EuroSciCon



17th Edition of International Conference on

Emerging Trends in Materials Science and Nanotechnology

April 26-27, 2018 Rome, Italy

Theme:

The Triumphs of Hi-tech New Wave are the Ensemble of Materials Science and Nanotech

Tentative Program

April 26, 2018: Day One

Morning Session	8:00-09:00	Registration
	09:00-09:15	Opening Remarks
	09:15-09:45	Keynote Presentation 1
	09:45-10:15	Keynote Presentation 2
	10:15-10:45	Keynote Presentation 3
	10:45-11:15	Panel discussion and Group Photo
		Morning Coffee and Networking
	11:15-13:15	Speaker Presentation Slots (20-25 minutes each presentation)
Evening Session	13:15-14:15	Lunch and Networking
	14:15-15:30	Speaker Presentation Slots (20-25 minutes each presentation)
	15:30-15:45	Evening Coffee and Networking
	15:45-17:00	Speaker Presentation Slots (20-25 minutes each presentation)
	17:00-17:30	Panel Discussions and Award Ceremony

April 27, 2018: Day Two

Morning Session	09:45-10:15	Keynote Presentation 1
	10:15-10:45	Keynote Presentation 2
	10:45-11:15	Panel discussion
		Morning Coffee and Networking
	11:15-13:15	Speaker Presentation Slots (20-25 minutes each presentation)
	13:15-14:15	Lunch and Networking
Evening Session		
	14:15-15:30	Speaker Presentation Slots (20-25 minutes each presentation)
	15:30-15:45	Evening Coffee and Networking
	15:45-17:00	Poster presentations
	17:00-17:30	Panel Discussions and Award Ceremony

