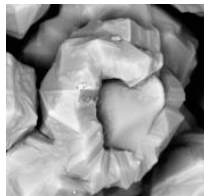


5<sup>th</sup> International Conference on  
Competitive Materials and Technology Processes

Miskolc-Lillafüred, Hungary  
October 8-12, 2018

**CONFERENCE PROGRAM**



**ic-cmtp5**

# ic-cmtp5 CONFERENCE DETAILED PROGRAM

## SESSIONS AND SYMPOSIUMS

SESSION 1: Advanced Materials for Bio- and Medical Applications

SESSION 2: Advanced Materials and Composites for Extreme Applications

SESSION 3: Advanced Nanomaterials and Competitive Nanocomposites

SESSION 4: Advanced Optical Materials – Properties and Applications

SESSION 5: Advanced Processing and Characterization Methods for Nanocomposites

SESSION 6: Biomaterials Derived Ceramics and Advanced Nanocomposites

SESSION 7: Competitive Ceramics and Nanoceramics

SESSION 8: Competitive Light-Weight Metals and Nanostructured Alloys

SESSION 9: Competitive Nanomaterials for Environment and Health

SESSION 10: Competitive Polymers and Nanopolymers

SESSION 11: Glasses, Coatings and Related Competitive Materials

SESSION 12: Hetero-Modulus and Hybrid Materials– Properties and Applications

SESSION 13: Interface as a Functional Material – Behavior, Function and Application

SESSION 14: Materials and Nanomaterials for Membranes and Catalysts

SESSION 15: Mechanical Properties and Processing Technology of Advanced Materials

SESSION 16: Minerals for Environmental and Medical Application

SESSION 17: Nanomaterials Applied to Biomedical Applications and Nanomedicine

SESSION 18: Nanomaterials for Electronic and Electrotechnical Applications

SESSION 19: Novel Synthesis and Processing Technology

SESSION 20: Phase Diagram as a Tool of Materials Science

SESSION 21: Polymer Derived Ceramics and Advanced Nanocomposites

SESSION 22: Processing, Properties and Application of Ceramics

SESSION 23: Testing and Characterization of Materials – Methods, Equipment and Errors

**is-ism2:** The 2<sup>nd</sup> International Symposium on Intelligent and Smart Materials

**is-icm3:** The 3<sup>rd</sup> International Symposium on Innovative Construction Materials

**is-icbm3:** The 3<sup>rd</sup> International Symposium on Innovative Carbon Based Materials

## ic-cmtp5 CONFERENCE DETAILED PROGRAM

<b>October 8. Monday</b>	<b>HUNYADI JÁNOS HALL</b>
<b>8:00 – 14:00</b>	<b>REGISTRATION and Placement of the Posters of POSTER SESSION I. on Stands</b>
<b>14:00 – 14:25</b>	<b>CONFERENCE OPENING</b>
<b>14:25 – 16:00</b>	<b>PLENARY, KEYNOTE and INVITED SESSION I.</b>
<b>16:00 – 16:05</b>	<b>Conference Photo on the Terrace</b>
<b>16:05 – 16:40</b>	<b>Coffee Break and POSTER SESSION I.</b>
<b>16:40 – 18:50</b>	<b>PLENARY, KEYNOTE and INVITED SESSION II.</b>
<b>18:50</b>	<b>WELCOME RECEPTION</b>

<b>October 9. Tuesday</b>	<b>HUNYADI JÁNOS HALL</b>
<b>8:30 – 10:35</b>	<b>PLENARY, KEYNOTE and INVITED SESSION III.</b>
<b>10:35 – 10:40</b>	<b>Conference Photo on the Terrace</b>
<b>10:40 – 11:00</b>	<b>Coffee Break and POSTER SESSION I.</b>
<b>11:00 – 13:00</b>	<b>PLENARY, KEYNOTE and INVITED SESSION IV.</b>
<b>13:00 – 14:00</b>	<b>BUFFET LUNCH</b>
<b>13:00 – 16:00</b>	<b>Removing Posters of POSTER SESSION I. from the Stands</b>
<b>14:00 – 19:00</b>	<b>SOCIAL PROGRAM I. and Free Program (City Tour and Thermal Cave Bath)</b>
<b>16:00 – 20:00</b>	<b>Placement of the Posters of POSTER SESSION II. on Stands</b>

## ic-cmtp5 CONFERENCE DETAILED PROGRAM

October 10. Wednesday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 - 10:30	PLENARY, KEYNOTE and INVITED SESSION V.		
10:30 - 10:35	Conference Photo on the Terrace		
10:35 - 11:00	POSTER SESSION II. and Coffee Break		
11:00 - 13:00	SESSION 2	SESSION 15 and 19	SESSION 7, 9, 22 and <b>is-icbm3</b>
12:30 - 14:00	BUFFET LUNCH		
14:00 - 19:00	SOCIAL PROGRAM II. and Free Program (Castel Tour in Tokai Vine Region)		

October 11. Thursday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 - 10:35	PLENARY, KEYNOTE and INVITED SESSION VI.		
10:35 - 10:40	Conference Photo on the Terrace		
10:35 - 11:00	Coffee Break and POSTER SESSION II.		
11:00 - 13:00	SESSION 2, 3 and 18	SESSION 1, 16 and 23	SESSION 5, 10, 13, 14 and 20
13:00 - 14:00	BUFFET LUNCH and Removing Posters of POSTER SESSION II. from the Stands		
14:00 - 14:30	Placement of the Posters of Short Orals on Stands		
14:30 - 16:00	SESSION OF SHORT ORALS AND SO POSTERS		
16:00 - 16:10	View and evaluation of the Short Orals POSTERS		
16:10 - 16:30	Coffee Break		
16:30 - 18:15	PLENARY, KEYNOTE and INVITED SESSION VII.		
18:15 - 18:30	AWARDS		
18:30	CONFERENCE CLOSING		
19:00	<b>ic-cmtp5 CONFERENCE DINNER</b>		

