

11th Conference for Young Sciences in Ceramics

ESR Workshop, COST IC1208

21.10.2015. Wednesday

09.00-18.00 h Registration - Conference Desk

INVITED LECTURE, IT1 - [Francis Cambier](#), *Belgian Ceramic Research Centre, Mons, Belgium*, **The use of lasers to obtain complex shape ceramics**

INVITED LECTURE, IT2 - [Paula Vilarinho](#), *University of Aveiro, Portugal*, **Is potassium-sodium niobate a lead free alternative to PZT?**

INVITED LECTURE, IT3 - [Akos Kukovecz](#), *University of Szeged, Hungary*, **Nanotechnology and sensors nanocomposites**

	Amphitheater	Hall-1	Hall-2	Ceremonial Hall
11.00-11.30 h	Opening ceremony-SM			
11.30-12.15 h	IT1 F. Cambier			
12.15-13.15 h	Welcome party			
13.15-14.00 h	IT2 P. Vilarinho-			
14.00-14.45 h	IT3 A. Kukovecz			
14.45-15.15 h		Coffee break		
15.15-16.45 h		Synthesis of ceramic powders - 1 A1 A. Kompch, <i>et al.</i> , Germany Synthesis and structural analysis of Mn-doped ZnO nanoparticles A2 A. Marzec, <i>et al.</i> , Poland Hydrothermal synthesis of composite heterostructures in the TiO₂-SnO₂ system A3 V. Nikolic, <i>et al.</i> , Serbia Solvothermal synthesis of magnetite nanoparticles suitable for application in magnetic hyperthermia A4 M. Piciorus, <i>et al.</i> , Romania Spherical silica nanoparticles obtained by Stober process. Tetra-ethyl-orthosilicate concentration influence upon silica nanoparticles morphology A5 J. Pantić, <i>et al.</i> , Serbia Phase evolution of sphehne based	Ceramic processing - 1 A7 A. Chmielarz, <i>et al.</i> , Poland Ti₂AlC gel-cast foams-properties and characterization A8 K. Wojciechowski, <i>et al.</i> , Poland Translucent zirconia polycrystals prepared from nanometric powders C1 J. Roleček, <i>et al.</i> , Czech Republic Ice-templating of ceramics in industrial scale C2 J. Zygmuntowicz, <i>et al.</i> , Poland Alumina matrix ceramic-nickel composites formed by centrifugal slip casting A9 A. Presenda, <i>et al.</i> , Spain Low temperature degradation of zirconia materials sintered via microwave heating technology	

		ceramics during annealing A6 D. Nicheva, <i>et al.</i> , Bulgaria Study of nickel-cobalt spinels prepared by Pechini method	A10 P. Ctibor, <i>et al.</i> , Czech Republic Extremely thick coating prepared from TiO₂ by plasma spraying	
16.45-17.00 h		Coffee break		
17.00-18.15 h		Ceramics for Energy - 1 C3 F. Ulu, <i>et al.</i> , Belgium Development of core-shell structured metal oxide powders to be used as lithium ion battery cathode materials A11 M. Botros, <i>et al.</i> , Germany Aluminum-doped Li₇La₃Zr₂O₁₂ as a solid electrolyte for lithium-ion batteries A12 D. Ciria, <i>et al.</i> , France Mechanical properties of fully dense ceramic electrolytes for Solid Oxide Fuel Cells C4 M. Plodinec, <i>et al.</i> , Croatia Ceramic composites based on TiO₂ nanotubes for application in solar cells A13 Z. Slavkova, <i>et al.</i> , Bulgaria Characterization of LiNaSO₄ for batteries application	Engineering ceramics - 1 A14 U. Akkasoglu, <i>et al.</i> , Turkey Pressureless sintering of SiAlON ceramics for cutting tool application C5 A. Dubiel, <i>et al.</i> , Poland Mechanical and thermal properties of silicon nitride-titanium nitride particulate composites C6 A. Wilk, <i>et al.</i> , Poland Aluminium oxynitride - hexagonal boron nitride composites with anisotropic properties C7 O. Poliarus, <i>et al.</i> , Ukraine High-temperature oxidation character of NiAl-ZrB₂ composite materials C8 V. Tsukrenko, <i>et al.</i> , Ukraine Ageing of ceramics in the ZrO₂-Y₂O₃-CeO₂-CoO-Al₂O₃ system	

