ACA III 2014

The Third Serbian Ceramic Society Conference »Advanced Ceramics and Application«

Programme

Belgrade, Serbia
September, 29-October, 1, 2014.

Advanced Ceramics and Applications III:
New Frontiers in Multifunctional Material Science and Processing

29th September-1st October, 2014, Serbia, Belgrade

Aims and Scope

Advanced Ceramics play an important role in the European Unions prioritized materials to enable the transition towards to a knowledge-based low carbon, cost competitive and efficient societies. This ACA III Conference will gather the researchers, engineers, academy staff and PhD students trying to emphasize the key advanced materials research, processing and innovation activities.

Serbian Ceramic Society has been initiated in 1995/1996 and fully registered in 1997 as Yugoslav Ceramic Society, being strongly supported by American Ceramic Society. Since 2009. continued as Serbian Ceramic Society in accordance to the Serbian law procedure. Serbian Ceramic Society is almost the only one Ceramic Society in the South-East Europe, with members from more than 20 Institutes and Universities, active in 16 sessions, by program and the frames which are defined by the American Ceramic Society activities.

Conference co-chairmen:

Prof. Dr. Vojislav Mitić SRB
Prof. Dr. Olivera Milošević SRB
Prof. Dr. Marcel Van de Voorde EU
Prof. Dr. Rainer Gadow GER

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Božana Čolović
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Adriana Peleš

Venue: Serbian Academy of Sciences and Arts, Great Hall (second floor) and Halls (first floor), Knez Mihailova 35, Belgrade, Serbia.

Conference fee: Standard fee: 6000 RSD; Members of SCS, Invited lecturers, Key-note speakers and PhD Students: 50% reduced fee; plenary lectures and last year winners for oral and poster presentations: free of charge.

Invoice and bank details for Conference fee payment: Banka Intesa ad Beograd, Count No. 160-380150-55, notification: Conference fee – participant name.

Abstracts and papers publication: Abstract should be submitted via e-mail as attached documents. It should be sent to: nina.obradovic@itn.sanu.ac.rs **no longer than June 15th 2014,** with the subject: 3SCSC-first name and surname of the first author. Abstracts should be prepared using the following instructions: paper size: A4; length: up to 200 words; language: English; font: Times New Roman; title: 14 pt, bold; author's names: 12 pt, regular; affiliation and address: 12 pt, regular; body text: 12 pt; margins: top, bottom, inside, outside: 2 cm. Abstracts should contain the aim, methods and the conclusion of a research and should be without images and references. The authors should provide contact details (e-mail and phone), as well as their title (BSc, MSc, PhD) on a separate sheet. The official language of the conference is English. Conference abstracts will be published in the Book of Abstracts Conference. Papers presented at the conference can be submitted for publishing in Science of Sintering or Journal of Ceramic Science and Technology.

Type of presentation: Visuals for oral presentations should be in Microsoft PowerPoint, versions up to 2007 (.ppt or .pptx, or Adobe Acrobat Reader 9 (.pdf)). Any animation or video files must be compatible with Windows 7 and Windows Media Player. Please bring your presentation to the reception desk at the beginning of the Conference on flash memory. Posters should be prepared in dimension: 70x100 cm. The official language of the conference is English.

Additional Conference information

Phone: +381-11-2027247 or 2185-437 or 2637-239, E-mail: nina.obradovic@itn.sanu.ac.rs

Programme Overview

Date	Time		Programme		Floor, Room
September, 29, Monday	**08-09**		**Registration** **Poster Session 1 Installation**		2nd Floor, Hall
	09-09.55		**Opening Ceremony**		2nd Floor, Great Hall
	09.55-10.00		**Short Break**		2nd Floor, Hall
	10.00-12.00		**Plenary Session 1**		2nd Floor, Great Hall
	12.00-12.20		**Coffee Break**		2nd Floor, Hal
	12.20-14.20		**Plenary Session 2**		2nd Floor, Great Hall
	14.30-15.30		**Buffet Lunch**		1st floor, Club SASA, Mezzanine Hall
	15.30-17.30		**Plenary Session 3**		2nd Floor, Great Hall
	17.30-18.30		**Coffe Break&Poster Session 1**		2nd Floor, Hall
	19.30		**Conference Dinner**		Hotel Royal, Kralja Petra street 56
September, 30, Tuesday	**08-09**		**Registration** **Poster Session 2 Installation**		1st Floor, Hall
	09.00-13.00		**Session 1** **Nanostructures&Functional Materials,** Blue Hall 2	**Session 3** **Basic& Sintering,** Red Hall 1	1st Floor
		11.05 – 11.25	**Coffee break**		
			Session 1 **Nanostructures&Functional Materials,** Blue Hall 2	**Session 3** **Basic& Sintering** Red Hall 1	
	13.00 – 14.00		**Buffet Lunch**		1st floor , Club SASA, Mezzanine Hall
	14.00-16.00		**Session 2** **Basic&Multifunctional,** Blue Hall 2	**Session 4** **Traditional&Bio& Heritage,** Red Hall 1	1st Floor
	16.00-17.00		**Coffe break & Poster Session 2**		1st Floor, Hall
	17.30		**Sightseeing or Commercial Visit**		
October, 1, Wednesday	**09.00-09.30**		**Round Table 1**		1st Floor, Blue Hall
	09.30-10.00		**Round Table 2**		
	10.00-10.30		**Coffee break**		
	10.30-11.45		**Session 5**		
	11.45-12.15		**Closing Ceremony**		