## **ic-cmtp5 CONFERENCE DETAILED PROGRAM– October 8. Monday**

**11:00 – 12:30** **ic-cmtp5 Conference Board Meeting (Reneszansz Hall)**  
Prof. Dr. László A. GÖMZE, chair of **ic-cmtp5** Conference

**OPENING CEREMONY, PLENARY, KEYNOTE and INVITED SESSION I.**  
Chair: Prof. Dr. Sergei N. KULKOV, Tomsk State University (Russia)

**14:00 – 14:05** **ic-cmtp5 Conference Opening**  
Prof. Dr. Sergei N. KULKOV, Tomsk State University (Russia)

**14:05 – 14:25** **Journal Építőanyag – JSBCM**  
**Welcome the Participants of ic-cmtp5 Conference**  
Prof. Dr. László A. GÖMZE – University of Miskolc  
chair of **ic-cmtp5** Conference (Hungary)

**14:25 – 14:55** **PLENARY LECTURE – 1<sup>ST</sup>**  
**Thermal Conduction in Glasses and Disordered Materials**  
Prof. Dr. Pawel Keblinski  
Rensselaer Polytechnic Institute (USA)

**14:55 – 15:20** **KEYNOTE LECTURE – 1<sup>ST</sup>**  
**State-of-the-Art in Multiple-Sample Evaluation of Adhesive and Bonding Strength**  
Prof. Dr. Uwe BECK, Bundesanstalt für Materialforschung und –prüfung (BAM) (Germany)

**15:20 – 15:40** **INVITED LECTURE – 1<sup>ST</sup>**  
**Dielectric Properties of Polycrystalline Magnesium Diboride at Room Temperature**  
Prof. Dr. Soo Kien CHEN, University Putra Malaysia (Malaysia)

**15:40 – 16:00** **INVITED LECTURE – 2<sup>ND</sup>**  
**Nonstoichiometry of Crystalline Compounds and Materials on Their Basis**  
Prof. Dr. Igor AVETISSOV, Dmintry Mendeleev University of Chemical Technology of Russia (Russia)

**16:00 – 16:05** **CONFERENCE PHOTO ON THE TERRACE**

**16:05 – 16:40** **POSTER SESSION I. and COFFEE BREAK**  
Chair: Prof. Dr. Tomasz SADOWSKI, Lublin University of Technology (Poland)  
Co-Chairs: Prof. Dr. Takeshi TOYAMA (Japan),  
Prof. Dr. Sergei N. KULKOV (Russia),  
Prof. Dr. Olga KOTOVA (Russia),  
Prof. Dr. Tohru SEKINO (Japan),  
Prof. Dr. Jun YANG (China),  
Dr. Jie DING (Australia)

## ic-cmtp5 CONFERENCE DETAILED PROGRAM– October 8. Monday

### POSTER SESSION I.

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

**Co-Chairs: Prof. Dr. Takeshi TOYAMA** (Japan), **Prof. Dr. Sergei N. KULKOV** (Russia),  
**Prof. Dr. Tohru SEKINO** (Japan), **Prof. Dr. Jun YANG** (China), **Dr. Jie DING** (Australia),  
**Prof. Dr. Olga KOTOVA** (Russia)

<b>PS1-01.</b>	<b>Development of Non-Radioactive Staining Solution Alternative to Uranium Acetate for Electron Microscopic Observation</b> Kanako Inoue, Yoshinori Muranaka, Pyoyun Park and Hidehiro Yasuda
<b>PS1-02.</b>	<b>Internal Thread Cutting Process Improvement Based on Cutting Tools Treatment by Composite Powders in a Magnetic Field</b> Jüri Olt, Viacheslav V. Maksarov and Aleksandr I. Keksin
<b>PS1-03.</b>	<b>Synthesis of a Solid Compound with High Energy Characteristics</b> Seisenova A.B., Aknazarov S.Kh., Juan Maria Gonzalez-Leal, Golovchenko O.Yu., Bairakova O.S., Kapizov O.S.
<b>PS1-04.</b>	<b>Synthesis of Lead-Free Piezoelectric Powders</b> Paweł Rutkowski
<b>PS1-05.</b>	<b>The Localization of Plastic Deformation in Bimetal</b> Yulia Li, Svetlana Barannikova and Lev Zuev
<b>PS1-06.</b>	<b>An In Situ Study of Quenched Ti-Al System Samples During Heating</b> Sergey Demakov, Kirillova Irina, Iana Semkina
<b>PS1-07.</b>	<b>Growth of SiC Ingots in H<sub>2</sub>-Containing Atmosphere</b> Andrey Lebedev, Dmitry Avrov, Alexander Bulatov, Yuri Bykov, Yuri Tairov
<b>PS1-08.</b>	<b>Computer Simulation of Damage to Metal-Ceramic Composites under Shock Loading</b> Valerii V. Karakulov, Igor Yu. Smolin, and Sergei N. Kulkov
<b>PS1-09.</b>	<b>Pre-Surface Preparation Features when Applying Wear Resistant Composite Sprayed Coatings</b> Jüri Olt, Viacheslav V. Maksarov and Victor A. Krasnyy
<b>PS1-10.</b>	<b>Preparation and Study of Properties of Composite Counter Electrodes Based on Langmuir Films of N-doped Graphene Oxide and Pt</b> Niyazbek Ibrayev, Evgeniya Seliverstova, Rumiya Dzhanabekova, and Almar Zhumabekov
<b>PS1-11.</b>	<b>Advanced Metallized Nanoporous Aluminum Oxide Films – Properties and Applications</b> Gleb Lyubas
<b>PS1-12.</b>	<b>Application of Finite Element Method (FEM) to Study Stress-Strain State and Distribution of Temperatures in Cutting Zone in Turning of Various Structural Materials by Carbide Tools with Coatings of Various Composition and Architecture</b> Alexey Vereschaka, Boris Mokritskii, Mars Migranov, Elena Mokritskaya, Oleg Sharipov
<b>PS1-13.</b>	<b>Increasing the Productivity of Milling of Titanium Alloys with a Multilayered Nanostructured Coating Tool</b> Alexey Vereschaka, Maksim Oganyan, Boris Mokritskii, Jury Bublikov
<b>PS1-14.</b>	<b>Effective Li-doped NiO Nanocrystals for Transparent Conductive Film</b> Dongsheng Li, Mengdi Hu, and Deren Yang
<b>PS1-15.</b>	<b>Extra Pure Tellurium Oxide for the Growth of High Quality Paratellurite Crystals</b> Mikhail Grishechkin, Ivan Ermochenkov, Anika Islam, Elena Mozhevitina, Andrew Khomyakov, Roman Avetisov, Marina Zykova, Igor Avetisov
<b>PS1-16.</b>	<b>Energy Transfer Mechanism of Ce<sup>3+</sup>- Mn<sup>2+</sup> in Long-Afterglow Phosphor CaAl<sub>2</sub>O<sub>3</sub>: Ce<sup>3+</sup>, Mn<sup>2+</sup></b> Le Ngoc Liem
<b>PS1-17.</b>	<b>Development of Biomorphic Cellular Ceramic Using Illite Clay</b> M. Randers, G. Sedmale, L. Grase, A. Krumina

