

## **AdvPhotoCat-E2017**

The 2<sup>nd</sup> International Workshop “Advances on Photocatalysis”  
Heraklion-Crete, Greece, 14 – 16<sup>th</sup> of July, 2017

*Program*

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**International organizing committee**

*Event Chair* **Dr. Mirela Suche**a – CEMATEP, TEI of Crete, Greece  
**Prof. Dr. Emmanouel Koudoumas** – CEMATEP, TEI of Crete, Greece  
**Prof. Dr. Nikos Katsarakis** – CEMATEP, TEI of Crete, Greece  
**Prof. Dr. Ioannis N. Remediakis** – Department of Materials Science and Technology, University of Crete, Greece  
**Dr. Gian Luca Chiarello** – Dep. of Chemistry, Università degli Studi di Milano, Italy  
**Prof. Dr. Gabriela Carja** – Faculty of Chemical Engineering and Environmental Protection, Technical University Gh.Asachi of Iasi, Romania  
**Prof. Dr. Felicia Iacom**i – Physics Faculty, Al. I. Cuza University, Romania  
**Dr. Alexandra Mocanu** – Faculty of Applied Chemistry and Materials Science, “Politehnica” University of Bucharest, Romania  
**Prof. Dr. Carlos Jose Tavares**, Physics Department, University of Minho, Guimaraes, Portugal

**International Scientific Committee**

**Prof. Dr. Yasuo Izumi** – Department of Chemistry, Graduate School of Science, Chiba University, Japan  
**Prof. Dr. Raffaele Marotta** – Department of Chemical Engineering, Materials and Industrial Production, School of Polytechnic and Basic Sciences, University of Naples “Federico II”, Italy  
**Prof. Dr. Suresh C. Pillai**, Centre for Precision Engineering, Materials and Manufacturing Research & Nanotechnology Research Group, Department of Environmental Science, Institute of Technology Sligo, Ash Lane, Sligo, Ireland  
**Prof. Martyn E Pemble** – Chemistry Dpt., University College of Cork, Ireland  
**Dr. Dimitra Vernardou** – CEMATEP, TEI of Crete, Greece  
**Prof. Declan McCormack** – Dublin Institute of Technology (DIT) and Centre for Research in Engineering Surface Technology (CREST), Ireland  
**Dr. Ralf Dillert** – Institute for Technical Chemistry, Leibniz University Hannover, Germany  
**Prof. Dr. Klara Hernadi** – Applied and Environmental Chemistry Department, University of Szeged, Hungary  
**Prof. Dr. Viacheslav Barsukov** – Department for Electrochemical Power Engineering & Chemistry Kiev National University of Technologies and Design, Ukraine  
**Dr. George Kenanakis** – IESL Fo.R.T.H and CEMATEP, TEI of Crete, Greece  
**Prof. Dr. Aurel Pui** – Chemistry Faculty, Al. I. Cuza University Romania  
**Prof. Dr. Eng. Edina Rusen** – Faculty of Applied Chemistry and Materials Science, University “Politehnica” of Bucharest, Romania  
**Conf. Dr. Alin Dirtu** – Chemistry Faculty, Al. I. Cuza University, Romania  
**Prof. Dr. Doina Humelnicu** – Chemistry Faculty, Al. I. Cuza University Romania  
**Prof. Dr. Ionel Humelnicu** – Chemistry Faculty, Al. I. Cuza University Romania  
**Dr. Petronela Dorneanu** – Petru Poni Institute of Macromolecular Chemistry, Iași, Romania  
**Dr. Narcisa Vrinceanu** – Lucian Blaga University of Sibiu Romania

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**Local organizing committee members (alphabetic order):**

**Mr. Andrei Ceban** – Physics Faculty, Al. I. Cuza University, Romania  
**Mrs. Daphne Davelou** – Materials Science Dpt. University of Crete, Greece  
**Mr. Dimitris Grigoropoulos** – CEMATEP, TEI of Crete, Greece  
**Mr. Andreas Kaliakatsos** – School of Environmental Engineering, Technical University of Crete, Greece  
**Mrs. Laura Lacko** – Adonis Travel, Heraklion, Crete, Greece  
**Mr. Michalis Minotakis** – Materials Science Dpt. University of Crete, Greece  
**Mrs. Cristina Postolachi** – Physics Faculty, Balti Extension, Al. I. Cuza University, Republic of Moldova  
**Mrs. Anatoli Tsangadoura** – Dept. Physics, University of Crete, Crete, Greece  
**Mr. Ioan-Valentin Tudose** – CEMATEP, TEI of Crete, Greece  
**Mr. Ioannis Vamvasakis** – Materials Science Dpt. University of Crete, Greece  
**Mrs. Eva Vasilaki** – Materials Science Dpt. University of Crete/CEMATEP, TEI of Crete , Greece  
**Mrs. Georgia Velegraki** – Materials Science Dpt. University of Crete, Greece  
**Mr. Nicolas Vrithias** – Materials Science Dpt. University of Crete, Greece

