MSE06	**Title: Preparation and luminescent properties of orange reddish emitting phosphor $KCaBi(PO_4)_2:Sm^{3+}$** **Mi Ruiyu,** China University of Geosciences, China
MSE07	**Title: Synthesis of nano-analcime with potassic hornblende syenite by direct alkali-hydrothermal treatment** **Yuxiang Qi,** China University of Geosciences, China
MSE08	**Title: Angle-insensitive multicolor display device based on phase change materials** **Hongkai Ji,** University of Science and Technology, China
MSE09	**Title: Gate-tunable Schottky junction solar cells with light transparent and electric-field permeable graphene mesh on n-Si** **Won Il Park,** Hanyang University, South Korea
MSE10	**Title: Characterization and stability of TiO_2 nanoparticles in industrial dye stuff effluent** **Langelihle Nsikayezwe Dlamini,** University of Johannesburg, South Africa
	Poster Presentations (Session 2)
MSE11	**Title: Effect of binder on adsorption of cesium on silica gel containing embedded phosphotungstic acid** **Aleksey Vasiliev,** East Tennessee State University, USA
MSE12	**Title: A highly efficient photoanode for enhancing degradation of the azo dye and electricity generation of dual-photoelectrode photocatalytic fuel cell** **He Yun,** City University of Hong Kong, China
MSE13	**Title: Preparation of zeolite for slow-release fertilizer using K-feldspar powder** **Jiangyan Yuan,** China University of Geosciences, China
MSE14	**Title: Raman microspectroscopy in dental research** **Tomasz Buchwald,** Poznan University of Technology, Poland
MSE15	**Title: Inverse gas chromatography - A novel method for the examination of bond strength between tooth hard tissues and restorative materials** **Zuzanna Okulus,** Poznan University of Technology, Poland
MSE16	**Title: Study on deposition rate and microstructure of niobium coating prepared by CVD from niobium pentafluoride** **Mingmin Zheng,** State Power Investment Corporation Science and Technology Research Institute, China
MSE17	**Title: Effect of reduced graphene oxide on the mechanical, thermal and electrical properties of epoxy** **Ahmed Alzahrany,** University of Sheffield, United Kingdom
MSE18	**Title: Solar cell: Photochemical cells based on dye sensitization of titanium dioxide and with indium tin oxide as a conductor** **Ari A Mohammed,** University of Zakho, Iraq
MSE19	**Title: Preparation and properties of protective coating on inner surface of nickel-based alloy tube** **Yanhong Liu,** State Power Investment Corporation Science and Technology Research Institute, China

MSE20 **Title: Specific Polymers – Alkoxysilane and phosphonic acid functional groups to improve compatibility between inorganic surfaces and polymers**
Loubat Cédric, Specific Polymers, France

MSE21 **Title: Response of S-phase to rapid annealing**
Yana Liang, University of Birmingham, UK

Panel Discussion

Day 3 June 14, 2017

Olimpica 1

Sessions: Electronic, Optical and Magnetic Materials

Session Chair: Henri Jaffres, Unité Mixte de Physique CNRS, France
Session Co-Chair: Alessandra Vitale, Politecnico di Torino, Italy

Session Introduction

Title: Electrical spin injection and detection in molybdenum disulfide multilayer channel
Henri Jaffres, Unité Mixte de Physique CNRS, France
Title: Microscopic background in metal-insulator criterion for doped Mott-Hubbard materials
Vladimir A Gavrichkov, Kirensky Institute of Physics, Russia
Title: An electromagnetic-thermal model for heating patterns prediction of microwave treated palm to contrast the Red Palm Weevil
Rita Massa, University Naples Federico II, Italy
Title: Study on chemical reaction under microwave irradiation
Satoshi Fujii, Tokyo Institute of Technology, Japan
Title: $L1_0$-FePt based systems for ultra high-density magnetic recording
Gaspare Varvaro, ISM-CNR, Italy
Title: Photoluminescent crystalline magnetic materials based on trivalent lanthanide ions and polycyanidometallates
Szymon Chorazy, Jagiellonian University, Poland

Networking & Refreshments Break

Title: Rare-metal-free supermagnet $L1_0$-type FeNi ordered alloy
Masato Kotsugi, Tokyo University of Science, Japan
Title: Rare-metal-free high-performance Ga-Sn-O thin film transistor
Tokiyoshi Matsuda, Ryukoku University, Japan
Title: Ferroelectricity and magnetism in the organic charge transfer salts k-$(ET)_2X$
Luca Fausto Tocchio, Politecnico di Torino, Italy
Title: Materials by design for thermodynamically stable electrides
Mina Yoon, University of Tennessee, USA
Title: Intrinsic charge transport in stanene: Role of buckling and electron-phonon coupling
Yuma Nakamura, Tsinghua University, China

Lunch Break

Sessions: Emerging Smart Materials | Materials for Energy and Environmental Sustainability

Session Chair: Tsvetanka Zheleva, US Army Research Lab, USA
Session Co-Chair: Antonina Pirrotta, University of Palermo, Italy

Session Introduction

Title: Materials research in energy and power for defense
Tsvetanka Zheleva, US Army Research Lab, USA
Title: A new perspective for analyzing experimental tests on biomaterials
Antonina Pirrotta, University of Palermo, Italy
Title: Solar cells efficiency enhancement by plasmons generation
Alexander Axelevitch, Holon Institute of Technology, Israel

Title: Sustainable solutions for industrial waste minimization: Environmental and material applications
Shivani Bhardwaj Mishra, University of South Africa, South Africa
Title: Quasiparticle approach to study the kinetics of self-assembly in complex material
Helena Zapolsky, University of Normandy, France
Title: Screen printable molecular copper ink for printed electronics
Bhavana Deore, National Research Council, Canada

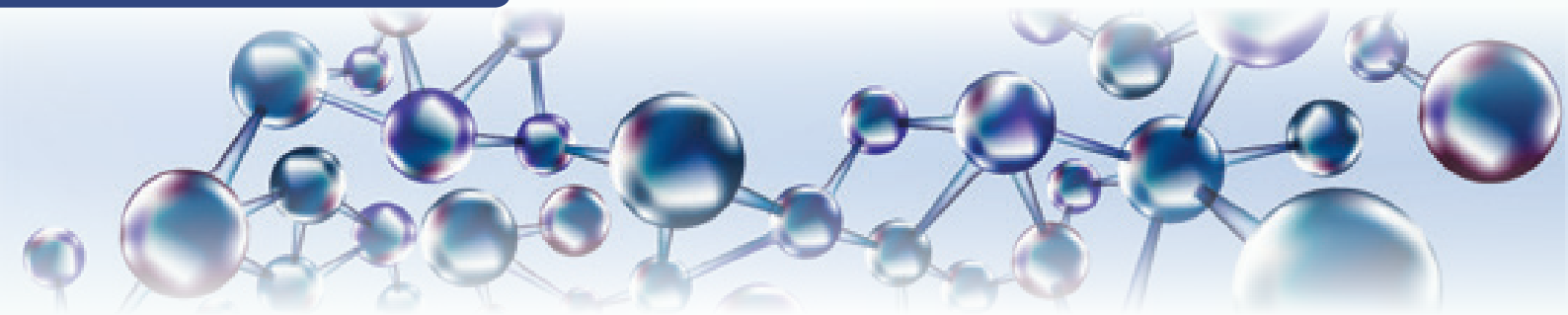
Networking & Refreshments Break

Title: Relation between nanoscale structures and transport phenomena in materials of polymer electrolyte fuel cell
Takashi Tokumasu, Tohoku University, Japan
Title: Siloxane photopolymers for PCR microfluidics
Alessandra Vitale, Politecnico di Torino, Italy
Title: The quantum Hall effect, the theta angle, instantons and all that
Adrianus M M Pruisken, University of Amsterdam, Netherlands
Title: CO_2 adsorption equilibria on calcium exchanged bentonite modified by mono-, di- and triethanolamines
Ali Elkhalifah, Al-Neelain University, Sudan
Title: Structural features and functions of ZIF crystals made via a reaction diffusion process at room temperature
Mohamad Hmadeh, American University of Beirut, Lebanon
Title: Influence of grain size on super elasticity and actuation properties of Cu-Al-Mn shape memory alloys
Nazim Babacan, Ghazi University, Turkey

Panel Discussion

Award Ceremony

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Day 1 June 13, 2016

Registrations

Terra Mitica

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Opening Ceremony

Keynote Forum

Introduction

Title: High temperature solar cell for single facility co-generation of photovoltaic and thermal electricity: A breakthrough approach to affordable solar power

Dieter M Gruen, Dimerond Technologies LLC, USA

Title: Liquid cell electron microscopy revealed a number of mysteries in molecular mechanism of muscle contraction

