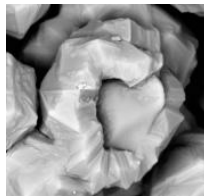


**ic-cmtp4** CONFERENCE DETAILED PROGRAM

**The 4<sup>th</sup> International Conference on  
Competitive Materials and Technology Processes**

Miskolc-Lillafüred, Hungary  
October 3-7, 2014

**CONFERENCE PROGRAM**



**ic-cmtp4**

# **ic-cmtp4 CONFERENCE DETAILED PROGRAM**

## **SESSIONS**

**SESSION 1:** Advanced Materials for Bio- and Medical Applications

**SESSION 2:** Advanced Materials for Extreme Applications

**SESSION 3:** Advanced Nanomaterials with Predesigned Properties

**SESSION 4:** Biomaterials Derived Ceramics and Composites

**SESSION 5:** Glasses, Coatings and Related Materials

**SESSION 6:** Hetero-Modulus and Hybrid Materials

**SESSION 7:** Light-Weight Metals and Alloys

**SESSION 8:** Materials with Extreme Dynamic Strength for Safety and Security

**SESSION 9:** Membranes and Catalysts

**SESSION 10:** Minerals for Environmental and Medical Application

**SESSION 11:** Nanomaterials for Environment and Health

**SESSION 12:** Novel Synthesis and Processing Technology

**SESSION 13:** Phase Diagram as a Tool of Materials Science

**SESSION 14:** Polymer Derived Ceramics and Composites

**SESSION 15:** Processing and Properties and Application of Ceramics

**SESSION 16:** Testing and Characterization of Materials – Methods, Equipment and Errors

**SESSION 17:** Mechanical Properties and Processing Technology of Advanced Materials

**is-ism1:** The 1<sup>st</sup> International Symposium on Intelligent and Smart Materials

**is-icm2:** The 2<sup>nd</sup> International Symposium on Innovative Construction Materials

**is-icbm2:** The 2<sup>nd</sup> International Symposium on Innovative Carbon and Carbon Based Materials

## ic-cmtp4 CONFERENCE DETAILED PROGRAM

October 3. Monday	HUNYADI JÁNOS HALL
14:00 – 14:15	CONFERENCE OPENING
14:15 – 16:05	PLENARY and KEYNOTE I.
16:05 – 16:30	POSTERS I. and Coffee Break
16:30 – 18:40	PLENARY and KEYNOTE II.
18:40 -19:20	WELCOME RECEPTION

October 4. Tuesday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 – 10:40	PLENARY and KEYNOTE III..		
10:40 – 11:00	COFFEE BREAK		
11:00 – 13:00	SESSION 1.	SESSION 2 .	SESSION 5. SESSION 13.
12:30 – 14:00	LUNCH		
14:00 – 19:00	SOCIAL PROGRAM I. and Free Program (City Tour and Thermal Cave Bath)		

October 5. Wednesday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 – 10:40	PLENARY and KEYNOTE IV..		
10:40 – 11:10	POSTERS SESSION II. and Coffee Break		
11:10 – 13:10	SESSION 16. SESSION 11.	SESSION 17.	SESSION 9. SESSION 12. SESSION 14.
13:00 – 14:00	LUNCH		
14:00 – 19:00	SOCIAL PROGRAM II. and Free Program (Castel Tour in Tokai Vine Region)		

## ic-cmtp4 CONFERENCE DETAILED PROGRAM

October 6. Thursday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 - 10:40	PLENARY AND KEYNOTE V.		
10:40 - 11:00	Coffee Break		
11:00 - 13:00	SESSION 15.	SESSION 3.	is-icbm2 SESSION 6. SESSION 3.
13:00 - 14:00	LUNCH		
14:00 - 15:10	PLENARY AND KEYNOTE VI.		
15:10 - 16:20	SHORT ORALS I.		
16:20 - 17:00	POSTERS III. and Coffee Break		
17:00 - 19:00	SESSION 1.	SESSION 15. is-icm2	is-ism1 SESSION 7.
19:30	ic-cmtp4 CONFERENCE DINNER		

October 7. Friday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 - 9:30	PLENARY AND KEYNOTE VI.		
9:30-10:30	is-icm2		
10:30-11:00	POSTERS SESSION IV. and Coffee Break		
11:00 - 12:45	SHORT ORALS II.		
12:45	CONFERENCE CLOSING		

## **ic-cmtp4 CONFERENCE DETAILED PROGRAM– October 3. Monday**

**11:00 – 12:30** **ic-cmtp4 Conference Board Meeting (Renesanzs Hall)**  
Prof. Dr. Laszlo A. GÖMZE, chair of **ic-cmtp4** Conference

### **OPENING AND PLENARY AND KEYNOTE LECTURES I.** Chair: Prof. Dr. Sergei N. KULKOV, Tomsk State University (Russia)

**14:00 – 14:05** **ic-cmtp4 Conference Opening**  
Prof. Dr. Sergei N. KULKOV (Russia)

**14:05 – 14:15** **Welcome Address**  
Prof. Dr. Laszlo A. GÖMZE  
chair of **ic-cmtp4** Conference (Hungary)

**14:15 – 14:50** **PLENARY LECTURE – 1<sup>ST</sup>**  
**Mesoscopic model of two-phase composites damage under mechanical and thermal loadings**  
Prof. Dr. Tomasz SADOWSKI - Lublin University of Technology (Poland)

**14:55 – 15:35** **PLENARY LECTURE – 2<sup>ND</sup>**  
**Gas adsorption induced joining for water vapor sealing of flexible device**  
Prof. Dr. Yasunori TAGA, Chubu University,(Japan)

**15:35 – 16:05** **KEYNOTE LECTURE – 1<sup>ST</sup>**  
**Scientific basis for creation materials based on titanium and aluminum minerals**  
Prof. Dr. Olga KOTOVA – SC UB RAS Syktyvkar (Russia)

**16:05 – 16:30** **POSTER SESSION I. and Coffee Break**  
Chair: Prof. Dr. Shigeru.NAGASAVA,  
Nagaoka University of Technology (Japan)

## **ic-cmtp4 CONFERENCE DETAILED PROGRAM– October 3. Monday**

### **PLENARY NAD KEYNOTE LECTURES II.**

**Chair** Prof. Dr. Tomasz **SADOWSKI** - Lublin University of Technology (Poland)

**16:30 – 17:10**

**PLENARY LECTURE – 3<sup>RD</sup>**

**15 years of development in the research phase diagrams for thermoelectric materials. Application of the Calphad method**

Prof. Dr. Jean-Claude **TEDENAC**, ITMO University (**Russia**) and University Montpellier 2 (**France**)

**17:10 – 17:50**

**PLENARY LECTURE – 4<sup>TH</sup>**

**Multifunctional doped glasses for photonic and plasmonic applications**

Prof. Dr. Nikolay **NIKONOROV**, ITMO University, (**Russia**)

**17:50 – 18:20**

**KEYNOTE LECTURE – 2<sup>ND</sup>**

**Oxides with anomalous properties for obtaining a composite materials**

Prof. Dr. Sergei **KULKOV**, Tomsk State University (**Russia**)

