

Scientific Program

International Conference on

Materials Science & Engineering

June 25-26, 2018 | Rome, Italy

June 25, 2018 | **Materials Science Agenda** | **Day 1**

09:00-09:30 — **Registration**

Conference Hall: Aurelia

09:30-10:00 — **Opening Ceremony**

10:00-10:40 — **Keynote Forum**

Title: Challenges for materials science in the 21st century

Michael Silver, American Elements, USA

10:40-10:50 — **Group Photo**

Networking and Refreshment 10:50-11:05 @ Congress Foyer

11:05-11:45

Title: High-performance, heteroepitaxial, nanolaminate device layers on single-crystal-like, artificial substrates and controlled self-assembly of nanostructures within device layers for wide-ranging electrical and electronic applications

Amit Goyal, Oak Ridge National Laboratory, USA

11:45-12:25

Title: Materials for advanced ultrasupercritical power plants

Augusto Di Gianfrancesco, European Collaborative Creep Committee, Italy

12:25-13:25 — **Special Session**

Quantum alphabet of matter language

Eugene Machusky, National Technical University, Ukraine

Lunch Break 13:25 - 14:15 @ Banquet Room

14:15-15:15 — **Special Session**

Title: Thermal Spray research developments and possibilities offered at CPT

Sergi Dosta, University of Barcelona, Spain

Oral Session:
Advanced Materials and Devices | Metals, Mining, Metallurgy and Materials | Electronic, Optical and Magnetic Materials | Biomaterials and Healthcare

Session Chair: **Alexander Katsman,** Israel Institute of Technology, Israel
Session Co-chair: **Sergi Dosta,** University of Barcelona, Spain

15:15-15:40

Title: Mechanisms of metastable phase transformations in Al-Cu alloys with additions of Si, Ti and B

Alexander Katsman, Israel Institute of Technology, Israel

15:40-16:05

Title: The texture of zinc after direct extrusion

Jaroslav Capek, Czech Academy of Sciences, Czech Republic

Refreshment 16:05 - 16:20 @ Congress Foyer

16:20-16:45

Title: Controlled adsorption and release onto/from calcium phosphate materials for medical applications: The example of a bisphosphonate
Allal Barroug, Cadi Ayyad University, Morocco

16:45-17:10

Title: Preparation of SnO_2/ ZnO composite thin films: Structural and optical characterizations and comparison with Brugmann model
Mohamed Bensaidi, Djillali Liabes University, Algeria

Panel Discussion

Session Adjournmnet

June 26, 2018 **Day 2**

Conference Hall: Aurelia

10:00-10:40

Keynote Presentation
Title: 2D Flatlands – Synthesis, characterization and applications
Eui-Hyeok Yang, Stevens Institute of Technology, USA

Refreshment Break 10:40 - 10:55 @ Congress Foyer

10:55 11:55

Special Session
The European Creep Collaborative Committee: History, structure, activities and last assessments results
Augusto Di Gianfrancesco, European Collaborative Creep Committee, Italy

Oral Session II: Electronic, Optical and Magnetic Materials | Nanomaterials and Nanotechnology | Metals, Mining, Metallurgy and Materials | Advanced Materials and Devices | Characterization and Testing of Materials

Session Chair: **Mauro Giorcelli,** Polytechnic University of Turin, Italy

11:55-12:20

Title: Comparison of electrical behavior of different carbon fillers as a tool to predict final composite behavior
Mauro Giorcelli, Polytechnic University of Turin, Italy

12:20-12:45

Title: High frequency nano-transistor based ring oscillator
Soheli Farhana, International Islamic University Malaysia, Malaysia

12:45-13:10

Title: Effect of prior austenitic grain size on the tensile toughness of ultra-high strength steel weldments
Gitae Park, Hanyang University, South Korea

Lunch Break 13:10 - 14:00 @ Banquet Room

14:00-14:25

Title: Fibre functionalization by plasma treatment
Mauro Giorcelli, Polytechnic University of Turin, Italy

14:25-14:50

Title: Condensed matter physics at the threshold of the extreme environments of temperature and magnetic fields
Kevin Storr, Prairie View A&M University, USA

Poster Session 14:50 - 16:00 @ Congress Foyer

Poster Judge: Amit Goyal, Oak Ridge National Laboratory, USA
Soheli Farhana, International Islamic University Malaysia, Malaysia

MS101
Title: Polymeric nanoparticles for controlled release of synergic system posaconazole/ temozolomide
Anderson de Jesus Gomes, University of Brazil, Brazil

MS102
Title: Hydrazine hydrate promoted solvothermal syntheses of Ni_3Fe alloys for efficient oxygen evolution reaction
Animesh Roy, Myongji University, South Korea

MS103
Title: Atomic resolution characterization of epitaxial structure by using aberration-corrected STEM
Chien-Nan Hsiao, National Applied Research Laboratories, Taiwan

MS104
Title: Investigating the impact of the particle size on the performance and internal resistance of aqueous zinc ion batteries with a manganese sesquioxide cathode
Christian Bischoff, Fraunhofer Institute for Solar Energy Systems ISE, Germany

MS105
Title: Production of gallocyanine nanogel as drug delivery system for tauopathies
Claure Nain Lunardi, University of Brazil, Brazil

MS106
Title: Hierarchical growth of $MnCo_2S_4$ nanoflakes on conducting substrate as a multifunctional electrode
Harsharaj S Jadhav, Myongji University, South Korea

MS107
Title: Influence of short-term ageing prior to high temperature creep of ferritic creep-resistant P92 steel
Jiri Dvorak, Institute of Physics of Materials, Czech Republic

MS108
Title: Electrochemical characteristics of firing reaction for screen-printed Ag contact formation of crystalline Si solar cells
Joo-Youl Huh, Korea University, South Korea

MS109
Title: Effect of post weld heat treatment on microstructure and mechanical properties of friction stir welded Cu-alloy joints
Kwangjin Lee, National Applied Research Laboratories, Taiwan

MS1010
Title: Fibre functionalization by plasma treatment
Mauro Giorcelli, Polytechnic University of Turin, Italy

MS1011
Title: Effects of ZnO ratios on structural and optical properties of SnO_2 thin films
Mohamed Bensaidi, University Djillali Liabes, Algeria

MS1012
Title: Microstructure and creep behaviour of AlTiVNbZr0.25 high entropy alloy at 1073 K
Petr Kral, Institute of Physics of Materials, Czech Republic

MS1013
Title: Ceramic coating and surface modification of non-toxic ceramic pigments
YooJin Kim, Korea Institute of Ceramic Engineering and Technology, South Korea

Panel Discussion

Session Adjournmnet and Award Ceremony

****Keynote Presentation: 35 minutes for presentation + 5 minutes for Q/A**
***Oral Presentation: 20 minutes for presentation + 5 minutes for Q/A**