Haruo Sugi, Teikyo University, Japan

Group Photo & Coffee Break

Special Session on **The fourth phase of water: Beyond solid, liquid, and vapor**

by: Gerald Pollack, University of Washington, USA

Track 1: Materials Science and Engineering
Track 13: Entrepreneurs Investment Meet

Session Introduction

Session Chair: Maria Pilar de Miguel Ortega, Centre for the Development of Industrial Technology, Spain

Session Co-chair: Oscar Juan Dura, Castilla-La Mancha, Spain

Title: Centre for the development of industrial technology: Funding opportunities for materials industries in Spain
Maria del Pilar de Miguel Ortega, Centre for the Development of Industrial Technology, Spain
Title: Transport properties on nanostructured oxides: Grain boundary effects
Oscar Juan Dura, Castilla-La Mancha, Spain
Title: Supercapacitors based in 3D graphene foams
Jorge Pedros, Technical University of Madrid, Spain
Title: Bioinspired gradient surfaces with controlling of water collection/repellency
Yongmei Zheng, Beihang University, China

Lunch Break

Title: New advances in antennas for micro- and millimeter wave communications based on emerging materials and reconfigurable structures
Juan Jose Vegas Olmos, Technical University of Denmark, Denmark
Title: Overview of NFFA-Europe
Dorian Martin, NFFA-Europe, France

Track 2: Nanomaterials

Session Introduction

Session Chair: Elena Cerro Prada, Technical University of Madrid, Spain

Session Co-chair: Alexander Axelevitch, Holon Institute of Technology, Israel

Title: Synthesis and microstructural characterization of highly active nanocrystalline titania for enhanced photoactivity
Elena Cerro-Prada, Technical University of Madrid, Spain
Title: Aluminum based nanostructures for biosensing
Alexander Axelevitch, Holon Institute of Technology, Israel
Title: Optical active plasmonic nanoassemblies for sensory applications
Nekane Guarrotxena, Spanish National Research Council, Spain
Title:Nanostructure control in tungsten trioxide (WO_3) thin films for improved electochromic properties
Pandurang Ashrit, Université de Moncton, Canada
Title: Catalytic decomposition of N_2O over Au/oxides
Sónia A C Carabineiro, University of Porto, Portugal

Coffee Break @ Laplaza 16:00-16:15

Title: Rapid and clean methodology to synthesize alcoholic suspensions of calcium hydroxide nanoparticles
Juan Antonio Madrid, National Center of Reference for Chemical VET, Spain
Title: Nanohybrids based on multi-stimuli responsive polymers and inorganic nanoparticles: Design and functional properties
Nekane Guarrotxena, Spanish National Research Council, Spain
Title: Synthesis of nanocarbon dots from spicy food and study of their *in-vitro* anticancer potential
Nagamalai Vasimalai, International Iberian Nanotechnology Laboratory, Portugal
Title: Nanoconfined reactions in clay nanotubes based on metal salt loading
Anna Stavitskaya, I.M.Gubkin Russian State University of Oil and Gas, Russia
Title: Carbon nanotubes doped with metal oxide nanoprticles as new materials for oil removal
Ahmad Kayvani Fard, Hamad Bin Khalifa University, Qatar
Title: Development of adsorption treatment by iron oxide nanoparticles and biological degradation in mimetic column for maaged aquifer recharge
Soon-Uk Yoon, INHA University, South Korea

Day 2 June 14, 2016

Terra Mitica

Keynote Forum

Title: Consequences of the physical foundation of the exponent 3/2 in pyramidal/conical (nano) indentations for the mechanical parameters and for daily life
Gerd Kaupp, University of Oldenburg, Germany

Track 3: Biomaterials
Track 4: Metals and Alloys
Track 5: Ceramics, Polymers and Composite Materials

Session Introduction

Session Chair: Ignacio Martin Gullon, University of Alicante, Spain

Title: New technology for toughened and reinforced PLLA with phosphorous glass to form nanocomposites for bioresorbable vascular scaffold applications
Xiang Zhang, University of Cambridge, United Kingdom
Title: Delamination resistances improvement of carbon fiber composites with tailored graphene oxide
Ignacio Martin Gullon, University of Alicante, Spain
Title: Gas turbine blade tip alloy selection for alloy-247LC
Thaddeus Strusinski, Siemens Energy USA North Carolina Winston-Salem Service Center, USA

Coffee Break

Title: CIMBNC- Combination and interactions of three kinds of nanoclays structural modifiers, for the colored bio-nanocomposites optimization
Bàrnbara Micó Vicent, University of Alicante, Spain
Title: Rheological analysis of micro-structured adhesives derived from castor oil conjugates
Harshal D Santan, Universidad de Huelva, Spain
Title: Thermo Optical Switching of Paraffin wax hosting carbon fillers
Abeer Salah, Cairo University, Egypt

Title: Plasma electrolytic oxidaNanoarchitectures in designing polymer sensors
Deepalekshmi Ponnamma, Qatar University, Qatar
Title: To develop a biocompatible and biodegradable polymer-metal composite with good mechanical and drug release properties
Murtaza Najabat Ali1, National University of Sciences and Technology, Pakistan

Lunch Break @ Laplaza 12:45-13:30

Poster Presentations @ Terra Mitica 13:30:14:00

Title: A new biomaterial in the subsystem nurse´s A-phase-silcocarnotite
Piedad N De Aza, Universidad Miguel Hernández, Spain
Title: Influence of hydroxyapatite granule size, porosity and crystallinity on tissue reaction, *in vivo* characterization of the materials and *in vivo* SEM analysis
Maria Piedad Ramírez Fernández, Universidad Católica San Antonio de Murcia, Spain
Title: Post polymerization functionalization of soluable poly(2,5-dithienylpyrrole)s
Pinar Camurlu, Akdeniz University, Turkey
Title: Effect of curing temperature on sol-gel formed glass coatings containing hBN nanoparticles
Hasan Erdem Çamurlu, Akdeniz University, Turkey
Title: Three dimensional PEDOT nanowires by electrochemical polymerization
Antonio García Barberá, University of Valencia, Spain
Title: Refined parameters for cations and anions in aqueous solution for atomistic force fields
Tariq Jamil, University of Colorado Boulder, USA
Title: Adsorption of graphene oxide onto synthetic fibers
Ivan Plaza, University of Granada, Spain
Title: Polyamide fibers coated with chlorhexidine
Miguel López, University of Granada, Spain
Title: Poly(acrylic acid)/Polyethylene glycol hygrogel prepared by using gamma-ray irradiation for mucosa adhesion
Deok-Won Lee, Kyung Hee University, Korea
Title: Efficient adsorbent for immobilization of caesium on contaminated areas
Aleksey Vasiliev, East Tennessee State University, USA

Track 3: Biomaterials
Track 4: Metals and Alloys
Track 5: Ceramics, Polymers and Composite Materials

Title: The potential of ceramic particles in coatings with improved scratch and wear resistance
Caterina Lesaint Rusu, Norwegian University of Science and Technology, Norway
Title: Plasma electrolytic oxidation of AA 7075 with silver sub micrometric powder: A new biocide and corrosion protective coating for aluminum alloys
Pietrogiovanni Cerchier, University of Padova, Italy
Title: *In vitro* and *in vivo* studies of dextran-based materials for peripheral nerve regeneration
Catarina Pinho, University of Coimbra, Portugal
Title: An investigation into the performance of metal coated additively manufactured polymer lattice structures
Muhammad Farhan Khan, University of Derby, UK
Title: Mechanical performance of novel thin ply thermoplastic composites
Somen K Bhudolia, Nanyang Technological University, Singapore

Track 6: Electronic, Photonic and Magnetic Materials
Track 8: Materials Science in Building and Construction Engineering
Track 9: Advanced Energy Materials

Session Introduction

Session Chair: David A Jackson, University of Kent, UK
Session Co-chair: María Teresa Pérez Prior, Universidad Carlos III de Madrid, Spain

Title: Multichannel fibre laser Doppler vibrometer studies of hypervelocity impacts
David A Jackson, University of Kent, UK
Title: Synthesis and characterization of DABCO-functionalized polysulfones as anion-exchange membranes for fuel cells applications
María Teresa Pérez Prior, Universidad Carlos III de Madrid, Spain

Coffee Break

Title: New developments in polybinary modulation for bandwidth limited channels
J J Vegas Olmos, Technical University of Denmark, Denmark
Title: Advanced materials oriented to an improved energy efficiency in buildings
Estibaliz Aranzabe, IK4-Tekniker, Spain
Title: Hybrid multi-material optical fibers
Fabien Sorin, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland
Title: Investigation of regularities of photoluminescence centers formation in Fe^{2+} doped CVD-ZnSe by the two-photon confocal microscopy method
N A Timofeeva, Russian Academy of Sciences, Russia
Title: Conducting polymers as an alternative for classical thermoelectric materials
Mario Culebras Rubio, University of Valencia, Spain

