

The logo for the European Ceramic Society (ECERS) is displayed in white text on an orange rectangular background. The letters 'E', 'C', 'E', 'R', 'S' are stylized, with the 'C' and 'E' having a grid-like pattern.The website address 'www.ecers2017.eu' is written in white text on a red rectangular background.

15th Conference & Exhibition of the European Ceramic Society

July 9–13, 2017

Budapest, Hungary

Main topics of ECerS 2017

- New Developments in Processing and Synthesis with a Special Focus on Additive Manufacturing
- High Temperature Processes and Advanced Sintering
- Advanced Structural Ceramics
- Electroceramics and Optical Materials
- Ceramics for Novel Energy Production and Storage
- Ceramics and Glasses for Healthcare
- Challenges and Opportunities in Industrial Ceramics
- The Ceramics Genome: Modelling, Simulation and In-situ Experimentation
- Developments on the Boron Based Ceramics
- Cultural Heritage
- Refractories
- Art and Ceramics

Jointly organised by

Turkish Ceramic Society and
Hungarian Scientific Society
of the Silicate Industry.

Important dates

Deadline for abstract submission:
February 17, 2017

Confirmation for abstract acceptance:
March 10, 2017

Early bird registration deadline:
March 17, 2017

Dear Colleagues and Partners

On behalf of the Organizing Committee, we would like to warmly welcome you to the beautiful and historical city of Budapest for the 15th Conference & Exhibition of the European Ceramic Society (ECerS2017), between 9th and 13th of July, 2017.

For the first time, the Conference will be organised jointly by the two member societies namely Turkish Ceramic Society and Hungarian Scientific Society of the Silicate Industry. Since the first ECerS conference in 1989, the tremendous growth in interest and participation from ceramic communities has made the ECerS Conference a globally very popular venue for scientists, artists, students and industrialists willing to have a direct access to one of the largest community of international experts of ceramic art, science and technology.

We would like to promote in the next ECerS2017 a multi-disciplinary atmosphere, mixing ceramics, materials science, chemistry, physics, art, design, archeology, dentistry, electronic, energy departments and industry and universities as well as young scientist with the experienced to discuss the developments in the ceramic art, science and technology under 12 different topics from the latest energy applications to traditional ceramics, from the latest additive manufacturing technologies to cultural heritage and art, from high temperature production to geopolymers.

All in all, our goal is to organize a truly unforgettable event for all attending as students, scientists, artists, craftsmans, industrialists and so on.

We look forward to welcoming you in Budapest!

Servet Turan and Csaba Balázs

On behalf of the ECerS 2017 Organization Committee

Ceramics for Novel Energy Conversion, Storage and Use

ECerS2017

15th Conference & Exhibition of the European Ceramic Society

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Topic description

This topic will cover the ceramic and glass solutions for energy harvesting and storage expects contributions from a wide range of subjects related to batteries, thermoelectrics, fuel cells, photovoltaics and solar devices, steam electrolyzers, membranes, electrochemical systems and technologies.

The scope of this topic includes the performance-synthesis and processing-properties-crystal structure and characterization relationship for these materials and devices. Specific components include electrodes, electrolytes, electrochemical membranes, catalysts, substrates, seals, interconnects or interfacial layers and semiconductors. Testing of single components, stacks, alternative system concepts, harvesting and recycling technologies are also considered within the scope of this topic.

Topic sessions

- Li- and Na-ion batteries including solid state
- Photovoltaics and solar energy
- Memresistors and thermoelectric materials
- Ceramic proton conductors and PCFCS
- Steam electrolysis and hydrogen production
- Solid oxide fuel cells
- Oxygen transport membranes and CO₂ capture
- Supercapacitors
- Energy and photonic devices
- Solar fuels/artificial photosynthesis: Materials and devices

Topic Organisers

Ceramics for Novel Energy Conversion, Storage and Use

Pierre-Marie Geffroy
SPCTS - European Ceramic Center
University of Limoges, France



Servet Turan
Department of Materials Science and
Engineering, Anadolu University, Turkey



John Kilner
Faculty of Engineering,
Imperial College London
London, UK



Hua-Tay Lin
Guangdong
University of
Technology,
Guangdong, China



Truls Norby
The Faculty of
Mathematics and
Natural Science,
University of Oslo,
Oslo, Norway



Mamoru Senna
Keio University,
Tokyo, Japan



**José Manuel Serra
Alfaro**
Institute of Chemical
Technology,
Valencia, Spain



Angelo Vaccari
Department of
Industrial Chemistry,
University of
Bologna, Italy

Invited Speakers for the Topic

Ceramics for Novel Energy Conversion, Storage and Use

Stereolithographic additive manufacturing of ceramic components with topologically fluctuated patterns to modulate energies and materials flows

Soshu Kirihara, Osaka University, Japan

Investigation of the BZCY72-BaPrO₃ system for high-temperature electrochemical applications: thermal evolution of structures and electrical properties

Glenn C. Mather, Institute of Ceramics and Glass - ELAMAT, Spain

Processes and materials for solar thermochemical production of fuels and chemical commodities

Martin Roeb, German Aerospace Center, Inst. of Solar Research, Solar Chemical Engineering, Germany

Manufacturing of proton conductive ceramics for hydrogen separation membranes and fuel cells

Alessandra Sanson, Inst. of Sci. and Technology for Ceramics – National Research Council of Italy (ISTEC-CNR), Italy

Low cost sodium battery based on ceramic materials - an old idea revisited

Michael Stelter, Fraunhofer Institute for Ceramic Technologies and Systems (IKTS), Germany

Full picture discovery for flux-grown crystals and interface designs on next-generation all-solid-state LIB

Katsuya Teshima, Center for Energy & Environmental Science Shinshu University, Japan

Quantification of degradation in infiltrated SOFC anodes

Enrique Ruiz-Trejo, Imperial College London, United Kingdom

Title to be announced on «Oxygen Transport Membranes and CO₂ Capture»

Henny Bouwmeester, University of Twentw, The Netherlands

Title to be announced on «Steam Electrolysis and Hydrogen Production»

Peter Vang Hendriksen, Denmark Technical University

Title to be announced on «Memresistors and Thermoelectric Materials»

Michitaka Ohtaki, Department of Energy and Material Sciences, Kyushu University, Japan