GENERAL CONFERENCE PROGRAMME

SYMPOSIUM A: Advanced Methods in Synthesis and Processing of Materials
SYMPOSIUM B: Advanced Materials for High-Technology Application
SYMPOSIUM C: Nanostructured Materials
SYMPOSIUM D: Eco-materials and Eco-technologies
SYMPOSIUM E: Biomaterials
SYMPOSIUM F: Advanced hybrid and composite materials

Sunday, September 4 2016
0800-1900 Registration

Monday, September 5, 2016
0800-0900 Registration
0900-1000 OPENING CEREMONY - Introduction and Welcome
Main Conference Hall
1015-1315 First Plenary Session, Main Conference Hall
1315 Photo Session
1500-1900 Symposium F, Main Conference Hall
1930-2100 Cocktail Party

Tuesday, September 6, 2016
0830-1230 Second Plenary Session, Main Conference Hall
1500-1630 Symposium C, Main Conference Hall
1700-1900 Symposium E, Main Conference Hall
1500-1615 Symposium B, Small Conference Hall
1645-1730 Symposium D, Small Conference Hall
2000-2200 Poster Session I (Symposium A), Villa Mimoza

Wednesday, September 7, 2016
0830-1230 Third Plenary Session, Main Conference Hall
1400-1900 Excursion to Dubrovnik, Croatia
2000-2200 Poster Session II (Symposium B), Villa Mimoza

Thursday, September 8, 2016
0830-1230 Fourth Plenary Session, Main Conference Hall
1400-1900 Boat-trip around Boka Kotorska Bay
2000-2200 Poster Session III (Symposiums C and E), Villa Mimoza

Friday, September 9, 2016
0900-1230 Fifth Plenary Session, Main Conference Hall
1230-1300 Awards and Closing of the Conference

Saturday, September 10, 2016
Full day Excursion to Skadar, Albania"The last Secret of Europe"
OPENING CEREMONY

Monday, September 5, 2016
Main Conference Hall

0900-1000

Welcome Speech
Dragan Uskoković, President of MRS-Serbia, Belgrade, Serbia

Presentation of YUCOMAT 2015 Awards
Slobodan Milonjić, Vice President of MRS-Serbia

MRS-Serbia 2016 Award for a Lasting and Outstanding Contribution to Materials Science and Engineering
Cell-instructive biomaterials for tissue engineering: Applications in regenerative medicine and study of disease
Gordana Vunjak-Novakovic
Columbia University, Department of Biomedical Engineering, New York, NY, USA

Break: 1000-1015

FIRST PLENARY SESSION
Main Conference Hall

Session I: 1015-1145
Chairmen: Gordana Vunjak-Novakovic and Robert Sinclair

1015-1045 Stimuli-responsive smart soft materials
Takuzo Aida
The University of Tokyo and RIKEN Center for Emergent Matter Science, Japan

1045-1115 Therapeutic biomaterial devices for controlled drug release in ocular and cardiac disease treatment
Freddy Boey, Subbu Venkatraman
Nanyang Technological University, School of Materials Science and Engineering, Singapur

1115-1145 Iron oxide nanoparticles for medical application: still a challenging task
Heinrich Hofmann
Powder Technology Laboratory, Institute of Materials, Ecole Polytechnique Federale de Lausanne, Swiss

Break: 1145-1215
Session II: 12:15-13:15
Chairmen: Takuzo Aida and Velimir R. Radmilović

12:15-12:45 In situ electron microscopy of energy-related thin film reactions
Robert Sinclair, Sang Chul Lee and Ai Leen Koh
Department of Materials Science and Engineering and Stanford Nano Shared Facilities, Stanford University, USA

12:45-13:15 Lithium and scandium trialuminides embedded in solid matrix
Velimir R. Radmilović
Sebian Academy of Sciences and Arts, Knez Mihailova 35, 11000, Beograd, Serbia

13:15-13:45 Photo session
Break: 13:45-15:00

SYMPOSIUM F: ADVANCED HYBRID AND COMPOSITE MATERIALS

Main Conference Hall

Session I: 15:00-17:00
Chairpersons: Kwang-Ho Kim, Robert Sinclair, Danilo Suvorov and Margarethe Hofmann

15:00-15:30 Materials research in Europe – a new concept needed?
Margarethe Hofmann-Amtenbrink¹, Alessandra Hool²
¹Past President of FEMS, CEO MatSearch and Foundation of Rare Metals, ESM, Pully, Swiss, ²MatSearch and Foundation of Rare Metals, ESM, Pully, Swiss

15:30-16:00 Hybrid-interface materials
Kwang Ho Kim¹,²
¹Global Frontier R&D Center for Hybrid Interface Materials, Republic of Korea, ²School of Materials Science and Engineering, Pusan National University, Republic of Korea

16:00-16:15 Advanced nanotechnology based on the directed self-assembly of block copolymers for device applications
Woon Ik Park, Jung-Ho Cho, Young Hun Jeong, and Jong Hee Whang
Electronic Materials & Component R&D Center, Korea Institute of Ceramic Engineering & Technology (KICET) 101 Soho-ro, Jinju 52851, Republic of Korea
16\textsuperscript{15}-16\textsuperscript{30}  \textbf{Virus based novel colorimetric sensor for cancer cell detection}  
Suck Won Hong\textsuperscript{1}, Jin-Woo Oh\textsuperscript{2}  
\textsuperscript{1}Department of Cogno-Mechatronics Engineering, Pusan National University, Busan 46241, Republic of Korea, \textsuperscript{2}Department of Nanoenergy Engineering, Pusan National University, Busan 46241, Republic of Korea  

16\textsuperscript{30}-16\textsuperscript{45}  \textbf{Organic-inorganic hybride thin films using atomic/molecular layer deposition for flexible electronic applications}  
Jin-Seong Park  
Division of Materials Science and Engineering, Hanyang University, Seoul, Republic of Korea  

16\textsuperscript{45}-17\textsuperscript{00}  \textbf{Ultrathin ALD interfacial layer for improved materials properties}  
Zhixin Wan, Woo-Jae Lee, Kwang-Ho Kim, and Se-Hun Kwon  
School of Materials Science and Engineering, Pusan National University, Republic of Korea  

\textbf{Break: 17\textsuperscript{00}-17\textsuperscript{30}}  

\textbf{Session II: 17\textsuperscript{30}-19\textsuperscript{00}}  
Chairpersons: Kwang-Ho Kim, Robert Sinclair, Danilo Suvorov and Margarethe Hofmann  

17\textsuperscript{30}-18\textsuperscript{00}  \textbf{3-Dimensional hybrid nanostructures: Novel fabrication strategies and applications}  
Yeon Sik Jung  
KAIST- Korean Institute for Science and Technology, Seoul, Republic of Korea  

18\textsuperscript{00}-18\textsuperscript{15}  \textbf{Hybrid materials/device enabling high energy and power densities along with robust cycle life}  
Jeung Ku Kang, Hyung Mo Jeong, Il-Woo Ock, Jong Ho Weon  
Department of Materials Science & Engineering and Graduate School of EEWS, Daejeon, Republic of Korea  

18\textsuperscript{15}-18\textsuperscript{30}  \textbf{Multi-scale computational design of active and durable materials for renewable energy systems}  
Byungchan Han, Joonhee Kang, Jeemin Hwang, Seunghyo Noh, Choa Kwon  
Department of Chemical and Biomolecular Engineering, Yonsei University, Seoul, 03722, Republic of Korea  