Poster Presentations @ Terra Mitica 17:40-18:10	
MSC-11	**Title: Synthesis and characterization of nanoparticles III-V semiconductor core/shell (InP/ZnS)**
	Jose Eladio Flores Mena, Instituto Politécnico Nacional, México
MSC-12	**Title: Synthesis and characterization of chemical-bath deposition CdPbxS1-x nanofilms**
	Jose Eladio Flores Mena, Instituto Politécnico Nacional, México
MSC-13	**Title: Synthesis, functionalization and antimicrobial activity of a near-IR photoactive gold multibranched tags**
	Lyutakov Oleksiy, Institute of Chemical Technology, Czech Republic
MSC-14	**Title: Light-activated antibacterial nanofibers**
	Elashnikov Roman, University of Chemistry and Technology, Czech Republic
MSC-15	**Title: Platform for smart SERS sensors based on surface-modified metal plasmonic thin films**
	Guselnikova Olga, University of Chemistry and Technology, Czech Republic
MSC-16	**Title: Metal grating coupling with different nanoparticles for highly intensified SERS response**
	Kalachyova Yevgeniy, University of Chemistry and Technology, Czech Republic
MSC-17	**Title: Surface modification processes of modern bioresorbable polymers towards to the desired surface properties applying in the tissue engineering**
	Kristina Bastekova, UTC Prague, Czech Republic
MSC-18	**Title: Stability of aged ethylene norbornene copolymers used for medical devices**
	Wowro Sonia Rosine Lago, Univ Paris-Sud, France
MSC-19	**Title: Plasma generated nitrogen functionalities on polymeric bone implants for upregulating osteogenesis**
	Wei Zhang, The Chinese Academy of Sciences, China
MSC-20	**Title: Optical response materials design and synthesis: Sensor, LCD color filter, chromic and others**
	Young-A Son, Chungnam National University, South Korea

Day 3 June 15, 2016

Terra Mitica

Track 7: Materials Chemistry
Track 10: Materials and Environmental Effects
Track 11: Advanced Materials and Tools
Track 12: Materials in Industry

Session Introduction

Session Chair: Josep Vives, Proquimia S.A., Spain
Session Co-chair: Hanumantha Rao Kota, Norwegian University of Science and Technology, Norway

Title: The times are changing. New surface treatments based on nanoceramics coatings
Josep Vives, Proquimia S.A. Vic, Spain

Title: Implications in sulphide mineral processing with new insights into metal sulphides oxidation during grinding by H_2O_2 generation

Hanumantha Rao Kota, Norwegian University of Science and Technology, Norway

Title: Plasmonics for plasmon-enhanced single-molecule spectroscopy

Yuko S Yamamoto, Kagawa University, Japan

Coffee Break @ Laplaza 11:00-11:15

Title: Probing optical, phonon, thermal and defect properties of 3C-SiC/Si (001)

Devki N Talwar, Indiana University of Pennsylvania, USA

Title: Preparation of polyamide microspheres with tunable morphology and size for use in SLS processing

Gexia Wang, The Chinese Academy of Sciences, China

Title: Breathe2Seat – New methodologies for assessing comfort and moisture management in automotive seats

Anabela Carvalho, Centre for Nanotechnology and Smart Materials, Portugal

Title: Mechanism of molecular interaction of superplasticizer oligomers with hydrated cement phases

Tariq Jamil, University of Colorado Boulder, USA

Title: Effect of the composition and production process parameters on the microstructure, residual stresses, mechanical and corrosion properties of gold alloys used in industrial processes

C Cason, University of Padua, Italy

Title: Corrosion and wear resistance of PEO coatings containing graphite nanoparticles produced on magnesium alloys

L Pezzato1, University of Padua, Italy

Title: Elucidating the mechanisms of ultrafiltration for wastewater treatment in the presence of surface active molecules and aggregates

Aybike Nil Olcay, Izmir Institute of Technology, Turkey

Panel Discussion

Award Ceremony

Lunch Break

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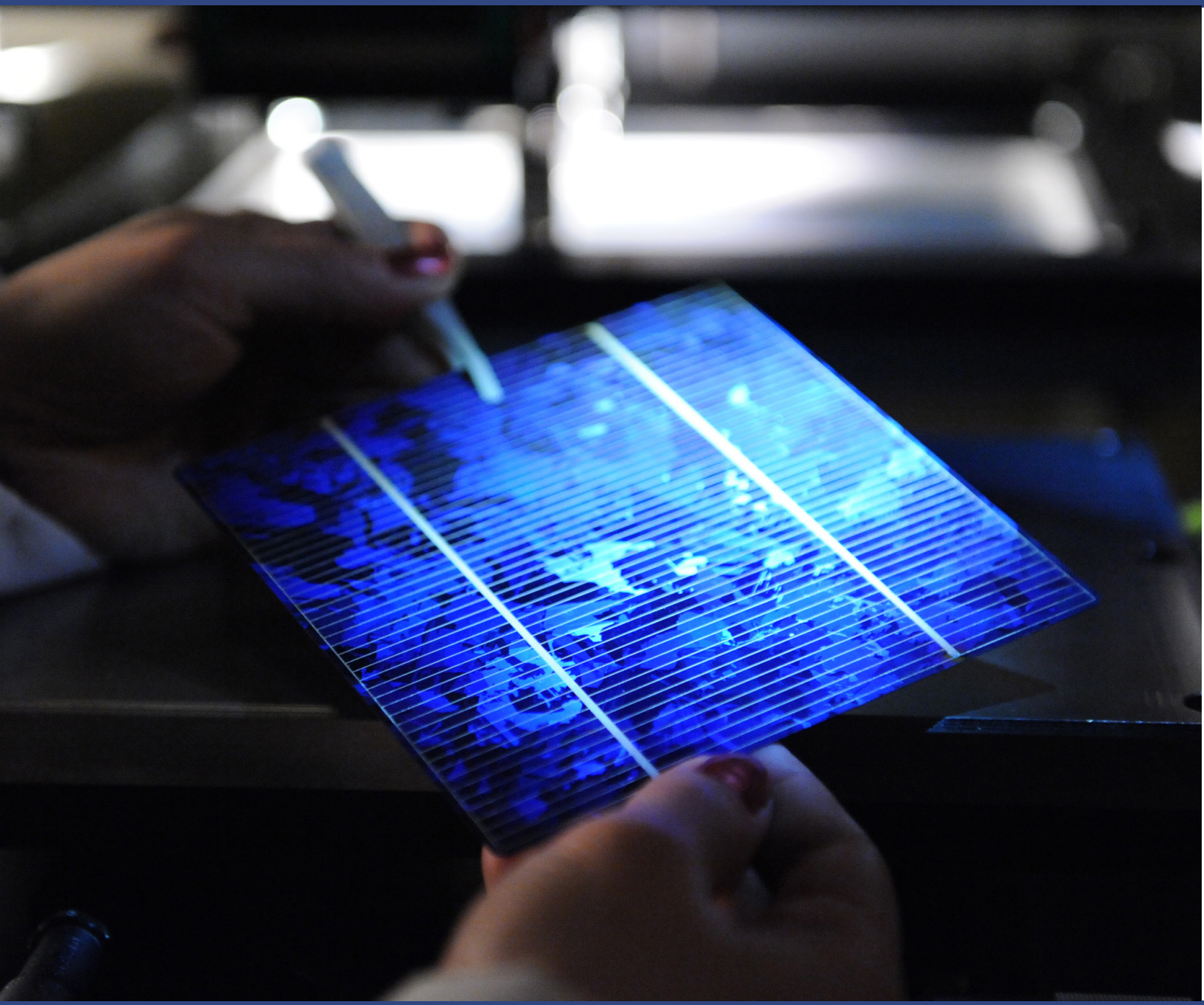
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Registrations

Sylt 3

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Opening Ceremony

Keynote Forum

Introduction

Title: Investigating materials formation with liquid-phase TEM
Jim De Yoreo, University of Washington, USA

Title: ISO-standards 14577 violate the first energy law: Can we further live with that?
Gerd Kaupp, University of Oldenburg, Germany

Title: New concept of bioresorbable polymer-based ceramic hybrids for cardiovascular stent applications
Xiang Zhang, University of Cambridge, UK

Title: Graphene flake and graphene quantum dot-receptor sensor for detecting nerve agents
Hyoyoung lee, Sungkyunkwan University, Republic of Korea

Coffee Break 10:05-10:20

Sessions:
Materials Science and Engineering | Materials in Industry

Session Chair: Hyoyoung lee, Sungkyunkwan University, Republic of Korea
Session Co-Chair: Nekane Guarrotxena, Spanish National Research Council, Spain