## ic-cmtp5 CONFERENCE DETAILED PROGRAM– October 8. Monday

PS1-18.	<b>Studying the Effect of a Green Inhibitor Admixture on the Compression Strength of XD3 Concrete Samples Mixed with Different Superplasticizers</b> Shaymaa Abbas Abdulsada, Tamás Török
PS1-19.	<b>Numerical Studying Features of Deformation and Fracture of Alumina Porous Ceramics</b> Valentina A. Mikushina, Igor Yu. Smolin and Sergei N. Kulkov
PS1-20.	<b>Computer Modeling of the Stress-Strain State of the Cervical Spine Segment</b> Yuliya Rikun, Tatyana Tchaikovskaya, Sergey Kulkov
PS1-21.	<b>The Mechanochemical Modification of Metal/Carbon Nanocomposites for the Increasing of Magnetic Properties and Catalytic Possibilities</b> Kodolov V.I., Trineeva V.V., Kopylova A.A., Mustakimov R.V.
PS1-22.	<b>The Plasticity of Red Mud and Clay Mixtures</b> István Kocserha, Alexandra Hamza
PS1-23.	<b>Use of Fly ash as Partial Replacement Material in Ordinary Portland Cement Concrete - An Exploratory Study</b> Imam, M. A. H.; Shah, S. A. R.; Ghafoor, Z.; Ismail, M.; Qurban, N.; and Arif, N.
PS1-24.	<b>The Chemical Mesoscopies Principles Application for the Explanation of Processes within the Polymeric Matrices Nanoreactors. The Formation of Metal/Carbon Nanocomposites</b> Kodolov V.I., Trineeva V.V., Pershin Yu.V., Vasil'chenko Yu.M.

### HUNYADI JANOS HALL

#### PLENARY, KEYNOTE and INVITED SESSION II.

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

16:40 - 17:10	<b>Nanoferroic Based Structures for Electronics</b> Paula M. Vilarinho
17:10 - 17:40	<b>Quasi-static and Dynamic Degradation Process of 2-phase Ceramic Matrix Composites and Cermet</b> Tomasz Sadowski, Marek Boniecki, Magdalena Szutkowska, Eligiusz Postek and Daniel Pietras
17:40 - 18:05	<b>New Adsorbent Materials on the Base of Minerals and Industrial Waste</b> Olga Kotova
18:05 - 18:30	<b>Recent Advances in Nanoparticles Applied to Water Remediation and Biomedical Applications</b> Erwan Rauwel
18:30 - 18:55	<b>Tube Fixed Plug Drawing: Determination of the Stribeck Friction Curve and Drawability of 316 LVM Stainless Steel</b> J-M. Drezet, N. Chobaut, S. Mischler, S. Dobler and E. Rosset

19:00

**Welcome Reception**  
Prof. Dr. László A. GÖMZE  
chair of ic-cmtp5 Conference (Hungary)

## ic-cmtp5 CONFERENCE DETAILED PROGRAM – October 9. Tuesday

October 9. Tuesday	HUNYADI JÁNOS HALL
<b>8:30 – 10:35</b>	<b>PLENARY, KEYNOTE and INVITED SESSION III.</b>
<b>10:35 – 10:40</b>	<b>Conference Photo on the Terrace</b>
<b>10:40 – 11:00</b>	<b>Coffee Break and POSTER SESSION I.</b>
<b>11:00 – 13:00</b>	<b>PLENARY, KEYNOTE and INVITED SESSION IV.</b>
<b>13:00 – 14:00</b>	<b>BUFFET LUNCH</b>
<b>13:00 – 16:00</b>	<b>Removing Posters of POSTER SESSION I. from the Stands</b>
<b>14:00 – 19:00</b>	<b>SOCIAL PROGRAM I. and Free Program (City Tour and Thermal Cave Bath)</b>
<b>16:00 – 20:00</b>	<b>Placement of the Posters of POSTER SESSION II. on Stands</b>