18\textsuperscript{30}-18\textsuperscript{45}  \textbf{Ni\textsubscript{2}Si silicide wire fabrication by conventional metal alloy processing}  
Seung Zeon Han\textsuperscript{1}, Sung Hwan Lim\textsuperscript{2}, Byungchan Han\textsuperscript{3} and Kwang Ho Kim\textsuperscript{4}
Developing multi-component coatings for structural applications by a hybrid HIPIMS technique
Qimin Wang¹, Kwang Ho Kim²
¹School of Electromechanical Engineering, Guangdong University of Technology, Guangzhou, P.R. China, ²Global Frontier R&D Center for Hybrid Interface Materials, Pusan National University, Busan, Republic of Korea
SECOND PLENARY SESSION

Tuesday, September 6, 2016
Main Conference Hall

Session I: 0830-1030  
Chairpersons: Eva Olsson and Hamish Fraser

0830-0900  
In situ off-axis electron holography of two-dimensional transition metal dichalcogenides  
Rafal E. Dunin-Borkowski¹, Florian Winkler¹, Amir H. Tavabi¹, Juri Barthel², Martial Duchamp¹, Emrah Yucelen³, Sven Borghardt⁴, Beata E. Kardynal⁴  
¹Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons and Peter Grünberg Institute 5, Forschungszentrum Jülich, D-52425 Jülich, Germany, ²Gemeinschaftslabor für Elektronenmikroskopie (GFE), RWTH Aachen University, D-52074 Aachen, Germany, ³Faculty of Physics and Center for Nanointegration (CENIDE), University of Duisburg-Essen, D-48047 Duisburg, Germany, ⁴Peter Grünberg Institute 9, Forschungszentrum Jülich, D-52425 Jülich, Germany

0900-0930  
Real-time viewing of III-V semiconductor nanowire growth by In Situ TEM  
L.R. Wallenberg¹, F. Lenrick¹, M. Ek¹, D. Jacobsson¹, L. Samuelson² and K. Dick Thelander³  
¹nCHREM, Inst. for Chemistry; ²Solid State Physics, Lund University, Sweden

0930-1000  
Oxidation of carbon nanotubes using environmental TEM and the influence of the imaging electron beam  
Ai Leen Koh¹, Emily Gidcumb², Otto Zhou²,³ and Robert Sinclair⁴  
¹Stanford Nano Shared Facilities, Stanford University, Stanford, CA 94305, USA, ²Department of Applied Physical Sciences, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA, ³Department of Physics and Astronomy, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA, ⁴Department of Materials Science and Engineering, Stanford University, Stanford, CA 94305, USA

1000-1030  
Electric field and thermal induced effects in nanostructured materials revealed by advanced in situ electron microscopy  
Ludvig de Knoop, Hanna Nilsson, Andrew Yankovich, Norvik Voskanian, Lunjie Zeng and Eva Olsson  
Department of Physics, Chalmers University of Technology, 412 96 Gothenburg, Sweden

Break: 1030-1100

Session II: 1100-1230
Chairmen: Rafal E. Dunin-Borkowski and Gianluigi A. Botton

11:00-11:30  **Energy loss spectroscopy at high resolution: Applications to functional oxides and nanostructures**
Gianluigi A. Botton
McMaster University, Department of Materials Science and Engineering, 1280 Main Street West, Hamilton, Ontario, Canada

11:30-12:00  **Non-planar nanostructures at atomic scale**
Jordi Arbiol¹,²
¹Institució Catalana de Recerca i Estudis Avançats (ICREA), 08010 Barcelona, CAT, Spain, ²Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and The Barcelona Institute of Science and Technology, Campus UAB, Bellaterra, 08193 Barcelona, CAT, Spain

12:00-12:30  **The art and science of spatially-resolved determinations of local composition in an aberration-corrected electron microscope**
Brian Welk, Jacob Jensen, John Sosa, Dan Huber, Robert Williams, Babu Viswanathan, and Hamish L Fraser
Center for the Accelerated Maturation of Materials, Department of Materials Science and Engineering, The Ohio State University, Columbus, OH, USA

Break: 12:30-15:00

**SYMPOSIUM C: NANOSTRUCTURED MATERIALS**

Session I: 15:00-16:15
Chairpersons: Satoshi Ohara and Natalia Kamanina

15:00-15:15  **Structural characterization of organic bulk heterojunction solar cells**
Vuk V. Radmilović¹, Fei Guo², Christoph J. Brabec²,³, Erdmann Spiecker⁴, Velimir R. Radmilović⁵
¹Innovation Center, Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ²Institute of Materials for Electronics and Energy Technology (i-MEET), Friedrich-Alexander-University Erlangen- Nuremberg, Erlangen, Germany, ³Bavarian Center for Applied Energy Research (ZAE Bayern), Erlangen, Germany, ⁴Center for Nanoanalysis and Electron Microscopy (CENEM), Friedrich – Alexander - University of Erlangen- Nuremberg, Erlangen, Germany, ⁵Serbian Academy of Sciences and Arts, Belgrade, Serbia
15:15-15:30 High-performance Ni-GDC nanocomposite anode fabricated from GDC nanocubes for low-temperature solid-oxide fuel cells
Satoshi Ohara and Kazuhiro Yamamoto
Joining and Welding Research Institute, Osaka University, Japan

15:30-15:45 The chemical recycling of polycarbonate using CeO2 nanocatalysts
Minori Taguchi, Takashi Naka, Toshitaka Funazukuri
Chuo University, National Institute for Materials Science, Japan

15:45-16:00 Modification of the materials properties via surface structuring
Natalia V. Kamanina
1Vavilov State Optical Institute, Kadetskaya Liniya V.O., dom.5, korpus 2, St.-Petersburg, 199053, Russia, 2Saint-Petersburg Electrotechnical University (“LETI”), St. Petersburg, Russia

16:00-16:15 Half Heusler thermoelectrics Ti_{(1-x)}Fe_{(1.33+x)}Sb - TiCoSb
A. Tavassoli 1,2,3, A. Grytsiv 1,3,4, G. Rogl 1,3,4, V. Romaka 5, P. Broz 6,7, E. Bauer 3,4, G. Giester 8, M. Zehetbauer 2, P. Rogl 1,4
1Institute of Materials Chemistry and Research, University of Vienna, Waehringerstr. 42, A-1090 Wien, Austria, 2Faculty of Physics, University of Vienna, Boltzmanngasse 5, A-1090 Wien, Austria, 3Institute of Solid State Physics, Vienna University of Technology, Wiedner Hauptstr., 8-10, A-1040 Wien, Austria, 4Christian Doppler Laboratory for Thermoelectricity, Wien, Austria, 5Department of Materials Science and Engineering, Lviv Polytechnic National University, Ukraine, 6Masaryk University, Faculty of Science, Department of Chemistry, Kotlarska 2, 611 37, Brno, Czech Republic, 7Masaryk University, Central European Institute of Technology, CEITEC, Kamenice 753/5, Brno 62500, Czech Republic, 8Institute of Mineralogy and Crystallography, University of Vienna, Althanstraße 14, A-1090 Vienna, Austria

16:15-16:30 Shape directing agents for controlling the morphology of anisotropic iron oxide nanoparticles
Ana Mrakovic 1, Gurvinder Singh 2, Frode Seland 2, Erzsébet Illés 1, Nikola Knezevic 1, Vladan Kusigerski 1, Sanja Vranjes-Djuric 1, Vojisav Spasojevic 1 and Davide Peddis 1,3
1The Vinča Institute of Nuclear Sciences, Belgrade, 11001, Serbia, 2Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim-7491, Norway, 3Istituto di Struttura della Materia – CNR, 00016 Monterotondo Stazione (Roma), Italy

Break: 16:30-17:00

SYMPOSIUM E: BIOMATERIALS
Main Conference Hall

Session I: 17<sup>00</sup>-19<sup>00</sup>
Chairpersons: Nenad Ignjatović and Bojana Obradović