Session Introduction

Title: Smart functional nanoscale-hybrid materials: Surface modification and applications
Nekane Guarrotxena, Spanish National Research Council, Spain
Title: Ductile behavior of hard MoBC and WBC nanolaminated coatings
Petr Vasina, Masaryk University, Czech Republic
Title: Dynamics of single ions and molecules at the surface of solids in solution
Kislon Voitchovsky, Durham University, UK
Title: Design and evaluation of new ligands with highly extractability and selectivity for palladium from secondary raw material
Emad Mowafy, University of Hail , Saudi Arabia
Title: Evaluating mechanical properties of complex material structures from a new combination of calotte grinding and indentation tests
Nick Bierwisch, Saxonian Institute of Surface Mechanics, Germany
Title: Optimizing electrical conductivity and optical transparency of IZO thin film deposited by radio frequency (RF) magnetron sputtering
Lei Zhang, Winston Salem State University, USA
Title: Fabrication, optical and thermal properties of glass and crystalline rare-earth aluminates
Vijaya Kumar, University of Mysore, India
Title: Effect of process parameters and post heat treatment in the development of microalloyed HSLA tubes for torsional applications
Thendralarasu Udhayakumar, Tube Investments of India Ltd, India

Lunch Break 13:00-13:30 @ Restaurant Rienacker

Title: Effect of process parameters and post heat treatment in the development of microalloyed HSLA tubes for torsional applications
Elakkiya Mani, Tube Investments of India Ltd, India
Title: Graphite based minimum quantity dry lubrication at drilling CFRP
Robert Beckenlechner, University of Stuttgart, Germany

Title: Insights into linear supramolecular polymer formation via TPE and BODIPY containing host-guest interaction
Chinmayananda Gouda, National Chiao Tung University, Taiwan

Sessions:
Nanomaterials | Biomaterials and Healthcare

Session Chair: Nikolay Ledentsov, VI Systems GmbH, Germany
Session Co-Chair: Yongmei Zheng, Beihang University, China

Session Introduction

Title: Recent progress in epitaxial quantum dots for lasers and light emitting diodes
Nikolay Ledentsov, VI Systems GmbH, Germany
Title: Functional metal-ceramic nanocomposites based on tubule clay
Yuri Lvov, Louisiana Tech University, USA
Title: Characterization of nanosuspension using pulsed field gradient nuclear magnetic resonance
Haruhisa Kato, National Institute of Advanced Industral Science and Technology, Japan

Coffee Break 15:20-15:35 @ Sylt Foyer

Title: Engineering optical Raman active nanoassemblies for nanosensor purposes
Nekane Guarrotxena, Spanish National Research Council, Spain
Title: Mechanical and topographical characterization of biomaterials, cells and tissues by enhanced atomic force microscopy
Jörg Barner, JPK Instruments AG, Germany
Title: Soft thermal nanoimprint lithography
Mark Schvartzman, Ben-Gurion University of the Negev, Israel
Title: Bioinspired gradient surfaces with controlling of dynamic wettability
Yongmei Zheng, Beihang University, China
Title: EHDA technology utilizing different bio-structure
Rita Haj Ahmad, De Montfort University, UK
Title: Electrochemical and biosynthesis of Nano-Photocatalytic materials and its applications in photovoltaic, anti-bacterial, anti-cancer and in preparation of polymer composites
Sannaiah Ananda, University of Mysore, India
Title: Synthesis and characterization of single-crystal bismuth telluride nanowires
Ming Yau Chern, National Taiwan University, Taiwan
Title: Iriartea deltoidea & Socratea exhorriza: Sustainable production alternatives for integrated Biosystems, first stage - bioconstruction.
Lina Fernanda Mojica Sánchez, CIAM-UNIMETA, Colombia
Title: On-demand release of paclitaxel and 5-flourouracil using thermoresponsive poly(NIPAAm-co-HMAAm)/ polyurethane partnered with alternating magnetic field induced hyperthermia on non-vascular nitinol stent
Ludwig Erik Aguilar, Chonbuk National University, South Korea
Title: Reversible and irreversible self-folding behavior of water responsive poly (vinyl alcohol) films
Amrita Rath, Indian Institute of Technology Madras, India
Title: Doxorubicin conjugated Fe_3O_4-GQD nanoparticle for magnetically targeted and ph responsive drug delivery vehicle: a two way targeted approach
Ankan Dutta Chowdhury, National Chiao Tung University, Taiwan

Panel Discussion

Day 2 | February 21, 2017 | Tuesday

Sylt 3

Keynote Forum

Title: Hybrid photovoltaic-piezoelectric flexible device for energy harvesting from nature

Elias Siores, University of Bolton, UK

Title: The decomposition of the solution during the formation of eutectic composites

Alex guskov, Institute of Solid State Physics of RAS, Russia

Title: Designing topological states by pressure, strain and functionalization

Udo Schwingenschloegl, King Abdullah University of Science & Technology,Saudi Arabia

Title: Graphene/h-BN heterostructures based field effect transistors employing chemical vapor deposition grown h-BN as a dielectric layer

Dae Joon Kang, Sungkyunkwan University, Republic of Korea

Sessions:
Materials Chemistry | Materials Physics | Energy Materials

Session Chair: Claude Delmas, University of Bordeaux, France
Session Co-Chair: Zhiqiang Gao, National University of Singapore, Singapore

Session Introduction

Title: Solid state electrochemistry: A tool for synthesis and characterization of solids
Claude Delmas, University of Bordeaux, France
Title: Chemical effects on metals friction at the nanometer scale
Arnaud Caron, KoreaTech, Republic of Korea
Title: Graphene oxide supported layered double hydroxide hybrids: Synthesis and applications
Mohamed Mokhtar Mohamed Mostafa, King Abdulaziz University, Saudi Arabia

Coffee Break 10:40-10:55 @ Sylt Foyer

Title: Approaches to reduce material consumptions in photovoltaics
Martha Ch. Lux-Steiner, Helmholtz-Zentrum Berlin, Germany
Title: Imaging electrons motion in semiconductor materials
Michael K L Man, Okinawa Institute of Science and Technology Graduate University, Japan
Title: Neutron scattering investigations of hydrogen storage in porous materials
Margarita Russina, Helmholtz Centre Berlin for Material and Energy Research, Germany
Title: Development of novel organic radical batteries
Shinichi Nakatsuji, University of Hyogo, Japan
Title: A dual-carbon phase modified and nanostructured nickel sulfide anode for sodium-ion batteries
Zhiqiang Gao, National University of Singapore, Singapore
Title: Hierarchical conducting polymers micro/nanostructures and their electrochemical energy conversion
Ying Zhu, Beihang University, China
Title: Environmental benign graphene quantum dots embedded halloysite nanotubes as high performance supercapacitor electrode material
Akhilesh Babu Ganganboina, National Tsing Hua University, Taiwan

Lunch Break 13:10-13:40

Sessions:
Metallurgy and Materials Science | Advanced Materials and Devices | Characterization and Testing of Materials

Session Chair: Mikhail Lebyodkin, CNRS, France
Session Co-Chair: Mihaela Albu, Graz Centre of Electron Microscopy, Austria

Session Introduction

Title: Development of solar grade silicon refining via metallurgical route: Thermodynamic properties of silicon based alloys
Kazuki Morita, The University of Tokyo, Japan
Title:Controlling microstructure via thermal science analysis during resistance spot welding
Peng-Sheng Wei, National Sun Yat-Sen University, Taiwan
Title: Light-induced superconductivity in an organic mott insulator induced by light-driven carrier doping
Masayuki Suda, Institute for Molecular Science, Japan
Title: Large tunnel magnetocapacitance in magnetic tunnel junctions
Hideo Kaiju, Hokkaido University, Japan
Title: Crack-closing of superelastic NiTi SMA short fibers in mortar beams
Eunsoo Choi, Hongik University, Korea
Title: Correlated versus random behavior of dislocations in jerky flow of Al-Mg alloys
Mikhail Lebyodkin, CNRS, France
Title: The development of smart materials for medical applications using laser scanning micrometry
Daniel Melling, University of Dundee, UK
Title: Quantum contact mechanics for holistic material optimization
Norbert Schwarzer, Saxonian Institute of Surface Mechanics, Germany

Coffee Break

Title: Magnetic characterization of the phase transformations during synthesis of the $FeWO_4$ nanoparticles using WS_2 nanotubess
Gregory Leitus, Weizmann Institue of Science, Israel
Title: Advanced alloys and steels microstructure characterization by analytical high resolution scanning transmission electron microscopy
Mihaela Albu, Graz Centre of Electron Microscopy, Austria
Title: Evaluation of liquid tin corrosion on austenitic steels as well as nickel-based alloys and first tests on possible protective surface layers at high temperature
Thomas Emmerich, Karlsruher Institute of Technology, Germany