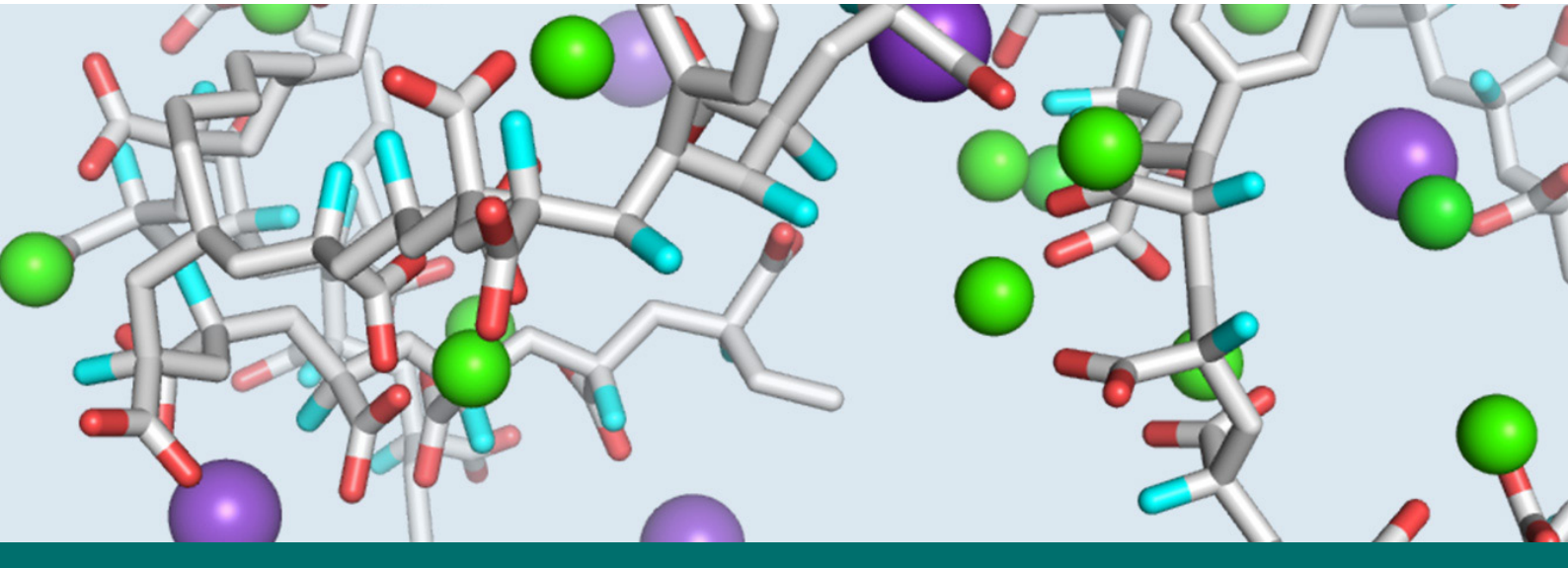
Conference Highlights

- Advanced Nanomaterials
- Nano Electronics
- Nanotechnology for Clean Energy and Environment
- Nano Applications
- Nano Biotechnology
- Nano Biomedicine
- Carbon and Graphene Nanostructures
- Polymer Science Engineering
- Biopolymers and Bioplastics
- Advanced Materials Science
- Nano Composites
- Nanotechnology in Materials Science
- Corrosion Engineering and Corrosion Protection
- Biomaterials
- Electronic, Optical and Magnetic Materials
- Nano Photonics
- Nano Robotics

For detailed sessions, please visit:
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- Opportunity to moderate the conference
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- All atendees can avail 21 CPD Credits (Coninuing Professional Development) Ceriicate Accreditaion by the Internaional Organizing Commitee (IOCM)
- Abstracts will be published in conference souvenir & internaional journals
- We will include your University/Insituion logo on the conference banners, books and in the conference website
- Can play the role of Honourable guest at the conference
- Speaker name and photograph will be displayed in conference website