**18:20 – 18:40**

**KEYNOTE LECTURE – 3<sup>RD</sup>**

**Studying hot tearing in Al-Zn alloys using in-situ XR diffracting solidification**

Prof. Dr. Jean-Marie **DREZET**, Ecole Polytechnique Fédérale de Lausanne (**Switzerland**)

**18:40-19:20**

**Welcome Reception**

Prof. Dr. Laszlo A. **GÖMZE**

chair of **ic-cmtp4** Conference (**Hungary**)

## ic-cmtp4 CONFERENCE DETAILED PROGRAM– October 3. Monday

### POSTER SESSION I.

**Chair:** Prof. Dr. Shigeru NAGASAWA,  
Nagaoka University of Technology (Japan)

1.	<b>The glass transition temperature and infrared absorption spectra of TeO<sub>2</sub>-Nb<sub>2</sub>O<sub>5</sub>-TiO<sub>2</sub> glasses</b> A. El Adawy, Z. Wassel, R. El-Mallawany
2.	<b>Modified SiO<sub>2</sub>-based aerogels: the effect of the fluorinated substituent on the properties of materials</b> Nataliya A. Sipyagina, Sergey A. Lermontov, Alena N. Malkova
3.	<b>Synthesis and Ferroelectric Properties of KNbO<sub>3</sub> Thin Film Grown on a Pt/Ti/SiO<sub>2</sub>/Si Substrate using the RF Magnetron Sputtering Method</b> Sahn Nahm, Tae-Ho Lee, Dae-Hyeon Kim and Bo-Yun Kim
4.	<b>Role of Zn<sup>2+</sup> ion on the formation of reversible thermochromic polydiacetylene/zinc oxide nanocomposites</b> Nisanart Traiphol, Amornsak Chanakul, Anothai Kamphan, Rakchart Traiphol
5.	<b>Recovery of phosphoric acid from steel slag by ion-exchange resin (H-R) dissolution method</b> Takeshi Toyama, Takafumi Sakuma
6.	<b>Ceramic-like open-celled geopolymer foam as a porous substrate for water treatment catalyst</b> Tomáš Kovářík, Tomáš Křenek, Michal Pola, David Rieger, Jaroslav Kadlec, Petr Franče
7.	<b>The corrosion resistance of zinc coatings in the presence of boron-doped detonation nanodiamonds (DNA)</b> Burkat G.K., Alexandrova G.S., Dolmatov V.Yu., Osmanova E.D., Myllymäki V. and Vehanen A.
8.	<b>Paramagnetism features of the composite material obtained by the nanodiamond powder base</b> Dolmatov V.Y., Nguyen Thi Thanh Binh, Lapchuk N.M., Myllymäki V, Vehanen A.
9.	<b>Characterization of Ta-B-C nanostructured hard coatings</b> Jiri Bursik, Ivo Kubena, Milan Svoboda, Vilma Bursikova, Pavel Soucek, Lukas Zabransky, Petr Vasina
10.	<b>Electrospun Biocomposite Scaffolds Based on Polycaprolactone with Silicate-Containing Hydroxyapatite</b> Svetlana Gorodzha, Maria A. Surmeneva and Roman A. Surmenev
11.	<b>Fibrous Materials on Polyhydroxybutyrate and Ferric Iron (III)-Based Porphyrins Basis: Physical- Chemical and Antibacterial Properties</b> Anna Zykova, Anatoly Olkhov, Anton Lobanov, Olga Staroverova, Polina Tyubaeva, Petr Pantyukhov, Anatoly Popov, Alexey Iordanskii
12.	<b>Analysis of structure and dynamics of superfine polyhydroxybutyrate fibers for targeted drug delivery</b> Anna Zykova, Anatoly Olkhov, Elena Kucherenko, Petr Pantyukhov, Svetlana Karpova, Alexey Iordanskii
13.	<b>Metamaterial Absorber Based Multifunctional Sensor Application</b> Amirullah M.Mamedov, Zafer Ozer
14.	<b>Purification of phosphate Mineral of Southe-Eastern Constantiois deposit (Basin in Algeria)</b> Souad Bentaalla-Kaced, Karima Deramchi, Taha Aifa, Abdelaziz Boutrid and Mohamed Amine Belghoul
15.	<b>Electronic Structures, Optical and Magnetic Properties of Some Heusler Compounds for Spintronic Devices: ab initio calculations</b> Amirullah M.Mamedov, Selami Palaz, Husnu Koc, Haci Ozisik, Engin Deligoz, Ekmel Ozbay
16.	<b>Topological Insulators: Electronic Band Structure and Spectroscopy.</b> Amirullah M.Mamedov, Selami Palaz, Husnu Koc, Ekmel Ozbay
17.	<b>Thermophysical properties of ethylene glycol based yttrium aluminum garnet (Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>EG) nanofluids</b> Gaweł Żyła

## ic-cmtp4 CONFERENCE DETAILED PROGRAM– October 3. Monday

18.	<b>Pulsed Nd:YAG Deposition of Nanostructured FeS<sub>1-x</sub> Containing Metastable Phases</b> Tomáš Křenek, Stefan Karatodorov, Valentin Mihailov, Jarmila Savková, Rostislav Medlín
19.	<b>Control of the location and size of quantum dots nucleation using of a functional substrate inducing a lateral self-organization by a buried dislocation network</b> Salah Madani, Ahmed Boussaha
20.	<b>The effect of rejuvenation treatment on microstructure and mechanic properties of Ni-superalloy in gas turbine blade failures</b> M. E. Djeghlal, O. Sifi, S. Djeraf



## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 4. Tuesday

October 4. Tuesday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 – 10:40	PLENARY and KEYNOTE III..		
10:40 – 11:00	COFFEE BREAK		
11:00 – 13:00	SESSION 1.	SESSION 2 .	SESSION 5. SESSION 13.
12:30 – 14:00	BUFFET LUNCH		
14:00 – 19:00	SOCIAL PROGRAM I. and Free Program (City Tour and Thermal Cave Bath)		

HUNYADI JANOS HALL	
<p align="center"><b>PIENARY AND KEYNOTE LECTURES III.</b>  <b>Chair: Prof. Dr. László A. GÖMZE,</b>            University of Miskolc (<b>Hungary</b>)</p>	
8:30 - 9:10	<b>Formation of carbon matrices by pyrolysis of diphthalocyanines of metals: structure analysis by neutron and X-ray scattering</b> Prof. Dr. Vasily <b>LEBEDEV</b> , Petersburg Nuclear Physics Institute ( <b>Russia</b> )
9:10 - 9:40	<b>Engineering estimation of mechanical properties and processing technology of paperboard as structural plies of visco-elastic, plastic materials</b> Prof. Dr. Shigeru <b>Nagasawa</b> , Nagaoka University of Technology ( <b>Japan</b> )
9:40 - 10:10	<b>Multilayer BaTiO<sub>3</sub>/NiFe<sub>2</sub>O<sub>4</sub> thin films prepared by chemical solution deposition technique</b> Vladimir V. <b>SRDIC</b> , Branimir Bajac, Adelina Inculescu. University of Novi Sad ( <b>Serbia</b> )
10:10 - 10:40	<b>Blood rheology</b> Dr. Ursula <b>WINDBERGER</b> , Medical University Vienna ( <b>Austria</b> )