Workshop

Title: Correlative and *in-situ* Materials Characterization
Said Mansour, Hamad Bin Khalifa University, Qatar
Mathias O. Mosig, Protochips, USA
Philipp Wachsmuth, JEOL, Germany

Session Introduction

Title: Optimization of sustainable cutting conditions in turning carbon steel by CNC turning machine
Haider M. Mohammad Albu-Swelim, University of Basrah, Iraq
Title: Enhancement the mechanical properties of aluminum casting alloys (A356) by adding nanorods structures from zinc oxide
Zaid S Qassim, University of Basrah, Iraq
Title: Prediction of hardness, yield strength, and tensile strength for single roll melt spinning of 5083 Al-alloy ribbons
Ahmad Kadhim Jassim Al-Dawod, University of Basrah, Iraq
Title: Comprehensive study of chemical synthesis and dielectric parameters of holmium substituted yttrium iron garnets (HoxY3-xFe5O12, x=0.1, 0.3, 0.6, 0.9, 1.2, 1.5) prepared by conventional ceramic method
Kausar Javed Khan, Lahore College for Women University, Pakistan
Title: Water content dependent mechanical properties of biopolymer thin films: A molecular dynamics study
Santhosh Mathesan, IIT Madras, India

Poster Presentations on Day 2 (February 21, 2017)

MSC-01

Title: Predictive wear modelling - The ultimate simulation tool for optimum tribo coatings
Nick Bierwisch, Saxonian Institute of Surface Mechanics, Germany

MSC-02

Title: Synthesis and characterization of conductive polymer hydrogels and the investigation of their application as biosensor hybrid for catechol detection
Ezer Castillo, Adelphi University, USA

MSC-03	**Title:Dynamic response of a modified water tank exposed to concentrated solar energy** **Mohammed H. Alhamdo,** University of AlMustansirya, Iraq
MSC-04	**Title: Experimental study of the thermal behavior of heated natural composite material** **Qasim Saleh Mahdi,** AL-Mustansiryah University, Iraq
MSC-05	**Title: Engineering of multi-functional composite nano-particles to address anti-microbial resistance using EHDA particle technology** **Suleman Ramzan,** De Montfort University, UK
MSC-06	**Title: Rare earth Chalcogels NaLnSnS4 (Ln= Y, Gd, Tb) for Selective Adsorption of Volatile Hydrocarbons and Gases** **Fatimah Edhaim,** King Abdullah University of Science & Technology, SA
MSC-07	**Title: On the friction and wear on-set of fcc metals by atomic force microscopy** **Hui-Eun Ko,** KoreaTech, Republic of Korea

Panel Discussions

End Of Day 2

Closing Ceremony

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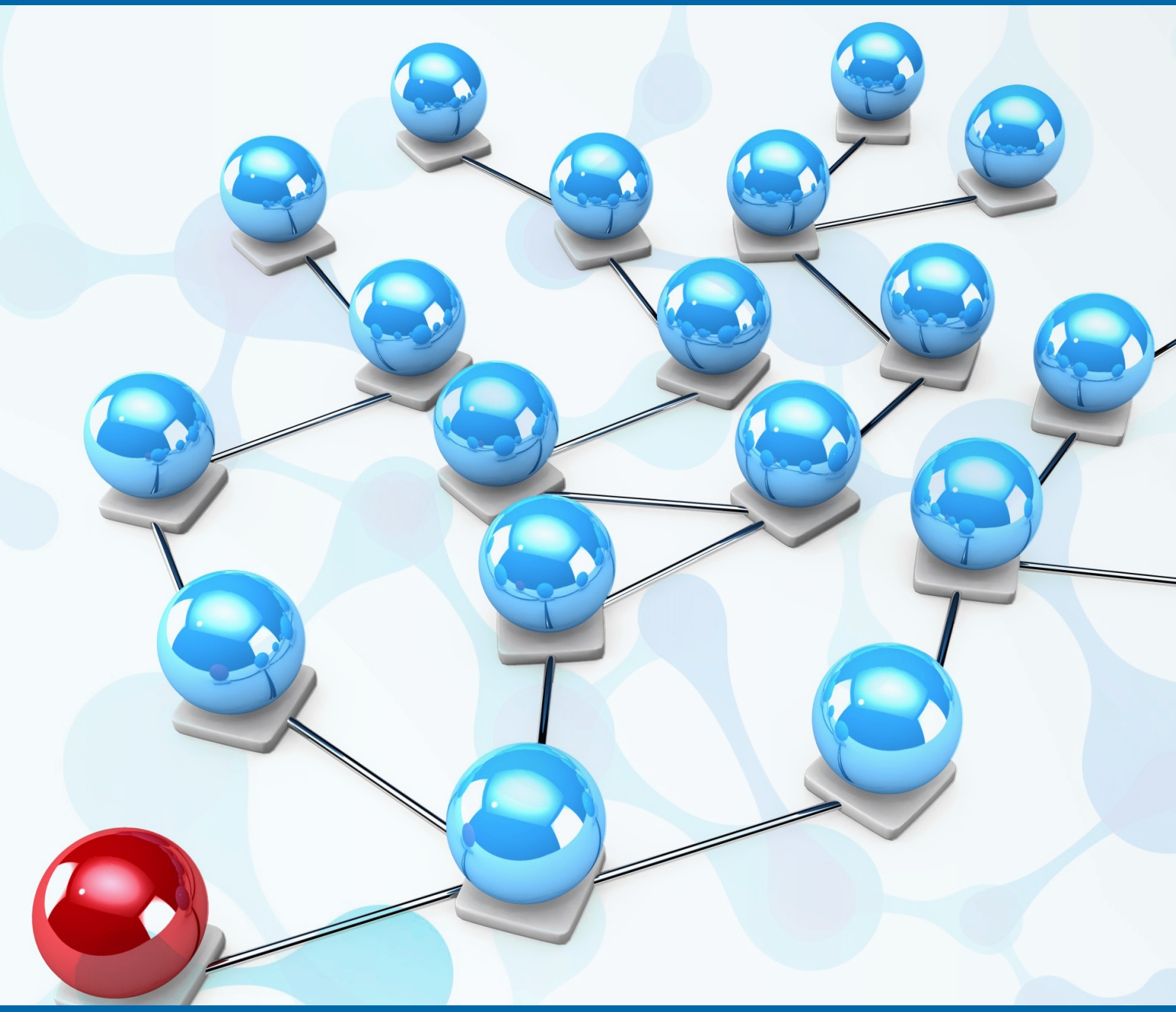
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Day 1 September 14, 2015

Registrations

Continental Ballroom 5-7

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Opening Ceremony

Keynote Forum

Introduction

Igor Kosacki
Honeywell International, Inc., USA

Haruo Sugi
Teikyo University, Japan

Jas Pal Badyal
Durham University, United Kingdom

Group Photo @ Continental Ballroom 5-7

Coffee Break

Track 1: Materials Science and Engineering

Session Chair: Wei Pan, Tsinghua University, China

Session Co-Chair: Rahul Basu, Sambhram Institute of Technology (SAIT), India

Session Introduction

Title: Promising thermal barrier coating candidates for next generation gas turbine
Wei Pan, Tsinghua University, China

Title: Perturbation analysis of the solidification problem for a sphere in porous media
Rahul Basu, Sambhram Institute of Technology (SAIT), India

Title: Effect of heat treatment on precipitation behaviour of intermetallic phases in duplex steel
Pavel Podany, COMTES FHT a.s., Czech Republic

Title: Failure of an Inconel 718 die used in production of hot copper direct extrusion
Michal Burchis Schwartz, S.C Laromet S.A, Romania

Title: High temperature phase transformation and the mechanism in $YTaO_4$
Jing Feng, Kunming University of Science and Technology, People's Republic of China

Title: A visual method for systematic multi-objective material selection in engineering design
Luca Masi, Granta Design, UK

Lunch Break 13:00-13:45 @ Continental Ballroom 2-4

Title: Characterization of magnetic glass ceramics derived from iron oxides bearing rolling mill scales wastes
Nehal Ali Erfan Abdelwahab, East Carolina university, USA

Title: A theoretical framework for predicting the temperature variation of the properties of metals established on a feasible electronic basis
Reza Rahemi, University of British Columbia, Canada

Title: Effect of high impact loading on nanoclay reinforced polypropylene
Shishay Amare Gebremeskel, Indian Institute of Technology Delhi, India

Title: Low-temperature heat treatment (80°C) effect on the electrochemically synthesized $CuInTe_2$ thin films for energy harvesting applications
Manorama Lakhe, Savitribai Phule Pune University, India

