

# PROGRAMME

## Day 1. Wednesday - June 14, 2017

**08.30 – 09.30 h, Registration**

**09.00 – 10.00 h, Opening ceremony and Welcome addresses**

**10.00 – 10.30 h, Cocktail**

### **Session 1: Ceramic Powders, Characterization and Processing**

Chair: V.V. Srdic, C. Rebholz

#### **10.30 – 11.00 h, Plenary lecture, PL-1**

D. Ferber-Lopez, D. Fonblanc, A. Lale, M. Schmidt, A. Viard, S. Bernard, *DESIGN, PROCESSING AND APPLICATION OF POLYMER-DERIVED SINGLE- AND MULTI-PHASE CERAMICS IN THE Si-X-C-N (X = Al, B AND/OR TRANSITION METALS) SYSTEM*

#### **11.00 – 11.20 h, Invited lecture, I-1**

M. Vukčević, I. Bošković, S. Nenadović, M. Mirković, M. Stojmenović, V. Pavlović, Lj. Kljajević, *CHARACTERISTICS OF RED MUD AND/OR METAKAOLIN-BASED GEOPOLYMERS AS A FUNCTION OF MICROSTRUCTURE MODIFICATION BY Ca(OH)<sub>2</sub>*

#### **11.20 – 11.40 h, Invited lecture, I-2**

B. Matovic, *SYNTHESIS OF GADOLINIA NANOMETRIC POWDERS*

#### **11.40 – 12.00 h, I-3**

V. Fruth, I. Atkinson, L. Predoana, J. Pandele-Cusu, S. Petrescu, I. Raut, M. Doni, L. Jecu, D. Nastac, I. Barcan, A. Badanoiu, *BACTERIA AS SELF-HEALING AGENT, AN ALTERNATIVE TO RECOVER CEMENT MATERIALS*

#### **12.00 – 12.15 h, O-1**

S. Jovanović, J. Rmuš, M. Vukomanović, D. Bajuk-Bogdanović, D. Peddis, D. Suvorov, *SYNTHESIS AND CHARACTERIZATION OF ZINC DOPED COBALT FERRITE NANOPARTICLES*

#### **12.15 – 12.30 h, O-2**

N. Stanković, M. Nikolić, B. Jelenković, B. Matović, *DEPENDENCE OF LUMINESCENCE PROPERTIES OF Y<sub>2</sub>MoO<sub>6</sub>·Eu<sup>3+</sup> ON TEMPERATURE*

#### **12.30 – 12.45 h, O-3**

M. Kokunešoski, A. Šaponjić, Z. Baščarević, Z. Rakočević, Đ. Šaponjić, B. Matović, B. Babić, *INFLUENCE OF SYNTHESIS CONDITIONS ON MORPHOLOGICAL FEATURES OF SBA-15*

**12.45 – 13.00 h, Coffee break**

## **Session 1: Computing in Materials Science**

Chair: D. Zagorac, C. Doll

### **13.00 – 13.30 h, Plenary lecture, PL-2**

K.C. Hari Kumar, *CALPHAD MODELLING APPLIED TO CERAMIC SYSTEMS*

### **13.30 – 13.50 h, Invited lecture, I-4**

K. Doll, *ELECTRONIC STRUCTURE CALCULATIONS IN SOLID STATE CHEMISTRY*

### **13.50 – 14.10 h, Invited lecture, I-5**

I. Pašti, A. Dobrota, A. Jovanović, N. Gavrilov, S. Mentus, N. Skorodumova, *CARBON-BASED MATERIALS FOR ENERGY CONVERSION APPLICATION - FIRST PRINCIPLES INSIGHTS*

### **14.10 – 14.30 h, O-4**

S. Bromley, *NANOSCALE-TO-BULK: SIZE-DEPENDENT CRYSTALLINITY OF CERAMIC OXIDES*

### **14.30 – 15.30 h, Lunch break**

### **15.00 – 16.00 h, Poster Session 1 (Posters P1 - P18)**

## **Session 2: Computing in Materials Science**

Chair: K.C. Hari Kumar, S. Bromley

### **16.00 – 16.15 h, O-5**

J. Zagorac, D. Zagorac, M. Rosić, B. Matović, *STRUCTURE PREDICTION OF ALUMINIUM NITRIDE MODIFICATIONS USING DATA MINING*

### **16.15 – 16.30 h, O-6**

A. Cuko, M. Calatayud, S. Bromley, *THEORETICAL STUDY ON TITANOSILICATES MIXING: FROM NANOSCALE TO BULK*

### **16.30 – 16.45 h, O-7**

D. Zagorac, J. C. Schön, M. Rosic, J. Zagorac, B. Matovic, *ENERGY LANDSCAPE INVESTIGATIONS OF COBALT MOLYBDATE AND CONNECTION TO THE EXPERIMENT*