17<sup>00</sup>-17<sup>15</sup> Multifunctional opto-magnetic NaYF₄:Er<sup>3+</sup>,Yb<sup>3+</sup>,Gd<sup>3+</sup> & Fe₂O₄@SiO₂ nanoconstructs – towards biomedical applications
Bożena Sikora<sup>1</sup>, Przemysław Kowalik<sup>1</sup>, Krzysztof Fronc<sup>1</sup>, Jakub Mikulski<sup>1</sup>, Izabela Kamińska<sup>1</sup>, Anna Borodziuk<sup>2</sup>, Magdalena Duda<sup>2</sup>, Katarzyna Łysiak<sup>3</sup>, Maciej Szewczyk<sup>4,5</sup>, Karolina Zajdel<sup>6</sup>, Grzegorz Gruzel<sup>7</sup>, Leandro C. Figueiredo<sup>8</sup>, Paulo C. Morais<sup>8,9</sup>, Laise Andrade<sup>10</sup>, João P. Longo<sup>10</sup>, Ricardo B. de Azevedo<sup>10</sup>, Zulmira G. M. Lacava<sup>10</sup>, Ewa Mosiniewicz-Szablewska<sup>1</sup>, Magdalena Parlińska-Wojtan<sup>2</sup>, Roman Minikayev<sup>1</sup>, Tomasz Wojciechowski<sup>1</sup>, Anita Gardias<sup>3</sup>, Jarosław Rybusiński<sup>3</sup>, Andrzej Sienkiewicz<sup>1,12</sup>, Mariusz Łapiński<sup>13</sup>, Piotr Stępień<sup>4,5,14</sup>, Wojciech Paszkowicz<sup>1</sup>, Jacek Szczytko<sup>3</sup>, Andrzej Twardowski<sup>13</sup>, Małgorzata Frontczak-Baniewicz<sup>2</sup>, Danek Elbaum<sup>1</sup>
<sup>1</sup>Institute of Physics, Polish Academy of Sciences, Warsaw, <sup>2</sup>Division of Biophysics, Institute of Experimental Physics UW, Warsaw, <sup>3</sup>Institute of Experimental Physics, Faculty of Physics UW, Warsaw, <sup>4</sup>Institute of Genetics and Biotechnology, Faculty of Biology UW, Warsaw, <sup>5</sup>Institute of Biochemistry and Biophysics PAS, Warsaw, <sup>6</sup>Mossakowski Medical Research Centre PAS, Warsaw, <sup>7</sup>Institute of Nuclear Physics PAS, Krakow, <sup>8</sup>Instituto de Fisica, Universidade de Brasilia, Brasilia DF, Brazil, <sup>9</sup>College of Chemistry and Chemical Engineering, Anhui University, Hefei, China, <sup>10</sup>Instituto de Ciências Biológicas, Departamento de Genética e Morfologia, Universidade de Brasilia, Brasilia DF, Brazil, <sup>11</sup>Laboratory of Physics of Complex Matter, EPFL, Station 3, Lausanne, Switzerland, <sup>12</sup>ADSresonaces, Préverenges, Switzerland, <sup>13</sup>Institute of Optoelectronics, Military University of Technology, Warsaw, <sup>14</sup>Centre of New Technologies, Ochota UW, Warsaw, Poland

17<sup>15</sup>-17<sup>30</sup> Tumor-selective hybrid system based on hydroxyapatite nanocarrier, chitosane, poly(lactic-co-glycolic acid) and androstan derivate
Nenad L. Ignjatović<sup>1</sup>, Katarina M. Penov-Gašić<sup>2</sup>, Victoria M. Wu<sup>3</sup>, Jovana J. Ajduković<sup>4</sup>, Vesna V. Kojić<sup>4</sup>, Dana Vasiljević-Radović<sup>5</sup>, Vuk D. Uskoković<sup>3,6</sup>, Dragan P. Uskoković<sup>1</sup>
<sup>1</sup>Institute of Technical Sciences of SASA, Belgrade, Serbia, <sup>2</sup>University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia, <sup>3</sup>Advanced Materials and Nanobiotechnology Laboratory, Department of Bioengineering, University of Illinois, Chicago, IL, USA, <sup>4</sup>Oncology Institute of Vojvodina, Sremska Kamenica, Serbia, <sup>5</sup>University of Belgrade, Institute for Chemistry, Technology and Metallurgy, Belgrade, Serbia, <sup>6</sup>Department of Biomedical and Pharmaceutical Sciences, School of Pharmacy, Chapman University, Irvine, CA, USA

17<sup>30</sup>-17<sup>45</sup> One pot and two step synthesis of 1D and 2D calcium phosphates and their biomedical characteristics
Zoran S. Stojanović, Nenad Ignjatović, Victoria Wu, Vojka Žunić, Ljiljana Veselinović, Srečo Škapan, Miroslav Miljković, Vuk Uskoković, Dragan Uskoković

1Institute of Technical Sciences of SASA, Knez Mihailova 35/4, 11000 Belgrade, Serbia, 2Advanced Materials and Nanobiotechnology Laboratory, Department of Bioengineering, University of Illinois, 851 South Morgan Street, Chicago, IL 60607-7052, USA, 3Advanced Materials Department, Jožef Stefan Institute, Jamova cesta 39, 1000 Ljubljana, Slovenia, 4Laboratory for Electron Microscopy, Faculty of Medicine University of Niš, Dr. Zoran Đinđić Boulevard 81, 18 000 Niš, Serbia, 5Department of Biomedical and Pharmaceutical Sciences, School of Pharmacy, Chapman University, 9401 Jeronimo Road, Irvine, CA 92618-1908, USA

1745-1800 Alginate hydrogels with silver nanoparticles and honey as potential wound dressings
Bojana Obradović, Jasmina Stojkova, Vesna Mišković-Stanković, Milica Labudović Borović, Ljiljana Ščepanović
1Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia
2School of Medicine, University of Belgrade, Belgrade, Serbia

1800-1815 Novel platforms for designing antimicrobial biomaterials
Marija Vukomanović, Vojka Žunić, Mario Kurtjak, Nemanja Aničić, Danilo Suvorov
Advanced Materials Department, Jožef Stefan Institute, Ljubljana, Slovenia

1815-1830 Coupling vanadate elution control with catalytic properties of V2O5 in V2O5/PLGA composite coating
Nemanja Aničić, Marija Vukomanović, Danilo Suvorov
1Advanced Materials Department, Jožef Stefan Institute, Ljubljana, Slovenia
2Jožef Stefan International Postgraduate School, Ljubljana, Slovenia

1830-1845 Quantifying the fractal dimension and the effective permeability of membrane fouling
Miguel Herrera-Robledo and Volodymyr V. Tarabara
Department of Civil and Environmental Engineering, Michigan State University, USA

1845-1900 Effect of cooling rate from α+β range on stereological parameters of microstructure in the Ti6Al7Nb alloy
Krzysztof Wieczerzak, Robert Dąbrowski, Edyta Rożniata, Rafał Dziurka
AGH University of Science and Technology, Faculty of Metals Engineering and Industrial Computer Science, Al. A. Mickiewicza 30, 30-059 Kraków, Poland
SYMPOSIUM B: ADVANCED MATERIALS FOR HIGH-TECHNOLOGY APPLICATIONS

