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# Materials Science and Chemistry

May 17-18, 2018 | Rome, Italy



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Olimpica 2

conference**series.com** 09:00-09:25

Opening Ceremony

Keynote Forum

- 09:25-09:30 **Introduction**  
**Title: Surface multi-functionalization of carbon fibres by novel plasma surface engineering technologies**  
 Hanshan Dong, University of Birmingham, UK
- 09:30-10:10 **Title: Jumping crystals: Controlled giant thermoelastic deformation of an organic molecular crystal**  
 Theo Rasing, Radboud University, Netherlands
- 10:10-10:50

Group Photo

Networking and Refreshments Break 10:50-11:05 @ Foyer

- 11:05-11:45 **Title: Design of metal-to-metal charge transfer chromophores for visible light activation of oxygen evolving Mn oxide catalysts in a polymer film**  
 Akira Yamaguchi, Tokyo Institute of Technology, Japan

Sessions: **Materials Science and Chemistry | Materials Science and Engineering | Materials Chemistry in Developing Areas | Materials Synthesis and Characterization | Polymeric Materials**

Session Chair: **Fargin Evelyne**, ICMCB - Université Bordeaux, France

Session Co-Chair: **Xiaoying Li**, University of Birmingham, UK

Session Introduction

- 11:45-12:15 **Title: Orientation studies of endohedral nitrogen fullerenes and their water-solubilization, progress and opportunities**  
 Kyriakos Porfyrakis, University of Oxford, UK
- 12:15-12:45 **Title: Surface engineering of soda lime silicate glass under thermal poling process for hardness reinforcement**  
 Fargin Evelyne, ICMCB - Université Bordeaux, France

Lunch Break 12:45-13:45 @ Hotel Restaurants

- 13:45-14:15 **Title: Proposed link between the periodic table and the standard model**  
 John O Roberts, University of Liverpool, UK
- 14:15-14:45 **Title: Correlation of oxygen defects with surface Lewis acidity and catalytic properties of hybrid MoO<sub>3</sub>/SBA-15 catalysts**  
 Jin An Wang, Instituto Politécnico Nacional, Mexico
- 14:45-15:15 **Title: Ceramic conversion treatments of a low cost beta titanium alloy to combat wear**  
 Xiaoying Li, University of Birmingham, UK
- 15:15-15:45 **Title: Functionalization of MnO<sub>2</sub> as a water oxidation catalysts in terms of the redox chemistry of Mn**  
 Akira Yamaguchi, Tokyo Institute of Technology, Japan

Networking and Refreshments Break 15:45-16:00 @ Foyer

- 16:00-16:30 **Title: Development of method for quantitative determination of bromelain in gel formulation**  
 Nana Gorgaslidze, Tbilisi State Medical University, Georgia
- 16:30-16:50 **YRF: A new hydrometallurgical process involving mechanochemical conversion with reagent**  
 Seda Çetintaş, Kocaeli University, Turkey
- 16:50-17:10 **YRF: Biosensor based on magnetite/lignin/polydopamine hybrid material combined with glucose oxidase for amperometric glucose biosensor**  
 A Jędrzak, Poznan University of Technology, Poland

Panel Discussion

**Day 2 May 18, 2018**

**Olimpica 2**

**Keynote Forum**

- 09:30-10:10** Title: **Development of high and ultra-high temperature ceramic matrix composites**  
Jon Binner, University of Birmingham, UK
- 10:10-10:50** Title: **The formation mechanism of metastable Al<sub>6</sub>(Fe, Mn) phase in die-cast Al-Mg alloys**  
Shouxun Ji, Brunel University London, UK

**Networking and Refreshments Break 10:50-11:05 @ Foyer**

**Sessions: Nanomaterials | Inorganic Materials Chemistry | Organic Materials Chemistry | Applied Materials Chemistry | Materials Chemistry and Physics | Science and Technology of Advanced Materials**

**Session Chair: Alain Tressaud, ICMCB-CNRS-University of Bordeaux, France**

**Session Co-Chair: Lartigue Lenaic, Université de Nantes, France**

**Session Introduction**

- 11:05-11:35** Title: **Optical anisotropy studies of silver nanowire/polymer composite films**  
Takeo Tomiyama, Hitachi Chemical Co., Ltd., Japan
- 11:35-12:05** Title: **Fluorine, a key-element for the XXI<sup>st</sup> century: Uses of fluoride materials in modern technologies**  
Alain Tressaud, ICMCB-CNRS, University Bordeaux, France
- 12:05-12:35** Title: **Synthesis of Co-free & Li-excess positive electrode materials for lithium-ion battery**  
Mitsuharu Tabuchi, National Institute of Advanced Industrial Science and Technology, Japan
- 12:35-13:05** Title: **Ultra-bright magnetic nanoassemblies as theranostic agents**  
Lartigue Lenaic, Université de Nantes, France