Monday, September 29th, 2014

08.00 – 09.00 Registration
Poster Session 1 Installation **Hall, 2nd floor**

Great Hall, 2nd floor

09.00 – 09.55 Opening Ceremony of The Third Serbian Ceramic Society Conference »Advanced Ceramics and Application«
Prof. Dr. Vojislav Mitić, President of the Serbian Ceramic Society
Prof. Dr. Olivera Milošević, President of the General Assembly of the Serbian Ceramic Society
Prof.DrFelix Ungar, President of European Academy of Sciences & Arts
Representatives of SASA, Ministry of Science &Serbian Government

09.55-10.00 Short Break

10.00-12.00 Plenary Session 1
Chairperson: Sheldon M. Wiederhorn & Makio Naito

10.00-10.30 PL1 Structural Ceramics for Extreme Environments
Bill Lee
Dept. of Materials and Centre for Advanced Structural Ceramics (CASC), Imperial College London

10.30 – 11.00 PL2 2D Atomic Layers from Layered Ceramics
Minoru Osada
International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), Tsukuba, Japan

11.00-11.30 PL3 Nonclassical Materials: Single Crystalline $BaTiO_3$ Nanocube, Supra Crystal and Their Properties
K. Kato[1], K. Mimura[1], Q. Ma[1], F. Dang[1], H. Imai[2], S. Wada[3], M. Osada[4], H. Hajime[4], M. Kuwabara[5]
[1]National Institute of Advanced Industrial Science and Technology, 2266-98 Anagahora, Shimoshidami, Moriyama, Nagoya, Japan
[2]Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama, Japan
[3]University of Yamanashi, 4-3-11, Takeda, Kofu, Japan
[4]National Institute for Materials Science, 1-1 Namiki, Tsukuba, Japan
[5]Kyushu University, 6-1 Kasuga-kouen Kasuga, Fukuoka, Japan

11.30 – 12.00 PL4 Advanced Ceramics from Preceramic Polymers and Fillers
Paolo Colombo[1,2,3], Enrico Bernardo[4]
[1]*Department of Industrial Engineering, University of Padova, Italy*
[2]*Adjunct Professor of Materials Science and Engineering, Department of Materials Science and Engineering, The Pennsylvania State University, USA*
[3]*Visiting Professor, Department of Mechanical Engineering, University College London, UK*
[4]*Department of Industrial Engineering, University of Padova, Italy*

12.00 – 12.20 Coffee break

12.20 – 14.20 Plenary Session 2
Chairperson: Rainer Gadow & Jose Manuel Torralba

12.20 – 12.50 PL5 The Birth of Fracture Mechanics: A Perspective on Toughness
Sheldon M. Wiederhorn
National Institute of Standards and Technology,Gaithersburg, MD, 20899-8500

12.50 – 13.20 PL6 One-step Mechanical Method to Create Nanocomposite Structure and its Applications for Advanced Materials
Makio Naito, Akira Kondo, Takahiro Kozawa JWRI,
Osaka University, 11-1, Mihogaoka, Ibaraki city, Osaka 567-0047, Japan

13.20 – 13.50 PL7 Tailoring Ceramic Nanostructures for Nanodevice Applications
Branislav Vlahovic, Igor Filikhin, and Serge Matinian,
Department of Physics, North Carolina Central University, 1801 Fayetteville Street, Durham, NC 27707, USA

13.50 – 14.20 PL8 FAMA – facility for Modification and Analysis of Materials with Ion Beams
N. Nešković
Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia

14.30 – 15.30 Buffet Lunch — Club SASA, Mezzanine Hall, 1st floor

15.30 – 17.30 Plenary Session 3

Chairperson: Paolo Colombo & William Bill Lee

15.30 – 16.00 PL9 Electrical Discharge Machining (EDM) of High Performance Ceramics–Materials and Process Development for Wear Resistant Precision Tools with High Geometrical Complexity

Rainer Gadow, Richard Landfried and Frank Kern
Institute for manufacturing technologies of ceramic components and composites, IMTCCC, University of Stuttgart, Allmandring 7b, D-70569 Stuttgart, Germany

16.00 – 16.30 PL10 Development of Zircon by Powder Injection Moulding

José M. Torralba [1,2], Carolina Abajo[1], Javier Hidalgo[1], Antonia Jiménez-Morales[1]
[1]*Department of Materials Science and Engineering, Universidad Carlos III Madrid, Spain*
[2]*IMDEA Materials Institute, Madrid, Spain*

16.30 – 17.00 PL11 Aqueous Processing of Water Sensitive Powders. How to Overcome the Hurdles?

