Materials Congress 2017

9th World Congress on

Materials Science and Engineering

June 12-14, 2017 Rome, Italy

Tentative Program	
Day 1 June 12, 2017 @ Olimpica 1	
07:00-08:00	**Registrations**
08:00-08:30	**Opening Ceremony**
Keynote Forum	
	Introduction
	Robert Huber, Nobel Laureate, Chemistry 1988
	Karl Ulrich Kainer, Helmholtz-Zentrum Geesthacht, Germany
	Zhong Lin Wang, Georgia Institute of Technology, USA
	Coffee Break and Group Photo @ Foyer
	Track 1: Materials Science and Engineering **Track 10: Metals, Metallurgy and Materials**
Chair	**Yet to be decided**
Co-Chair	**Yet to be decided**
	Title: Light driven directional mass transport of azo-benzene containing materials for complex tri-dimensional structures on surfaces
	Stefano L. Oscurato, University of Naples, Italy
	Title: Finite-Element Analysis of Velocity Mode Transition of Crack Propagation in Rubber Materials
	Augusto Di Gianfrancesco, Consultant, Rome Area, Italy
	Title: Plasma Modification of Micro-fiber Polyester Fabrics for Protective Applications
	Atsushi Kubo, University of Tokyo, Japan
	Title: Many-body mechanism facilitating ballistic transport in metallic chains
	Alexei M. Tsvelik, Brookhaven National Laboratory, USA
	Title: Quasiparticle approach to study the kinetics of self-assembly in complex material
	Helena Zapolsky, University of Normandy, France
	Title: Coupling diffusion and mechanics modelling for hydrogen embrittlement (HE)
	Olga Barrera, University of Oxford, UK

	Title: Proposed link between the periodic table and the standard model
	John Roberts, University of Liverpool, UK
	Title: Helical light induced chiral surface relief in azo-polymer thin film
	Takashige Omatsu, Chiba University,China
	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: Rare-metal-free high-performance Ga-Sn-O thin film transistor
	Tokiyoshi Matsuda, Ryukoku University, Japan
	Title: Enhancing the photocatalytic activity for pollutant degradation and H2 evolution by modifying ZrO2 with nanoclusters of BiVO3, Ag3PO4, SrTiO3 and WO3: A first-principles study
	Francis Opaku, University of Johannesburg, South Africa
Special Session on *"Physics versus non-physical ISO/NIST standards in nano-, micro-, and the numerous macro- techniques are detrimental for daily life: what can be done? "* **By Gerd Kaupp, University of Oldenburg, German**	
	Lunch Break @ Hotel Restaurant
	Track 2: Nanomaterials
Chair	**Yet to be decided**
Co-Chair	**Yet to be decided**
	Title: Nanoplasmonic Upconverting Nanoparticles as Orientation Sensors for Single Particle Microscopy
	Shuang Fang Lim, North Carolina State University, USA
	Title: Fabrication of nanoporous graphene membranes for nanofiltration applications
	Marco Laurenti, Politecnico di Torino, Italy
	Title: Nanostructure control in tungsten trioxide (WO3) thin films for improved electochromic properties
	NekaneGuarrotxena, Spanish National Research Council (CSIC),Spain
	Title: Synthesis and Characterization of Titanium Carbide Nanofibers Using a Modified Carbothermal Reduction Process
	Kanchan Mondal, Southern Illinois University, USA

	Title: 2D Material Fluid Nanocomposites for Reconfigurable Integrated Optoelectronics and Si Photonics
	Anna Baldycheva, University of Exeter, UK
	Title: Si nanopowder for internal hydrogen generation materials
	Hikaru Kobayashi, Osaka University, Japan
	Title: Nanotechnology: General and Biomedical Applications
	Tatiana Tennikova, Saint-Petersburg State University, Russia
	Title: Controlled synthesis of vertical and planar graphenes using plasma-enhanced chemical vapor deposition
	Mineo Hiramatsu, Meijo University, Japan
	Title: Noble Metal Nanostructures
	Sarmiza Elena Stanca, Leibniz Institute of Photonic Technology, Germany
	Title: Nanocellulose Based Flexible, Environment-friendly Nonvolatile Resistive Switching Memory
	Kazuki Nagashima, IMCE Kyushu University, Japan
	Coffee Break @ Foyer
	Title: The nanophotonic behaviors ofwideband diluted magnetic semiconductor nanostructures
	Bing Suo, Beijing institute of Technology, China
	Title: Photoelectron spectra of GexSb20Se80-x Glasses
	Li Wang, Beijing University of Technology, China
	Title: Supporting Titania on silica, graphene, epoxy graphene and carbon nanotubes: A first-principles study
	Penny Govender, University of Johannesburg, South Africa
	Title: Characterization and stability of TiO2 nanoparticles in industrial dye stuff effluent
	Langelihle Nsikayezwe Dlamini, University of Johannesburg, South Africa
	Title: The fate, behaviour and effect of WO3 nanoparticles on the functionality of an aerobic treatment unit
	Sandile Simelane, University of Johannesburg, South Africa
	Title: Flexible synthesis of anataseTiO2nanocrystallites for dye-sensitized solar cells applied at regular sunlight and room light conditions
	Yu-Ling Guo, National Cheng Kung University, Taiwan