Small Conference Hall

Session I: 1500 - 1615
Chairmen: Zoran S. Petrović and Smilja Marković

1500 - 1515
Boson peak and glass forming ability in CuHfTi metallic glasses
Amra Salčinović Fetić1,2, G. Remenyi3,4, D. Starešinić2, E. Babić5, I. A. Figueroa6, H. A. Davies7, and K. Biljaković2,3
1Department of Physics, Faculty of Science, University of Sarajevo, Sarajevo, Bosnia and Herzegovina, 2Institute of Physics, Zagreb, Croatia, 3CNRS, Institut Néel, Grenoble, France, 4Institut Néel, Université Grenoble Alpes, Grenoble, France, 5Department of Physics, Faculty of Science, Zagreb, Croatia, 6Institute for Materials Research-UNAM, Ciudad Universitaria Coyoacan, Mexico D.F., Mexico, 7Department of Engineering Materials, University of Sheffield, Sheffield, UK

1515 - 1530
The influence of thermal treatment on physicochemical properties of graphene oxide/phosphotungstic acid nanocomposite
Zoran Jovanović1, Danica Bajuk-Bogdanović2, Milica Vujković2, Željko Mravik2, Ivanka Holclajtner-Antunović2
1Laboratory of Physics, Vička Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia, 2Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia

1530 - 1545
Influence of point defects concentration on optical and photocatalytic properties of ZnO ceramics
Smilja Marković1, Vladimir Rajić2, Ljiljana Veselinović1, Jelena Belošević-Čavor3, Srečo Davor Škapin4, Stevan Stojadinović5, Vladislav Rač6, Steva Lević5, Miloš Mojović6, Dragan Uskoković1
1Institute of Technical Sciences of SASA, Belgrade, Serbia, 2Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia, 3The Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia, 4Jožef Stefan Institute, Ljubljana, Slovenia, 5Faculty of Physics, University of Belgrade, Belgrade, Serbia, 6Faculty of Agriculture, University of Belgrade, Zemun, Serbia

1545 - 1600
Activated track etched carbon for supercapacitor electrodes
Petar Laušević, Predrag Pejović, Dragana Žugić, Yuri Kochnev, Pavel Apel and Zoran Laušević
1Laboratory of physical chemistry, Vinča institute of nuclear sciences, University of Belgrade, Serbia, 2School of Electrical Engineering, University of Belgrade, Serbia, 3Flerov laboratory of nuclear reactions, Joint institute for nuclear research, Dubna, Russia
The influence of fluorine doping on the structural and the electrical properties of LiFePO$_4$ powder

Dragana Jugović$^1$, Miodrag Mitričić$^2$, Miloš Milović$^1$, Nikola Cvjetičanić$^3$, Bojan Jokić$^4$, Ana Umčević$^2$, Dragan Uskoković$^1$
$^1$Institute of Technical Sciences of SASA, Knez Mihailova 35/IV, 11 000 Belgrade, Serbia, $^2$Vinča Institute of Nuclear Sciences, University of Belgrade, P.O. Box 522, 11 001 Belgrade, Serbia, $^3$Faculty of Physical Chemistry, University of Belgrade, Studentski Trg 12-16, P.O. Box 137, Belgrade, Serbia, $^4$Faculty of Technology and Metallurgy, University of Belgrade, Karnegijeva 4, 11 000 Belgrade, Serbia

Break: 16$^{15}$-16$^{45}$

SYMPOSIUM D: ECO-MATERIALS AND ECO-TECHNOLOGIES
Small Conference Hall

Session I: 16$^{45}$-17$^{30}$
Chairmen: Smilja Marković and Irena Nikolić

16$^{45}$-17$^{00}$ Designing materials from biological oils
Zoran S. Petrović
Pittsburg State University, Kansas Polymer Research Center

17$^{00}$-17$^{15}$ Recovery of rare earth elements of bastnasite ores by advanced hydrometallurgical methods
Carsten Dittrich$^1$, Srecko Stopić$^2$, Bernd Friedrich$^2$
$^1$MEAB Chemie Technik GmbH, Aachen, Germany
$^2$IME Process Metallurgy and Metal Recycling, Germany

17$^{15}$-17$^{30}$ Strength and durability of alkali activated slag in a sea water: influence of alkali ion
Irena Nikolić$^1$, Smilja Marković$^2$, Ljiljana Karanović$^3$, Vuk Radmilović$^4$, Velimir Radmilović$^5$
$^1$University of Montenegro, Faculty of Metallurgy and Technology, Džordža Vašingtona bb, 81 000 Podgorica, Montenegro, $^2$Institute of Technical Sciences of SASA, Knez Mihailova 35, Belgrade, Serbia, $^3$University of Belgrade, Faculty of Mining and Geology, Laboratory of Crystallography, Đušina 7, 11000 Belgrade, Serbia, $^4$Innovation center, University of Belgrade, Faculty of Technology and Metallurgy, Karnegijeva 4, 11120 Belgrade, Serbia, $^5$Serbian Academy of Sciences and Arts, Knez Mihailova 35, Belgrade, Serbia
THIRD PLENARY SESSION

Wednesday, September 7, 2016
Main Conference Hall

Session I: 0830-1030
Chairmen: Eiji Osawa and Francois M. Peeters

0830-0900  Grain boundary geometry, structural units and segregation in oxides
Yuichi Ikuhara\textsuperscript{1,2,3}

\textsuperscript{1}Institute of Engineering Innovation, The University of Tokyo, Tokyo, 113-8656, Japan, \textsuperscript{2}Nanostructures Research Laboratory, Japan Fine Ceramics Center, Nagoya, 456-8587, Japan, \textsuperscript{3}WPI-AIMR Research Center, Tohoku University, Sendai, 980-8577, Japan

0900-0930  Interfacial step alignment as a mechanism of hetero-epitaxy/orientation relationships: the case of Ag on Ni
Dominique Chatain\textsuperscript{1}, Paul Wynblatt\textsuperscript{2}, Anthony D. Rollett\textsuperscript{2}, Gregory S. Rohrer\textsuperscript{2}

\textsuperscript{1}Aix-Marseille University, CNRS, CINaM, UMR 7325, 13288 Marseille, France, \textsuperscript{2}Department of Materials Science and Engineering, Carnegie Mellon University, Pittsburgh, PA 15213, USA

0930-1000  Controlling Microstructural Evolution via Adsorption
Wayne D. Kaplan
Department of Materials Science and Engineering, Technion - Israel Institute of Technology, Israel

Break: 1000-1030

Session II: 1030-1230
Chairpersons: Dominique Chatain and Yuichi Ikuhara

1030-1100  TEM observation of atomic structures and their evolutions in 2D and 1D materials
Kazu Suenaga
Advanced Industrial Science and Technology, Japan

1100-1130  Atomic Structure of defects, dopants and edge terminations in monolayer 2D materials
Jamie H. Warner
Department of Materials, University of Oxford, UK

1130-1200  Atomic collapse in graphene
Francois Peeters\textsuperscript{1}, Dean Moldovan\textsuperscript{1}, Massoud R. Masir\textsuperscript{1,2}, Eva Andrei\textsuperscript{3}
\textsuperscript{1}Department Physics, University of Antwerp, Groenenborgerlaan 171, B-2020 Antwerpen, \textsuperscript{2}Department of Physics, University of Texas at Austin, Austin TX 78712, USA, \textsuperscript{3}Rutgers University, Department of Physics and Astronomy, Piscataway, NJ 08855, USA

\textbf{12\textsuperscript{00} - 12\textsuperscript{30} \ Aberration corrected views of of chemical ordering and segregation in complex oxides}

Maria Varela
Facultad de CC. Fisicas & Instituto Pluridisciplinar, Universidad Complutense de Madrid 28040 Madrid, Spain
FOURTH PLENARY SESSION

Session I: 0830-1030
Chairmen: Danilo Suvorov and Philippe Colomban

0830-0900  Towards device physics of the CH₃NH₃PbI₃ photovoltaic perovskite
László Forró
Laboratory of Physics of Complex Matter, Ecole Polytechnique Fédérale de
Lausanne, CH-1015 Lausanne, Swiss