<b>HUNYADI JANOS HALL</b>	
<b>PLENARY, KEYNOTE and INVITED SESSION III.</b> <b>Chair: Prof. Dr. Jun Yang,</b> <b>Shanghai Jiao Tong University (China)</b>	
<b>8:30 - 9:00</b>	<b>Smart Materials Based on a High and Low Temperatures SME-Alloys</b> Sergei Kulkov
<b>9:00 - 9:30</b>	<b>SHSynthesis and Additive Manufacturing of AlN-graphen Nanocomposites</b> Dariusz Kata, Pawel Rutkowski, Jan Huebner
<b>9:30 - 9:50</b>	<b>Hydrothermal Synthesis of (K,Na)NbO3 Powder</b> Jae-Ho Jeon
<b>9:50 - 10:10</b>	<b>Hydrogel Composition Based on Biopolymers for Creation of Wound Coverings</b> Alexander Slobodov, Raisa Gorshkova, Dara Slobodova, Stanislav Pankov, Kamollidin Murodov Ismatullo Rakhimov, Alexey Mischenko, Alexander Sochagin, Ekaterina Kacher
<b>10:10 - 10:30</b>	<b>Fictionalized Wearable Battery with Protection Capabilities</b> Jie Ding, Caiyun Wang, Kewei Shu

**10:30 - 10:35**

**CONFERENCE PHOTO ON THE TERRACE**

**10:35 - 11:00**

**COFFEE BREAK and POSTER SESSION I.**



## ic-cmtp5 CONFERENCE DETAILED PROGRAM – October 9. Tuesday

<b>HUNYADI JANOS HALL</b>	
<b>PLENARY, KEYNOTE and INVITED SESSION IV.</b> <b>Chair: Prof. Dr. Olga Kotova,</b> <b>Institute of Geology, Komi SC, UB-RAS (Russia)</b>	
<b>11:00 - 11:25</b>	<b>Conventional Brick Clays a Challenge of Materials Science – New Explanation of Drying Sensitivities</b> László A. Gömze, Ludmila N. Gömze, György Benedek, Tibor Bokányi, Emese Kurovics
<b>11:25 - 11:50</b>	<b>Inorganic Polymer Composite Fibers for Water Treatments, Examples for Decontamination to Radioactive Cesium in Fukushima and Others</b> Takaomi Kobayashi
<b>11:50 - 12:15</b>	<b>Morphological Control of Alkaline Earth Metal Phosphate Particles by Microwave Heating</b> Takeshi Toyama
<b>12:15 - 12:35</b>	<b>Synthesis and Properties of Nanocrystalline Materials Based on LaPO<sub>4</sub></b> K. M. Kenges, O. V. Proskurina and M. K. Aldabergenov
<b>12:35 - 12:55</b>	<b>Functionalization in Molten State of Polypropylene with a Maleinized Hyperbranched Polyester Polyol: New Approach</b> Carolina Caicedo and Edwin A. Murillo

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM I. and Free Program**

## ic-cmtp5 CONFERENCE DETAILED PROGRAM – October 10. Wednesday

October 10. Wednesday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 – 10:30	PLENARY, KEYNOTE and INVITED SESSION V.		
10:30 – 10:35	Conference Photo on the Terrace		
10:35 – 11:00	POSTER SESSION II. and Coffee Break		
11:00 – 13:00	SESSION 2	SESSION 15 and 19	SESSION 7, 9, 22 and <b>is-icbm3</b>
12:30 – 14:00	BUFFET LUNCH		
14:00 – 19:00	SOCIAL PROGRAM II. and Free Program (Castel Tour in Tokai Vine Region)		

HUNYADI JÁNOS HALL	
<b>PLENARY, KEYNOTE and INVITED SESSION V.</b> <b>Chair: Prof. Dr. László A. Gömze</b> <b>University of Miskolc (Hungary) and Tomsk State University (Russia)</b>	
8:30 - 9:00	<b>Development of Ceramic-Metal Nanocomposites and Their Multifunctionalities</b> Tohru Sekino, Shengfang Shi, Tomoyo Goto, Sung Hun Cho, and Takafumi Kusunose
9:00 - 9:25	<b>The Change in the Quality and Properties of New Materials by Changing the Content of Gas in Them</b> Aleksandr Urakov, Natalia Urakova, Alexey Reshetnikov, Maxim Kopylov, Kasatkin Anton
9:25 - 9:50	<b>Nanostructured Electrode Materials for High Energy Secondary Batteries</b> Jun Yang, Xiaowei Miao, Jinghui Zhu, Yitian Bie, Jinzhuan Wang, and Tao Zhang
9:50 - 10:10	<b>Tailoring of MAT Based Ceramics From Aluminum Dross</b> Emad M.M. Ewais, Nada H.A. Besisa
10:10 - 10:30	<b>Nanostructured Metal Coatings for Microelectronic Applications</b> Magda Lakatos-Varsányi, Ferenc Hajdú, Richard Berényi, Lajos Károly Varga