Gallery of Materials Science 2017

EuroSciCon

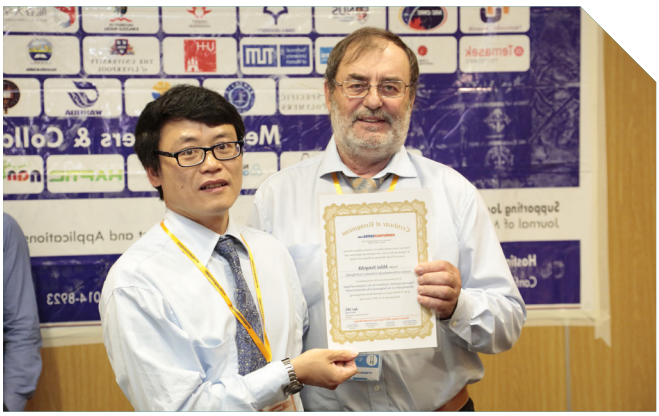












Rome Attractions



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Colosseum



Basilica of St. Peter



Roman Forum



Trevi Fountain

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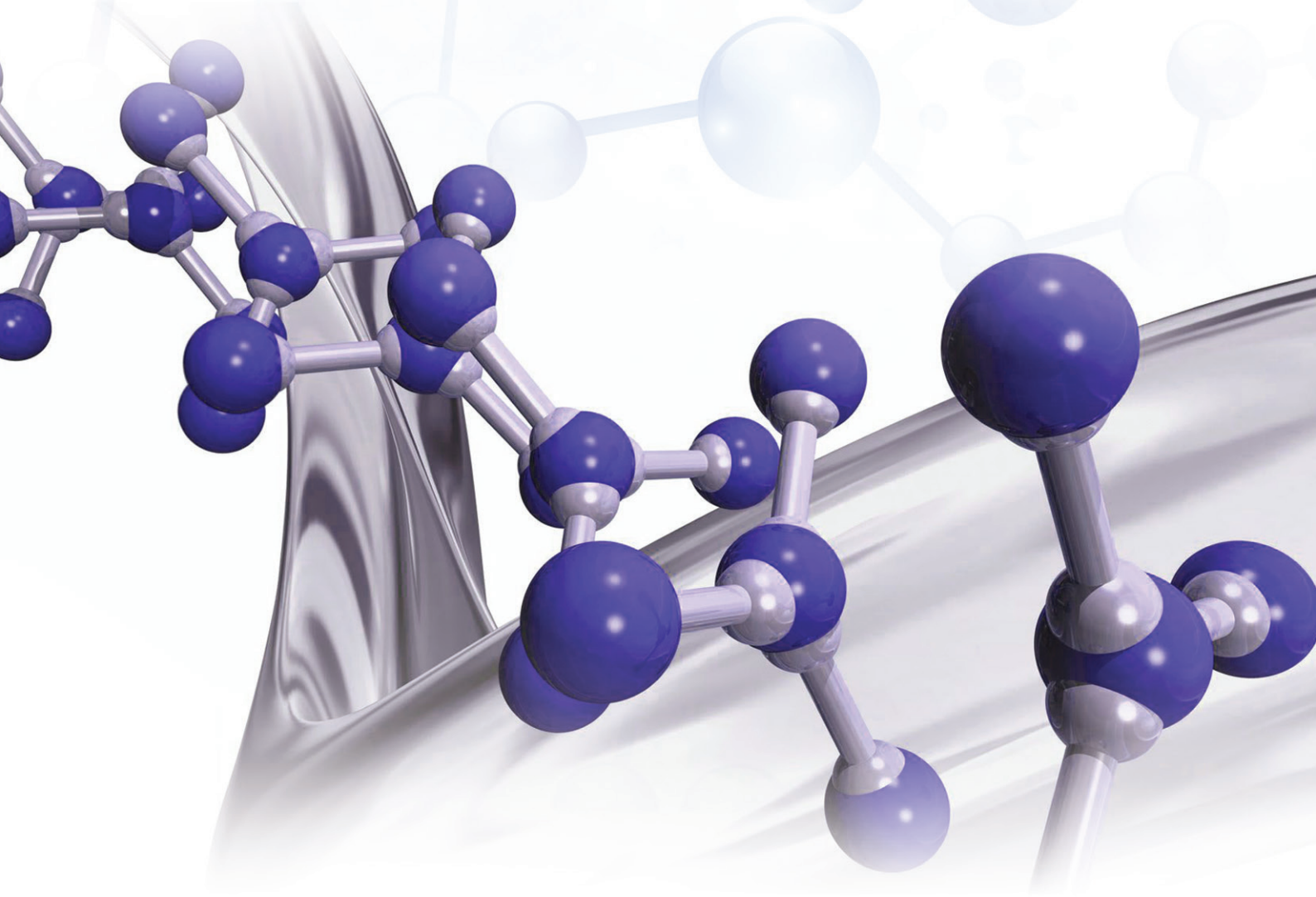
1078th Conference

SCIENTIFIC PROGRAM

10th International Conference on

EMERGING MATERIALS & NANOTECHNOLOGY

July 27-29, 2017 | Vancouver | Canada



Conference Series - America

One Commerce Center-1201, Orange St. #600, Wilmington, Zip 19899, Delaware, USA P: +1-702-508-5200, F: +1-650-618-1417

Conference Series - UK

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Day 1 July 27, 2017

08:00-9:30 Registrations

West Minster South

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Opening Ceremony

Keynote Forum

Title: Small things offer big promise
Carlo Montemagno, University of Alberta, Canada
Title: Progress in semiconductor materials and processes for printed transistors
Beng S Ong, Hong Kong Baptist University, Hong Kong

Networking & Refreshments Bretak

Jas Pal Badyal, Durham University, United Kingdom
Title: Probing the nano-scale with the use of Nano-Opto-Mechatronics Instruments (NOMI)
Hamed Sadeghian, TNO, Netherlands

Workshop

Title: Emerging nano-porous metal-organic frameworks materials for applications related to energy efficiency and environmental sustainability
Youssef Belmabkhout, KAUST, Saudi Arabia

Sessions: Materials and Devices | Nanotechnology & Emerging Technologies

Session Chair: Anton Liopo, The University of Texas MD Anderson Cancer Center, USA
Session Chair: Jingyang Wang, Chinese Academy of Sciences, China