10:40 - 11:00

COFFEE BREAK

**HUNYADI JANOS HALL**

**ORAL PRESENTATIONS**

**SESSION 1: Advanced Materials for Bio- and Medical Applications**

**Chair:** Prof. Dr. Aleksandr **URAKOV**,  
Izhevsk State Medical Academy (Russia)

<b>11:00 - 11:20</b>	<b>Nest-Like Barium Hexaferrite Microspheres With Hierarchical Porous Structure for Drug Delivery</b> M. E. Contreras-García, S. Torres-Cadenas, A. Bravo-Patiño
<b>11:20 - 11:40</b>	<b>Biodegradable Nanocomposites With Encapsulated Magnetic Nanoparticles For Controlled Drug Release</b> Anna V. Bychkova, Valery E. Prusakov, Yuriy V. Maksimov, Regina Yu. Kosenko, Ekaterina L. Kucherenko, Alexey L. Iordanskii
<b>11:40 - 12:00</b>	<b>Development and application of monocrystalline and nanostructural materials for medical X-ray sources</b> M.L.Taubin, A.A. Pavlov, D.N. Chesnokov, A.A. Yaskolko
<b>12:00 - 12:20</b>	<b>Combined Mechanical and Electrical Study of Polymers of Biological Origin</b> Gabriella Zsoldos, Kalman Marossy, Kornel Szoda
<b>12:20 - 12:40</b>	<b>Sodium Hypochlorite Influence on Detoxification System of Man Organism – Practical Application and Thermodynamic Analysis</b> Alexander Slobodov, Olga Izotova, Andrey Uspensky, Mikhail Radin and Vladimir Sibirtsev
<b>12:40 - 13:00</b>	<b>Pills violate the physico-chemical state of the stomach contents</b> Aleksandr Urakov, Reshetnikov Alexey, Kopylov Maxim, Kasatkin Anton, Baimurzin Dmitry

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM I. and Free Program**

**BEATRIX HALL**

**ORAL PRESENTATIONS**

**SESSION 2: Advanced Materials for Extreme Applications**

**Chair:** Prof. Dr. László A. GÖMZE,  
University of Miskolc (**Hungary**)

<b>11:00 - 11:20</b>	<b>Highly Resistant Inorganic Materials – Possibilities and Problems of Thermodynamic Research</b> Alexander Slobodov, Alexander Uspensky, Stanislav Suvorov, Igor Panteleev, Alexander Sochagin, Dmitry Kremnev
<b>11:20 - 11:40</b>	<b>Fish scale-cellular composite structure for impact protection: numerical and experimental proof-of-concepts</b> Elliot Law, Yie Sue Chua, Sze Dai Pang and Ser Tong Quek
<b>11:40 - 12:00</b>	<b>Band Structure and Optical Properties of Kesterite Type Compounds: first principal calculations</b> Amirullah M.Mamedov, Selami Palaz, Huseyin Unver, Gokay Ugur, Ekmel Ozbay
<b>12:00 - 12:20</b>	<b>Kinetic and thermodynamic and surface analysis studies on corrosion inhibition of steels by Cetyltrimethylammonium/KI mixture in 5 M HCl medium : The effect of silicon and phosphorus contents in steel</b> Younes El Kacimi, Khaoula Alaoui, Mohcine Galai and Mohammed Ebn Touhami

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM I. and Free Program**

**RENEZANSZ HALL**

**ORAL PRESENTATIONS**

**SESSION 5: Glasses, Coatings and Related Materials and  
SESSION 13: Phase Diagram as a Tool of Materials Science**

**Chair: Prof. Dr. Nikolay NIKONOROV,  
ITMO University (Russia)**

<b>11:00 - 11:20</b>	<b>High Performance Ceramic Coatings as Friction Surfaces of Brake Rotors</b> Septimiu Popa, Rainer Gadow
<b>11:20 - 11:40</b>	<b>The influence of post-deposition annealing on the microstructure and properties of TiB<sub>x</sub>/TiSi<sub>y</sub>Cz multilayer deposited by PLD method</b> Agnieszka Twardowska, Agnieszka Kopia, Urszula Danuta Wdowik
<b>11:40 - 12:00</b>	<b>Effect of colouring pigments on the microstructure of crystal glazes</b> Andrea Simon, Mark Pavlicsak, Rober Géber, István Kocserha, Ferenc Kristály
<b>12:00 - 12:20</b>	<b>Polypropylene Itaconate incorporated with [Cu<sub>3</sub>(Btc)<sub>2</sub>] MOF as functional coating material of CO<sub>2</sub> Adsorbent</b> Atmanto Heru Wibowo, Witri Wahyu Lestari, Fitriana Jati Teteki, Yuni Krisyuningsih Krisnandi, Adhitasari Suratman
<b>12:20 - 12:40</b>	<b>Design of Efficient Thermoelectric Materials via First Principles Calculations</b> J.C. Tédénac, P. Jund, K. Niedziolka, P. Hermet

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM I. and Free Program**

## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 5. Wednesday

October 5. Wednesday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 – 10:40	PLENARY and KEYNOTE IV..		
10:40 – 11:10	POSTERS SESSION II. and Coffee Break		
11:10 – 13:10	SESSION 16. SESSION 11.	SESSION 17.	SESSION 9. SESSION 12. SESSION 14.
13:00 – 14:00	LUNCH		
14:00 – 19:00	SOCIAL PROGRAM II. and Free Program (Castel Tour in Tokai Vine Region)		

HUNYADI JANOS HALL	
<b>PIENARY AND KEYNOTE LECTURES IV.</b> <b>Chair: Prof. Dr. Yasunori TAGA,</b> <b>Chubu University (Japan)</b>	
8:30 - 9:10	<b>Novel Approaches of Silicon Carbide and Carbon Allotropes for Energy and Environmental Functions</b> Dr. Mikael SYVÄJÄRVI, Valdas Jokubavicius, Xinyu Liu, Jianwu Sun, Linköping Univresity (Sveden)
9:10 - 9:40	<b>Preparation of calcium carbonate/silicate compositionally graded hollow spherical particle by spray-drying</b> Takeshi TOYAMA, Nihon University (Japan)
9:40 - 10:10	<b>Radiation hardness of SiC power devices</b> Joachim BOLLMANN, TU Bergakademia Freiberg (Germany)
10:10 - 10:40	<b>Characterization of materials - uncertainty budgets in testing, measurement and analysis</b> Uwe BECK, M. Weise, BAM (Germany)