0900-0930  Tailoring defined-shape ferroelectric particles for various ferro- and
piezoelectric applications
Danilo Suvorov¹, M. Macek-Krzmac¹ and H. Ursic Nemevsek²
¹Advanced Materials Department, Jožef Stefan Institute, Jamova 39, Ljubljana,
Slovenia, 1000, ²Electronic ceramics Department, Jožef Stefan Institute, Jamova 39,
Ljubljana, Slovenia, 1000

0930-1000  How could electrolytes and electrodes be friendlier for Li-ion traffic?
Mamoru Senna
Faculty of Science and Technology, Keio University, Japan

Break: 1000-1030

Session II: 1030-1230
Chairmen: Mamoru Senna and László Forró

1030-1100  Recent progress in R&D of the primary particles of detonation nanodiamond
Eiji Osawa, Shuichi Sasaki, Ryoko Yamanoi
NanoCarbon Research Institute Limited, Japan

1100-1130  Nanodiamond and its derivatives for catalysis
Dangsheng Su
Dalian Institute of Chemical Physics, Chinese Academy of Science, Dalian, China

1130-1200  Scaffolds for tissue repair and regeneration
Serena Best
University of Cambridge, UK

1200-1230  Advanced and in situ transmission electron microscopy of semiconductor
nanowire materials
Wolfgang Jäger
Institute of Materials Science, Christian-Albrechts-University of Kiel, 24143 Kiel, Germany EU
FIFTH PLENARY SESSION

Session I: 09\textsuperscript{00}-11\textsuperscript{00}
Chairmen: Jamie H. Warner and Wolfgang Jäger

09\textsuperscript{00}-09\textsuperscript{30} Neutron scattering and atomistic modeling for materials science
Max Avdeev
Australian Nuclear Science and Technology Organisation, Australia

09\textsuperscript{30}-10\textsuperscript{00} Understanding failure and fatigue mechanisms of advanced and natural polymer fibres by Raman/IR microspectrometry
Philippe Colomban
Sorbonne Universités, UPMC Paris 06, MONARIS umr8233 CNRS, France

10\textsuperscript{00}-10\textsuperscript{30} High-melting point compounds: new approaches and results
Rostislav A. Andrievski
Institute of Problems of Chemical Physics, Semenov Prospect, 1, Chernogolovka, Moscow Region, 142432, Russia

10\textsuperscript{30}-11\textsuperscript{00} Deformation Mechanisms, Microstructure, and Mechanical Properties of High-Mn Austenitic Steels
James Wittig
Interdisciplinary Materials Science, Vanderbilt University, USA

Break: 11\textsuperscript{00}-11\textsuperscript{30}

Session II: 11\textsuperscript{30}-12\textsuperscript{30}
Chairmen: Feng-Huei Lin and Vuk Uskoković

11\textsuperscript{30}-12\textsuperscript{00} Hyaluronate-based thermo-sensitive hydrogel as cell carrier for nucleus pulposus regeneration and vitreous body substitute
Feng-Huei Lin
National Health Research Institutes (NHRI), Taiwan

12\textsuperscript{00}-12\textsuperscript{30} From controlled drug delivery to gene therapies to bone regeneration: calcium phosphate nanoparticles as essential components of advanced biomaterials
Vuk Uskoković
Department of Biomedical and Pharmaceutical Sciences, Chapman University, Irvine, CA 92618-1908, USA
12:30-13:00 CLOSING CEREMONY
POSTER SESSION I

Tuesday, September 6, 2016, 20:00-22:00

SYMPOSIUM A: ADVANCED METHODS IN SYNTHESIS AND PROCESSING OF MATERIALS

P.S.A.1. Novel pathway towards the synthesis of complex double perovskites
Jasminka Popović, Marijana Juric, Lidija Andros Dubraja, Kresimir Molcanov
Rudjer Boskovic Institute, Bijenicka 54, HR-10000 Zagreb, Croatia

P.S.A.2. High-temperature treatment for new properties of LuPO₄:Eu, Lu₂O₃:Tb,Ti/Hf and BaHfO₃:Pr
Justyna Zeler, Dagmara Kulesza, Ioannis Seferis, Eugeniusz Zych
Faculty of Chemistry, University of Wrocław, 14 F. Joliot-Curie Street, 50-383 Wrocław, Poland

P.S.A.3. Processing and characterization of dental acrylic improved with zirconia
Abdulsalam Ahmed Emadani, Nataša Tomić, Miloš Petrović, Dusica B. Stojanović, Petar S. Uskoković, Radmila Jančić Heinemann, Vesna Radojević
University of Belgrade, Faculty of Technology and Metallurgy, Karnegijeva 4, Belgrade, Serbia

P.S.A.4. Biocompatible poly(methyl methacrylate)/di-methyl itaconate – (iron oxide dopped alumina) composite with improved mechanical properties
Gamal Ali Lazouzi, Nataša Tomić, Miloš Petrović, Milorad Zrilić, Vesna Radojević, Radmila Jančić Heinemann
University of Belgrade, Faculty of Technology and Metallurgy, Karnegijeva 4, Belgrade, Serbia

P.S.A.5. Rapid fabrication of antimicrobial poly(vinyl butyral)/ titania nanofibers using multi-needle electrospinning
Faisal Ali Alzarrug, Dušica B. Stojanović, Vera M. Obradović, Andela N. Radisavljević, Aleksandar M. Kojović, Petar S. Uskoković, Radoslav R. Aleksić
University of Belgrade, Faculty of Technology and Metallurgy, Serbia

P.S.A.6. Thin films of MoS₂ on Cu₂O as biosensors
Alexandra Yu. Ledneva¹, Sofya B. Artemkina¹, Hsiang-Chen Wang², Vladimir E. Fedorov¹
¹Nikolaev Institute of Inorganic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia
²Graduate Institute of Opto-Mechatronics, National Chung Cheng University, Taiwan
P.S.A.7. **PVA membranes doped with Ti and Zr oxide for alkaline electrolysis with ionic activators**

Sladjana Maslovara¹, Dragana Zugic¹, Milica Marceta Kaninski¹, Vladimir Nikolic¹, Gvozden Tasic¹, Yuri Kochnev²

¹Vinca Institute of Nuclear Sciences, Department of Physical Chemistry, University of Belgrade, Serbia, ²Flerov laboratory of nuclear reactions, Joint institute for nuclear research, Dubna, Russia

P.S.A.8. **Influence of the nickel loading and the calcination temperature on the activity of NiO-Al₂O₃ catalyst prepared by mixing powders of metal oxides in the partial oxidation of methane**

Matilda Lazić

Technical College of Applied Sciences in Zrenjanin, Zrenjanin, Serbia

P.S.A.9. **Structural and magnetic properties of mechanochemically synthesized LaFe₁₋ₓCrₓO₃ (x = 0.5 and 0.75)**

Dragana Jugovic¹, Ivica Bradarić², Čedomir Jovalekić³, Tanja Barudžija², Vladan Kusigerski², Miodrag Mitrić²

¹Institute of Technical Sciences of SASA, Belgrade, Serbia, ²Institute of Nuclear Sciences “Vinča”, University of Belgrade, Belgrade, Serbia, ³Centre for Multidisciplinary Studies, University of Belgrade, Belgrade, Serbia

P.S.A.10. **Surfactant-assisted high energy ball milling technique as a method for preparation of magnetic submicrometer particles**

Vesna Jović, Jelena Lamovec, Katarina Radulović, Danijela Randelović, Zoran Jakšić, Dana Vasiljević – Radović

