

**Manufacturing technologies, properties and applications
of advanced structural ceramic materials**

PROGRAM

Friday, April 7, 2017

8.55 - 9.00 Opening

9.00 - 11.00 Plenary Session

9.00 - 10.00 **Alan Wilmański, Mirosław M. Bućko**, Composites in the aluminum oxynitride – some 3d metal nitrides systems prepared from SHS-derived powders

10.00 – 11.00 **Zbigniew Pędzich, Grzegorz Grabowski, Kamil Wojteczko, Agnieszka Wojteczko**, Optimization of useful properties of alumina/zirconia composites for selected applications

11.00 - 11.30 Coffee break

11.30 - 13.00 Session I

11.30 – 12.00 **Marek Grabowy**, Zirconia solid solutions as an example of brilliant engineering and functional material - Cerel's Production and R&D Competences

12.00 – 12.20 **Michał Kawalec, Ryszard Kluczowski, Mariusz Krauz**, Overview of Fuel Cells

12.20 – 12.40 **Ryszard Kluczowski, Michał Kawalec, Mariusz Krauz**, Technology of Anode Supported Solid Oxide Fuel Cells in IEn OC CEREL

12.40 – 13.00 **Mariusz Krauz, Ryszard Kluczowski, Michał Kawalec**, Metal Supported Solid Oxide Fuel Cells – third generation of SOFC

13.00 - 14.00 Lunch

14.00 - 16.00 Session II

14.00 – 14.20 **Magdalena Gromada, Janusz Trawczyński, Michał Wierzbicki**, Perovskite membranes for clean oxygen separation from air

14.20 – 14.40 **Vladimir Buljak, Milorad Milovančević**, Towards modeling of thermal cyclic of the elastic properties in porous ceramics

14.40 – 15.00 **Shwetank Pandey, Vladimir Buljak**, Parameter identification for Drucker-Prager Cap model through inverse analysis using only compaction curves

15.00 – 15.20 **Domenico Tallarico, Natalia V. Movchan, Alexander B. Movchan, Michele Camposaragna**, On the dynamic response of superlattices made of piezoelectric ceramics

15.20 – 15.40 **Philippe Godin, Séverine Romero Baivier**, Thermo-mechanical modelling of refractory ceramic behavior in use

15.40 – 16.00 **Achraf Kallel, Severine Romero Baivier**, Finite Element Analysis of the Compaction Behavior of Refractory Powders

16.00 - 16.30 Coffee break

16.30 - 18.30 Session III

16.30 – 16.50 **Daniel Kempen, Andrea Piccolroaz**, Thermomechanical modeling and simulation of the sintering process of ceramics

16.50 – 17.10 **Nikolai Gorbushin, Gennady Mishuris**, Model of crack movement in bi-material

17.10 – 17.30 **Gennaro Vitucci, Nikolai Gorbushin, Gennady Mishuris**, Non-brittle crack propagation in discrete chains

17.30 – 17.50 **Anastasiya Vinakurava, Andrzej Skrzat, Feliks Stachowicz**, Analysis of stress-strain state of the femur after resection using developed application based on micropolar theory

17.50 – 18.10 **Mojtaba Biglar, Feliks Stachowicz, Tomasz Trzepieciński, Magdalena Gromada**, The influence of metallic interface on micro-mechanical fracture and electrical behaviour of multilayer piezoelectric actuator

18.10 – 18.30 **Monika Perkowska, Gennady Mishuris, Andrea Piccolroaz, Michał Wrobel**, Hydraulic fracturing in ceramics

18.30 Dinner