José M.F. Ferreira
Department of Materials and Ceramics Engineering (DEMaC), CICECO, University of Aveiro, 3810-193, Aveiro-Portugal

17.00-17.30 PL12 Ozone Decay on the Metal Oxides Ceramics

S. Rakovsky, T. Batakliev, V. Georgiev, M. Anachkov, G. Zaikov[1]
Institute of Catalysis, Bulgarian Academy of Sciences, Sofia, Bulgaria
[1]*Institute of Biochemical Physics – Russian Academy of Sciences, Moscow, Russia*

17.30 – 18.30 Coffee break and Poster Session 1

Hall, 2st floor

19.30 Conference Dinner , Hotel Royal, Kralja Petra street 56

Tuesday, September 30th, 2014

08.00 – 09.00 Registration
Poster Session 2 Installation

Hall, 1st floor

09.00 – 13.00 1st Session – Nanostructures & Functional Materials

Chairpersons: Minoru Osada & Kazumi Kato

Blue Hall 2, 1st floor

09.00 – 09.30 PL13 Chemical Nanotechnologies: From Molecules to Functional Nanostructures for Energy and Health Applications

Sanjay Mathur
Inorganic and Materials Chemistry Dpt., University of Cologne, Germany

09.30 – 09.55 KN1 – Multifunctional Self-organized Nanowires and Nanowire Arrays

Srdjan Milenkovic[1], Achim Walter Hassel[2]
[1]IMDEA Materials Institute, Eric Kandel 2, 28906, Getafe, Spain; [2]Institute for Chemical Technology of Inorganic Materials, Johannes Kepler University Linz, Altenberger Str. 69, A-4040 Linz, Austria

09.55-10.20 KN2 - Magnetic and Structural Properties of ZrO_2(Fe, Mn) and CdO(Fe) Nanoparticles

I. Kuryliszyn-Kudelska[1], M. Arciszewska[1], A. Małolepszy[2], M. Mazurkiewicz[2], L. Stobinski[3], R. Minikayev[1], W. Paszkowicz[1], N. Nedelko [1], A. Grabias[4], M. Kopcewicz[4], W. Dobrowolski[1]
[1]Institute of Physics, Polish Academy of Sciences, Al. Lotników 32/46, 02-668 Warsaw, Poland; [2]Warsaw University of Technology, Faculty of Materials Science and Engineering, 02-507 Warsaw, Wołoska 141, Poland;[3]Institute of Physical Chemistry, Polish Academy of Sciences, Kasprzaka 44/52, 01-224 Warsaw, Poland; [4]Institute of Electronic Materials Technology, Wolczynska 133, 01-919 Warsaw, Poland

10.20-10.45 KN3 NanoTools for Ultrafast DNA Sequencing

Radomir Zikic
Institute of Physics, Pregrevica 118 Belgrade, Serbia

10.45-11.05 INV1- Synthesis and Characterization of Magnesium Hydroxide Nanoparticles via Hydrothermal Method

A. Sierra-Fernandez[1,2], G. Flores-Carrasco[3], L.S.Gomez-Villalba[1], O.Milosevic[4], R. Fort[1], M.E.Rabanal[2]

[1] Instituto de Geociencias (CSIC, UCM), C/ José Antonio Novais 2, 28040 Madrid, Spain; [2]University Carlos III of Madrid and IAAB, Department of Materials Science and Engineering and Chemical Engineering, Avda.Universidad 30, 28911 Leganes, Madrid, Spain; [3]CIDS-ICUAP Benemérita Universidad Autónoma de Puebla, Av. San Claudio y 14 sur, Edif. 103C C.U., Col. San Manuel, Puebla 72570,México;[4]Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Knez Mihailova 35/IV, 11000 Belgrade, Serbia.

11.05 – 11.25 Coffee break

Blue Hall 2, 1st floor

11.25–11.50 KN4 Transport Properties of Electron-doped $Sr_{1-x}La_xCu_2O_\delta$ Superconducting Thin Films

V. P. Jovanović [1], Z. Z. Li [2] and H. Raffy [2]

[1] Institute of Physics, University of Belgrade, Pregrevica 118, 11000 Belgrade, Serbia; [2]Laboratoire de Physique des Solides, UMR 8502-CNRS, Université Paris-Sud, 91405 Orsay, France

11.50-12.10 INV2 Electrical and Dielectric Characterization of Nanostructural Ceramic Materials by Complex Impedance Spectroscopy

D. L. Sekulić[1], Z. Ž. Lazarević[2], N. Ž. Romčević[2]

[1]Faculty of Technical Sciences, University of Novi Sad, Novi Sad, Serbia,[2]Institute of Physics, University of Belgrade, Belgrade, Serbia

12.10-12.25 OR1- Synthesis and Characterization of Nanostructured Hybrid Systems of Ag&ZnO Obtained by Solvothermal Method for Photocatalytic Applications

L. Muñoz[1], A. Sierra-Fernandez[1,2], L.S.Gomez-Villalba[2], O.Milosevic[3], M.E.Rabanal[1]

[1]University Carlos III of Madrid and IAAB, Department of Materials Science and Engineering & Chemical Engineering, Avda.Universidad 30, 28911 Leganes, Madrid, Spain;[2] Instituto de Geociencias (CSIC, UCM), C/ José Antonio Novais 2, 28040 Madrid, Spain;[3]Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Knez Mihailova 35/IV, 11000 Belgrade, Serbia.