10:40 - 11:10

**POSTER SESSION II. and COFFEE BREAK**

<b>POSTER SESSION II.</b> <b>Chair: Prof. Dr. Rainer GADOW,</b> <b>University Stuttgart (Germany)</b>	
1.	<b>Nanosructured Organic Alkali-Soluble Silicate for Innovative Industrial and Construction Applications</b> Figovsky O.L., Kudryavtsev P.G.
2.	<b>Matrix-Isolated Smart Nanocomposite Materials - Alumina-Silicon Flocculants-Coagulants</b> Figovsky O.L., Kudryavtsev N., Kudryavtsev P.
3.	<b>Thermodynamic Parameters of Mixtures with Allowance for Phase Transition Components under Shock-wave Loading</b> Sergey Kinelovskii and Konstantin Maevskii
4.	<b>A novel computational homogenization method to design, mesh and evaluate the effective elastic response of multiphase composites</b> Toufik Outtas, Abdennour Benhizia, Toufik Kanit
5.	<b>Numerical Simulation of Mechanical Behaviour and Prediction of Effective Properties of Metal Matrix Composites with Consideration for Structural Evolution under Shock Wave Loading</b> Valerii V. Karakulov, Igor Yu. Smolin and Sergei N. Kulkov
6.	<b>Optical Properties of Polycrystalline Alumina and Ruby Fabricated by Pulsed Electric Current Sintering with Pre-Powder Treatments</b> Hien Huu Nguyen, Makoto Nanko and Khanh Quoc Dang
7.	<b>The effect of the addition ground olive stones on the physical and mechanical properties of clay bricks</b> Chelouah Nasser, Arezki Samia, Tahakourt Abdelkader
8.	<b>Properties of Oxide-Hydroxide Sintered Ceramics</b> R.V.Levkov, S.N. Kulkov
9.	<b>Micro-mechanical modeling of mechanical and electrical properties in homogenous piezoelectric ceramic by using boundary integral formulations</b> Mojtaba Biglar, Feliks Stachowicz, Tomasz Trzepiecinski and Magdalena Gromada
10.	<b>Transport Properties of Alivalent Substitution Solid Solutions of the System (1-x)PbF2-xYF3-SnF2</b> Vasily Lutsyk, Yuliya Pogorenko, Roman Pshenychnyi, Anatoliy Omel'chuk
11.	<b>Effects of post-discharge nitriding on structural and corrosion properties of 4140 low-alloy steel</b> A. Medina, L. Béjar, C. Aguilar, M. Contreras
12.	<b>A Study On The Development And Characterization of Antiviral Nanoparticles With Albumin</b> M. V. Basaveswara Rao, S.S.Manikiran, N. Rama Rao, K.R.S.Sambasiva Rao,
13.	<b>Calculation of the effective properties of composites with a transition layer</b> Maria A. Anisimova, Igor Sevostianov, Anna G. Knyazeva
14.	<b>Development of Dynamic Spallation Test for Oxide Scale with Fast Hard Ball Collision-Influences of Collision Material for Spallation of Oxide Scale</b> Kazuki Takahashi, Ryo Ishikawa, Ken Yamashita, Makoto Nanko
15.	<b>Mechanical properties of nonwoven geopolymer composites</b> David Riegert, Jaroslav Kadlec, Michal Pola
16.	<b>The influence of metakaolin substitution by blast-furnace slag in alkali-activated inorganic binders</b> Jaroslav Kadlec, David Rieger, Tomáš Kovářík, Pavel Novotný, Petr Franče, Michal Pola

## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 5. Wednesday

17.	<b>Shear superplasticity behavior and microstructure evolution in MDFed fine-grained Sn-1Bi alloy</b> Akbaripanah F., Moradi Y
18.	<b>Researches of mechanical behavior of the bone microvolumes and porous ceramics under uniaxial compression</b> Tatyana Kolmakova, Svetlana Buyakova, Sergey Kulkov

### HUNYADI JANOS HALL

#### ORAL PRESENTATIONS

##### SESSION 16:

#### Testing and Characterization of Materials and Methods, Equipment and Errors, SESSION 11: Nanomaterials for Environment and Health

**Chair: Dr. Uwe BECK,**

BAM Federal Institute for Materials Research and Testing (**Germany**)

11:10 - 11:30	<b>On specifics of rheological measurements for heavy highly-viscous oil</b> Larissa Strelets
11:30 - 11:50	<b>Efficiency Of Surface Treatments Between Dies And Forging Steels By Measuring Coefficient Of Friction</b> Kazuya Horie, Yasuyuki Kawamoto, Makoto Nanko, Yoshihiro Kuwabara and Satoru Nishiwaki
11:50 - 12:10	<b>Method development and validation for the quantitative application of mid-range infrared spectroscopy in GLP environment</b> János Elek, Angéla Simon, János Török, Angéla Csontos, Csaba Ballai
12:10 - 12:30	<b>Investigation of thermal properties of raw materials of asphalt mixtures</b> Róbert Géber, Andrea Simon, István Kocserha
12:30 - 12:50	<b>Characterization and Synthesis of Silica Nanoparticles-Crosslinked Hydrogels with Decorations of Aminopropyl Silane</b> David Alfonso Patiño Ruiz, Adriana Patricia Herrera Barros, aria Teresa Acevedo Morantes
12:50 - 13:10	<b>A Study On The Development And Evaluation Of Ritonavir - Albumin Nanospheres</b> M.V. Basaveswara Rao, S.S.Manikiran, N.Rama Rao, K.R.S.Sambasiva Rao, N.L Prasanthi

13:00 - 14:00

**LUNCH**

14:00-19:00

**SOCIAL PROGRAM II. and Free Program**

**BEATRIX HALL**

**ORAL PRESENTATIONS**

**SESSION 17: Mechanical Properties and Processing Technology of Advanced Materials**

**Chair:** Prof. Dr. Shigeru NAGASAWA,  
Nagaoka University of Technology (Japan)

<b>11:10 - 11:30</b>	<b>Laser Cutting of a Thick Glass Plate</b> Yukio Miyashita, Yohei Kurabe, Kazuki Shibasaki and Yuichi Otsuka
<b>11:30 - 11:50</b>	<b>Synthesis and characterization of Zirconia-Ytria nanoparticles in t' phase by sol-gel and spray drying.</b> M.E. Contreras-García , G. M. Rodríguez-Torres, J. Zarate-Medina , J.C. Rubio- Ávalos
<b>11:50 - 12:10</b>	<b>Analysis and prevention of liquid metal embrittlement occurring in resistance-spot-welded TWIP steel sheets</b> Hyungsoo Lee, Seok Su Sohn, Sang-Heon Kim, Taejin Song, Nack J. Kim and Sunghak Lee
<b>12:10 - 12:30</b>	<b>The Exchanges of Metal/Carbon Nanocomposites Electron Structures and Properties due to the p – Elements Intercalation</b> V.I. Kodolov, I.N. Shabanova, V.V. Trineeva, A.A. Kopilova, R.V. Mustakimov, S.A. Pigalev and N.S. Terebova
<b>12:30 - 12:50</b>	<b>Consolidation by Spark Plasma Sintering of PolyEtherEtherKetone</b> J.-C. Sébilleau, S. Lemonnier, E. Barraud, M.-F. Vallat, A. Carradò, M. Nardin
<b>12:50 - 13:10</b>	<b>Wedge cutting characteristics of copper foil stacked on adhesive tape</b> Shigeru Nagasawa, Weerayut Jina, Susumu Hayashihara