22.10.2015. Thursday

08.00-18.00 h Registration - Conference Desk

INVITED LECTURE, IT4 - Anne Leriche, University of Valenciennes and Hainaut-Cambresis, Maubeuge, France, **Comparison of two different methods to process macroporous scaffolds for bone substitution applications**

INVITED LECTURE, IT5 - Markus Winterer, University of Duisburg Essen, Germany, **Routes to nanoparticles optimized for energy technology**

INVITED LECTURE, IT6 - Offer Schwartzglass, Faculty of Engineering, Shenkar College of Engineering & Design, Israel, **Advanced ceramic material for efficient ultrasonic cleaning and micro blowers realization**

INVITED LECTURE, IT7 - Andras Sapi, University of Szeged, Hungary, **3D Mesoporous oxide supported platinum nanoparticles for heterogenous catalytic applications - Gas vs. liquid phase reactions**

	Amphitheater	Hall-1	Hall-2	Ceremonial Hall
09.15-11.15 h		<p>Synthesis of ceramic powders - 2</p> <p>A15 A. Ghafarinazari, <i>et al.</i>, Italy Thermal oxidation mechanism of mesoporous silicon</p> <p>A16 A. Levisch, <i>et al.</i>, Germany Chemical vapor synthesis of aluminum nitride nanoparticles from metallic aluminum</p> <p>A17 R. Crisan, <i>et al.</i>, Romania Nano-meter sized maghemite with high surface area and superparamagnetic behavior synthesis by oxidation of magnetite</p> <p>A18 S. Lukic, <i>et al.</i>, Germany Chemical vapor synthesis (CVS) of Ga₂O₃ and GaN nanoparticles for water splitting</p> <p>Electroceramics -1</p> <p>C9 V. Tsygoda, <i>et al.</i>, Ukraine Thermo-electromotive force of multicomponent composites based on the refractory oxygen-free compounds</p> <p>A19 N. Kanas, <i>et al.</i>, Norway Ceramic processing of all-oxide ceramic thermoelectric module</p> <p>A20 J. Lelièvre, <i>et al.</i>, France New lead-free materials with A_{1/2}Bi_{1/2}BO₃</p>	<p>Bioceramics - 1</p> <p>A22 D. Larionov, <i>et al.</i>, Russia Osteoconductive ceramics with a specified system of interconnected pores based on monophasic calcium phosphates</p> <p>A23 M. Putz, <i>et al.</i>, Romania Mixed cationic templates controlling ordered silica morphology</p> <p>C10 N. Aničić, <i>et al.</i>, Slovenia The influence of polymer characteristics and particle morphology on the elution control of vanadate ions from V₂O₅/polymer composites</p> <p>A24 A. Wajda, <i>et al.</i>, Poland The structure and textural characterization of zinc doped bioactive glasses from NaCaPO₄-SiO₂ system</p> <p>A25 T. Đorđević, <i>et al.</i>, Serbia Evaluation of mesoporous silica and titanium dioxide as antibiotic carriers in drug delivery systems</p> <p>A26 A. Vladescu, <i>et al.</i>, Romania Improvement of the mechanical and antibacterial properties of hydroxyapatite</p> <p>A27 M. Radović, <i>et al.</i>, Serbia Synthesis of alumina powders and their insecticidal effect against</p>	