10:30 - 10:35

**CONFERENCE PHOTO ON THE TERRACE**

10:35 - 11:00

**COFFEE BREAK and POSTER SESSION II.**

<b>POSTER SESSION II.</b>	
<b>Chair: Prof. Dr. Tohru SEKINO</b> , Osaka University (Japan)	
<b>Co-Chairs: Prof. Dr. Takeshi TOYAMA</b> (Japan), <b>Prof. Dr. Sergei N. KULKOV</b> (Russia), <b>Prof. Dr. Jun YANG</b> (China), <b>Dr. Jie DING</b> (Australia), <b>Prof. Dr. Olga KOTOVA</b> (Russia), <b>Prof. Dr. Tomasz SADOWSKI</b> (Poland),	
<b>PS2-01.</b>	<b>Effect of Extrusion Speeds and ATO Content on Rheological and Thermal Properties of PVC</b> Ali I. Al-Mosawi, Kálmán Marossy
<b>PS2-02.</b>	<b>Physicochemical Properties of HEC/Bentonite/Magnetite Composite Materials</b> Olga V. Alekseeva, Anna N. Rodionova, Alexander V. Agafonov, Andrew V. Noskov
<b>PS2-03.</b>	<b>Optical Properties of Zinc Phosphotellurite Glass</b> Mihai Elisa, Raluca Stefan, Ileana Cristina Vasiliu, Bogdan Alexandru Sava, Lucica. Boroica, Aurelian Catalin Galca
<b>PS2-04.</b>	<b>Formation of Iron Sulfide Catalytic Colloidal Dispersion via Laser Ablation in Liquids</b> Lukáš Vála, Veronika Vavruňková, Věra Jandová, Tomáš Křenek
<b>PS2-05.</b>	<b>Influence of Nanodiamond (ND) Loading on Properties of Poly(vinyl alcohol) (PVA) Nanocomposite Membranes</b> Tomáš Remiš, Tomáš Kovářík and Jaroslav Kadlec
<b>PS2-06.</b>	<b>Degradation of Methylene Blue Under UV and Visible Illumination by Yttria Doped Titania Nanoparticles</b> Jānis Grabis, Dzidra Jankoviča, Inta Sīpola,
<b>PS2-07.</b>	<b>Local Mechanical Properties of Advanced Skutterudites</b> Jiří Buršík, Vilma Buršíková, Gerda Rogl and Peter Rogl
<b>PS2-08.</b>	<b>Biomechanical and Radiographic Analysis of Adjacent Segment Level Following Hybrid Dynamic Stabilization Topping off Fusion of the Lumbar Spine</b> Bendoukha Mohammed, Mosbah Moustafa
<b>PS2-09.</b>	<b>Microstructural evaluation of Re particle reinforced composite on aluminium surface by friction stir processing</b> Marek Stanisław Węglowski, Adriana Wrona, Ilona Nejman, Maria Richert
<b>PS2-10.</b>	<b>Investigation of Structures and Properties of Oxide-Hydroxide Systems After Mechanical Activation</b> Ruslan Levkov, Sergey Kulkov
<b>PS2-11.</b>	<b>Autowaves of Localized Plastic Deformation in TRIP Steels</b> Vladimir Danilov, Vadim Gorbatenko, Dina Orlova, and Lidia Danilova
<b>PS2-12.</b>	<b>Large Periodic Shear Deformation for Modeling of Nonlinear Viscoelasticity Polymeric Materials</b> I Pyshnograï, N A Cherpakova, R Pivokonsky, P Filip
<b>PS2-13.</b>	<b>Effect of the Alkali Silica Reaction on Metavolcanic Mortars</b> Mohamed Mostafa
<b>PS2-14.</b>	<b>Bentonite Clay Containing Polymeric Composition Materials with Plant Extract of Tamarixidin (TN-10)</b> Zharylkasyn Abilov, Shynar Zhumagalieva, Rizvangul Iminova, Bates Kudaybergenova and Gulfayruz Kayralapova
<b>PS2-15.</b>	<b>Hypersound Excitation of Three-Layer Magnetic Film by Microwave Field</b> Leonid Kotov, Mikhail Dianov, Vladimir Vlasov, Vladimir Ustyugov
<b>PS2-16.</b>	<b>New approach of the Compatibilization of Low density Polyethylene/Polyamide blends with a polyethylene modified with maleinized hyperbranched polyol polyester</b> Carlos Ararat and Edwin A. Murillo
<b>PS2-17.</b>	<b>Thermomechanical Properties of Nanodiamond/Potassium Silica Based Geopolymer Nanocomposite</b> Jaroslav Kadlec, Tomáš Kovářík, Jiří Hájek, Michal Pola and Tomáš Křenek

**ic-cmtp5 CONFERENCE DETAILED PROGRAM – October 10. Wednesday**

<b>PS2-18.</b>	<b>Mechanical and Thermal Properties of Porous Cordierite Obtained from Natural Raw Materials</b> Maris Rundans, Gaida Sedmale, Liga Grase and Ruta Svinka
<b>PS2-19.</b>	<b>Some Mineral Deposits for Building Materials and Facing Stones in the Ludlow and Pridoli Region of Komi Republic in Russia</b> B Kanev, T Beznosova, Emese Kurovics, Olga Kotova and László A. Gömze
<b>PS2-20.</b>	<b>Design and Construction of a Salt Spray Chamber to Perform Corrosion Tests in Metallic Materials</b> Oscar Chamarraví Guerra, Antonio Ferrer Cárdenas, Carlos Alfredo Pinilla Quevedo, Evelio Ricardo Cadena Barahona
<b>PS2-21.</b>	<b>Detection and Evolution Technique of the Optical (Thermoradiative) Characteristics with Compensation of the Effect of Reflection (Transmittance) Indicatrices of the Semitransparent Materials with Subsurface Scattering</b> Vladimir Merzlikin, Andrei Bystrov, and Andrei Kostukov
<b>PS2-22.</b>	<b>Optimization of the sorption activity of pectic polysaccharides</b> Raisa Gorshkova, Dara Slobodova, Aleksandr Slobodov
<b>PS2-23.</b>	<b>Influence of technology processes and additives on properties of zeolites from Tokaj-Mád region, Hungary</b> Emese Kurovics, Aleksandr Y. Buzimoz, Olga Kotova and László A. Gömze