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM II. and Free Program**



**RENEZANSZ HALL**

**ORAL PRESENTATIONS**

**SESSION 9: Membranes and Catalysts and  
, SESSION 12: Novel Synthesis and Processing Technology and  
SESSION 14: Polymer Derived Ceramics  
Chair: Prof. Dr. Sergey KULKOV,  
Tomsk State University (Russia)**

<b>11:10 - 11:30</b>	<b>Design of nanocomposite active components and structured catalysts for steam/autothermal reforming of biofuels</b> S. Pavlova, M. Arapova, V. Sadykov, T. Larina, V. Rogov, T. Krieger, T. Glazneva, K. Parkhomenko, A.-C. Roger, O. Smorygo
<b>11:30 - 11:50</b>	<b>High Capacity MnOxZrO2 sorbent for elementary mercury capture: preparation, characterisation and comparison to other sorbents</b> J Lakatos, C E Snape
<b>11:50 - 12:10</b>	<b>Influence of Processing Time and Concentration in phosphoric acid treatment of Zinc Oxide</b> Hiroaki Onoda, Yurie Sato
<b>12:10 - 12:30</b>	<b>Effect of laser power and laser fluence on the size of TiO2 nanoparticles synthesized by pulsed laser ablation in deionized water</b> Amandeep Singh, Jorma Vihinen, Erkka Frankberg, Leo Hyvärinen, Mari Honkanen, Erkki Levänen
<b>12:30 - 12:50</b>	<b>Investigation on Interlaminar Strength of Thru Thickness Basalt Fiber Reinforced SiOC-Composites</b> Patrick Weichand

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM II. and Free Program**

## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 6. Thursday

October 6. Thursday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZSZANSZ HALL
8:30 – 10:40	PLENARY AND KEYNOTE V.		
10:40 – 11:00	Coffee Break		
11:00 – 13:00	SESSION 15.	SESSION 3.	is-icmb2 SESSION 6. SESSION 3.
13:00 – 14:00	LUNCH		
14:00 – 15:10	PLENARY AND KEYNOTE VI.		
15:10 – 16:20	SHORT ORALS I.		
16:20 – 17:00	POSTERS III. and Coffee Break		
17:00 – 19:00	SESSION 1.	SESSION 15. is-icm2	is-ism1 SESSION 7.
19:30	ic-cmtp4 CONFERENCE DINNER		

### HUNYADI JANOS HALL

#### PLENARY AND KEYNOTE LECTURES V.

**Chair:** Prof. Dr. Jean-Claude **TEDENAC**,  
University Montpellier 2 (**France**) and ITMO University (**Russia**)

8:30 - 8:50	<b>Synthesis of [001]-Oriented PbTiO<sub>3</sub> Platelets by Topochemical Microcrystal Conversion Method using PbBi<sub>4</sub>Ti<sub>4</sub>O<sub>15</sub> Precursor</b> Su-jin Park, Tae-gon Lee, Ho-jun Lee, Seong-hoon Jo, Sahn Nahm
8:50 - 9:30	<b>Neutron Spectroscopy for Advanced Materials Characterisation and Development: A suite of high end tools for sophisticated analysis</b> Dr. Anton P.J. <b>STAMPFL</b> , Australian Nuclear Scy. and Techn. Org, ( <b>Australia</b> )
9:30 - 10:10	<b>Concentration fields of the phase diagrams for the materials genome decoding</b> Prof. Dr. Vasily <b>LUTSYK</b> , Institute of Physical Materials Science, SB RAS, ( <b>Russia</b> )
10:10 - 10:40	<b>Structure and function tuning of nanostructured oxides for advanced energy and environmental photocatalyst</b> Prof. Dr. Tohru <b>SEKINO</b> , Tomoyo Goto, Sung Hun Cho and Soo Wahn Lee, Osaka University ( <b>Japan</b> )

10:40 - 11:00

COFFEE BREAK

**HUNYADI JANOS HALL****ORALS PRESENTATIONS****SESSION 15: Processing, Properties and Applications of Ceramics**

**Chair:** Dr. Nikolas TESSIER-DOYEN,  
ENSCI-Université de Limoges(France)

11:00 - 11:20	<b>Electrical Discharge Machining (EDM) of High Performance Ceramics Materials and Process Development for Wear Resistant Precision Tools with High Geometrical Complexity</b> Rainer Gadow
11:20 - 11:40	<b>[001]-Textured Pb(Zr<sub>1-x</sub>Ti<sub>x</sub>)O<sub>3</sub>-Pb[(Zn<sub>1-y</sub>Ni<sub>y</sub>)<sub>1/3</sub>Nb<sub>2/3</sub>]O<sub>3</sub> Ceramics for Multilayer Actuators</b> Tae-Gon Lee, Ho-Jun Lee, Dae-Hyeon Kim, Su-jin Park, Jong-Seong Park and Sahn Nahm
11:40 - 12:00	<b>Cu-doped nanostructured ZnO coatings: Effect of Cu-doping on band gap energy and photocatalytic activity</b> Saara Heinonen, Juha-Pekka Nikkanen, Leo Hyvärinen and Erkki Levänen
12:00 - 12:20	<b>Low loss and Large Electrostrain in CuO-added (1-x)KNbO<sub>3</sub>-xBaZrO<sub>3</sub> Lead-free Piezoelectric Ceramics</b> Jongseong Park, Dae-Hyeon Kim, Tae-Gon Lee, Sung-Hoon Jo and Sahn Nahm
12:20 - 12:40	<b>Evolution of A.C. conductivity of WET illitic clay during drying</b> Štefan Csáki, Igor Štubňa, Viera Trnovcová, Ján Ondruška, Libor Vozár, Patrik Dobroň
12:40 - 13:00	<b>Influence of the granulation processing on the compaction behavior and properties of alumina granules</b> Nicolas Tessier-Doyen, Philippe Michaud, Pierre-Marie Geffroy and Cécile Pagnoux

13:00 - 14:00

**LUNCH****HUNYADI JANOS HALL****PIENARY AND KEYNOTE LECTURES VI and Short Orals I.**

**Chair:** Prof. Dr. Tohru SEKINO,  
Osaka University(Japan)

14:00 - 14:40	<b>Conventional Brick Clay "LENTI" a Challenge in Materials Science</b> Prof. Dr. László A. GÖMZE, Ludmila N. Gömze, Tibor Bokányi, György Benedek, Dirk Vandermaelen and Hartmut Brem, University of Miskolc (Hungary)
14:40 - 15:10	<b>Diversity Oriented Syntetic Strategies for the New Molecules</b> Prof. Dr. Mandava V. Basaveswara RAO, Krishna University (India)