		formula (A=Rb; B=Ti) A21 J. Ćirković, <i>et al.</i> , Serbia Structural and electrical properties of BST ceramics prepared by hydrothermally assisted complex polymerization method	<i>Acanthoscelides obtectus say</i> A28 P. Jeleń., Poland Spectroscopic studies of bioactive coatings based on silicon oxycarbide glasses	
11.15-11.45 h		Coffee break		
11.45-12.30 h	IT4, A. Leriche			
12.30-13.15 h	IT5 M. Winterer			
13.15-14.45 h				Lunch break
14.45-15.30 h		IT6 O. Schwartzgless	IT7 A. Sapi	
15.30-17.00 h		COST Workshop - 1 E1 R.M. Oliveira Pinho, <i>et al.</i> , Portugal Effect of poling on dielectric, piezoelectric and ferroelectric properties of doped potassium sodium niobate E2 J. Zaffran, <i>et al.</i> , Israel Improving NiOOH catalytic activity in electrochemical water splitting using transition metal dopants: A first-principles calculation based study E3 O.A. Condurache, <i>et al.</i> , Romania Study of ferroelectric-relaxor BaCe_xTi_{1-x}O₃ ceramics E4 N.I. Ilić, <i>et al.</i> , Serbia BiFeO₃ ceramics densification study E5 L. Fulanović, <i>et al.</i> , Slovenia Characterization of 0.9Pb(Mg_{1/3}Nb_{2/3})O₃-0.1PbTiO₃ electrocaloric multilayered structures prepared by tape casting E6 I. Turcan, <i>et al.</i> , Romania Investigation of BaSrTiO₃ porous ceramics	Bioceramics - 1 A29 A. Tikhonov, <i>et al.</i> , Russia Intercalation of layered calcium phosphate and synthesis of ceramics based on it Optics A30 A. Sidorowicz, <i>et al.</i> , Poland Influence of thulium and holmium oxide powders morphology on properties of transparent Tm, Ho:YAG A31 A. Bjelajac, <i>et al.</i> , Serbia Microwave assisted synthesis of CdS quantum dots in DMSO A32 M. Nakielska, <i>et al.</i> , Poland Spectroscopic investigations of Tm, Ho:YAG ceramics for solid state laser applications A33 I. Dinić, <i>et al.</i> , Serbia Hydrothermal synthesis of optically active rare earth fluorides A34 M. Chaika, <i>et al.</i> , Ukraine Influence of Yb²⁺ on optical properties of garnet YAG:Yb garnet	
17.00-17.15 h		Coffee break		
17.15-18.30 h		COST Workshop - 2 E7 B. Bajac, <i>et al.</i> , Serbia Structure and properties of multiferroic BaTiO₃/NiFe₂O₄ thin films obtained by	Engineering ceramics - 2 A35 S. Ilic, <i>et al.</i> , Serbia Phase development and thermal behaviour of hybrid sol-gel derived	

		<p>solution deposition technique</p> <p>E8 V.A. Lukacs, <i>Romania</i> Biomorphic growth and functional properties of nickel oxide 1-D microstructures</p> <p>E9 B. Belec, <i>et al.</i>, <i>Slovenia</i> Magnetic properties of plate-like composite nanoparticles combining soft-magnetic iron oxide with hard-magnetic barium hexaferrite</p> <p>E10 I.V. Ciuchi, <i>et al.</i>, <i>Italy</i> Enhancement of the energy storage properties in PLZT ceramics with compositions across FE-AFE phase boundary</p> <p>E11 E. Đurđić, <i>et al.</i>, <i>Serbia</i> The cation distribution in NiFe₂O₄ and NiFe_{1.85}Y_{0.15}O₄: Raman and X-ray diffraction studies</p>	<p>mullite precursor</p> <p>A36 A. Dudek, <i>et al.</i>, <i>Poland</i> Subcritical crack growth in oxide and non-oxide ceramics using the Constant Stress Rate Test</p> <p>A37 T. Csanádi, <i>et al.</i>, <i>Slovakia</i> Micro-scale plasticity and elastic behaviour of ceramic crystals under micropillar compression</p> <p>A38 K. Kornaus, <i>et al.</i>, <i>Poland</i> The influence of sintering temperature and additive on the microstructure of pressure-less sintered tungsten carbide</p> <p>C11 E. Okur, <i>et al.</i>, <i>Turkey</i> Improving the thermal shock properties of Y-alpha-SiAlON/glass composite</p>	
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20.00-23.00 h Restaurant "Fontana" *Meeting of Young Ceramist Network of the European Ceramic Society*
F. Cambier and P. Vilarinho - Invited talks