**HUNYADI JANOS HALL**

**ORAL PRESENTATIONS**

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

**Chair: Prof. Dr. Jae-Ho Jeon,**

**Korea Institute of Materials Science (Republic of Korea)**

<b>11:00 - 11:15</b>	<b>Manufacturing Composite Polymer Materials with Enhanced Thermal Conductivity</b> Oguzhan Der, Stuart Edwardson, and Volfango Bertola
<b>11:15 - 11:30</b>	<b>Thermodynamic and Kinetic Aspects of Quasi-Equilibrium Polymer-Modified Electrode Systems</b> V.V. Malev, M.A. Vorotyntsev
<b>11:30 - 11:45</b>	<b>Microstructure of Laser Cladded of Inconel 625 - WC Metal Matrix Composite</b> Jan Huebner, Dariusz Kata, Paweł Rutkowski
<b>11:45 - 12:00</b>	<b>Comparative Investigations of the Selective Co Etching From Hardmetals Support Layer of Diamond Coating</b> Peter Rugóczy, Gábor Muránszky, János Lakatos
<b>12:00 - 12:15</b>	<b>The Influence of Cr Doping on the Structural and Magnetic Properties of GdMnO<sub>3</sub> Multiferroic Ceramics</b> J. F. M. Ibrahim, László A. Gömze, Emese Kurovics
<b>12:15 - 12:30</b>	<b>The Topological Phase and Optical Properties of the NaSnX(X=Bi, As, Sb) Compounds: first principal calculation.</b> Husnu Koc, Selami Palaz, Chingiz Ahundov, Amirullah M.Mamedov, Ekmel Ozbay
<b>12:30 - 12:45</b>	<b>Incommensurate Phase Transition and Electronic Properties of BaMnF<sub>4</sub></b> Selami Palaz, Husnu Koc, Rena F. Babayeva, Amirullah M. Mamedov, Ekmel Ozbay
<b>12:45 - 13:00</b>	<b>Electrochemical Analysis of the Anti-Corrosion Properties of Benzonitrile Compound on 420 Martensitic Stainless Steel in Strong Acid Solution</b> Roland Loto, Bryan Uche Ayozie, Cleophas Akintoye Loto, and Tayo Sanni

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM II. and Free Program**

**BEATRIX HALL****ORAL PRESENTATIONS**

**SESSION 15: Mechanical Properties and Processing Technology of Advanced Materials,  
SESSION 19: Novel Synthesis and Processing Technologies**

**Chair: Prof. Dr. Sergey N. Kulkov,  
Inst. Strength Physics and Material Sciences RAS/Tomsk State University (Russia)**

<b>11:00 - 11:15</b>	<b>Mathematical model for mass exchange in wood drying process</b> M. Khramchenkov, R. Khramchenkova
<b>11:15 - 11:30</b>	<b>The Effect of the Synthetic Fibre Reinforcement on the Fracture Energy of the Concrete</b> Karoly Peter Juhasz
<b>11:30 - 11:45</b>	<b>Design and Fabrication of Friction Stir Welding Machine</b> Jithin Ambarayil Joy, Muhammad Sajjad, Dong-Won Jung
<b>11:45 - 12:00</b>	<b>Synthesis and Powder Properties of Cerium Phosphate White Pigments</b> Hiroaki Onoda and Haruka Muraki
<b>12:00 - 12:15</b>	<b>Biomimetic Synthesis of Nanostructured WO<sub>3</sub> Particles from Aqueous Solutions Containing Gelatin</b> Hiroaki Uchiyama, Syouta Mizuguchi, and Yuki Nagayasu
<b>12:15 - 12:30</b>	<b>Solid Waste Processing Technology in Reactor Equiped with Plasmatron Having Nanocarbon Electrodes</b> Vladimir E. Messerle, Oleg A. Lavrichshev, and Alexandr B. Ustimenko
<b>12:30 - 12:45</b>	<b>Design and Synthesis of Catalysts and Cathode Structure for Lithium-Oxygen Batteries</b> Aishui Yu, Liangyu Li, and Chunguang Chen
<b>12:45 - 13:00</b>	<b>Effect of the Formulation of Sodium Activation Solutions on the Setting Time of Metakaolin Based Geopolymers</b> Lahlou Nouha, Hattaf Rabii , Moussa Redouane, Ouazzani Touhami Mohamed

**13:00 - 14:00****LUNCH****14:00-19:00****SOCIAL PROGRAM II. and Free Program**

**RENEZANSZ HALL**

**ORAL PRESENTATIONS**

**SESSION 7: Competitive Ceramics and Nanoceramics,  
SESSION 9: Competitive Nanomaterials for Environment and Health,  
SESSION 22: Processing, Properties and Application of Ceramics  
Symposium is-icbm3  
Chair: Prof. Dr. Alexander Slobodov,  
ITMO University (Russia)**