Centre of Microelectronic Technologies, Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Njegoseva 12, 11000 Belgrade, Serbia

P.S.A.11. **Characterization of NdFeB magnetic submicron particles obtained by surfactant-assisted high energy ball milling (SA-HEBM)**

Jelena Lamovec¹, Vesna Jović¹, Davor Lončarević², Katarina Radulović¹, Zoran Jakšić¹, Danijela Randelović¹, Dana Vasiljević – Radović¹

¹Centre of Microelectronic Technologies, Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ²Department of Catalysis and Chemical Engineering, Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Njegoseva 12, 11000 Belgrade, Serbia

P.S.A.12. **Experimental and theoretical analysis of fullerene nanoparticles/water system**

Milan Vrančić, Ivana Borishev, Stevan Armaković, Sanja J. Armaković, Aleksandar Tot, Danica Jović, Slobodan Gadžurić, Aleksandar Djordjević

¹Department for Chemistry, Biochemistry and Environmental Protection, University of Novi Sad, Novi Sad, Serbia, ²Department of Physics, Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia
P.S.A.13. **Highly Efficient Graphene Supports for Fuel Cells**
Veera Sadhu¹, Esaam Jamil², Selmiye Alkan Gürsel¹,²
¹Nanotechnology Research and Application Center, Sabanci University, 34956 Istanbul, Turkey, ²Faculty of Natural Science and Engineering, Sabanci University, 34956 Istanbul, Turkey

P.S.A.14. **Modeling of optimal parameters of synthesis and sintering of nanostructured NiFeCuW powder**
Sladana Đurašević¹, Dejan Vujičić¹, Marija Nikolić², Siniša Randić¹
¹Faculty of Technical Sciences in Čačak, University of Kragujevac, Serbia
²Technical College Čačak, Serbia

P.S.A.15. **The study of the products of off-line pyrolysis of poly(ethyleneimine)**
Vesna Balanac¹, Tatjana Šolević Knudsen², Branimir Jovančević³, Jan Schwarzauer⁴, Vesna Antić⁵
¹Cooper Standard Srbija doo, Sremska Mitrovica ²Center of Chemistry, Institute of Chemistry, Technology and Metallurgy, Belgrade, Serbia ³Faculty of Chemistry, Belgrade, Serbia ⁴Institute of Geology and Geochemistry of Petroleum and Coal, RWTH Aachen University, Aachen, Germany ⁵Faculty of Agriculture, Zemun, Serbia

P.S.A.16. **Parameters and sinterability of mullite-ZrO₂(Y₂O₃) nanoparticles prepared by plasma and chemical methods**
Jānis Grabis, Dzidra Jankoviča, Inta Sipola
Riga Technical University, Faculty of Material Science and Applied Chemistry, Institute of Inorganic Chemistry

P.S.A.17. **Sample preparation method influence on SOP modes in ZnO(Mn)**
Branka Hadžić, Nebojsa Romčević, Maja Romčević, Witold Dobrowolski, Martina Gilić, Milica Petrović, Dusanka Stojanović, Željka Nikitović and Zorica Lazarević
¹Institute of Physics, Belgrade, Serbia, ²Institute of Physics Polish Academy of Science, Warsaw, Poland

P.S.A.18. **Crystal structure, optical and magnetic properties of ZnO:Fe nanoparticles**
Vladimir Rajić¹, Snilja Marković², Ljiljana Veselinović², Miodrag Mitrić³, Jelena Belošević-Čavor⁴, Valentin Ivanovski³, Vladan Kusigerski³, Miloš Mojović¹, Srečo Davor Škapin⁴, Stevan Stojadinović⁵, Steva Lević⁶, Vladislav Rač⁶, Dragan Uskoković²
¹Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia, ²Institute of Technical Sciences of SASA, Belgrade, Serbia, ³The Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia, ⁴Jožef Stefan Institute, Ljubljana, Slovenia, ⁵Faculty of Physics, University of Belgrade, Belgrade, Serbia, ⁶Faculty of Agriculture, University of Belgrade, Zemun, Serbia
POSTER SESSION II

Wednesday, September 7, 2016, 20:00 - 22:00

SYMPOSIUM B: ADVANCED MATERIALS FOR HIGH-TECHNOLOGY APPLICATIONS

P.S.B.1. **Electrone structure, valence state Ce(Yb) and magnetic properties of new ternary intermetallic compounds**
Ivan Shcherba¹, Dragan Uskokovic³, Viktor Antonov⁴, Maria Kovalska², Ljubov Romaka², Sergij Senkiv²
¹Institute of Technology, the Pedagogical University of Cracow, Podchorozych st. 2 Cracow 30-084 Poland, ²Ivan Franko National University of Lviv, Ukraine, ³Institute of Technical Sciences of SASA, Belgrade, Serbia, ⁴Institute of Physics of Metals, NASU, Kyiv, Ukraine

P.S.B.2. **Influence of different precursor solutions on final characteristics of barium titanate based thin films**
Jovana Stanojev¹, Jelena Vukmirovic¹, Branimir Bajac¹, Elvira Djurdjic², Srdjan Rakic², Vladimir V. Srdic¹
¹Faculty of Technology, Department of Materials Engineering, University of Novi Sad, Bul. Cara Lazara 1, 21000 Novi Sad, Serbia, ²Faculty of Sciences, Department of Physics, University of Novi Sad, Trg D. Obradovici 4, 21000 Novi Sad, Serbia

P.S.B.3. **YBCO bulk superconductor exposed to air moisture**
Pavel Diko¹, Mária Kaňuchová², Samuel Piovarčí¹, Vitaliy Antal¹, Daniela Volochová¹
¹Institute of Experimental Physics, Slovak Academy of Sciences, Watsonova 47 04001 Košice, Slovakia, ²Faculty of Mining, Ecology, Process Control and Geotechnology, Technical University of Košice, Park Komenského 17, 042 00 Košice, Slovakia

P.S.B.4. **Computational study of loratadine reactivity in order to understand its degradation properties from the aspect of DFT and MD simulations**
Sanja J. Armaković¹, Stevan Armaković² and Biljana Abramović¹
¹University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Trg D. Obradovića 3, 21000 Novi Sad, Serbia, ²University of Novi Sad, Faculty of Sciences, Department of Physics, Trg D. Obradovića 4, 21000 Novi Sad, Serbia

P.S.B.5. **Synthesis and characterization of Pd nanocatalyst at tungsten carbide based support for fuel cells application**
Ljiljana M. Gajic-Krstajic¹, P. Zabinski², V.R. Radmilovic³, P. Ercius⁴, M. Krstajic-Pajic⁵, U.Ć. Lačnjevac⁶, N.V. Krstajic³, N.R. Elezovic⁶
¹Institute of Technical Sciences of SASA, Knez Mihailova 35, Belgrade, Serbia, ²AGH University of Science and Technology, Faculty of Non-Ferrous Metals, Al. Mickiewicza 30,30-059 Krakow, Poland, ³Faculty of Technology and Metallurgy University of Belgrade, Karnegijeva 4, 11000 Belgrade, Serbia, ⁴National Center for Electron Microscopy, LBNL University of California, Berkeley, CA, USA, ⁵Institute for Chemistry Technology and Metallurgy University of Belgrade, Njegoseva 12, Belgrade, ⁶Institute for Multidisciplinary Research, University of Belgrade, Kneza Viseslava 1, 11030 Belgrade, Serbia

P.S.B.6. Corrosion stability of graphene coatings on metallic substrates
Ivana Jevremović¹, Samira Naghdī², Kyong Yop Rhee², Vesna Mišković-Stanković¹
¹Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia, ²Department of Mechanical Engineering, College of Engineering, Kyung Hee University, 446-701 Yongin, Republic of Korea