Day 2 June 13, 2017 @ Olimpica 1	
Keynote Forum	
	Gilbert Daniel Nessim, Bar Ilan University, Israel
	Track 3:Biomaterials and Medical Devices **Track 4:Polymer Science and Technology** **Track 5:Ceramics and Composite Materials**
Chair	**Yet to be decided**
Co-Chair	**Yet to be decided**
	Title: Sticky Degradable Bioelastomers
	Richard Vendamme, Flemish Institute for Technological research, Germany
	Title: Flexible and soft bioelectronics for the biotic/abiotic interface
	Damia Mawad, University of New South Wales, Australia
	Title: Fabrication of Co-Cr alloys for biomedical applications by implementing rapid solidification
	Julio Juarez Islas, Instituto de Investigaciones en Materiales, Mexico
	Coffee Break @ Foyer
	Title: SPECIFIC POLYMERS – Value your research work in functional polymers. From your proofs of concept to hundred grams' polymers
	Cedric Lobart, 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: New Development and Applications of Polyurethane Materials
	Bing Lu, Wanhua Chemical Group Co. Ltd., China
	Title: Geometry and Size Dependent Structural Reversible of Sub- micrometer Polymer Structures
	Hong Yee Low, Singapore University of Technology and Design,Singapore
	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: Strategies for enhancing interfacial adhesion between chicken feather filler and thermoplastic matrices inbiocomposites
	Jorge Macanás de Benito, UniversitatPolitècnica de Catalunya, Spain
	Title: Perlite Metal Syntactic Foam (PMSF) in Impact Engineering
	Thomas Fiedler, University of Newcastle, Australia

	Title: Investigation of the Microstructure and Oxidation Properties of NbB2-SiC-GNP Composites
	Burak Cagri, Istanbul Technical University, 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
	Lunch Break @ Hotel Restaurant
	Track 11: Mechanics, Characterization Techniques and Equipment's
	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: Materials Characterization by X Ray Diffraction Techniques
	Aitor Larrañaga Varga, University of the Basque Country, Spain
	Title: Computational investigation of the kneading process of bread dough
	Natalie German, Technical University of Munich, Germany
	Title: A high resolution, multi-purpose scanning I/Q-interferometer scheme for material diagnostics
	Kyuman Cho, Sogang University, South Korea
	Title: In-situ measurement for ablation geometryduring impinging of plume with laser triangulation method
	Juhwan Lim, Agency for Defense Development, South Korea
	Title: Internal Stress and FrictionMeasurementsduring MoS2 - nickel electrodeposition
	Ebru Saraloglu Güler, Baskent University, Turkey
Poster Presentations on Day 2 (June 13, 2017) @ Foyer	
	Title: Optoelectronicstudies on Hybrid Perovskites Films for Solar Cells Applications
	Mauricio Solis de la Fuente, Lawrence Berkeley National Laboratory, USA
	Title: Valorization of feather wastes as useful and environmental friendly materials
	Marta Casadesús, UniversitatPolitècnica de Catalunya, Spain
	Title: Manufacturing of Gasket Sheet using Paper Manufacturing Process without Organic Solvent
	Yoonjong Yoo, Korea Institute of Energy Research, Republic of Korea
	Title: Visible light driven photo-active nano Ag-TiO2 for coating applications
	Jia Liang Cheng, Temasek Polytechnic, Singapore
	Title: Preparation of leucite from analcime by ion exchange process: An Experimental Study
	Qianqian Chang, China University of Geosciences, China

	Title: Preparation and luminescent properties of orange reddish emitting phosphor KCaBi(PO4)2:Sm3+
	Mi Ruiyu, China University of Geosciences, China
	Title: Synthesis of nano-analcime with potassic hornblende syenite by direct alkali-hydrothermal treatment
	Yuxiang Qi, China University of Geosciences, China
	Title: Angle-Insensitive multicolour display device based on phase change materials
	Hongkai Ji, University of Science and Technology, China
	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
	Title: Effect of binder on adsorption of cesium on silica gel containing embedded phosphotungstic acid
	Aleksey Vasiliev, East Tennessee State University, USA
	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
	Title: Preparation of Zeolite Fas slow-release fertilizer using K-feldspar powder
	Jiangyan Yuan, China University of Geosciences, China
	Title: Raman microspectroscopy in dental research
	Tomasz Buchwald, Poznan University of Technology, Poland
	Title: Inverse gas chromatography - a novel method forthe examination of bond strength between tooth hard tissues and restorative materials
	Zuzanna Okulus, Poznan University of Technology, Poland
	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
	Title: Effect of reduced graphene oxide on the mechanical, thermal and electrical properties of epoxy
	Ahmed Alzahrany, University of Sheffield, United Kingdom
	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
	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