Session Introduction

Title: Gold-based emerging nanomaterials for imaging and experimental cancer therapy
Anton Liopo, The University of Texas MD Anderson Cancer Center, USA
Title: Strategic modification of nanostability for super thermal insulating materials
Jingyang Wang, Chinese Academy of Sciences, China

Lunch Break

Title: Engineering graphene and TMDCs for nanoelectronic device applications
Moon-Ho Ham, Gwangju Institute of Science and Technology (GIST), South Korea
Title: Nanocarbon composites for mechanical and barrier applications
Ken Bosnick, National Research Council Canada, Canada
Title: Developing nanostructured materials for harvesting more photons
Dongling MA, Institut National de la Recherche Scientifiue (INRS), Canada
Title: Plasmon-enhanced optoelectronic devices based on metal nanostructures
Lin Jiang, Soochow University, China
Title: To explore nano world and material structure stress by X-ray nano probe at Taiwan photon source
Shao-Chin Tseng, National Synchrotron Radiation Research Center, Taiwan
Title: Microneedle bio-sensor: Direct, label-free, real time detection of pH in biological cells
Ganesh Kumar Mani, Tokai University, Japan
Title: Bacteria can enhance mechanical strength of a porous medium
Swayamdipta Bhaduri, University of Alberta, Canada

Panel Discussion

Networking & Refreshments Break

Sessions: Biomaterials and Bioinspired Materials | Emerging Materials for Energy Storage | Metals and Mining
Session Chair: Samuel Frimpong, Missouri University of Science and Technology, USA
Session Chair: Aman Ullah, University of Alberta, Canada

Title: Tire rubber material characterization for effective structural and fatigue modeling and analysis
Samuel Frimpong, Missouri University of Science and Technology, USA
Title: Rapid conversion of lipids into biopolymers and conjugates
Aman Ullah, University of Alberta, Canada
Title: Hydroxyapatite–heparin–BMP-2 on modified titanium surfaces enhances the efficacy of bone formation and osseointegration: *in vitro* & *in vivo* study
Deok-Won Lee, Kyung-Hee University, South Korea
Title: DEM modeling of oil sands materials structures
Samuel Frimpong, Missouri University of Science and Technology, USA
Title: Modifying titanium surfaces with nano-sized hydroxyapatite and simvastatin can enhance bone formation and osseointegration
Deok-Won Lee, Kyung-Hee University, South Korea
Title: Nano-Si: With good performance in solar cells and lithium ion batteries
Zhihao Yue, Nanchang University, P.R. China

Panel discussions | Memento Presentation to Organizing Committee Members

Day 2 July 28, 2017

West Minster South

Sessions: Advanced Emerging Materials | Materials: Characterization and Applications | Coatings and Surface Engineering

Session Chair: Matheus F A Goosen, Alfaisal University, Saudi Arabia
Session Chair: Krzysztof Z Sokalski, Czestochowa University of Technology, Poland

Keynote Forum

Registrations and Introduction

Title: Digital etching of III-V semiconductors in aqueous solutions
Jan J Dubowski, Université de Sherbrooke, Canada

Networking & Refreshments Break

Title: Ni-based nanomaterials for high efficiency supercapacitors in energy storage
Hao Gong, National University of Singapore, Singapore

Title: Suspension thermal sprayed nanocomposite WC-Co coatings: Nanoindentation assessment
Matheus F A Goosen, Alfaisal University, Saudi Arabia
Title: Scaling a way for revealing self-similar features of materials and new applications
Krzysztof Z Sokalski, Czestochowa University of Technology, Poland
Title: Laser assist break of hard and brittle materials
Etsuji Ohmura, Osaka University, Japan
Title: Self-organized periodic nanostructures on the surfaces of semiconductors and dielectrics by scanning femtosecond laser pulses
Ki-Soo Lim, Chungbuk National University, Korea
Title: Lanthanides-redox ligands for single molecule magnets and luminescence
Lahcène Ouahab, CNRS, Université de Rennes 1, France