23.10.2015. Friday

08.00-10.00 h Registration - Conference Desk

INVITED LECTURE, IT8- [Lucian Pintilie](#), *National Institute of Materials Physics, Bucharest, Romania*, **Polarization driven effects and the role of interfaces in ferroelectric thin films and heterostructures**

INVITED LECTURE, IT9 - [Endre Horváth](#), *Ecole Polytechnique Fédérale de Lausanne, Switzerland*, **From synthesis to application of photovoltaic perovskite nanowires**

INVITED LECTURE, IT10 - [Roger Anderton](#), *United Kingdom*, **Boscovich's Unification that came after Newton's Unification**

INVITED LECTURE, IT11 - [Dragoslav Stoiljkovic](#), *University of Novi Sad, Serbia*, **From Boscovich's theory to modern quantum theory**

	Amphitheater	Hall-1	Hall-2	Ceremonial Hall
09.15-11.15 h		COST Workshop - 3 E12 A. Chandran, <i>et al.</i> , Serbia Synthesis and structural characterizations of SnO₂ thick films E13 V. Preutu, <i>et al.</i> , Romania Preparation and properties of PCL-functional oxide composites E14 A. Dzunuzovic, <i>et al.</i> , Serbia Properties of BaTiO₃ - NiZnFe₂O₄ multiferroic composites obtained by auto-combustion synthesis E15 J. Vukmirovic, <i>et al.</i> , Serbia Fabrication of BaTiO₃ thin films by inkjet printing Ceramics processing -2 A39 J. Hruby, <i>et al.</i> , Czech Republic Calculation of activation energy and its changes during sintering using MSC and Wang & Raj models C12 A. Miazga <i>et al.</i> , Poland Graded ceramic/metal composites obtained by the centrifugal slip casting A40 V. Mackert <i>et al.</i> , Germany UV laser sintering of SnO₂ and ZnO thin films produced by electrophoretic deposition A41 R. Cabezas-Rodríguez, <i>et al.</i> , Spain	Bioceramics. - 2 A42 S. Kurbatova, <i>et al.</i> , Russia Synthesis and characterization of resorbable calcium phosphate bioceramics with a ratio of 0,5≤Ca/P≤1 A43 M.J. Lukić, <i>et al.</i> , Serbia Simultaneous thermal analysis and dilatometric study of HAP-LiFePO₄ system A44 M. Slama, <i>et al.</i> , Czech Republic Effect of colloidal milling on the physical, mechanical and biological properties of hydroxyapatite monoliths prepared by electrophoretic deposition A45 L. Stipniece, <i>et al.</i> , Latvia Synthesis and characterization of divalent cation substituted calcium phosphates A46 M. Kuzina, <i>et al.</i> , Russia Mixed-anionic calcium phosphate powders for bioresorbable ceramic A47 T. Maravić, <i>et al.</i> , Serbia Influence of dental composite core material on biomedical properties of premolars restored with a zirconia full crown: A finite element analysis A48 T. Uhlířová, <i>et al.</i> , Czech Republic Elastic properties of cellular alumina ceramics prepared by biological	