<b>HUNYADI JANOS HALL</b>	
<b>SHORT ORALS I.</b>	
<b>Chair: Prof. Dr. Tohru SEKINO,</b> Osaka University (Japan)	
<b>15:10 - 15:15</b>	<b>The Influence of surface roughness on the biocompatibility and fatigue life of the titanium based materials</b> Stepan Major, Pavel Cyrus and Marie Hubalovska
<b>15:15 - 15:20</b>	<b>Modeling of carbon-carbon composites joining using solid-phase syntesis</b> Kamila Aligozhina, Anna Knyazeva
<b>15:20 - 15:25</b>	<b>Effect of mechanical treatment on properties of natural zeolites</b> Aleksandr Buzimov, Sergey Kulkov, László A Gömze, István Kocserha and Róbert Géber
<b>15:25 - 15:30</b>	<b>Multilayer Structures of Nano Ferrocene/Schiff Base Compound Embedded in Inorganic Matrix for Optical Limiting Devices</b> I.C. Vasiliu, I. Ionita, A. Matei, M.Elisa, R. Iordanescu, A. Emandi
<b>15:30 - 15:35</b>	<b>Studying the Process of Synthesis of Carbon Nanomaterials onto a Cement Binder</b> Yury Tolchkov, Tatiana Panina, Zoya Mikhaleva, Alexey Tkachev
<b>15:35 - 15:40</b>	<b>A hybrid surface modification method of copper mesh for enhancing thermal performance of ultra-thin heat pipes</b> Wei-Kong Sheng, Hsin-Ting Lin, Chun-Hui Wu and Ping-Hei Chen
<b>15:40 - 15:45</b>	<b>Porous Composite Materials ZrO<sub>2</sub>(MgO)-MgO For Osteoimplantology</b> A.S. Buyakov, S.N. Kulkov
<b>15:45 - 15:50</b>	<b>Bromide photo-thermo-refractive glasses</b> Victor Dubrovin, Alexander Ignatiev and Nikolay Nikonorov
<b>15:50 - 15:55</b>	<b>Self-Healing of SiC/Y<sub>2</sub>SiO<sub>5</sub> Hybrid Composites via Thermal Oxidation</b> Huy Dinh Vu, Makoto Nanko
<b>15:55 - 16:00</b>	<b>Inorganic composites with two phosphors in glass for higher lightening properties for white LEDs</b> J.V. Tuzova, V.A. Aseev, Y.K. Fedorov, N.V. Nikonorov, A. I. Novogran
<b>16:00 - 16:05</b>	<b>Structure and Mechanical Properties of Hot Pressed Hetero-Modulus Composites ‘Alumina-Zirconia - Titanium Carbide’</b> Grigoriev M.V., Kotelnikov N.L., Buyakova S.P., Kul’kov S.N
<b>16:05 - 16:10</b>	<b>Studying The Modification of Construction Composites with Carbon Nanomaterials</b> Tatiana Panina, Yury Tolshckow, Zoya Mikhaleva, Alexey Tkachev
<b>16:10 - 16:15</b>	<b>omposites of aluminium alloy and magnesium alloy with graphite showing low thermal expansion and high specific thermal conductivity</b> Valerio Oddone

16:20 - 17:00

**POSTER SESSION III. and COFFEE BREAK**

**HUNYADI JANOS HALL**

**POSTER SESSION III.**

**Chair:** Prof. Dr. Olga **KOTOVA**,  
Institute of Geology Komi SC UB RAS (Russia)

<b>1</b>	<b>Repeatability of Crack Healing on 5 vol% Ni/ Al<sub>2</sub>O<sub>3</sub> Nanocomposites</b> Akinori Dake and Makoto Nanko
<b>2</b>	<b>Development and characterization of textile batteries</b> Andrea Ehrmann, Marina Normann, Thomas Grethe, Anne Schwarz-Pfeiffer
<b>3</b>	<b>Micromagnetic investigation of low-symmetry 3D particles</b> Andrea Ehrmann, Tomasz Blachowicz
<b>4</b>	<b>Synthesis of Fluozirconate Glass ZBNL with Partial or Complete Substitution of Samarium, Europium and Ytterbium Difluorides for Barium (Lanthanum) Fluorides</b> Vasily Lutsyk, Alexander Ivanenko, Nataliya Kompanichenko, Anatoliy Omelchuk
<b>5</b>	<b>Evaluation of the shrinkage and creep of medium strength self compacting concrete</b> Claudia Jenny De La Cruz, Gonzalo Ramos and Wilson Alexander Hurtado
<b>6</b>	<b>Computer Models of Bounding T-x-y Diagrams for Ceramic System TiO<sub>2</sub>-ZrO<sub>2</sub>-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub></b> Vasily Lutsyk, Anna Zelenaya
<b>7</b>	<b>Synthesis for Pr<sup>3+</sup> doped CaTiO<sub>3</sub> Spherical Particle using Water-Soluble Ti Complex</b> Tomomi Kosaka, Miho Mizunuma and Yuji Tanaka

**HUNYADI JANOS HALL**

**ORALS PRESENTATIONS**

**SESSION 1: Advanced Materials for Bio- and Medical Applications and  
SESSION 11: Nanomaterials for Environment and Health**

**Chair: Prof. Dr. Erwan Rauwel,  
Tallinn University of Technology(Estonia)**

<b>17:00 - 17:20</b>	<b>Piezoresistive Carbon-based Hybrid Sensor for Body-Mounted Biomedical Applications</b> Mark Melnykowycz, Michael Tschudin, and Frank Clemens
<b>17:20 - 17:40</b>	<b>45S5 Bioglass porous scaffolds functionalized with Vitamin D and Collagen.</b> M.E. Abad-Javier, M. Cajero-Juárez and M.E. Contreras-García
<b>17:40 - 18:00</b>	<b>Surface treatment and corrosion behavior of austenitic stainless steel biomaterial</b> Monika Oravcová, Peter Palček, Viera Zatkalíková, Tomasz Tański, Mariusz Król
<b>18:00 - 18:20</b>	<b>Free radical oxidation approach to creation of stable protein coatings on magnetic nanoparticles for biomedical applications</b> Anna V. Bychkova, Alexandra P. Chikunova, Tatiana A. Danilova, Pavel G. Pronkin, Vyacheslav M. Misin and Mark A. Rosenfeld
<b>18:20 - 18:40</b>	<b>Stable metal nanoparticles study for biomedical and green houses applications</b> Erwan Rauwel, Siim Küünal, Protima Rauwel, Lorena Gracia, Mithu Guha and David Wragg
<b>18:40 - 19:00</b>	<b>Synthesis and crystallization of titanium dioxide in supercritical carbon dioxide</b> Aaretti Kaleva, Saara Heinonen, Juha-Pekka Nikkanen, Erkki Levänen