Symposium Session

Title: Materials surface analysis
Luisa Amelia Dempere, University of Florida, USA

Track 4: Mining and Metallurgy
Track 5: Surface Science and Engineering

Session Chair: Junhua Dong, Chinese Academy of Sciences, China

Title: Atmospheric corrosion monitoring and modeling of a low alloy steel under an electrolyte film in cyclic wet–dry condition
Junhua Dong, Chinese Academy of Sciences, China
Title: Hot forging of high-Aluminum content Magnesium alloys by using a servo press
Hisaki Watari, Tokyo Denki University, Japan

Coffee Break 16:25-16:40 @ Foyer

Title: The development of thermomechanical treatment of duplex steel
Michal Duchek, COMTES FHT, Czech Republic
Title: TiO_2 mineral from Ilmenite : Development of extraction method and its characterization
Muhammad Nurdin, Universitas Halu Oleo, Indonesia
Title: Optimisation of pack chromising process for proton exchange membrane (PEM) fuel cell bipolar plate applications
Atinuke Oladoye, Dublin City University, Ireland
Title: A comparison of two different principles of 3D surface reconstruction with regard to fabric defect detection
Lenka Techniková, Technical University of Liberec, Czech Republic
Title: Dry and wet sliding wear behaviours of laser-clad $TiNiZrO_2$ coatings in 3.5% NaCl
Babatunde Abiodun Obadele, Tshwane University of Technology, South Africa
Title: Antibiotic release from implant surfaces using immobilized PLGA microspheres
Dongwei Wang, Southwest Jiaotong University, China

Panel Discussion

Day 2 September 15, 2015

Continental Ballroom 5-7

Keynote Forum

Lixin Xue
Ningbo Institute of Industrial Technologies (CAS), China

Yutaka Ohno
Nagoya University, Japan

Track 2: Nanotechnology in Materials Science
Track 3: Energy Materials

Session Chair: Martin Ntwaeaborwa, University of the Free State, South Africa

Session Co-Chair: Jun DING, National University of Singapore, Singapore

Session Introduction

Title: Luminescent properties of powder and pulsed laser deposited thin film phosphors and their applications in lighting, phototherapy and solar cells
Martin Ntwaeaborwa, University of the Free State, South Africa
Title: Synthesis of Fe3O4 nanostructures and their applications
Jun DING, National University of Singapore, Singapore

Coffee Break

Title: High efficiency organometal halide perovskite devices by spray and brush solution-processing methods
Padmaja Guggilla, Alabama A & M University, USA
Title: Controlling electron recombination in nanowire-based DSSCs
Kirk J Ziegler, University of Florida, USA
Title: Self-assembly of DNA with inorganic material
Enrique C Samano, UNAM, Mexico
Title: Atomistic mechanism of lithiation of nanomaterials as Li-ion battery anodes studied by *in-situ* TEM
Xuedong BAI, Chinese Academy of Sciences, China
Title: Amyloid fibrils for functional nanomaterial applications
Sreenath Bolisetty, ETH, Switzerland

Title: Enhancement of 3D electrospun polycaprolactone/collagen constructs to facilitate the integration of nanofiber/cell mats in skin graft
Seyed Babak Mahjour, Stevens Institute of Technology, USA
Title: Magnetic relaxation phenomena in Fe nanoparticles composited with activated carbon
Satyendra Prakash Pal, Indian Institute of Science Education and Research, India

Lunch Break

Title: Studying the effects of functionalized multi-wall carbon nanotubes on mechanical and thermal properties of epoxy composites
Nasim Hadiashar, Santa Clara University, USA
Title: Hydrothermal synthesis of MoS_2 nanostructured films as high performance counter electrodes for dye-sensitized solar cells
Mohammad Al-Mamun, Griffith University, Australia
Title: The effect of preparation method on the properties of titanium dioxide nanoparticles used as a dielectric material
Davoud Dastan, Savitribai Phule Pune University, India
Title: Y_2O_3:Eu^{3+} nanophosphors: Synthesis by microwave-assisted heating method and characterization
Adrine Malek Khachatourian, KTH – Royal Institute of Technology, Sweden

Workshop

Title: Dielectric and pyroelectric nano-particle doped organic thinfilm: theory and application
Matthew Edwards, Alabama Agriculture and Mechanical University, USA

Coffee Break

Track 8: Electrical, Optical and Magnetic Materials
Track 11: Polymer Technology

Session Chair: Matthew E Edwards, AAMU, USA
Session Co-Chair: Santiranjan Shannigrahi, Institute of Materials Reserach and Engineering, Singapore

Title: Physical mechanisms of temperature dependent surface resistivity outcomes of doped nanoparticles, and single-wall or multi-wall carbon nanotubes polyvinyl alcohol thin films
Matthew E Edwards, Alabama Agricultural & Mechanical University, USA
Title: Polymer-ceramic composite film fabrication and characterization for harsh environment applications
Santiranjan Shannigrahi, Institute of Materials Reserach and Engineering, Singapore
Title: Development of highly sensitive micro magnetic sensor for biomagnetic field measurement utilizing magneto-impedance element
Tsuyoshi Uchiyama, Nagoya University, Japan
Title: Strength, elastic and electrical properties of non-stoichiometric materials under various Oxygen partial pressures
Kazuhisa SATO, Tohoku University, Japan
Title: Auxiliary anode on large-area organic light-emitting diode lighting
Apisit Chittawanij, National Formosa University, Taiwan
Title: A first-principles study on the structural and electronic properties of $CdCr_2O_4$ from density functional theory
Najmeh Bolandhemat, Universiti Putra Malaysia, Malaysia

Panel Discussion

Poster Presentations @ Continental Ballroom 1-3

MSE-01
Title: Photocatalytic and antioxidant activities of ZnO nanoparticles synthesized using Citrus paradisi peel extract
Alexis Debut, Universidad de las Fuerzas Armadas ESPE, Ecuador

MSE-02
Title: Determination of antimicrobial activity of textiles treated with encapsulated nanodispersion biocidal systems
Katerina Klanova, National Institute of Public Health, Czech Republic

MSE-03
Title: Preparation of polyurethane/buckypaper composites films and characterization of their structural vibration damping and strain sensing properties
Weiwei LIN, Florida International University, USA

MSE-04
Title: Raman spectroscopy of ZnS nanoparticles
Nebojsa Romcevic, University of Belgrade, Serbia

MSE-05
Title: Informatics guided computation of physical and chemical properties of nanomaterials
Claudia Loyola Canales, Universidad Andrés Bello, Chile

MSE-06 **Title: Formation of hair follicle using 3D biomimetic nanofibers constructs**
Seyed Babak Mahjour, Stevens Institute of Technology, USA

MSE-07 **Title: The effect of pressure on feeding characteristic and porosity formation of A356 alloy**
Jae-Ik Cho, Korea Institute of Industrial Technology, Rep. of Korea

MSE-08 **Title: Modification of molecular and optical properties of cellulose triacetate by alpha particles irradiation**
Mymona Mohseen Ahmad Abutalib, King Abdulaziz University, Saudi Arabia

MSE-09 **Title: Design of silicon nanoparticles to improve the barrier effect on hardened Portland cement-based materials**
Roberto Madrigales, UNAM, Mexico

MSE-10 **Title: Luminescence properties of the ($A_2B_2O_7$) type $Eu_{1.90}Dy_{0.10}Ge_2O_7$**
Esra ÖZTÜRK, Karamanoglu Mehmetbey University, Turkey

MSE-11 **Title: Synthesis and thermoluminescence characterization of nano and micro-crystals of LiF doped with Ag**
Miguel A Vallejo, Universidad de Guanajuato, Mexico

MSE-12 **Title: Graphene based solar light sensitive photodiode**
Asmaa Hendi, King Abdulaziz University, Saudi Arabia

MSE-13 **Title: Low temperature magnetotransport study of pulsed laser deposited $Mg_{0.15}Zn_{0.85}O$ film**
Tanveer A Dar, Devi Ahilya University, India

MSE-14 **Title: Removal of Mercury, Lead and Cadmium in aqueous solution by natural and modified zeolites**
Dulce Kristal Becerra Paniagua, Universidad de Ciencias y Artes de Chiapas, Mexico

MSE-15 **Title: Structural and dielectrical properties of hard-soft ferrite composites**
Chirag Patel, Gujarat University, India

MSE-16 **Title: Synthesis and characterization of Pyrochlore ($A_2B_2O_7$) structure $Eu_{1.90}La_{0.10}Zr_2O_7$ phosphor**
Erkul KARACAOGLU, Karamanoglu Mehmetbey University, Turkey

MSE-17 **Title: Novel Ag/YVO_4 nanoparticles prepared by a hydrothermal method for photocatalytic degradation of methylene-blue dye**
Elham S Aazam, King Abdulaziz University, Saudi Arabia