## Day 2. Thursday - June 15, 2017

### Session 3: High Temperature Phenomena, Sintering, Microstructure Design and Mechanical

Chair: D. Bučevac, R. Kumar

**09.00 – 09.20 h, Invited lecture, I-6**

K. Yoshida, M. Takahashi, T. Yano, *EFFECTS OF BORON AND ALUMINUM ADDITIVES ON MICROSTRUCTURE OF POROUS SIC CERAMICS WITH IN-SITU GRAIN GROWTH*

**09.20 – 09.40 h, Invited lecture, I-7**

N. Kostoglou, B. Babic, B. Matovic, G. Constantinides, A. Kontos, T. Steriotis, V. Ryzhkov, E. Gunduz, C. Mitterer, C. Rebholz, *NOVEL PRODUCTION ROUTES FOR POROUS BORON NITRIDE NANOSTRUCTURES AND CARBON FOAM-ALUMINIUM FLUORIDE NANOCOMPOSITES*

**09.40 – 10.00 h, Invited lecture, I-8**

S. Ramya, A. Eranezhuth, R. Kumar, *SYNTHESIS, CHARACTERIZATION AND EVALUATION OF PHOTOCATALYTIC PROPERTIES OF NANO-ZIRCONIA*

**10.00 – 10.20 h, Invited lecture, I-9**

D. Bucevac, V. Krstic, *LOW-TEMPERATURE SINTERING OF YAG:Ce FOR LASER PHOSPHOR PROJECTION*

**10.20 – 10.35 h, O-8**

A. Knöller, Z. Burghard, J. Bill, *V<sub>2</sub>O<sub>5</sub> NANOFIBER SCAFFOLDS - A CONCEPT TO GENERATE DAMPING CERAMICS*

**10.35 – 10.45 h, Coffee break**

### Session 4: Ceramic Composites, Membranes and Multimaterials

Chair: E. Volceanov, A. Rečnik

**10.45 – 11.05 h, Invited lecture, I-10**

G. Motz, M. Seifert, *FORMATION OF MULTIPHASE CERAMIC COMPOSITES BY REACTION OF NIOBIUM OR MOLYBDENUM WITH POLYSILAZANES*

**11.05 – 11.25 h, Invited lecture, I-11**

K. Shqau, *SUPPORTED CERAMIC MEMBRANES FOR ENERGY-RELATED GAS SEPARATION*

**11.25 – 11.45 h, Invited lecture, I-12**

C. Ferone, G. Roviello, L. Ricciotti, F. Messina, R. Cioffi, O. Tarallo, C. Menna, D. Asprone, *HYBRID ORGANIC-INORGANIC GEOPOLYMER FOAMS*

**11.45 – 12.05 h, Invited lecture, I-13**

V. Jordan, M. Podlogar, A. Rečnik, *HIERARCHIC SELF-ASSEMBLY OF INORGANIC MESOCRYSTALS*

**12.05 – 12.20 h, O-9**

S. Kilper, T. Jahnke, Z. Burghard, D. Rothenstein, J. Bill, *M13 BACTERIOPHAGES AS VERSATILE BIO-TEMPLATES FOR FUNCTIONAL CERAMIC COMPOSITE MATERIALS*

**12.20 – 12.35 h, O-10**

N. Tasić, Z. Branković, T. Novaković, G. Branković, *NANOSIZED TITANIA PHOTOCATALYSTS OBTAINED BY SIMPLE CHEMICAL METHOD*

**12.35 – 12.50 h, O-11**

D. Kisić, M. Nenadović, Đ. Veljović, M. Popović, Z. Rakočević, *ZnO NANORODS GROWN BY VAPOUR - LIQUID - SOLID METHOD*

**12.50 – 13.50 h, Lunch break**

**13.10 – 14.00 h, Poster Session 2 (Posters P19 - P37)**

**Session 4: Ceramic Composites, Membranes and Multimaterials**

Chair: G. Motz, K. Shqau

**14.00 – 14.20 h, Invited lecture, I-14**

E. Volceanov, S. Badea, A. Volceanov, V. Fruth, *LAYERED AND PARTICULATE SILICATE-POLYMER NANOCOMPOSITES FOR LIGHTWEIGHT HIGH STRENGTH APPLICATIONS*

**14.20 – 14.40 h, Invited lecture, I-15**

G. Bakic, M. Djukic, V. Maksimovic, B. Rajcic, A. Maslarevic, *APPLICATION OF METAL MATRIX COMPOSITE COATINGS IN THERMAL POWER PLANTS*

**14.40 – 15.00 h, Invited lecture, I-16**

Z. Burghard, *STRUCTURAL DESIGN OF OXIDE BASED FUNCTIONAL MATERIALS INSPIRED BY NATURE*

**15.00 – 15.15 h, O-12**

S. Dmitrović, M. Prekajski, A. Zarubica, B. Matović, *SPIDER SILK-CERAMICS COMPOSITES CANDIDATE FOR SYNTHESIS OF NOVEL BIOPOLYMERS*