20:00 -

**ic-cmtp4 CONFERENCE DINNER**

## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 6. Thursday

### BEATRIX HALL

#### ORAL PRESENTATIONS

##### SESSION 3: Advanced Nanomaterials with Predesigned Properties

**Chair:** Dr. Vilma BURSIKOVÁ,  
Masaryk University (Czech Republic)

11:00 - 11:20	Fractal nature structure method in designing micro/nano-structure properties V V Mitić, Lj Kocić, V Paunović
11:20 - 11:40	<b>Inorganic, organic and hybrid aerogels: the synthesis and properties</b> Sergey A. Lermontov, Nataliya A. Sipyagina, Alena N. Malkova, Elena A. Straumal, Alexander Ye. Baranchikov and Vladimir K. Ivanov
11:40 - 12:00	<b>Ytterbium-Erbium Doped Lead-Fluoride Nano-Glassceramics for Temperature Sensors</b> V. A. Aseev, E.V. Kolobkova, J. V. Tuzova, K. S. Moskaleva, N.V. Nikonorov
12:00 - 12:20	<b>The size and shape of particles and magnetic properties of composite films</b> Leonid Kotov, Mikhail Lasek, Mikhail Dianov, Dmitri Bogachuk, Eugene Golubev, Yuri Kalinin, Aleksandr Sitnikov
12:20 - 12:40	<b>Titania-Ceria Surfactant Assisted Sol-Gel Synthesis and Characterisation</b> M. E. Contreras-García, M. Cajero-Juárez, A. Torres-Romero
12:40 - 13:00	<b>Comparative Studies on Mechanical Properties and Microstructure of Boroncarbide Based Nanolaminate Coatings</b> Vilma Buršíková, Jiří Buršík, Lukáš Zábranský, Pavel Souček, Saeed Mirzaei and Petr Vašina

13:00 - 14:00

LUNCH

### BEATRIX HALL

#### ORAL PRESENTATIONS

##### is-icm2 - The 2<sup>nd</sup> International Symposium on Innovative Construction Materials

**Chair:** Prof. Dr. Daman PANESAR,  
The University of Toronto (Canada)

17:00 - 17:20	<b>Admixture Compatibility of Alternative Supplementary Cementitious Materials</b> Ehsan Ghafari, Dimitri Feys
17:20 - 17:40	<b>Development of spraying agent for reducing drying shrinkage of mortar</b> Hiromi Fujiwara, Masanori Maruoka and Lingling Liu
17:40 - 18:00	<b>Application of carbon FRP for fatigue strengthening of old steel structures</b> Jan Vůjtěch, Pavel Ryjáček and Martin Vovesný
18:00 - 18:20	<b>Ultra Lightweight Cement Composites for energy efficient buildings</b> Min-Hong Zhang and Yunpeng Wu
18:20 - 18:40	<b>The machining properties of electrical discharge machined surface of insulating material with added ultra sonic phenomena</b> Yasushi Fukuzawa, Daiki Hanaoka, Shigeru Nagasawa
18:40 - 19:00	<b>Self Consolidating Concrete: Consequences of Delayed Ettringite Formation and Freeze-Thaw Resistance on Concrete Properties and Performance</b> Daman Panesar

20:00 -

ic-cmtp4 CONFERENCE DINNER

## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 6. Thursday

### RENEZANSZ HALL

#### ORAL PRESENTATIONS

is-icbm2 - **The 2nd International Symposium on Innovative Carbon and Carbon Based Materials,**  
**SESSION 6: Hetero-Modulus and Hybrid Materials and**  
**SESSION 3: Advanced Nanomaterials with Predesigned Properties**  
**Chair:** Prof. Dr. Joachim **BOLLMANN,**  
TU Bergakademie Freiberga (**Germany**)

11:00 - 11:20	<b>3D Computer Model of Ti-C-V T-x-y Diagrams with Three-Phase Reaction Type Changing</b> Vasily Lutsyk
11:20 - 11:40	<b>Preparation of SiC-MgAl<sub>2</sub>O<sub>4</sub>-Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>-MWCNTs nanocomposites by spark plasma sintering</b> Evgeny V. Zharikov, Vitaly V. Kapustin, Pavel P.Faikov, Alexander A.Barmin, Andrei V. Ivanov, Razhudin N. Rizakhanov
11:40 - 12:00	<b>Raman spectroscopy in the ternary layered phases of Ti-Si-C system: from first principles to experiment</b> Urszula Wdowik, Agnieszka Twardowska
12:00 - 12:20	<b>Investigations on new carbon-based nanohybrids combining carbon nanotubes and metal oxide nanoparticles</b> Protima Rauwel, Augustinas Galeckas, Martin Salumaa, Frédérique Ducroquet and Erwan Rauwel
12:20 - 12:40	<b>Interesting behaviour of polymers contained multiwall carbon nanotubes</b> Andrea Adamne Major
12:40 - 13:00	<b>How Mesoscopic Physics Explains the Super small Quantities Action of Metal/Carbon Nanocomposites in Different Liquid Media</b> V.V. Trineeva, V.I. Kodolov

13:00 - 14:00

LUNCH



**RENEZANSZ HALL**

**ORAL PRESENTATIONS**

**is-ism1: The 1st International Symposium on Intelligent and Smart Materials  
and**

**SESSION 7: Light-Weight Metals and Alloys**

**Chair: Prof. Dr. Rakchart TRAIIPHOL,  
Mahidol University (Thailand)**

<b>17:00 - 17:20</b>	<b>Self-Recovering Section of RPV Steel Radiation Embrittlement Kinetics as Indication of Material Smart Behavior</b> Evgenii Krasikov
<b>17:20 - 17:40</b>	<b>Importance of surface charge on solid-liquid interfaces in nano/microfluidic channels for membrane, sensor and energy conversion applications</b> Pál Árki, Frederich Güth, Christine Hecker and Yvonne Joseph
<b>17:40 - 18:00</b>	<b>Control over the photophysical properties of conjugated polymer nanoparticles: The effects of solvent and molecular weight</b> Rakchart Traiphol, Ruttayapon Potai, Anothai Kamphan
<b>18:00 - 18:20</b>	<b>One-step consolidation and precipitation hardening of nanostructured AA7020 powder by Spark Plasma Sintering</b> Hippolyte Queudet, Julien Guyon, Jaafar Ghanbaja, Sébastien Lemonnier, Elodie Barraud, Nathalie Allain and Eric Gaffet
<b>18:20 - 18:40</b>	<b>Development and optimisation by Spark Plasma Sintering (SPS) of the AZ91 magnesium alloy from a metastable as-atomised powder</b> Mathieu Mondet, Elodie Barraud, Sébastien Lemonnier, Nathalie Allain and Thierry Grosdidier

**20:00 -**

**ic-cmtp4 CONFERENCE DINNER**

## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 7. Friday

October 7. Friday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 – 9:30	PLENARY AND KEYNOTE VI.		
9:30-10:30	is-icm2		
10:30-11:00	POSTERS SESSION IV. and Coffee Break		
11:00 – 12:45	SHORT ORALS II.		
12:45	CONFERENCE CLOSING		

HUNYADI JANOS HALL	
<p><b>PLENARY AND KEYNOTE LECTURES VI</b> and <b>is-icm2: The 2nd International Symposium on Innovative Construction Materials</b> <b>Chair: Prof. Dr. Tomasz SADOWSKI,</b> Lublin University of Technology(Poland)</p>	
8:30 - 9:10	<p><b>Rheological principles of development hetero-modulus and hetero-viscous complex materials with extreme dynamic strength</b> Prof. Dr. László A. GÖMZE and Ludmila N. Gömze, IGREX Engineering Service Ltd. (Hungary)</p>
9:10 - 9:30	<p><b>A non-contact optical measurement technology based on digital image correlation (DIC)</b> Vladimir VESELKOV and Petr Gajdos, Brno University of Trchnology (Czech Republic)</p>
9:30 - 9:50	<p><b>Multi-functional building coating materials: An emerging approach to mitigate air pollution and reduce carbon footprint</b> Liya E. Yu, Padmaja Krishnan, Min Hong Zhang</p>
9:50 - 10:10	<p><b>Numerical methods for estimating J-integral in models with regular rectangular meshes</b> Bartosz Kozłowiec</p>
10:10 - 10:30	<p><b>Optimization of activator solution and heat treatment of ground lignite type fly ash geopolymers</b> Zoltán Molnár, Roland Szabó, Ádám Rácz, János Lakatos, Ákos Debreczeni and Gábor Mucsi</p>