Day 3 June 14, 2017 @ Olimpica 1	
	Track 6: Electronic, Optical and Magnetic Materials
Chair	**Yet to be decided**
Co-Chair	**Yet to be decided**
	Title: Ferroelectricity and magnetism in the organic charge transfer salts κ-(ET)2X
	Luca Fausto Tocchio, Politecnico di Torino, Italy
	Title: Photoluminescent crystalline magnetic materials based on trivalent lanthanideions and polycyanidometallates
	Szymon Chorazy, Jagiellonian University, Poland
	Title: Rational design of organic electrode materials: new advances and tools
	Christine Frayret, Université de Picardie Jules Verne, France
	Title: Electrical spin injection and detection in molybdenum disulfide multilayer channel
	Henri Jaffres, Unité Mixte de Physique CNRS, France
	Title: Self-Phase- Matched Second-Harmonic generation in Centrosymmetric ZnWO4 Zinc Tungstate Single Crystal
	Concita Sibilia, University of Roma, Italy
	Title: Study on chemical reaction under microwave irradiation
	Satoshi Fujii, Tokyo Institute of Technology, Japan
	Title: Siloxane photopolymers for PCR microfluidics
	Alessandra Vitale, Politecnico di Torino, Italy
	Title: Nanocrystalline cellulose from abaca fibers
	Annivar Ryan, DOST-FPRDI, Philiphines
	Title: L10-FePt based systems for ultra high-density magnetic recording
	Gaspare Varvaro, Istituto di Struttura della Materia - CNR, Italy
	Title: Microscopic background in metal-insulator criterion for doped Mott-Hubbard materials
	Vladimir A Gavrichkov, Kirensky Institute of Physics, Russia
	Title: Fiber Networks Modified with Graphene for Durable and Versatile Flexible Electronics
	Pietro Cataldi, Italian Institute of Technology, Italy
	Title: Intrinsic charge transport in stanene: Role of buckling and electron-phonon coupling
	Yuma Nakamura, Tsinghua University, Japan

	Title: Single Particle Spectroscopic Studies on Two-Photon Photoluminescence of Plasmon Coupled Gold Nanotriangle Dimers
	Monalisa Garai, National University of Singapore, Singapore
	Coffee Break @ Foyer
	Track 7: Emerging Smart Materials **Track 8: Materials for Energy and Environmental Sustainability**
Chair	**Yet to be decided**
Co-Chair	**Yet to be decided**
	Title: Screen Printable Molecular Copper Ink for Printed Electronics
	Bhavana Deore, National Research Council, Canada
	Title: Multi-scale deformation analysis in a thermoplastic polyurethane
	Alexander M Korsunsky, University of Oxford, UK
	Title: Solar Cells Efficiency Enhancement by Plasmons Generation
	Alexander Axelevitch, Holon Institute of Technology, Israel
	Title: A new perspective for analyzing experimental tests on biomaterials
	Antonina Pirrotta, University of Palermo, Italy
	Title: Materials research in energy and power for defense
	Tsvetanka Zheleva, US Army Research Lab, USA
	Title: Development of highly stretchable conductive fiber and fiber-based electronic sensors for textile electronics
	Taeyoon Lee, Yonsei University, Republic of Korea
	Title: CO2 Adsorption Equilibria on Calcium Exchanged Bentonite Modified by Mono-, Di- and Triethanolamines
	Ali Elkhalifah, Al-Neelain University, Sudan
	Title: Relation between nanoscale structures and transport phenomena in materials of polymer electrolyte fuel cell
	Takashi Tokumasu, Tohoku University, Japan
	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: High Performance Rubber Concrete
	Samaneh Pourmohammadimojaveri, Western Sydney University, Australia
	Title: Mechanical and thermal properties of propylene glycol extended and paper waste sludge modified polyurethane foams
	Agne Kairytė, Kaunas University of Technology, Lithuania

	Title: Influence of grain size on superelasticity and actuation properties of Cu-Al-Mn shape memory alloys
	Nazim Babacan, Ghazi University, Turkey
	Lunch Break @ Hotel Restaurant
	Award Ceremony

Welcome Message



It is my pleasure to invite colleagues from academia and business, young researchers and students from all parts of the world to attend the 9th World Congress on Materials Science and Engineering to be held at Roma, Italy on June 12 to 14, 2017.

The past century has seen revolutionary discoveries in biology, physics, chemistry, and material science. The pace of growth in knowledge seems to have gained momentum even more quite recently.
We learned to make use of a very wide spectrum of electromagnetic radiation and of particles, electrons and neutrons, to visualize biological and inorganic objects in their finest details and their dynamic properties with the help of novel materials and instruments and by developing new methods. Many of these have found practical utilization in technology and medicine and have revolutionized these fields for the benefit of mankind.

The Meeting will gather a multi-disciplinary group of scientists and engineers to present their latest findings, exchange ideas, and so pave the way for further discoveries, which most often happen where disciplines and specialists meet.
Apart from presenting and listening to great science, the location of the event in Roma, the capital of Italy, offers an unforgettable visit of the 'Eternal City' and the 'Capital of the World'.
Do not miss it!

Yours sincerely
Robert Huber

Prof. Robert Huber
Max-Planck-Institut für Biochemie
Martinsried-München, Germany