		Synthesis of yttrium silicate by solid-liquid state reaction for environmental barrier coatings	foaming A49 M. Mirković, <i>et al.</i> , Serbia Synthesis of monetite (CaHPO₄) by mechanochemical treatment of brushite (CaHPO₄·2H₂O)	
11.15-11.45 h		Coffee break		
11.45-12.30 h	IT8, L. Pintilie			
12.30-13.15 h	IT9 E. Horvat			
13.15-14.45 h				Lunch break
14.45-15.15 h		IT10 R. Anderton	Demonstration of equipment	
15.15-15.45 h		IT11 D. Stoiljkovic		
15.45-17.00 h		<p>Bioceramics - 3</p> <p>C13 G. Kazakova, <i>et al.</i>, Russia Resorbable bioceramics in Ca₃(PO₄)₂ – Mg₂P₂O₇ system</p> <p>A50 I. Narkevica, <i>et al.</i>, Latvia Development of innovative 3D porous TiO₂ ceramic scaffolds for orthopaedic applications</p> <p>A51 J. Sekaninova, <i>et al.</i>, Czech Republic Calcium partially stabilized ZrO₂ bioceramics nanocrystals</p> <p>A52 M. Prekajski, <i>et al.</i>, Serbia Ouzo effect – as the new simple nanoemulsion method for synthesis of strontium hydroxyapatite nanospheres</p> <p>A53 M.D. Vranceanu, <i>et al.</i>, Romania Calcium phosphate coatings deposited on Ti substrate using electrochemically assisted deposition</p>	<p>Catalysts & Ceramics for Energy</p> <p>A54 T. Varga, <i>et al.</i>, Hungary Synthesis, characterisation, and electrochemical properties of graphite oxide/vanadate nanowire composites</p> <p>A55 N. Lysunenکو, <i>et al.</i>, Ukraine Electrical efficiency of SOFCs with 8YSZ and 10Sc1CeSZ electrolytes</p> <p>A56 S. Dmitrović, <i>et al.</i>, Serbia Synthesis and characterization of Ag doped ceria nanopowders</p> <p>A57 K.L. Juhasz, <i>et al.</i>, Hungary Synthesis and characterization of platinum nanoparticles with controlled size for heterogen catalytic processes</p> <p>C14 J. Sroka, <i>et al.</i>, Poland Improved properties of the epoxy – fly ash composites by silane treatment of the filler</p>	
17.00-17.15 h		Coffee break		
17.15-18.30 h		<p>Electroceramics - 2</p> <p>A58 M. Čebela, <i>et al.</i>, Serbia Synthesis, optical and magnetic properties studies of multiferroic BiFeO₃</p> <p>A59 C. Vlăduț, <i>Romania</i> ZnO based films with sensing properties</p> <p>C15 M. Drozdova, <i>et al.</i>, Estonia Electrical behavior of zirconia-alumina nanofibers-graphene composites</p>	<p>Engineering ceramics - 3</p> <p>C18 A. Kukharchik, <i>et al.</i>, Russia Nano- and bio-structured materials: Surfaces and mesophase features</p> <p>C19 M. Pareiko, <i>et al.</i>, Ukraine Self-fluxing Fe-based alloy with TiB₂ additives for the spraying wear-resistant coatings</p> <p>C20 D. Németh, <i>et al.</i>, Slovakia FEM analysis of cracking around the</p>	

		<p>C16 C. Ianasi, <i>et al.</i>, Romania Fe₂O₃-SiO₂-PVA hybrid xerogels, precursors for superparamagnetic nanocomposites, potential candidates as MRI T2 contrast agents</p> <p>C17 E. Pawlikowska, <i>et al.</i>, Poland Ferroelectric barium-strontium titanate and ceramic-polymer composites based on BST in terahertz radiocommunication applications</p>	<p>indent in W-C coating</p> <p>C21 K. Jach, Poland Modification of quartz and ceramic substrates by deposition of tungsten layers</p> <p>C22 I. Sytnyk, <i>et al.</i>, Ukraine The structure and properties of chromium carbide steels with titanium nitride coating</p>	
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19.30-23.00 h Social Event – Excursion