12.25-12.40 OR2 Ultrasonic Processing of Hierarchically Organized TiO_2 Functional Nanomaterials

Ivan M. Dugandzic[1], Dragana J. Jovanovic[2], Lidija T. Mancic[1], Zoran V. Saponjic[2], Jovan M. Nedeljkovic[2], Olivera B. Milosevic[1]

[1]Institute of Technical Sciences of SASA, Knez Mihailova 35/IV, 11000, Belgrade, Serbia, [2]Vinča Institute of Nuclear Sciences, University of Belgrade, 11001 Belgrade, Serbia

13.00 – 14.00 Buffet Lunch **Club SASA, Mezzanine Hall, 1st floor**

Blue Hall 2, 1st floor

14.00–16.00 2st Session – Basic & Multifunctional

Chairpersons: Branislav Vlahovic&Karel Maca

14.00 – 14.25 KN5 Towards Electronic Materials Fractal Theory

Ljubiša M. Kocić[1] and Vojislav V. Mitić[2]
[1]*University of Niš, Faculty of Electronic Engineering, Niš, Serbia;*[2]*Institute of Technical Sciences of SASA, Belgrade, Serbia*

14.25 – 14.50 KN6 Magnetic Interactions and Magnetotransport in $Ge_{1-x}TM_xTe$ Diluted Magnetic Semiconductors

L.Kilanski[1], R.Szymczak[1], E.Dynowska[1], M.Gorska[1], A.Podgorni[1], W.Dobrowolski[1], M.Romcevic[2], V.E.Slynko[3] and E.I.Slynko[3]
[1]*Institute of Physics, Polish Academy of Sciences, al. Lotnikow 32/46, 02-668 Warsaw, Poland;* [2]*Institute of physics, University of Belgrade, 11080 Belgrade, Republic of Serbia;* [3]*Institute of Materials Science Problems, Ukrainan Academy of sciences, Chernovtsy, Ukraine*

14.50-15.10 INV3 A- and B-site Substitutions Effect on the Dynamic Relaxation Processes in Tetragonal Tungsten Bronzes

Andrei Rotaru[1,2,3] and Finlay D. Morrison[3]
[1]*University of Craiova, Faculty of Mathematics and Natural Sciences, Department of Chemistry,A.I. Cuza 13, Craiova, Romania;*[2]*INFLPR-National Institute for Laser, Plasma and Radiation Physics, Laser Department, Bvd. Atomistilor, Nr. 409, Magurele (Ilfov), Bucharest, Romania;*[3]*University of St Andrews, EaStCHEM, School of Chemistry, North Haugh, KY169ST, St Andrews,Fife, Scotland, United Kingdom*

15.10 – 15.30 INV4 The Influence of Temperature on Microstructure Contact Surfaces on $BaTiO_3$ –ceramics Doped with Ho_2O_3

S. Janković[1] , V. V. Mitić[2,3*], Lj. Kocić[2,] V. Paunović[2], M. Miljković[4]
[1]*Mathematical Institute, SASA, Knez Mihailova 35, 11000 Belgrade,* [2]*University of Niš, Faculty of Electronic Engineering, Aleksandra Medvedeva 14, 18000 Niš, Serbia,* [3]*Institute of Technical Sciences, SASA, Knez Mihailova 35, 11000 Belgrade, Serbia,* [4]*University of Niš, SEM Laboratory, 18000 Niš, Serbia*

15.30-15.45 OR3 The research of the physical and chemical mechanism and kinetics of reactionary SPS-sintering of TiB_2 – TiN composition

Petukhov O.[1], Khobta I.[1], Herrmann M.[2], Rathel J.[2],Ragulya A.[1]
[1]Frantsevich Institute for Problems of Materials Science of National Academy of Sciences of Ukraine. 03680, Kiev -142, 3, Krzhyzhanovsky St., Ukraine;[2]Fraunhofer IKTS, Winterbergstrasse 28, 01277, Dresden, Germany

16.00 – 17.00 Coffee break and Poster session 2

17.30 Sightseeing or Commercial Visit

Red Hall 1, 1st floor

09.00 – 13.00 3rd Session -Basic & Sintering

Chairpersons: Nina Obradovic & Slavcho Rakovsky

09.00-09.25 KN7 Characterizing Griffith Cracks in Glass: a Measurement Problem
S. M. Wiederhorn
National Institute of Standards and Technology, Gaithersburg, MD, 20899-8500

09.25-09.50 KN8 – Computer Simulation of Grain Coarsening Due to Diffusion and Deformation in Liquid Bridge
Zoran S. Nikolic[1] and Kazunari Shinagawa[2]
[1]University of Niš, Faculty of Electronic Engineering, Serbia; [2]Kagawa University, Faculty of Engineering, Japan

09.50-10.15 KN9 Recycling of the Advanced Ceramic Materials
Srecko Stopic, Bernd Friedrich,
IME Process Metallurgy and Metal Recycling,
RWTH Aachen University, Germany

10.15-10.35 INV5- The Sintering Activation Energy of Various Advanced Ceramics and Composites
Karel Maca
Dept. of Ceramics and Polymers, Brno University of Technology, Technicka 2, 616 69 Brno,Czech Republic, CEITEC BUT, Brno University of Technology, Technicka 10, 616 00 Brno, Czech Republic

10.35--10.55 INV6 Application of Integral Characteristics in Thermodynamics and Quantum Mechanics
Dimitrije Stefanović[1], Janja Nedović[1] , Časlav Stefanović[2]
[1]Faculty of Electronic Engineering 18000 Niš, Serbia;[2]Faculty of Mathematics and Natural Science, Kosovska Mitrovica, Serbia

11.05-11.25 Coffee break

11.25-11.40 OR4 FTIR/DRIFT Contactless Measurement of Salt Crystallization Phenomena