P.S.B.7. Solid-state reactions in nanomaterials based on monolayered chalcogenides of transition metals
Svetlana Kozlova, Maxsim Ryzhikov, Vladimir Fedorov
Nikolaev Institute of Inorganic Chemistry SB RAS, 630090, Ave. Akad. Lavrentiev 3, Novosibirsk, Russia

P.S.B.8. SiC and Si-C-N ceramics derived from new siliconorganic polymers
Aleksei Utkin, Natalya Baklanova
Institute of Solid State Chemistry and Mechanochemistry SB RAS, Russia

P.S.B.9. Macroporous conducting cryogels based on polyaniline
Jaroslav Stejskal, Miroslava Trchová, Patrycja Bober
Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, 162 06 Prague 6, Czech Republic

P.S.B.10. Temperature responsive hydrogels with ethylene glycol propylene glycol pendant chains
Edin Suljovrujic, Zorana Rogic Miladinovic, Dejan Milicevic, Maja Micic
Vinca Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia

P.S.B.11. Nanocomposites of polypyrrole nanotubes and noble-metal nanoparticles
Miroslava Trchová¹, Irina Sapurina¹², Jaroslav Stejskal¹
¹Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, 162 06 Prague 6, Czech Republic, ²Institute of Macromolecular Compounds, Russian Academy of Sciences, St. Petersburg 199004, Russian Federation

P.S.B.12. Electrical properties of mechanically activated magnesium-titanate ceramics
Nebojša Mitrović¹, Suzana Filipović², Jelena Orelj¹, Aleksandra Kalezić-Glišović¹, Slobodan Đukić¹
¹Faculty of Technical Sciences Čačak, University of Kragujevac, Serbia
²Institute of Technical Sciences of SASA, Belgrade, Serbia

P.S.B.13. **Influence of mechanical activation on the MgO-Al₂O₃-SiO₂ system with TeO₂**
Nataša Đorđević¹, Nina Obradović², Suzana Filipović², Darko Kosanović², Smilja Marković², Miodrag Mitrić³, Vladimir B. Pavlović²
¹Institute for Technology of Nuclear and Other Mineral Raw Materials, Bulevar Franse de Epera 86, 11000 Belgrade, Serbia, ²Institute of Technical Sciences of SASA, Knez Mihailova 35/IV, 11000 Belgrade, Serbia, ³Vinča Institute of Nuclear Sciences, University of Belgrade, Mike Alasa 12-14, 11000 Belgrade, Serbia

P.S.B.14. **Temperature dependence of thermal conductivity of two-layered graphene**
Stevo Jačimovski¹, Dejan Raković²
¹Academy of Criminalistic and Police Studies, Belgrade, Serbia
²University of Belgrade, Faculty of Electrical Engineering, Serbia

P.S.B.15. **The electrical resistance decay of a metallic granular packing**
Zorica M. Jakšić¹, Milica Ćvetković¹, Julija R. Šćepanović¹, Ivana Lončarević², Ljupka Budinski-Petković² and Slobodan B. Vrhovac¹
¹Institute of Physics Belgrade, University of Belgrade, Pregrevica 118, Zemun 11080, Belgrade, Serbia, ²Faculty of Engineering, Trg D. Obradovića 6, Novi Sad 21000, Serbia

P.S.B.16. **Analyses of commercially and laboratory produced ODS steels**
Jarmila Degmová, Jana Šimeg Veterniková, Veronika Sabelová, Július Dekan, Milan Pavúk, Stanislav Sojak, Martin Petriška, Vladimír Slugeň
Institute of Nuclear and Physical Engineering, Slovak University of Technology, Ilkovičova 3, 812 19 Bratislava, Slovakia

P.S.B.17. **Ni-based alloys coatings for high temperature applications**
Monika Solecka, Agnieszka Kopia, Agnieszka Radziszewska, Jan Kusiński, Łukasz Cieniek
Department of Surface Engineering and Materials Characterisation, Faculty of Metals Engineering and Industrial Computer Science, AGH University of Science and Technology in Krakow, Poland

P.S.B.18. **Effects of retrogression and reaging treatments on the mechanical characteristics of alloy EN AW 7049A-T6**
Jelena Marinković, Ljubica Radović, Milutin Nikačević
Military Technical Institute, Belgrade, Serbia

P.S.B.19. **Characteristics of stress distribution in the case of single LAP joint of two composite plates**
Abdurrahman Houssein
Alabel algharbi univesrty, Dean of Engineering Facutly zintan, Libya

P.S.B.20. **OLE of tribology effects on cup anemometer classification**
Miodrag Zlatanović¹, Ivan Popović²
¹Wind Electricity doo, ²School of Electrical Engineering, Beograd, Serbia

P.S.B.21. **Monte Carlo simulations of He+ in CF4**
Željka D. Nikitović, Zoran M. Raspopović, Vladimir D. Stojanović
Institute of Physics, Univerzity of Belgrade, Pregrevica 118, 11080 Belgrade, Serbia
POSTER SESSION III

Thursday, September 8, 2016, 20:00-22:00

SYMPOSIUM C: NANOSTRUCTURED MATERIALS

P.S.C.1. Characterization of graphite-encapsulated iron nanoparticles synthesized by milling-assisted low-pressure chemical vapor deposition
Duygu Ağaoğulları¹, Steven Madsen², Ai Leen Koh³, Robert Sinclair²
¹Department of Metallurgical and Materials Engineering, Istanbul Technical University, Maslak, Istanbul 34469, Turkey, ²Department of Materials Science and Engineering, Stanford University, Stanford, CA 94305-4034, USA, ³Stanford Nano Shared Facilities, Stanford University, Stanford, CA 94305-4045, USA

P.S.C.2. Structures and properties of quasi-onedimensional vanadium and niobium sulfides with Peierls distortion
Vladimir E. Fedorov¹, Andrey N. Enyashin², Svetlana G. Kozlova¹, Mariia N. Kozlova¹, Maxim R. Ryzhikov¹
¹Nikolaev Institute of Inorganic Chemistry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia, ²Institute of Solid State Chemistry, Ural Branch of Russian Academy of Sciences, Ekaterinburg, Russia

P.S.C.3. Aqueous sol-gel route toward selected quaternary metal oxides with single and double perovskite-type structure containing tellurium
Igor Djerdj¹, Berislav Marković¹, Jasminka Popović¹, Tobias Weller³, Zvonko Jagličić⁴, Željko Skoko⁶, Damir Pajić⁶, Christian Suchomski³, Pascal Voepel³, Roland Marschall¹, and Bernd M. Smarsly³
¹Department of Chemistry, J. J. Strossmayer University of Osijek, Osijek, Croatia, ²Ruder Bošković Institute, Zagreb, Croatia, ³Institute of Physical Chemistry, Justus-Liebig-University Giessen, Giessen, Germany, ⁴Institute of Mathematics, Physics and Mechanics, Ljubljana, Slovenia, ⁵Faculty of Civil and Geodetic Engineering, University of Ljubljana, Ljubljana, Slovenia, ⁶Department of Physics, Faculty of Science, University of Zagreb, Zagreb, Croatia

P.S.C.4. Thiol click chemistry on gold-decorated MoS₂: elastomer composites and structural phase transitions
Peter Topolovsek¹, Luka Cmok¹, Christoph Gadermaier¹, Milos Borovsak¹, J. Kovač², Ales Mrzel¹
¹Department of Complex Matter, Jozef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia, ²Department of Surface Engineering and Optoelectronics, Jozef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia
P.S.C.5. **Positronics of sub-nanometer-structured functional materials**
Oleh Shpotyuk\(^1,2\), Adam Ingram\(^3\), Yaroslav Shpotyuk\(^4\), Jacek Filipecki\(^1\)
\(^1\)Jan Dlugosz University in Czestochowa, 13/15, Armii Krajowej str., 42200, Czestochowa, Poland, \(^2\)Vlokh Institute of Physical Optics, 23, Dragomanov str., 79005 Lviv, Ukraine, \(^3\)Opole University of Technology, 75, Ozimska str., 45370 Opole, Poland, \(^4\)Centre for Innovation and Transfer of Natural Sciences and Engineering Knowledge, University of Rzeszow, 1, Pigionia str., 35-959 Rzeszow, Poland