Lunch Break

Title: Crystal growth of Na-Si clathrates by the flux method
Haruhiko Morito, Tohoku University, Japan
Title: Microstructure and surface properties of Ti-6Al-4V cold spray coated with SiC-based cermet
Isaac D Adebiyi, Vaal University of Technology, South Africa
Title: Facile fabrication of hybrid copper-fiber conductive features with enhanced durability and ultra-low sheet resistance for low-cost high-performance paper-based electronics
Tengyuan Zhang, Western University, Canada

Panel Discussion

Poster Presentation

EM17 01	**Title: New bone formation & fusion relevant to timing of cranioplasty via frozen autologous bone flaps in rabbits: a preliminary report using micro-CT scans & tissue staining analysis** **Deok-Won Lee,** Kyung-Hee University, South Korea
EM17 02	**Title: Au, Ag, and Tio$_2$ green synthesis and applications as antibacterial for both gram positive and gram negative strain** **Nada E Omer,** University of Dammam, Saudi Arabia
EM17 03	**Title: Number of layer dependent direct optical transition from monolayer to pentalayer in synthesized large area MoSe$_2$** **Jae-Hun Jeong,** Yonsei University, South Korea
EM17 04	**Title: Fabrication of multiplexed plasmonic nanoparticle structures based on AFM lithography** **Jianmei Chen,** Soochow University, China
EM17 05	**Title: The effect of preparation conditions on the ion-exchange properties of LTA zeolite prepared from local silica** **Samia Kosa,** King Abdulaziz University, Saudi Arabia
EM17 06	**Title: Bone regeneration enhanced by using a Gold nanoparticle–hydrogel complex** **Deok-Won Lee,** Kyung-Hee University, South Korea
EM17 07	**Title: One step room temperature green synthesis of Au nanoparticles via gallic acid** **Mustafa Can,** Sakarya University, Turkey
EM17 08	**Title: Synthesis and characterization of hematite nanoparticles for arsenite removal from aqueous medium** **Herlys Viltres Cobas,** Centro de Investigación en Ciencia Aplicada y Tecnología, Mexico
EM17 09	**Title:Multifunctional nanoparticles composed of a mixed ferrite core and a mesoporous silica shell for RGD peptide to target α (v) β (3) integrin in cancer therapy and diagnosis** **Susel Del Sol Fernandez,** Centro de Investigación en Ciencia Aplicada y Tecnología, Mexico

Best Poster Award Presentation
Memento Presentation to Organizing Committee Members

Networking & Refreshments Break

Day 3 July 29, 2017

West Minster South

Sessions: Advanced Emerging Materials | Materials: Characterization and Applications | Coatings and Surface Engineering

Session Chair: Klaus G Nickel, University Tübingen, Germany
Session Chair: David Kennedy, National Research Council of Canada, Canada

Title: The potential of improving building construction materials by a biomimetic approach
Klaus G Nickel, University Tübingen, Germany

Title: Quantifying the biological fate of nanosilver
David Kennedy, National Research Council of Canada, Canada

Networking & Refreshments Break

Title: Photochromic organic field-effect transistors: Molecules, device properties and laser patterning of circuits
Yutaka Wakayama, National Institute for Materials Science (NIMS), Japan

Title: A bioinspired strategy for immobilizing silver nanoparticles towards the synthesis of antimicrobial paper
Md.Shafiul Azam, University of Alberta, Canada

Title: Effects of the chemical composition of coal tar pitch on the baking zone temperature in Soderberg electrode systems
Lay Shoko, Vaal University of Technology, South Africa

Title: Growth, structural and electrical properties of VO$_2$/ZnO nanostructures
Sang-Wook Han, Jeonbuk National University, South Korea

Title: Temperature-dependent hard X-ray excited optical luminescence to study the optical properties of the ZnO microwires
Bi-Hsuan Lin, National Synchrotron Radiation Research Center, Taiwan