D. Čjepa[1], S. Vučetić[1], O. Rudić[1], S. Pašalić[2], S. Vujović[3], J. Ranogajec[1]
[1]Faculty of Technology, University of Novi Sad, 21000, Novi Sad, Serbia;[2]Serbian Ministry of Education, Science and Technological Development, Nemanjina 22-24, 11000 Belgrade, Serbia;[3]Provincial Institute for the Protection of Cultural Monuments, 21000, Novi Sad, Serbia

11.40-11.55 OR5 Magnetic Characterization of PIM MnZn Ferrite for Power Electronic Application

Nebojša Mitrović, Elvis Gašanin,Aleksandra Kalezić -Glišović, Borivoje Nedeljković, Maja Kićanović
Joint Laboratory for Advanced Materials of SASA, Section for Amorphous Systems,
Faculty of Technical Sciences Čačak, University of Kragujevac, Serbia,

11.55-12.10 OR6 Selection of the Most Suitable Non-conventional Machining Processes for Ceramic Processing by Using MCDMs

Dušan Petković, Miloš Madić, Goran Radenković
University of Niš, Faculty of Mechanical Engineering, Aleksandra Medvedeva 14, Niš, Serbia

12.10-12-30 JEOL Electron Microscopes-news

S. Zizek
SCAN d.o.o. Predvor, Nazorjeva 3, Kranj, Slovenia

13.00 – 14.00 Buffet Lunch **Club SASA, Mezzanine Hall, 1st floor**

Red Hall 1, 1st floor

14.00 – 16.00 4th Session – Traditional & Bio&Heritage

Chairpersons: Maria Eugenia Rabanal &Ljubica Pavlovic

14.00 – 14.25 KN10 Ni-Al Layered Double Hydroxides as Precursors of Ceramic Pigments

Margarita Gabrovska[1], Dorel Crişan[2], Nicolae Stănică[2], Dimitrinka Nikolova[1], Maya Shopska[1], Lyubima Bilyarska[1], Maria Crişan[2], Rumeana Edreva-Kardjieva[1]
[1]Institute of Catalysis, Bulgarian Academy of Sciences, Acad. G. Bonchev Str. Bl. 11, 1113 Sofia, Bulgaria,[2]"Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, 202 Splaiul Independentei Str., 060021 Bucharest-12, Romania

14.25 - 14.50 KN11 What we know and what we would like to know – new developments in characterisation of pharmaceutical materials
Milan D. Antonijević
School of Science, Faculty of Engineering and Science, University of Greenwich (Medway Campus), Chatham Maritime, Kent ME4 4TB, UK

14.50 - 15.15 KN12 Objective Measurement Method to Detect Hip Bone affected by Osteoarthritis
Francesco Lamonaca[1], Monica Vasile[2], Alfonso Nastro[3]
[1] Dept. of Informatics, Models, Electronic and Systems, University of Calabria, Ponte Pietro Bucci, 87040 Rende (CS), Italy; [2]Medical School, Ovidius University of Costanta, Bd.Mamaia 124, 900527, Costanta, Romania;[3] Department of Chemistry and Chemical Technology, , University of Calabria, Ponte Pietro Bucci, 87040 Rende (CS), Italy.

15.15-15.35 INV 7 Biodegradable Composite Materials
Dumitru Nedelcu
"Gheorghe Asachi" Technical University of Iasi, Romania, Blvd. Mangeron, No. 59A, 700050 Iasi, Romania

15.35-15.50 INV 8 Where is Archaeology Without Physical and Chemical Analysis in the Ceramic Technology Studies?
Biljana Djordjević,
National Museum in Belgrade, Serbia

15.50-16.00 OR7 Sculptural Concretes: Use in Restoration
Rajko Blažić
High School-Academy for Arts and Conservation, Serbian Ortodox Church, Belgrade, Serbia

16.00 – 17.00 Coffee break and Poster Session 2

17.30 Sightseeing or Commercial Visit

Blue Hall 2, 1st floor
October, 1st, 2014

09-09.30 Round Table 1: The Establishment of ModTech Branch in Belgrade

By invitation only

09.30-10.00 Round Table 2: Enhancing Scientific Cooperation between Serbia and Italy

10.00-10.30 Coffee break

Blue Hall 2, 1st floor
October, 1st, 2014

10.30-11.45 5th Session: Advanced Materials, Ceramics & Processing
Chairpersons: Vladimir Pavlovic&Dumitru Nedelcu

10.30-11.00 PL 14 A Novel, Highly Efficient Material for Photovoltaic Conversion: the $CH_3NH_3PbI_3$ Perovskite
László Forró
Laboratory of Physics of Complex Matter, EcolePolytechniqueFédérale de Lausanne, Switzerland

11.00.-11.30 PL 15 The Bavarian Porcelain Industry Facing Global Competition - Changes, Chances and Challenges 1989 to 2014
Wilhelm Siemen
Deutsches Porzellanmuseum, Hohenberg, Germany

11.30-11.45 The application of PRIZMA's Ultrasound Atomizers and Electrostatical Precipitators in the Advanced Materials Processing,
Miroslav Ravlić
Prizma, Kragujevac