<b>11:00 - 11:15</b>	<b>F- ion-induced Improvement of Luminescence Properties of Yb<sup>3+</sup> in Oxyfluoride Glass Ceramics</b> Lijuan Zhao, Yuting Fu, Yuao Guo, Liying Guo, Bing Wu, Jinjin Liu and Hua Yu
<b>11:15 - 11:30</b>	<b>Enhancing Toughness and strength of SiC ceramics with Reduced graphene oxide by HP sintering</b> Huang Yihua, Jiang Dongliang, Zhang Xianfeng, Liao Zhenkui, Huang Zhengren
<b>11:30 - 11:45</b>	<b>Porous Geopolymers: Processing Routes and Structural Properties</b> Tomáš Kovářík, Michal Pola, Jiří Hájek, David Rieger, Miloš Svoboda, Jaroslav Kadlec and Věra Jandová
<b>11:45 - 12:00</b>	<b>MEMS Air Turbine Generator with Ceramic Magnetic Circuit Aiming at Power Supply for IoT Edge Devices</b> Minami Kaneko, Kazuya Kudo, Kazuki Ebisawa, Ken Saito, Katsuyuki Tanaka, and Fumio Uchikoba
<b>12:00 - 12:15</b>	<b>Effects of Pumice Powder on Silicone Exterior Coating Material</b> Mehtap Demir, Taha Oğuz
<b>12:15 - 12:30</b>	<b>Properties of Slip Casted Porous Mullite Ceramics Doped with Zirconium Dioxide</b> Ludmila Mahnicka-Goremikina, Ruta Svinka, Visvaldis Svinka
<b>12:30 - 12:45</b>	<b>Nanostructure and Surface Properties of Carbon Black/PVDF Copolymer Nanofiber Nanocomposite</b> Muhamad Nasir, Rana Ida Sugatri, Putri Putih Puspa Asri, Fitri Dara and Ardeniswan
<b>12:45 - 13:00</b>	<b>Dependence of Oxidation Rate From Structures in Case of Graphites and Diamonds</b> János Lakatos, Gábor Muránszky, Peter Rugóczy

**13:00 - 14:00**

**LUNCH**

**14:00-19:00**

**SOCIAL PROGRAM II. and Free Program**

## ic-cmtp5 CONFERENCE DETAILED PROGRAM – October 11. Thursday

October 11. Thursday	HUNYADI JÁNOS HALL	BEATRIX HALL	RENEZANSZ HALL
8:30 – 10:35	PLENARY, KEYNOTE and INVITED SESSION VI.		
10:35 – 10:40	Conference Photo on the Terrace		
10:35 – 11:00	Coffee Break and POSTER SESSION II.		
11:00 – 13:00	SESSION 2, 3 and 18	SESSION 1, 16 and 23	SESSION 5, 10, 13, 14 and 20
13:00 – 14:00	BUFFET LUNCH and Removing Posters of POSTER SESSION II. from the Stands		
14:00 – 14:30	Placement of the Posters of Short Orals on Stands		
14:30 – 16:00	SESSION OF SHORT ORALS AND SO POSTERS		
16:00 – 16:10	View and evaluation of the Short Orals POSTERS		
16:10 – 16:30	Coffee Break		
16:30 – 18:15	PLENARY, KEYNOTE and INVITED SESSION VII.		
18:15 – 18:30	AWARDS		
18:30	CONFERENCE CLOSING		
19:00	ic-cmtp5 CONFERENCE DINNER		



**HUNYADI JANOS HALL**

**PLENARY, KEYNOTE and INVITED SESSION VI.**  
**Chair: Prof. Dr. Erwan Rauwel,**  
**Estonian University of Life Science, Institute of Technology**  
**(Estonia)**

<b>8:30 - 9:00</b>	<b>Interface as a Functional Material: From Evidences to Future Outlook</b> Prof. Yasunori Taga, Keisuke Nishimura, and Yuri Hisamatsu
<b>9:00 - 9:25</b>	<b>Characterization of Dynamic Nanoprocess in Nanoparticles by High Time-Resolved Ultra-High Voltage Electron Microscopy</b> Hidehiro Yasuda
<b>9:25 - 9:50</b>	<b>Rheological Behavior of Aerated Sludge</b> Nicky Eshtiaghi
<b>9:50 - 10:10</b>	<b>Fabrication of Polycrystal Silver Nanowire Flexible Transparent Conductive Composite Film by Organic Precursor Painting Reduction Method</b> Yamato Hayashi
<b>10:10 - 10:40</b>	<b>Preparation, Self-Assembly and Properties of Colloidal Spheres</b> Prof. Limin Wu

**10:40 - 10:45**

**CONFERENCE PHOTO ON THE TERRACE**

**10:45 - 11:00**

**COFFEE BREAK and POSTER SESSION II.**

**HUNYADI JANOS HALL****ORALS PRESENTATIONS**

**SESSION 2: Advanced Materials and Composites for Extreme Applications,  
SESSION 3: Advanced Nanomaterials and Competitive Nanocomposites,  
SESSION 18: Nanomaterials for Electronic and Electrotechnical Applications**

**Chair: Prof. Dr. Sergey N. Kulkov,  
Inst. Strength Physics and Material Sciences RAS/Tomsk State University (Russia)**

<b>11:00 - 11:15</b>	<b>Laser Ablation: Efficient Technique for Formation of Metastable Nanostructured Materials with Unique Properties</b> Tomáš Křenek
<b>11:15 - 11:30</b>	<b>Synthesis and Characterization of Carbon Nanosheets from Stinging Nettle (Urtica Dioica)</b> Kanokon Nuilek, Andrea Simon, and Peter Baumli
<b>11:30- 11:45</b>	<b>Influence of Thickness of Multilayer Composite Nano-structured Coatings on Tool Life of Metal-cutting Tool and Nature of Wear</b> Alexey Vereschaka, Anatoliy Aksenenko, Nikolay Sitnikov and Gaik Oganyan
<b>11:45 - 12:00</b>	<b>Band Structure of Phononic Crystal Consist of Hollow Aluminum Cylinders in Different Media; Finite Element Analysis</b> Zafer Ozer, Mehtap Demir, Amirullah M. Mamedov, Ekmel Ozbay
<b>12:00- 12:15</b>	<b>Mechanical Properties of Magnetron Sputtered MoBC and WBC Coatings</b> Vilma Bursikova
<b>12:15 - 12:30</b>	<b>Corrosion of Glass Used for Radioactive Waste Disposal Influenced by Iron Corrosion Products</b> Ali Al Dabbas, Katalin Kopecskó
<b>12:30 - 12:45</b>	<b>Effect of SiC Content and Particle Size on the Corrosion Resistance of 1070 Aluminum in 3.5% NaCl Solution</b> Roland Loto, Phillip Babalola, Cleophas Akintoye Loto, and Gabriel Olanrewaju
<b>12:45 - 13:00</b>	<b>Nanoscale Chemical Templating Technique to Fabricate High Resolution AFM Silicon Cantilevers</b> Maha M O Khayyat