***IT support:*** **Mr. Stratos Stipsianos** -Department of Informatics Engineering, School of Engineering, TEI of Crete, Greece

***Website design:*** [www.photocatalysis-workshop.com](http://www.photocatalysis-workshop.com) **Mr. Dragoș Duțu** – Alexandru Ioan Cuza University of Iași, Romania

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**Friday 14<sup>th</sup> of July 2017**

*09:30 – 11:15 Registration, late arrivals, coffee*

11:15 – 12:00 Welcome speeches

Prof E. Koudoumas

Prof. Nikolos Katsarakis

12:00 – 12:30 Invited Presentation\*

**“Photocatalytic materials for improved charge carriers separation”**

Dr. Elena Selli – Italy

12:30 – 13:00 Invited Presentation

**“Disinfection of Wastewater by Solar Photocatalysis”**

Danae Venieri – Greece

13:00 – 13:30 Invited Presentation

**“Photocatalytic metal-oxide nanofibers fabricated by electrospinning”**

Petronela Pascariu – Romania

*13:30 – 14:30 Lunch break – light lunch*

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\* Invited 20 min. +10 min. discussions//Oral 15 min. +5 min. discussions//Posters permanent exhibition

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14:30 – 15:00 Invited Presentation\*

**”New class of ionic conductors based on metal-closo-boranes”**

Dr. Zbigniew Lodziana – Poland

15:00 – 15:30 Invited Presentation

**“Enhanced water oxidation at photoanodes”**

Nuria Lopez – Spain

15:30 – 16:00 Oral Presentation

**“Electronic properties engineering of transition metal dichalcogenide monolayers and nanostructures”**

George Kopidakis – Greece

16:00 – 16:20 Oral Presentation

**“TMD nanoribbons: metallic edge semiconductors”**

Daphne Davelou - Greece

*16:20 – 17:20 Coffee break during posters presentation*

17:20 – 17:40 Oral Presentation

**“Porous Networks of Assembled CoO Nanoparticles Showing High Performance for the Photocatalytic Reduction of Aqueous Cr(VI)”**

Georgia Velegraki – Greece

17:40 – 18:00 Oral Presentation

**“Size Effects of Platinum Nanoparticles in the Photocatalytic Hydrogen Production Over 3D Mesoporous Networks of CdS and Pt Nanojunctions”**

Ioannis Vamvasakis – Greece

*20:00 Festive Dinner “Petousis” Tavern*

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**Saturday 15<sup>th</sup> of July 2017**

10:00 – 10:30 Invited Presentation\*

**“Photocatalytic challenge of carbon dioxide conversion into fuels supported by spectroscopy”**

Yasuo Izumi – Japan

10:30 – 11:00 Invited Presentation

**“3-D Printing of Photocatalytic Materials for Energy Applications”**

Kostas Sierros – USA

*11:00 – 12:00 Coffee break and posters presentation*

12:00 – 12:30 Invited Presentation

**“New Type of Conductive Materials Based on Carbon Fibers”**

Alexandra Mocanu – Romania

12:30 – 12:50 Oral Presentation

**“ZnTe-Sensitized TiO<sub>2</sub> Coral-Like Nanostructures for Visible-Light Photoreduction of CO<sub>2</sub> into CH<sub>4</sub>”**

Muhammad Fahad Ehsan - Pakistan

*13:00 – 14:00 Lunch break – light lunch “Krasas”*

14:00 – 14:30 Invited Presentation

**“Preparation and evaluation of photocatalytic activity of efficient semiconducting photocatalysts based on nano-titania”**

Hossam El Nazer – Egypt

14:30 – 15:00 Invited Presentation

**“Ruthenium complexes for dye-sensitized solar cells – state of art and perspectives”**

Maciej Zalas – Poland

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15:00 – 15:20 Oral Presentation\*

**“Mesoporous TiO<sub>2</sub> oxides templated by tri-block copolymer and modified with nano-sized CeO<sub>2</sub> as catalysts for photoenergy applications”**

Mihaela Mureseanu – Romania

15:20 – 15:40 Oral Presentation

**“Spectroscopic Analysis of Proton Exchange for the Photocatalytic Transformation of Aqueous Acetic Acid: An Isotopic Study”**