11.45-12.15 Closing Ceremony

Poster Session 1: PS1 Art & Traditional & Heritage

Hall, 2st floor
Monday, 29, 09, 2014.
17.30-18.30 h

PS1-1 Characterization of Material as a Supply Source for Heritage Aqueduct Construction in FYR Macedonia
Zagorka Radojević[1], Ivana Delić Nikolić[1], Anja Terzić[1]
[1]Institute for Materials Testing, Belgrade, Serbia

PS1-2 Corundum and Bauxite Refractory Shotcretes Based on Activated Waste Coal Ash: Investigation of Thermally Induced Properties Change
Anja Terzić[1], Zagorka Radojević[1], Ljiljana Miličić[1], Nina Obradović[2], Ljubiša Andrić[3]
[1]Institute for Materials Testing, Belgrade, Serbia, [2]Institute of Technical Sciences of Serbian Academy of Sciences and Arts, Belgrade, Serbia, [3]Institute for Technology of Nuclear and Other Raw Mineral Materials, Belgrade, Serbia

PS1-3 Self Sensing Concrete
Gordana Topličić-Ćurćić, Dušan Grdić, Nenad Ristić, Zoran Grdić
University of Nis, The Faculty of Civil Engineering and Architecture, Serbia

PS1-4 The Use of Different Analytical Techniques in the Proces of Investigated Ceramic Materials
A.Radosavljević-Mihajlović,
ITNMS, Bulevar Franshe d Eperea 86, Belgrade, Serbia

PS1-5 The Use of X-ray Powder Analysis for Investigation of Ceramic Materials
Ana S. Radosavljevic-Mihajlovic[1], Jovica Stojanovic[1], Anja M. Dosen[2]
[1] ITNMS Bulevar Franche dEpere , 11000 Belgrade, Serbia, [2]Faculty of Mining and Geology, Department of Crystallography, University of Belgrade, Đušina 7, 11000 Belgrade, Serbia

PS1-6 The Synthesis and Crystal Structures of Diphylloaluminosilicates Phase Doped with Ca^{2+} and Gd^{3+}
Ana S. Radosavljevic-Mihajlovic[1], Jovica Stojanovic[1], Anja M. Dosen[2]
[1] University of Belgrade - Vinca Institute of Nuclear Sciences, P.O. Box 522, 11001 Belgrade, Serbia, [2]Faculty of Mining and Geology, Department of Crystallography, University of Belgrade, Đušina 7, 11000 Belgrade, Serbia

PS1-7 Combining Fresh and Ripe Sculptural Concretes
Rajko Blažić
High School-Academy for Arts and Conservation, Serbian Ortodox Church, Belgrade, Serbia

PS1-8 Gold and Silver Plating Concretes
Rajko Blažić,
High School-Academy for Arts and Conservation, Serbian Ortodox Church, Belgrade, Serbia

PS1-9 Sculptural Concretes: Unusual Montages
Rajko Blažić
High School-Academy for Arts and Conservation, Serbian Ortodox Church, Belgrade, Serbia

PS1-10 Sculptural Concretes: Stone Immitation
Rajko Blažić
High School-Academy for Arts and Conservation, Serbian Ortodox Church, Belgrade, Serbia

PS1-11The Mirrors
Zvonko Petković
High School-Academy for Arts and Conservation, Serbian Ortodox Church, Belgrade, Serbia

PS1-12 Natural carbonate fillers
Ljubiša Andrić[1], Anja Terzić[2], Marko Pavlović[3], Milan Petrov[1], Ljubica Pavlović[1], Zagorka Aćimović[3]
[1]Institute for Technology of Nuclear and Other Raw Mineral Materials, Belgrade, Serbia, [2]Institute for Materials Testing, Belgrade, Serbia, [3]University of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia

PS1-13 Calcium carbonate fillers prepared by means of micronized milling with application in coatings
Marko Pavlović[1], Anja Terzić[2], Ljubiša Andrić[3], Milan Petrov[3], Ljubica Pavlović[3], Zagorka Aćimović[1]
[1]University of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia, [2]Institute for Materials Testing, Belgrade, Serbia, [3]Institute for Technology of Nuclear and Other Raw Mineral Materials, Belgrade, Serbia

Poster Session 2: PS2 Nanostructures & Amorphous& Functional & Sintering

Hall, 1st floor
Tuesday, 30, 09, 2014.
16-17h

PS2-1 Properties of Zig-zag Nickel Nanostructures Obtained by GLAD Technique
J. Potočnik[1], M. Nenadović[1], M. Popović[1], B. Jokić[2] and Z. Rakočević[1]
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PS2-2 Argon Irradiation Effects on the Structural and Optical Properties of Reactively Sputtered CrN Films
M. Novaković, M. Popović and N. Bibić
VINČA Institute of Nuclear Sciences, University of Belgrade, 11001 Belgrade, Serbia

PS2-3 Annealing Effects on the Properties of TiN Thin Films
M. Popović, M. Novaković and N. Bibić
VINČA Institute of Nuclear Sciences, University of Belgrade, 11001 Belgrade, Serbia

PS2-4 Raman Spectroscopy of Optical Properties in CdS Thin Films
J. Trajić[1], M. Gilić[1], N. Romčević[1], M Romčević[1], G. Stanišić[1], B. Hadžić[1], Y.S. Yahia[2]
[1]Institute of Physics, P.O. Box 68, University of Belgrade, 11080 Belgrade, Serbia, [2]Nano–Science& Semiconductor Labs., Department of Physics, Faculty of Education, Ain Shams University, Roxy, Cairo, Egypt