MSE-18 **Title: Super-hydrophobic polymer coating materials based on PS/SiO_2**
Ialy Sousa, Universidade Federal de Campina Grande, Brazil

MSE-19 **Title: Biosynthesis of silver nanoparticles and their characterization**
Sangappa Y, Georgia Institute of Technology School of Materials Science and Engineering, USA

MSE-20 **Title: Anti-corrosive material coating based on PMMA/ montmorillonite (MMT)**
Ariosvaldo A B Sobrinho, Universidade Federal de Campina Grande, Brazil

MSE-21 **Title: Asymmetric bi-layer composite membrane containing Boron modified nano bioactive glass for guided bone regeneration**
Reza Moonesi Rad, Middle East Technical University, Turkey

MSE-22 **Title: A facile strategy for the fabrication of three-dimensional nanofibrous scaffold**
Suresh Raj Pant, Research Institute for Next Generation, Nepal

MSE-23 **Title: Preparation of polypyrrole-diamond/Au/Cu_2O nanocomposite modified electrode and study of its electrocatalytic activity for methanol oxidation**
H Ashassi-Sorkhabi, University of Tabriz, Iran

MSE-24 **Title: Study of optical nonlinearity in PLD grown NiZnO thin film**
Arpana Agrawal, Devi Ahilya University, India

MSE-25 **Title: Liquid hydrocarbons internal reforming in a solid oxide fuel cell reactor**
A Al-Musa, King Abdulaziz City for Science & Technology, Saudi Arabia

MSE-26 **Title: Optical and dielectric study of bis (thiourea) nickel barium chloride single crystals**
Rakesh R Hajiyani, Saurashtra University, India

MSE-27 **Title: Effect of additives on the structure and properties of Nickel Silicon Carbide (Ni-SiC) nano-composite coating**
Kailash Hamal, Tribhuvan University, Nepal

Continental Ballroom 5-7

Keynote Forum

Dieter M Gruen
Dimerond Technologies, LLC, USA

Track 6: Biomaterials and Tissue Engineering
Track 7: Materials Chemistry (Organic and Inorganic) and Sustainable Chemistry
Track 10: Emerging Areas of Materials Science and Nanotechnology

Session Chair: Ramesh K Agarwal, Washington University in St. Louis, USA

Session Co-Chair: Nezar H Khdary, KACST, Saudi Arabia

Session Introduction

Title: Acoustic metamaterials membranes for low frequency sound attenuation
Ramesh K Agarwal, Washington University in St. Louis, USA
Title: Uniformly distributed copper nanoparticles supported on mesoporous silica for greenhouse gas capturing
Nezar H Khdary, KACST, Saudi Arabia

Coffee Break

Title: The response of HMSC-bm, SaOS-2 and imunocompetent cells to calcium phosphate doped alginate coatings on titanium surfaces
Lucie Himmlova, Charles University, Czech Republic
Title: Synthesis and characterization of modified (PVA) membranes
Ferial M Tera, National Institute of Standards, Egypt
Title: Cleaner technologies through optimization of resources
Sampath Kumar M C, B.M.S College of engineering, India
Title: Assessment of biomimectic modification on a novel low elastic modulus Ti–Nb–Hf alloy for dental implants
Virginia Paredes, Universidad ECCI Bogotá, Colombia
Title: The effect of the type of HA on the degradation and mechanical properties of PLGA/HA composites
Ashutosh Naik, Biocon research Limited, India
Title: Mechanism of material removal in Ti-6Al-4V at the incubation and advanced water droplet erosion stages
Dmytro Kevorkov, Concordia University, Canada
Title: A new portable reactor for photoelectrocatalytic system on organic compound Rhodamine B degradation
Maulidiyah, Universitas Halu Oleo, Indonesia

Lunch Break

Title: Synthesis, characterization and application of mesoporous silicas SBA-15 and its hybrid containing Glycidyl Methacrylate organo bridge for the controlled release of ibuprofen and mesalamine drugs in biological fluids
Fozia Rehman, University of Campinas, Brazil
Title: Synthesis and characterization of nanodiamonds-zinc oxide nanocomposites by ball milling technique
Hameed Ullah, Hazara University, Pakistan

Closing Ceremony

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Registrations

Chattahooche-A

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Opening Ceremony

Keynote Forum

Introduction

Title: Small things offer big promise

Carlo Montemagno, University of Alberta, Canada

Title: Materials and processing opportunities and challenges for transformation of global electricity infrastructure

Rajendra Singh, Clemson University, USA

Title: Heat resistant engineering materials for industrial application

Zofia Niemczura, Arcelormittal Global R&D, USA

Group Photo @ Chattahooche-A

Networking & Refreshments Break:

Title: A multi-layered composite ensuring harmless to the human body and implant longevity of hip prosthesis in orthopedics

Masaru Matsuo, Dalian University of Technology, China

Sessions:
Materials Science and Engineering | Computational Materials Science | Polymer Technology

Session Chair: Matthew E Edwards, Alabama A&M University, USA
Session Chair: Michael F Herman, Tulane University, USA

Session Introduction

Title: Electrical conduction mechanism of volume and surface resistivities of multi-walled carbon nanotubes doped polyvinyl alcohol (PVA) and the pyroelectric behavior of polyvinylidene difluoride (PVDF) thin films
Matthew E Edwards, Alabama A&M University, USA
Title: An approximate semiclassical method that uses real valued trajectories for time dependent tunneling calculations
Michael F Herman, Tulane University, USA
Title: Tuning electrical conductivity with photoirradiation and electric field in organic crystals and ionic solids
Nobuhiro Ohta, National Chiao Tung University, Taiwan
Title: Fine-controlled subano-metal particles in a dendrimer reactor
Kimihisa Yamamoto, Tokyo Institute of Technology, Japan
Title: Study of the adsorption of simple molecules on metal oxides by ab initio calculations. Application to the detection of gas
Caroline Lambert-Mauriat, Aix Marseille Université, France
Title: *In situ* investigations of particle-mediated crystal growth
Dongsheng Li, Pacific Northwest National Laboratory, USA

Lunch Break

Title: Terahertz laser sources based on difference frequency generation of infrared nonlinear optical materials $SnGa_4Q_7$ (Q = S, Se)
Wen-Dan Cheng, Chinese Academy of Sciences, China
Title: Microstructure and mechanical properties of a low C medium Mn heavy plate steel
Lin-Xiu Du, Northeastern University, China
Title: Microstructure and mechanical property of vacuum rolled Ni-based alloy/pipeline steel clad plate
Guang-ming XIE, Northeastern University, China

Panel Discussion

Memento Presentation to Organizing Committee Members

Session Chair: Jun Ding, National University of Singapore, Singapore
Session Chair: Hideo Miura, Tohoku University, Japan

Session Introduction

Title: Spinel ferrite films with enhanced magnetization and large magneto-resistance
Jun Ding, National University of Singapore, Singapore
Title: Degradation of crystallinity and properties of advanced functional materials caused by anisotropic local diffusion of component atoms under severe operating conditions
Hideo Miura, Tohoku University, Japan
Title: A high-entropy alloy with ultrahigh ductility breaks strength-ductility paradox
Yonghao Zhao, Nanjing University of Science and Technology, China
Title: Research on the optimization mechanism of loading path for hydroforming process
Zong-an LUO, Northeastern University, China

Networking & Refreshments Break:

Title: Process research on the stainless steel / low alloy steel clad plate prepared by vacuum hot rolling
Feng Ying-ying, Northeastern University, China

Young Research Forum

Title: On sample structure for fabricating micro-material by electromigration
Yasuhiro Kimura, Tohoku University, Japan
Title: Tailoring surface charge to antifouling applications
Guo Shanshan, National University of Singapore, Singapore

Panel Discussions 17:35-18:00

Day 2 September 13, 2016

Chattahooche-A

Keynote Forum

Introduction

Title: Recent progress in acoustic metamaterials membranes for low frequency sound attenuation
Ramesh K Agarwal, Washington University in St. Louis, USA

Title: Nanostructured functional organic materials synthesized by a laser irradiation method for applications of molecular devices and high-sensitive sensors
Masahiro Goto, National Institute for Materials Science, Japan

Sessions:
Nanotechnology in Materials Science | Energy Materials | Emerging Areas of Materials Science and Nanotechnology

Session Chair: Rajendra Bordia, Clemson University, USA
Session Chair: Masumi Saka, Tohoku University, Japan

Session Introduction

Title: Analysis and simulation guided processing of hierarchical porous and multi-layered ceramics for energy applications
Rajendra Bordia, Clemson University, USA
Title: Effect of passivation on suppression or utilization of atomic migration phenomena in metallic thin-film materials
Masumi Saka, Tohoku University, Japan