**15.15 – 15.30 h, O-13 Sponsored presentation**

D. Chudoba, *RESEARCH POSSIBILITIES IN FRANK LABORATORY OF NEUTRON PHYSICS AT JOINT INSTITUTE FOR NUCLEAR RESEARCH*

**16.00 – 19.00 h, Excursions - City sightseeing**

**20.00 – 24.00 h Gala dinner**

## Day 3. Friday - June 16, 2017

### Session 5: Electro and Magnetic Ceramics

Chair: B. Stojanovic, E. Traversa

**09.00 – 09.20 h, Invited lecture, I-17**

M. Frontasyeva, *STATE OF THE ART OF NEUTRON ACTIVATION ANALYSIS AT THE REACTOR IBR-2 OF FLNP JINR*

**09.20 – 09.40 h, Invited lecture, I-18**

M. Kondo, *DEVELOPMENT OF SOLID ELECTROLYTE CERAMIC SENSORS FOR OXYGEN AND HYDROGEN MONITORING IN FAST REACTORS AND FUSION REACTORS*

**09.40 – 10.00 h, Invited lecture, I-19**

S. Bernik, M. Presečnik, *SYNTHESIS AND PROCESSING OF p-TYPE  $Ca_3Co_4O_9$  CERAMICS FOR MICROSTRUCTURAL ENHANCEMENT OF THE THERMOELECTRIC CHARACTERISTICS*

**10.00 – 10.20 h, Invited lecture, I-20**

M. Vijatovic Petrovic, A. Dzunuzovic, J. Bobic, R. Grigalaitis, B. Stojanović, *THE OVERVIEW OF BARIUM TITANATE PROPERTIES AND APPLICATION OPPORTUNITIES*

**10.20 – 10.35 h, O-14**

K. Vojisavljević, T. Pečnik, H. Uršič, B. Malič, *ENHANCED LOCAL PIEZOELECTRIC RESPONSE IN Mn-DOPED  $(K_{0.5}Na_{0.5})_{0.99}Sr_{0.01}NbO_3$  FILMS*

**10.35 – 10.50 h, O-15**

A. Nesterovic, J. Vukmirovic, B. Bajac, G. Dubourg, J. Stanojev, E. Djurdjic, Z. Cvejic, V.V. Srdic, *DESIGN OF DOPED BARIUM TITANATE THIN FILMS BASED VARACTOR AND GOLD ELECTRODES FOR MEASUREMENT OF TUNABLE PROPERTIES*

**10.50 – 11.05 h, O-16**

M. Malinović, I. Stijepović, V.V. Srdić, M. Milanović, *SYNTHESIS AND CHARACTERISATION OF DOUBLE FERRITE NANOCOMPOSITES*

**11.05 – 11.30 h, Coffee break**

### Session 5: Electro and Magnetic Ceramics

Chair: M. Kondo, S. Bernik

**11.30 – 11.50 h, Invited lecture, I-21**

E. Traversa, *TAILORING THE CATHODE NANOSTRUCTURE TO ACHIEVE HIGH POWER OUTPUT FOR SOLID OXIDE FUEL CELLS OPERATING AT 600°C*

**11.50 – 12.10 h, Invited lecture, I-22**

T. Rojac, D. Damjanovic, *CHARGED DEFECTS AND DOMAIN WALLS IN Pb(Zr,Ti)O<sub>3</sub> AND BiFeO<sub>3</sub> CERAMICS*

**12.10 – 12.30 h, Invited lecture, I-23**

E. Babić, I. Kušević, N. Novosel, D. Pajić, *VORTEX PINNING AND CONNECTIVITY IN NOVEL SUPERCONDUCTORS*

**12.30 – 12.50 h, Invited lecture, I-24**

T. Tian, L.H. Cheng, L.Y. Zheng, J.J Xing, H. Gu, S. Bernik, H.R. Zeng, W. Ruan, K.Y. Zhao, G. Li, *HIGH CONDUCTIVITY OF ZnO CERAMICS AND THEIR ENHANCED THERMOELECTRIC PROPERTIES*

**12.50 – 13.10 h, Invited lecture, I-25**

A. Radojković, M. Žunić, S. Savić, Z. Branković, G. Branković, *IMPROVED PROPERTIES OF DOPED BaCe<sub>0.9</sub>Y<sub>0.1</sub>O<sub>3-δ</sub> AS A PROTON CONDUCTING ELECTROLYTE FOR IT-SOFC*

**13.10 – 14.00 h, Lunch break**

**13.40 – 14.40 h, Poster Session 3 (Posters P38 – P56)**