PS2-5 Raman and IR Spectroscopic Study of Nanostructured $Ni_{0.5}Zn_{0.5}Fe_2O_4$ Prepared by Soft Mechanochemical Synthesis
Z. Ž. Lazarević[1], Č. Jovalekić[2], A. Milutinović[1], M. Romčević[1], G. Stanišić[1], M. Gilić[1], N. Ž. Romčević[1]
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PS2-6 Surfactants assisted hydrothermal synthesis of $NaYF_4$ co-doped Yb^{3+}/Er^{3+} up-conversion nanoparticles
Ivana Z. Dinic[1], Ivan M. Dugandzic[1], Lidija T. Mandcic[1], Maria Eugenia Rabanal[2], Olivera B. Milosevic[1]
[1]Institute of Technical Sciences of SASA, 11000 Belgrade, Serbia, [2]Materials Science and Engineering Department and IAAB, Universidad Carlos III de Madrid, Avda de la Universidad 30, 28911 Leganes, Spain

PS2-7 Growth, Structural and Optical Studies of Neodymium Doped Yttrium Aluminum Garnet

S. Kostić[1], Z. Ž. Lazarević[1], M. Romčević[1], A. Milutinović[1], V. Radojević[2], M. Petrović-Damjanović[1], N. Ž. Romčević[1]

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PS2-8 Influence of Er^{3+}/Yb^{3+} Concentration Ratio on the Down-conversion and Up-conversion Luminescence and Lifetime in $GdVO_4$: Er^{3+}/Yb^{3+} Microcrystals

Tamara V. Gavrilović,[1] Dragana J. Jovanović,[1] Vesna Lojpur,[1] Aleksandar Nikolić[2] and Miroslav D. Dramićanin[1]

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PS2-9 Annealing Effects on Luminescent Properties of Eu^{3+} Doped $Gd_2Zr_2O_7$ Nanopowders

M. S. Rabasovic[1], D. Sevic[1], J. Krizan [2], M. D. Rabasovic[1] and N. Romcevic[1]

[1] Institute of Physics, University of Belgrade, Serbia, [2]AMI d.o.o, Trstenjakova 5, 2250 Ptuj, Slovenia

PS2-10 The morphological characterization of mechanically activated ZnO powder

A. Peleš[1], S. Filipović[1], N. Obradović[1], J. Krstić[2], V. Pavlović[1]

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PS2-11 Strontium Containing Polyphosphate Glass for Fabrication of 3D-scafold for Biomedical Application

V. D. Živanović [1], S. D. Matijašević[1], J. D. Nikolić [1], Grujić [2], S. V. Smiljanić[2,] S. N. Zilđović[1], V.S. Topalović[1]

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PS2-12 Reduction of doubtful detection of micro-nucleus in human lymphocyte

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PS2-13 Nanometric oxide films obtained by applying pulsed electric discharges

Topala Pavel, Thighineanu Ion

Academy of Science of Moldova, Moldova

PS2-14 Thermally Induced Structural Transformations of $Fe_{73.5}Cu_1Nb_3Si_{15.5}B_7$ Amorphous Alloy

Dragica M. Minić[1], Milica Vasić[1], Dušan M. Minić[2], Bohumil David[3], Vladimir A. Blagojević[1], Tomáš Žák[3]

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PS2-15 The Correlation of the Electric Resistance Change and Density of the Fermi Level Electron States of the Amorphous Alloy NiFeWCu

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PS2-16 Development of Cu-C Composite Microstructure

Rebeka Rudolf[1,2], Nebojša Romčević[3]

[1] University of Maribor, Faculty of Mechanical Engineering, Slovenia, [2] Zlatarna Celje d.d. Slovenia, [3] University of Belgrade, Institute of Physics, Belgrade, Serbia

PS2-17 The Influence of the Mechanochemical Activation and Heat Effect on the Magnetic Properties of the Powder System $BaTiO_3$ - Fe_xO_y

[1]Z. Ristanovic, [2]S. Djukic, [2]A. Plazinic, [1]D. Sretenovic, [2]A. Maricic

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PS2-18 Problems of Thermodynamically Equilibrium and Integral Characteristics of Entropy

Stanislav Veljković[1], Ivan Stefanović[1] , Časlav Stefanović[2]

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PS2-19 The Ho_2O_3 Concentration Influence on $BaTiO_3$ – ceramics Fractal Structures

D. Sirmić[1], M.Cvetanović[1], F. Bastić[1], V. Mitić[1,2], Lj. Kocić[1], S. Janković[3], V. Paunović[1], M. Miljković[4]

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PS2-20 The Sintering Temperature Influence on $BaTiO_3$ – ceramics Microstructure Fractal Nature

F. Bastić[1], D. Sirmić[1], M.Cvetanović[1], S. Janković[2], V. Mitić[1,3], Lj. Kocić[1], V. Paunović[1], B. Jordović[4]

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PS2-21 The Fractal Nature Grains Shape Reconstruction on the way to Microstructure Prognosis

Filip Bastić[1], Danijel Sirmić[1], Miloš Cvetanović[1],V.V. Mitić[1,2], V. Lj.Kocić[1], V. Paunović[1],
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PS2-22 Statistical analysis of the influence of temperature on microstructure contact surfaces on BaTiO3 -ceramics doped with Ho_2O_3