Networking & Refreshments Break:

Title: Fabrication of aluminum matrix composites with nano-sized reinforcements via friction stir processing
Zong-yi Ma, Chinese Academy of Sciences, China
Title: Synthesis and preparation of nanocomposites of metal oxide and metal sulphide by electrochemical, hydrothermal and biological method: Its application for polymer nanocomposites, antibacterial, photo-voltaic and as photocatalyst
Sannaiah Ananda, University of Mysore, India
Title: Energy storage material
Subramanian Selladurai, Anna University, India

Title: Micro-beam laser ablation/mass spectrometry for materials depth-profiling and elemental surface distribution studies – Polymers, waxes, asphaltenes, steels
Avin Pillay, The Petroleum Institute, UAE

Title: Synthesis of carbon hollow spheres by a modified hydrothermal carbonization method
Mingli Qin, University of Science and Technology Beijing, P.R. China
Title: Transmission electron microscopy – A versatile tool to study the microstructure of HT-PEMFC
Christina Scheu, Max-Planck-Institute, Germany
Title: Hollow polydopamine nanoparticles loaded ionic liquid and doxorubicin for combined chemotherapy and microwave thermal therapy of cancer
Tianlong Liu, Chinese Academy of Sciences, P. R. China

Panel Discussions

Memento Presentation to Organizing Committee Members

Lunch Break

Session Chair: Avin Pillay, The Petroleum Institute, UAE
Session Chair: Zong-yi Ma, Chinese Academy of Sciences, China

Session Introduction

Title: Large pulsed electron beam surface treatment of woven carbon fiber/ZnO nanorod/polyester resin composites
Hyung Wook Park, Ulsan National Institute of Science and Technology, Rep. of Korea
Title: The design, synthesis and application of microwave susceptible agents for tumor microwave thermotherapy based on confinement mechanism
Xianwei Meng, Chinese Academy of Sciences, China
Title: Synthesis and characterization of hybrid nanoparticles for biomedical and environmental remediation applications
Soubantika Palchoudhury, University of Tennessee, USA
Title: Luminescent periodic microstructures for medical applications
Kenta Miura, Gunma University, Japan
Title: Alumina-based nanocomposites using graphite nanoplatelets as reinforcement
Syed Nasimul Alam, National Institute of Technology Rourkela, India
Title: $BiVO_4$ and WO_3 nanophotocatalysts: Water-splitting and environmental applications
G. T. Chandrappa, Bangalore University, India
Title: Null current hysteresis for acetylacetonate based perovskite solar cells as electron extraction layer
Abd. Rashid bin Mohd Yusoff, Kyung Hee University, South Korea

Networking & Refreshments Break:

Title: Nitrogen doping into ZnO branched nanowire by plasma treatment and its effect on photo electrochemical performance
Shrok Allami, Ministry of Science and Technology, Iraq

Young Research Forum

Title: Polymeric nanocomposites gate dielectric for organic thin film transistors
Davoud Dastan, Savitribai Phule Pune University, India
Title: Engineered metal oxide nanoparticles, nano-bio interaction and toxicology
Avnika S Anand, Defence Research and Development Organization, India
Title: Density functional theory calculations for the electronic, magnetic, and chemical bonding properties of geometrically frustrated spinel $CdCr_2O_4$
Najmeh Bolandhemat, Universiti Putra Malaysia, Malaysia

Panel Discussions

Poster Presentations:

MSE-01
Title: A study of natural radioactivity in the welding workshops waste
Zain M Al-Amoudi, King Abdulaziz University, Saudi Arabia

MSE-02
Title: Synthesis of polymer composites thin films of Cr_2O_3 nanoparticles and study of its optical and electrical properties
Venkatesha B M, University of Mysore, India

MSE-03
Title: Solid state decarburization of high carbon ferrochromium
Amit Bhalla, University of Witwatersrand, South Africa

MSE-04
Title: Synthesis of vanadium oxide/carbon nanotubes for anodes for lithium-ion batteries
Baorui Jia, University of Science and Technology Beijing, P R China

MSE-05	**Title: Analysis of valonia oak (*Quercus aegylops*) acorn tannin and wood adhesives application** **Fatmah Bahabri,** King Abdulaziz University, Saudi Arabia
MSE-06	**Title: Rate-dependent hardening model for HCP metals with effect of deformation twinning and dynamic recrystallization** **Jonghun Yoon,** Hanyang University, South Korea
MSE-07	**Title: Effect of gamma irradiation on the structural and color properties of CR 6-2 polycarbonate** **Mymona Abutalib,** King Abdulaziz University, Saudi Arabia
MSE-08	**Title: Corrosion inhibition effects of Tungstate and Nitrite ions on sputter-deposited nanocystalline W–42Cr–5Ni Alloy in 0.5 M NaCl solution** **Durga Bhakta Pokharel,** Tribhuvan University, Nepal
MSE-09	**Title: Vanadium nitride nanoparticles encapsulated in carbon sheets for stable high energy lithium ion anodes** **Haoyang Wu,** University of Science and Technology Beijing, China
MSE-10	**Title: An intelligent electronic control unit to limit vehicle speed** **Srivas M C,** B M S College of Engineering, India

Best Poster Award Presentation

Day 3 September 14, 2016

Chattahooche-A

Keynote Forum

Introduction

Title: Generating efficient and tunable white light using electronically coupled nanocrystal and molecular building blocks

Pavle V Radovanovic, University of Waterloo, Canada

Title: The scientific adventure of packing: From space saving to material design

Ho-Kei Chan, Harbin Institute of Technology, Shenzhen, China

Sessions:
Mining, Metallurgy and Materials Science | Surface Science and Engineering | Biomaterials and Tissue Engineering | Materials Chemistry and Physics | Electrical, Optical and Magnetic Materials

Session Chair: Padmaja Guggilla, Alabama A&M University, USA
Session Chair: Nezar H Khdary, King Abdulaziz City for Science and Technology, Saudi Arabia

Session Introduction

Title: Effects of ionic irradiation on PMN-PT ferroelectric materials for space applications
Padmaja Guggilla, Alabama A&M University, USA
Title: Super high surface area mesoporous carbon for arsenic removal from ground water
Nezar H Khdary, King Abdulaziz City for Science and Technology, Saudi Arabia

Networking & Refreshments

Title: Effect of tempering time on strength and toughness of a ultra-low C medium Mn steel
Hong-Yan Wu, Northeastern University, China
Title: Soft nanomaterials of POSS-based copolymer for stone arts conservation
Ling He, Xian Jiaotong University, China
Title: Dielectric study of hydrogen sulphate ($AHSO_4$ and $BHSO_4$ A= Sodium, B= Potassium) crystals
Azha Periasamy, Bharathiar University, India
Title: Generato retaining ring steel(Mn18Cr18N) prepared by powder metallurgy
Shubin Ren, University of Science and Technology Beijing, China
Title: Biocompatibility and human osteoblast response to template-assisted electrohydrodynamic atomized interlocked ceramic patterns on curved 3D metallic substrates for medical implants
Anouska Nithyanandan, University College London, United Kingdom

Panel Discussions

Memento Presentation to Organizing Committee Members

Lunch Break

Session Chair: Sampath Kumar M C, B.M.S. College of Engineering, India
Session Chair: Veena Prasad, Centre for Nano and Soft Matter Sciences, India

Session Introduction

Title: Application of cleaner development mechanisms
Sampath Kumar M C, B.M.S. College of Engineering, India
Title: Azo substituted achiral bent-core liquid crystals: photo-induced studies in B_7 and B_2 mesophases
Veena Prasad, Centre for Nano and Soft Matter Sciences, India
Title: Mechanically deformable and programmable nanoscale surface textures with tunable wetting and mechanical properties
Wei Li Lee, Massachusetts Institute of Technology, USA
Title: The study of fatigue property of S500LF wheel spoke steel
Cai-Ru GAO, Northeastern University, China
Title: A low-C 5-Mn ultra-heavy plate steel with high microstructural homogeneity and excellent strength - toughness combination
Jun Hu, Northeastern University, China
Title: Characterization of plasma sprayed CNT reinforced alumina coatings on ASME-SA213-T91 boiler tube steel
Buta Singh Sidhu, IKG Punjab Technical University, India
Title: Parametric investigations into manufacturing of magnetic abrasives by sintering process
Balkar Singh, IKG-Punjab Technical University, India

Young Research Forum

Title: Fracture toughness of austenitic stainless steel welds for ultra-high vacuum and cryogenic applications
Ignacio Aviles Santillana, CERN, Switzerland
Title: Synthesis and luminescence properties of pyrophosphate phosphors doped with rare earth
Wafa Hami, Cadi Ayyad University, Morocco

Panel Discussions

Special Appreciation Awards

Refreshments