Panel Discussion | Awards & Closing Ceremony

Lunch Break

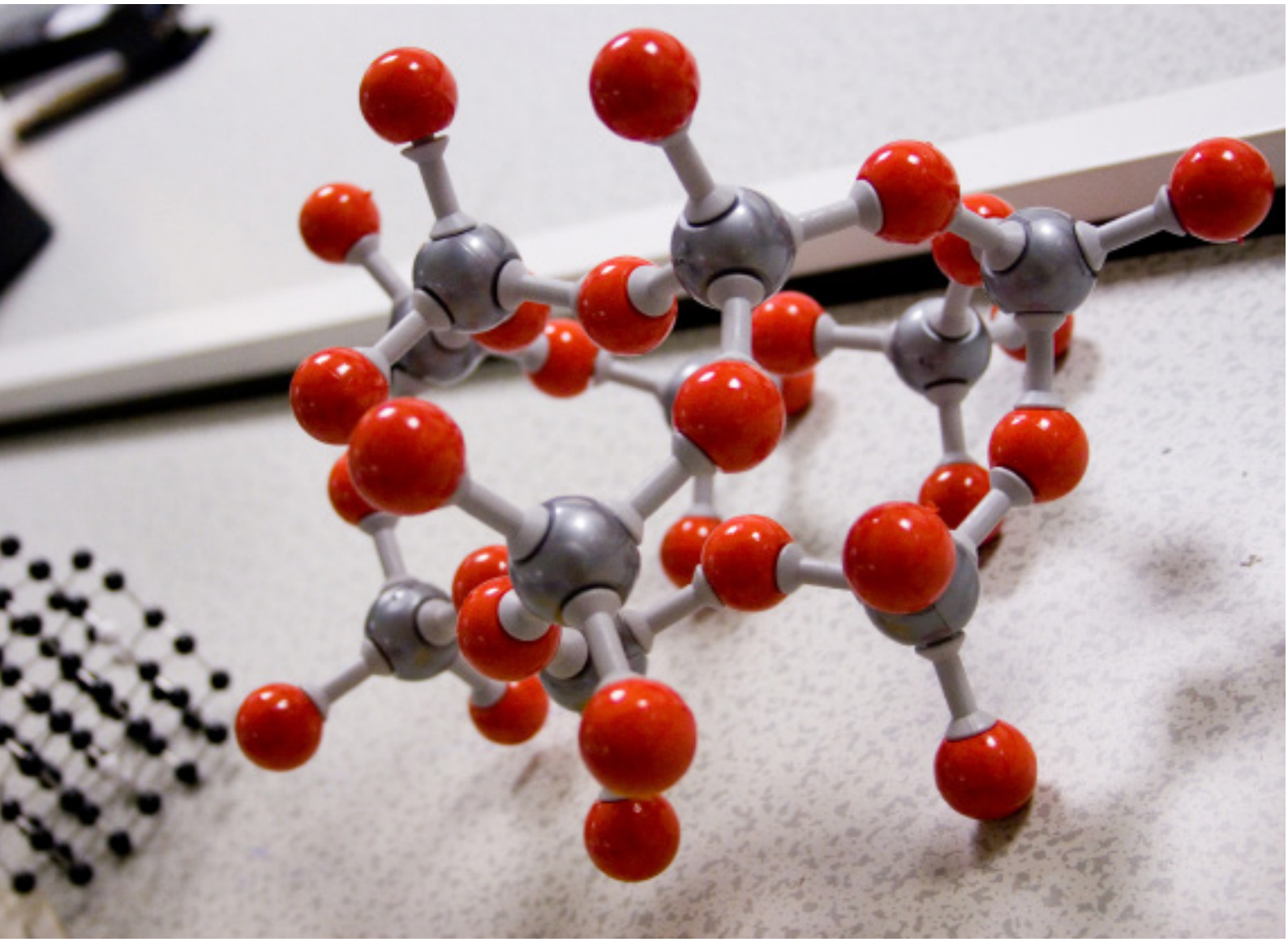
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Scientific Program

9th World Congress on

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June 12-14, 2017 Rome, Italy



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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