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PS2-23 $BaTiO_3$ – ceramics and fractal microstructure analyses

M. Cvetanović[1], F. Bastić[1], D. Sirmić[1], V. Mitić[1,2], Lj. Kocić[1], V. Paunović[1], M. Miljković[3]
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PS2-24 The Electrical Characteristics of Nb doped $BaTiO_3$ Ceramics

Miloš Marjanović[1], Miloš Đorđević[1], Vesna Paunović[1], Vojislav Mitić[1,2]
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PS2-25 Influence of Sm_2O_3 on the Microstructure and Dielectric Characteristics of Codoped $BaTiO_3$ Ceramics

Vesna Paunović[1], Vojislav Mitić[1,2], Ljiljana Živković[1], Ljubiša Kocić[1]
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PS2-26 Microstructure samples preparation and analysis on the way for statistical and fractals applications

Miroslav Miljkovic[1], Vesna Paunovic[1], Ljubisa Kocic[1], Slobodanka Jankovic[3], Vojislav Mitic[1,2]
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PS2-27 Integral Characteristics of Distribution of Gas Molecules Velocity

Janja Nedović [1] , Dimitrije Stefanović[1] , Dejan Blagojević[2]
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PS2-28 The Influence of Calcination Temperature on the Internal Morphology of a Fe_2O_3-Cr_2O_3 Porous Catalyst Used in the Water-gas Shift Reaction

Andrei Rotaru[1,2] and Petre Rotaru[1]
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PS2-29 The Effect of Calcination Condition on the Structural and Textural Properties of Mg(II) Doped Mesoporous Alumina

Zorica Vuković, Tatjana Novaković, Ljiljana Rožić, Srđan Petrović
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PS2-30 Hydrogen Retention in Glassy Carbon

Zoran Jovanović, Ana Kalijadis, Zoran Laušević
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PS2-31 Influence of Mortmorillonite/Beidelite Ratio on Electrochemical Response of *p*-Nitrophenol at Smectite Modified Glassy Carbon Electrode

M. Žunić[1], A. Milutinović-Nikolić[1], D. Stanković [2], D. Manojlović[2], N. Jović-Jovičić[1], P. Banković[1], Z. Mojović[1], D. Jovanović[1]
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PS2-32 Oxygen Reduction Reaction on Palladium Modified Zeolite 13X

Zorica Mojović, Tihana Mudrinić, Predrag Banković, Nataša Jović-Jovičić, Ana Ivanović-Šašić, Aleksandra Milutinović-Nikolić, Dušan Jovanović,
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PS2-33 General Factorial Design in Adsorption Process of Acid Yellow 99 on Hexadecyl Trimethyl Ammonium Modified Smectite

N. Jović-Jovičić, A. Ivanović-Šašić, A. Milutinović-Nikolić, P. Banković,
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PS2-34 The Influence of the Nickel Incorporation Method on the Performance of Bentonite Based Electrodes in Electrooxidation of Phenol

T. Mudrinić[1], Z. Mojović[1] A. Milutinović-Nikolić[1], P. Banković[1], M. Žunić[1], N. Jović-Jovičić[1] N. Vukelić[2], D. Jovanović[1]
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PS2-35 Use of the Complex Salt for the Charge Obtaining with the Aim of Reactionary SPS - Sintering of TiN - TiB_2 – Ni Composite

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PS2-36 Research of the Thermodynamic Laws of Reactionary SPS-sintering of TiB_2 – TiN Composition

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PS2-37 Properties of Magnesium Titanate Ceramic Obtained by Two Stage Sintering

S. Filipovic[1], N. Obradovic[1], V. B. Pavlovic[1], D. Kosanovic[1], M. Mitric[2], V. Paunovic[3], V. Pouchly[4], M. Kachlik[4], K. Maca[4]
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PS2-38 Influence of Mechanical Activation on the Constituents of the MgO-Al_2O_3-SiO_2-MoO_3 System

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PS2-39 Mechanism and Kinetics of Dissolution of Glass-ceramics in Simulated Body Fluid (SBF)

Jelena. D. Nikolić[1], Vladimir. D. Živanović[1], Snežana N. Zildžović[1], Srđan D. Matijašević[1], Snežana R. Grujić[2], Sonja V. Smiljanić[2], Vladimir S. Topalović[1]
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PS2-40 Equivalent electrodes' method (EEM) and the Hybrid boundary element method (HBEM) application

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PS2-41 Determination of the Martensitic and Reverse Transformation Temperatures in Copper-based Shape Memory Alloys

Ana Kostov, Radiša Todorović, Aleksandra Milosavljević
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PS2-42 Microstructural Investigation of the Ternary Cu-Al-Ag System

Zdenka Stanojević Šimšić[1], Dragana Živković[2], Ana Kostov[1] Dragan Manasijević[2], Tamara Holjevac Grgurić,[3] Ivana Marković[2], Radiša Todorović [1]
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PS2-43 Investigation of Thermodynamic Properties of Cu-Al-Zn Alloys

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PS2-44 The Influence of Temperature on Microstructure Contact Surfaces on $BaTiO_3$ – ceramics doped with Ho_2O_3

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PS2-45 Targeted Synthesis of Ceramic-Polymer Nanocomposites

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