Saher Hamid – Germany

15:40—16:00 Oral Presentation

**“ZnO-TiO<sub>2</sub> core-shell flower-like structures for enhanced photocatalytic performance”**

Eva Vasilaki – Greece

*16:00 – 17:00 Coffee break and posters presentation*

17:00 – 17:30 Invited Presentation

**“Novel facile method for obtaining CdSe/polyaniline/C60 composite material”**

Aurel Diacon – Romania

17:30—18:00 Presentation

**“Quantronics crystals”**

Michael Schmidt – sponsor presentation – Germany

*19:00 Optional Social Event – Cretan evening: Visit to Anopolis village followed by dinner at Anopolis Pallas Tavern during the show “A night with the Gods”. Attendance with reservation before 12<sup>th</sup> of July. Price 46euros/person (includes transportation from TEI of Crete and back, guide, dinner, show tickets)*

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**Sunday 16<sup>th</sup> of July 2017**

10:00 – 10:30 Invited Presentation\*

**“Enhanced photoelectrocatalytic water splitting over a bilayer WO<sub>3</sub> n-n heterojunction prepared by RF diode sputtering”**

Gianluca Chiarello – Italy

10:30 – 11:00 Invited Presentation

**“Space-and time-resolved aerosols emission spectroscopy: advanced LIDAR techniques for environmental approach”**

Silviu Gurlui – Romania

*11:00 – 12:00 Coffee break and posters presentation*

12:00 – 12:30 Invited Presentation

**“Redox dynamics of Cu, Pt and Cu/Pt nanoparticles on TiO<sub>2</sub> during methanol photo-steam reforming studied by *in-situ* modulated excitation X-ray Absorption Spectroscopy (MEXAS)”**

Massimo Bernareggi – Italy

12:30 – 12:50 Oral Presentation

**“Tuning the photocatalytic properties of gold nanoparticles by exposure to green light”**

Felicia Iacomi – Romania

*13:00 – 14:00 Lunch break – light lunch “Maggevmata”*

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14:00 – 14:30 Invited Presentation\*

**“Materials for Photocatalytic & Photovoltaic Energy Applications”**  
Theivasanthi Thirugnanasambandan – India

14:30 – 14:50 Oral Presentation

**“Metal Chalcogenide based Nanocomposite Photocatalysts for Energy and Environment”**  
Muhammad Fahad Ehsan – Pakistan

14:50 – 15:10 Oral Presentation

**“Composites of the self-assemblies of plasmonic nanoparticles - layered double hydroxides for efficient UV and solar-driven photocatalysis”**  
Gabriela Carja – Romania

15:10-- 15:30 Oral Presentation

**“Dyeing process for recovery of textile reactive dyestuffs from wastewaters using photocatalytic ability of garnet and turquoise gemstones”**  
Iuliana Cocean – Romania

*15:30 – 16:00 Closing remarks and future perspectives- round table*

*16:00 – 17:00 Cocktail-coffees- farewell*

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**Posters\***

**“Nanoparticles of silver/layered double hydroxides as nanoarchitectonics with solar photocatalytic response in environmental catalysis”**

Gabriela Carja – Romania

**“Lithium-ion capacitor for Photovoltaic-Supercapacitor Energy System”**

Viaceslav Barsukov - Ukraine

**“Sm<sup>3+</sup> - Lindqvist polyoxotungstate type: synthesis, characterization and photocatalytic activity”**

Doina Humelnicu, Ionel Humelnicu – Romania

**“Photocatalytic Ag doped TiO<sub>2</sub> nano-coatings for biologic contaminants removal from waters”**

Andreas Kaliakatsos – Greece

**“A versatile tool for mosquito repellency: solar activated IR3535 release from TiO<sub>2</sub> - functionalized polyurethane microcapsules”**

Carlos Jose Tavares – Portugal

**“Photocatalytic efficiency of TiO<sub>2</sub>-Au/graphene oxide catalysts on amaranth degradation under sun light irradiation”**

Florina Pogacean – Romania

**“TiO<sub>2</sub>-Pt based photocatalysts containing graphene oxide and reduced graphene oxide for sunset yellow degradation under natural solar exposure”**

Maria Coros – Romania

**“Synthesis and characterization of ternary ferrites as potential photocatalysts”**

Dr. Constantin Virlan – Romania

**“Effects of silver interaction with light over textile dyestuffs chromophore groups in the reaction with hemp fabrics”**

Alexandru Cocean – Romania

**“Photocatalytic device for air purification applications”**

Mirela Sucheana – Greece

**“Electronic structure calculations for transition metal dichalcogenide alloys”**

Michail Minotakis – Greece

**Sponsors posters**

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