**Lunch Break 13:05-14:05 @ Hotel Restaurants**

- 14:05-14:35** Title: **Magnetic nanoparticles: The effect of chemico-physical parameters on their fundamental and biomedical applicative properties**  
Paolo Arosio, Università degli Studi di Milano, Italy
- 14:35-15:05** Title: **Simple green synthesis of amino acid functionalised CdTe/CdSe/ZnSe core-multi shell with improved cell viability for cellular imaging**  
Oluwatobi S Oluwafemi, University of Johannesburg, South Africa
- 15:05-15:25** YRF: **Optimization of mechanochemical modification process of a lignocellulosic biomass waste for adsorption applications**  
Elif Cerrahoglu, Kocaeli University, Turkey

**Networking and Refreshments Break 15:25-15:40 @ Foyer**

**Poster Presentations 15:40 - 17:00 @ Foyer**

**Poster Judge: Lartigue Lenaic, Université de Nantes, France**

- PPMC001** Title: **Mesoporous CeO<sub>2</sub>-ZrO<sub>2</sub>-based mixed oxides for automotive catalysis**  
Anatoly Bortun, PIDC, USA
- PPMC002** Title: **Novel low dimensional mixed valent transition metal chalcogenides discovered by exploratory synthesis**  
Mihai I Sturza, IFW Dresden - Institute for Solid State Research, Germany
- PPMC003** Title: **Synthesis of hydrazones of 5 $\alpha$ -androstane series**  
Nana N Barbakadze, Tbilisi State Medical University, Georgia
- PPMC004** Title: **Synthesis of derivatives of adamantane modified epiandrosterone**  
Nana N Barbakadze, Tbilisi State Medical University, Georgia
- PPMC005** Title: **Catalytic synthesis of alkylpyrazines over mixed oxides obtained from LDHs materials**  
Florina Teodorescu, Center for Organic Chemistry - Romanian Academy, Romania

- PPMC006** Title: **Separation of by-product gases in steel industry for carbon resources utilization by semi-alicyclic polyimide membranes**  
Jeong-Hoon Kim, KRICT - Carbon Resources Institute, South Korea
- PPMC007** Title: **Synthesis of 5 $\alpha$ -steroidal[17,16-d]pyrazolines**  
Nanuli Nadaraia, Tbilisi State Medical University, Georgia
- PPMC008** Title: **Synthesis of a new Cd-complex supported on magnetic nanoparticles and study of its catalytic activity for oxidation reactions**  
Taiebeh Tamoradi, University of Kurdistan, Iran
- PPMC009** Title: **Steroidal oximes modified by N-protected amino acids**  
Nana Gorgaslidze, Tbilisi State Medical University, Georgia
- PPMC010** Title: **The lipid composition of some plants growing in Georgia**  
Nana Gorgaslidze, Tbilisi State Medical University, Georgia
- PPMC011** Title: **Synthesis and characterization of ultra-thin and ultra-highly conductive poly(3,4-ethylenedioxythiophene) nanofilm**  
Sungsoo Kim, Pai Chai University, Korea
- PPMC012** Title: **A joint spectrochemical, chemometrics and DFT/TD-DFT analysis of the Zn<sup>II</sup>, Cu<sup>II</sup> and Fe<sup>II</sup> metal ions complexation by MTB in aqueous solution**  
Zolaikha Rasouli, University of Kurdistan, Iran
- PPMC013** Title: **Phenalenyl like substructures in fullerene molecules**  
Ayrat R Khamatgalimov, Arbuzov Institute of Organic and Physical Chemistry - FRC Kazan Scientific Center of RAS, Russia
- PPMC014** Title: **Copper sulfide nanocrystals for efficient photothermal ablation of tumor cells**  
Zhiyong Zheng, Technical University of Denmark, Denmark
- PPMC015** Title: **Scaling up the synthesis of a hydroxyquinoline functionalized calix[4]arene – A designer molecule for selective rare earth extraction**  
Quirina Roode Gutzmer, Freiberg University of Mining and Technology, Germany
- PPMC016** Title: **Non-enzymatic direct glucose fuel cells: A novel principle towards autonomous electrochemical biosensors**  
M Helena M de Sá, Instituto Superior de Engenharia do Porto, Portugal
- PPMC017** Title: **Screening cancer biomarkers with plastic antibodies assembled on a fuel cell: Application to CEA**  
Raquel Campos, Instituto Superior de Engenharia do Porto, Portugal

**Panel Discussion**

**Closing Ceremony**