P.S.C.6. **Colloidal dispersions of zirconium and titanium trisulfides**
Pavel A. Poltarak\(^1\), Anastasiia A. Poltarak\(^2\), Mariia N. Kozlova\(^1\), Sofia B. Artemkina\(^1\), Vladimir E. Fedorov\(^1\)
\(^1\)Nikolaev Institute of Inorganic Chemistry, \(^2\)Novosibirsk State University

P.S. C.7. **Investigation of rheological properties of barium titanate inks and adaptation to requirements of inkjet printing**
Jelena Vukmirovic\(^1\), Jovana Stanoev\(^1\), Branimir Bajac\(^1\), Elvira Djurdjic\(^2\), Sanja Kojic\(^3\), Goran Stojanovic\(^3\), Srdjan Rakic\(^2\), Vladimir V. Srdic\(^1\)
\(^1\)Faculty of Technology, Department of Materials Engineering, University of Novi Sad, Serbia, \(^2\)Faculty of Sciences, Department of Physics, University of Novi Sad, Serbia, \(^3\)Faculty of Technical Sciences, Department of Microelectronics, University of Novi Sad, Serbia

P.S.C.8. **Sputter-deposited Fe/Al thin superlattices: scanning of non-magnetic layer thickness**
Ali Karpuz\(^1\), Hakan Kockar\(^2\), Salih Colmekci\(^2\), Mehmet Uckun\(^2\)
\(^1\)Department of Physics, Karamanoglu Mehmetbey University, Karaman, Turkey, \(^2\)Department of Physics, Balikesir University, Balikesir, Turkey

P.S.C.9. **Effect of IF-WS\(_2\) nanoparticles addition on physical-mechanical and rheological properties and on chemical resistance of water-based paints**
Dragana Lazi\’\(\acute{c}\), Danica Simi\’\(\acute{c}\), Aleksandra Samolov
Military Technical Institute, Ratka Resanovi\’\(\acute{c}\)a 1, 11000 Belgrade, Serbia

P.S.C.10. **Nanocrystalline boehmite obtained at low temperature**
Ivan Stijepovic\(^1\), Marija Milanovic\(^1\), Ljubica Nikolic\(^1\), Zoran Obrenovic\(^2\)
\(^1\)University of Novi Sad, Faculty of Technology, Department of Materials Engineering, Bulevar cara Lazara 1, 21000 Novi Sad, Serbia, \(^2\)Faculty of Technology, University of East Sarajevo, Zvornik, Republic of Srpska, B&H

P.S.C.11. **Chromatic discretization and selectivity in optical properties of whole crystalline nanofilm-structures in IR region**
Jovan P. \’\(\acute{S}\)etraj\’\(\acute{c}\)i\’\(\acute{c}\), Ana J. \’\(\acute{S}\)etraj\’\(\acute{c}\)i\’\(\acute{c}\)-Tomic\(^2\), Igor J. \’\(\acute{S}\)etraj\’\(\acute{c}\)i\’\(\acute{c}\), Sini\’\(\acute{s}\)a M. Vu\’\(\acute{c}\)enovic\(^3\)

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P.S.C.12. **Effect of IF-WS$_2$ nanoparticles addition on thermo-rheological and mechanical behavior of aramid/phenolic resin/PVB composite material**

Danica M. Simić$^1$, Dušica B. Stojanović$^2$, Ana D. Tasić$^1$, Petar S. Uskoković$^2$, Radoslav R. Aleksić$^2$

$^1$Military Technical Institute, Ratka Resanovića 1, 11000 Belgrade, Serbia, $^2$University of Belgrade, Faculty of Technology and Metallurgy, Karnegijeva 4, 11000 Belgrade, Serbia

P.S.C.13. **Microstructure characterization of friction stir welded joints made from ultrafine grained aluminium**

Marta Lipinska$^1$, Lech Olejnik$^2$, Adam Pietras$^3$, Andrzej Rosochowski$^4$, Malgorzata Lewandowska$^1$

$^1$Faculty of Materials Science and Engineering, Warsaw University of Technology, Woloska 141, 02-507 Warsaw, Poland, $^2$Institute of Manufacturing Processes, Warsaw University of Technology, Narbutta 85, 02-524 Warsaw, Poland, $^3$Department of Friction and Resistance Welding and Environmental Engineering, Institute of Welding, Czeslawa 16/18, 44-100 Gliwice, Poland, $^4$Design, Manufacture and Engineering Management, University of Strathclyde, 75 Montrose Street, Glasgow G1 1XJ, United Kingdom


Alexander Vanetsev$^1,2$, IlmoSildos$^1$, Yurii Orlovskii$^1,2$

$^1$Institute of Physics, University of Tartu, Tartu, Estonia, $^2$General Physics Institute, Russian Academy of Sciences, Moscow, Russia
SYMPOSIUM E: BIOMATERIALS

P.S.E.1. Synthesis, characterization and biological application of opto-magnetic nanocomposites with up-converting properties based on NaYF4@Fe3O4@SiO2 nanoparticles
Przemysław Kowalik¹, Bożena Sikora¹, Krzysztof Fronc¹, Jakub Mikulski¹, Izabela Kamińska¹, Anna Borodziuk², Magdalena Duda², Katarzyna Łysiak³, Maciej Szewczyk⁴, Karolina Zajdel⁶, Grzegorz Grużel⁷, Leandro C. Figueiredo⁸, Paulo C. Morais⁹, Laise Andrade¹⁰, João P. Longo¹⁰, Ricardo B. de Azevedo¹⁰, Zulmira G. M. Lacava¹⁰, Ewa Mosiniewicz-Szablewska¹¹, Magdalena Parlińska-Wojtan¹, Roman Minikayev¹, Tomasz Wojciechowski¹, Anita Gardias³, Jarosław Rybusiński³, Andrzej Sienkiewicz¹, Mariusz Łapiński¹, Piotr Stępień⁴, Wojciech Paszkowicz¹, Jacek Szczytko³, Andrzej Twardowski³, Małgorzata Frontczak-Baniewicz⁶, Danek Elbaum¹

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P.S.E.2. Development and characterization of Mg-containing hydroxyapatite, β-tricalcium phosphate and biphasic calcium phosphate bioceramics
Liga Stipniece, Inga Narkevica, Kristine Salma-Ancane, Liga Berzina-Cimdina Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Faculty of Materials Science and Applied Chemistry, Riga Technical University, Latvia

P.S.E.3. Design and characterization of hydroxyapatite/poly(vinyl alcohol) nanocomposite coated titania scaffolds for bone repair
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P.S.E.4. Color of dental composite restorations related to dentin substituents

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P.S.E.5. Synthesis, characterization and antimicrobial activity of pentagonal bipyramidal Fe(III) complexes with 2,6-diacetyl- pyridine bis(trimethylammoniumacetohydrazone)
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P.S.E.6. Synthesis and development of polymeric scaffolds based on (meth)acrylates for tissue regeneration applications
Jovana S. Vuković, Marija M. Babić, Bojan D. Božić, Katarina M. Antić, Vuk V. Filipović, Jovanka M. Filipović, Simonida Lj. Tomić
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