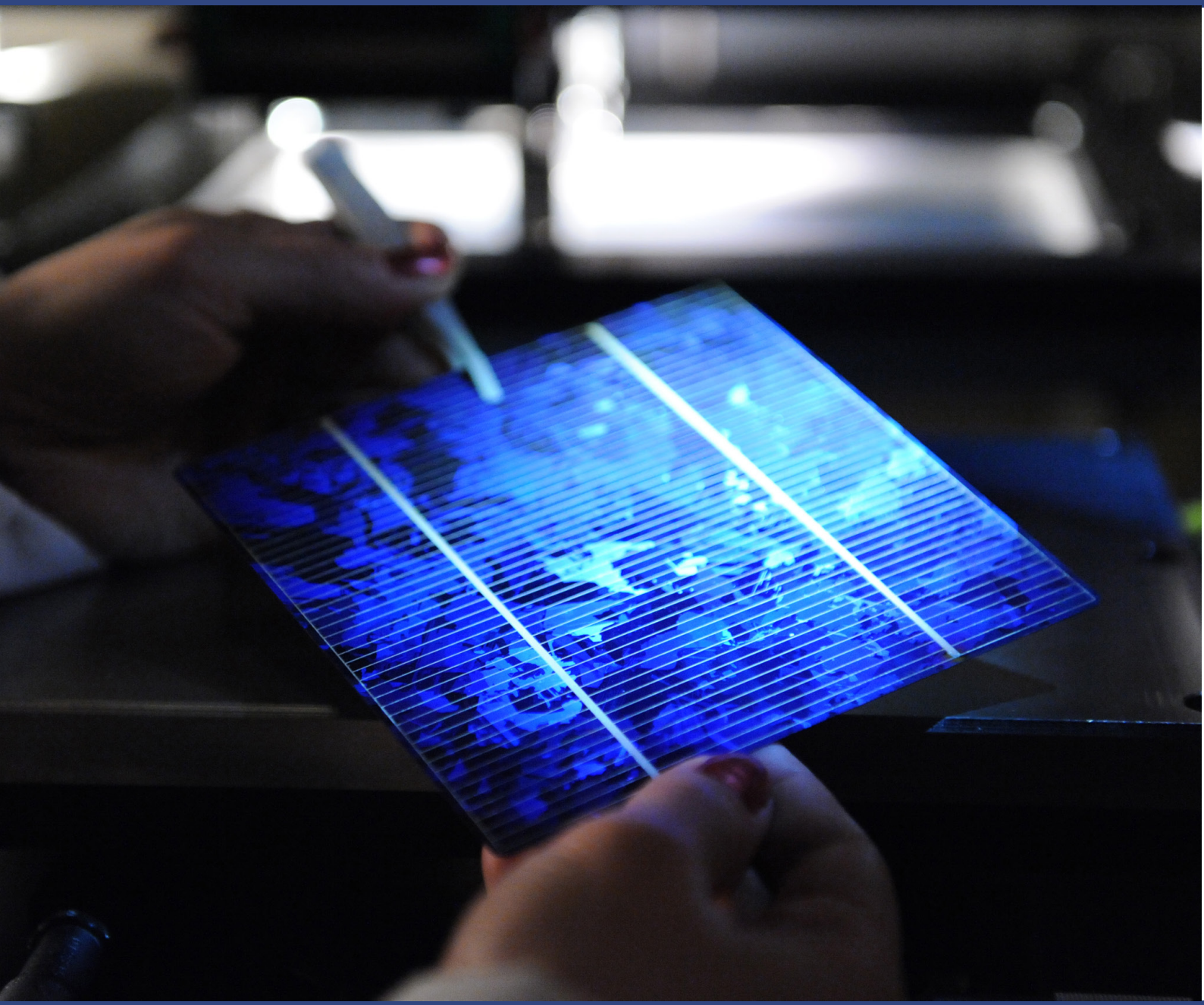
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Opening Ceremony

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

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

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

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

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

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) 16:20-17:00 @ Sylt Foyer

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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