10:30 - 11:00

**POSTER SESSION IV. and COFFEE BREAK**

**HUNYADI JANOS HALL**

**POSTER SESSION IV.**

**Chair:** Prof. Dr. Sergey **KULKOV**,  
Institute of Strength Physics and Material Sciences RAS (**Russia**)

1.	<b>Bioactive glass ceramics from natural calcium phosphates</b> A. Dobrádi, M. Enisz-Bódogh, K. Kovács
2.	<b>Comparative Analysis of Inorganic Polymers Obtained by Raw Materials with Different Properties</b> Adrienn Boros, Tamás Korim, Ida Balczár
3.	<b>Manufacture of Industrial Waste Based Alkali Activated Cement Using Mechanochemical Activation</b> Ida Balczár, Tamás Korim, Éva Makó
4.	<b>Synthesis of kaolinite methanol intercalation complexes using cost-efficient homogenization and solvothermal methods</b> András Kovács, Éva Makó
5.	<b>Dual-responsive cross-linked prodrug nanogels by a click chemistry for triggered drug delivery system</b> Yong Hun Kim, Uk Hyun Ban and Kwon Taek Lim
6.	<b>Involving ceramics materials' fractal parameters into Curie-Weiss law</b> V V Mitić, Lj Kocić, V Paunović
7	<b>Development hightech ceramic composites based on Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub> and IG-017 additive</b> Emese Kurovics, László A. Gömze, Sergei N. Kulkov

**HUNYADI JANOS HALL**

**SHORT ORALS II.**

**Chair:** Prof. Dr. Nikolay **NIKONOROV**,  
ITMO University (**Russia**)

11:00 - 11:05	<b>A study on the improvement of the strength of weld part by core pin drive injection molding method</b> Yoshio Fukushima, Takashi Suda, Tetsushi Kaburagi, Atsushi Motegi, Tomohiro Hishida, Yasuhiko Murata
11:05 - 11:10	<b>Establishment of identification method of the oxide scale spallation on collision test using a hard steel shot</b> Ken Yamashita, Ryo Ishikawa, Kazuki Takahashi, Satoshi Oshima and Makoto Nanko
11:10 - 11:15	<b>Changing Physical and Technological Properties of Difficult Land Reclamation Soils Under Licorice</b> Kurvantaev R., Karimov A., Dadamuhamedova M.R.
11:15 - 11:20	<b>The Study on Intermetallics Formation During Sintering of Al with ZrW<sub>2</sub>O<sub>8</sub></b> V.S. Shadrin, S.N. Kulkov
11:20 - 11:25	<b>Polymer Melt Viscosity Measuring by an Injection Machine</b> GergelyTóth, Tamás Dugár
11:25 - 11:30	<b>Numerical simulation of sintering the Ti powder layer taking into account properties change due to electron beam treatment</b> Svetlana N. Sorokova and Anna G. Knyazeva

## ic-cmtp4 CONFERENCE DETAILED PROGRAM – October 7. Friday

11:30 - 11:35	<b>Ferrite-austenite duplex steel with 1.5 GPa strength and 50% ductility by transformation-induced plasticity of non-recrystallized austenite</b> Seok Su Sohn, Hyejin Song, Min Chul Jo, Taejin Song, Hyoung Seop Kim, Sunghak Lee
11:35 - 11:40	<b>Designing a New Mixed ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> Oxide Catalysts for Low Temperature Dehydration of Bio-ethanol</b> Sofia Chuklina, Svetlana Maslenskova, Anna Pylinina, Ljudmila Podzorova, Alla Ily'icheva
11:40 - 11:45	<b>Removal mechanism of arsenic by hydration of calcium aluminoferrite</b> Kouhei Hano, Takeshi Toyama, Masaya Hirano
11:45 - 11:50	<b>Preparation of silica microsphere particles by spray-drying method</b> Toshiyuki Tanaka, Nobuyuki Nishimiya and Takeshi Toyama
11:50 - 11:55	<b>Preparation of pierced hollow calcium carbonate particles by addition of seed crystals</b> Takato Sekine, Takeshi Toyama and Hiroichi Tanaka
11:55 - 12:00	<b>The composite reinforcement production in digital manufacturing: experimental validation of the heat transfer and cure modeling results</b> Andrey Kutin, Ilya Kazakov, Aleksandr Krasnovskii
12:00 - 12:05	<b>Research of Products of High Temperature Synthesis and Their Use for Initiation of Reaction with the High Power</b> George Ksandopulo, Anna Baideldinova, Yuri Riabikin, Lyudmila Mukhina, Elena Ponomareva, Natalia Vasilieva
12:05 - 12:10	<b>Influence of binding composition on the structure and properties of steel work-pieces obtained by injection molding</b> Elena A. Darenskaia, Olga Yu. Vaulina, Yurii V. Myachin and Sergei N. Kulkov
12:10 - 12:15	<b>Investigation of austenitic stainless steel properties obtained with the use of PIM-technologies</b> Yuriy Myachin, Olga Vaulina, Elena Darenskaya, Svetlana Buyakova, Igor Turuntaev, Sergey Kulkov
12:15 - 12:20	<b>Certification of specifications for PIM-product powder compositions (after mechanical activation)</b> Inessa E. Vasilyeva, Olga Yu. Vaulina, Elena A. Darenskaia, Yurii V. Myachin, Sergei N. Kulkov
12:20 - 12:25	<b>Influence of mechanical activation in powder composition 03X17H12B on product properties</b> Olga Yu. Vaulina, Elena A. Darenskaia, Yurii V. Myachin, Inessa E. Vasilyeva, Sergei N. Kulkov
12:25 - 12:30	<b>COMPOSITE BOROSILICATE - CONTAINERS FOR STORAGE OF RADIOACTIVE WASTE</b> Mailybi K. Aldabergenov, Gulshat T. Balakaeva, Kairat Kenges Al-Farabi
12:30 - 12:35	<b>Study of Zn<sub>1</sub>-XMg<sub>x</sub>O materials for UV diode laser application</b> Abdallah Ouerdane
12:35 - 12:40	<b>Plastic deformation effect of the corrosion resistance in case of austenitic stainless steel</b> Tünde Kovács, Ferenc Haraszti

### CONFERENCE CLOSING

Prof. Dr. Shigeru **NAGASAWA** (Japan), Prof. Dr. Sergei **KULKOV** (Russia) and  
Prof. Dr. László A. **GÖMZE** (Hungary)

See you again in the **ic-cmtp5** in October 8-12, 2018