24.10.2015. Saturday

INVITED LECTURE, IT12 - Andreja Gajovic, *Ruđer Bošković Institute, Zagreb, Croatia*, **Raman spectroscopy technique and specific applications for study of ceramics**

INVITED LECTURE, IT13 - Konstantinos Giannakopoulos, *National Centre for Scientific Research "Demokritos", Athens, Greece*, **Structural characterisation of layers for advanced non-volatile memories**

	Amphitheater	Hall-1	Hall-2	Ceremonial Hall
09.15-10.15 h		<p>Synthesis of ceramic powders - 3</p> <p>A60 M. Nikolić, <i>et al.</i>, Serbia Synthesis and characterization of mesoporous and superparamagnetic bilayered-shell aroundsilica core particles</p> <p>A611 S. Ognjanovic, <i>et al.</i>, Germany Characterization of aluminum nitride nanoparticles synthesized by chemical vapor synthesis</p> <p>C23 S. Ilies, <i>et al.</i>, Romania Silver modified zeolite-multi-walled carbon nanotubes-epoxy composite electrode for electrochemical detection and degradation of ibuprofen in water</p> <p>C24 T. Minović Arsić, <i>et al.</i>, Serbia Synthesis and characterization of ceria/carbon cryogel composite</p>	<p>Electroceramics - 3</p> <p>A62 J. Stanojev, <i>et al.</i>, Serbia Dielectric properties of barium titanate based thin films</p> <p>Traditional ceramics - 1</p> <p>T1 M. Kavanová, <i>et al.</i>, Czech Republic Characterization of the interaction between glazes and ceramic bodies</p> <p>T2 V. Topalović, <i>et al.</i>, Serbia Properties of sintered cordierite ceramics obtained by sol-gel methods of powder synthesis</p> <p>T3 A. Abdelghany, <i>et al.</i>, Egypt Effect of transition metal addition in the bioactivity of borate bioglass: A descriptive correlational study</p>	
10.15-11.00 h		IT12 Andrea Gajovic		
11.00-11.15 h		Coffee break		
11.15-12.00 h		IT13 K.Giannakopulos		
12.00-13.00 h		<p>Traditional ceramics - 2</p> <p>T4 K. Pasiut, <i>et al.</i>, Poland The influence of molar ratio Al_2O_3/SiO_2 on the structure of ceramic glazes</p> <p>T5 A. Gerle, <i>et al.</i>, Poland Corrosion of $MgCr_2O_4$, $MgAl_2O_4$, $MgFe_2O_4$ spinels in $SO_2-O_2-SO_3$ atmosphere – thermodynamic evaluation</p> <p>T6 O. Chudinovich, <i>et al.</i>, Ukraine Phase equilibria and properties of solid solutions in the $La_2O_3-Yb_2O_3$ and $La_2O_3-Y_2O_3-Yb_2O_3$ systems at 1500 °C</p>	<p>Ceramics processing -3</p> <p>C25 O. Kornienko, <i>et al.</i>, Ukraine Interaction cerium oxide with dysprosia at 1500 °C</p> <p>C26 M. Marych, <i>et al.</i>, Ukraine Features of the structure and properties of ceramic composite system B_4C – eutectic alloy (B_4C-TiB_2)</p> <p>C27 S. Sadigh Akbari, <i>et al.</i>, Turkey Mechanical properties of magnesia-partially stabilized zirconia with addition of silicon nitride</p>	

		T7 M. Głuszek, <i>et al.</i> , Poland Preparation, properties and applications of shear thickening fluids based on silica, glycols and dopants	C28 J. Shishkina, Ukraine Fabrication of Ti_xAl_y/TiC based ceramic composite powder from the TiH_2-Al-C system	
13.00-13.15 h		Closing ceremony		