**13:00 - 14:30****LUNCH AND PLACEMENT OF THE POSTERS OF SHORT ORALS**

**BEATRIX HALL**

**ORAL PRESENTATIONS**

**SESSION 1: Advanced Materials for Bio- and Medical Applications,  
SESSION 16: Minerals for Environmental and Medical Applications,  
SESSION 23: Testing and Characterization of Materials –  
Methods, Equipment and Errors  
Chair: Prof. Dr. Uwe Beck,  
BAM (Germany)**

<b>11:00 - 11:15</b>	<b>Finite Element Method Analysis for Mechanistic Design in Flexible Pavement, Review: From How to Build a Material in FE Analysis to Complexity in Reality</b> Seoyoung Cho, Csaba Tóth, Zoltán Soós
<b>11:15 - 11:30</b>	<b>Damage of Thin-Walled Box Beams with Omega Cross-Section Joined by Adhesive Layers Subjected to Bending Deformation Process</b> T. Sadowski, M. Nowicki
<b>11:30 - 11:45</b>	<b>Sorption and Alcohohrotective Activity of Pectic Polysaccharides Obtained by New Method</b> Raisa Gorshkova, Dara Slobodova, Aleksandr Slobodov
<b>11:45 - 12:00</b>	<b>Perspective of Multiplex Assay</b> Dara Slobodova, Raisa Gorshkova, Pavel Gladyshev, Sergey Yavshits, Vladimir Sibirtsev, Galina Mischenko, Alexander Slobodov
<b>12:00 - 12:15</b>	<b>Removal of Cs+ and Sr2+ from Aqueous Solution Using Titania Nanotube</b> Tomoyo Goto, Sung Hun Cho, and Tohru Sekino
<b>12:15 - 12:30</b>	<b>Biogeo sorbents for Solving Ecological Problems</b> Tatyana Shchemelinina, Olga Kotova, Maria Harja, Elena Anchugova
<b>12:30 - 12:45</b>	<b>Surface and Subsurface Defects Studies of Dental Materials Exposed to Sandblasting</b> Krzysztof Siemek, Paweł Horodek, Marat K. Essev, Andrey G. Kobets
<b>12:45 - 13:00</b>	<b>Modiefied Failure Assessment Diagram on the Presence of Hydrogen Embrittlement of API 5L Pipeline Steel</b> M. Hadj Meliani, M. Sadou, D. Selmane, FT. Arzour, G. Pluinage

**13:00 - 14:30**

**LUNCH AND PLACEMENT OF THE POSTERS OF SHORT ORALS**

**RENEZANSZ HALL**

**ORAL PRESENTATIONS**

**SESSION 5: Advanced Processing and Characterization Methods for Nanocomposites,  
SESSION 10: Competitive Polymers and Nanopolymers,  
SESSION 13: Interface as a Functional Material – Behavior, Function and Application,  
SESSION 14: Materials and Nanomaterials  
Chair: Prof. Dr. Yasunori Taga,  
Chubu University (Japan)**

<b>11:00 - 11:15</b>	<b>Effect of Chain Extender on Hard Segment in Polyurethane Elastomers Structure</b> Somdee Patcharapon, Lassú-Kuknyó Tímea, Kónya Csaba, and Marossy Kálmán
<b>11:15 - 11:30</b>	<b>Computer Simulations of Size Effects of BaTiO<sub>3</sub> Ferroelectric Thin Films</b> Zhenyong Man, Jiangtao Zeng, Liaoying Zheng, Guorong Li
<b>11:30 - 11:45</b>	<b>Microstructure and Chemorheological Behavior of Whipped Cream as Affected by Rice Bran Protein Addition</b> Azin Atashzar, Ali Rafe and Seyed-Ahmad Shahidi
<b>11:45 - 12:00</b>	<b>Highlight of photocurrent generation in carbon-based nanohybrids combined with HfO<sub>2</sub> nanoparticles</b> Protima Rauwel, Augustinas Galeckas, Frédérique Ducroquet and Erwan Rauwel
<b>12:00 - 12:15</b>	<b>Catalytic Activity in Methane Oxidation of La<sub>1-x</sub>Ca<sub>x</sub>CoO<sub>3</sub> (x = 0-1) Perovskites Prepared by Mechanochemical Route</b> Lyubov Isupova, Irina Yakovleva, E. Sutormina, E. Gerasimov and Vladimir Rogov
<b>12:15 - 12:30</b>	<b>Experimental Investigation of High-Temperature Phase Transformations in Cu-Pd-Sn Ternary System</b> Georgy Khartsyzov, Svetlana Sinyova, Roman Starykh, and Maria Kareva
<b>12:30 - 12:45</b>	<b>Synthesis and Properties of Nanocrystalline Materials Based on LaPO<sub>4</sub></b> Evgeny Grigoryev

**13:00 - 14:30**

**LUNCH AND PLACEMENT OF THE POSTERS OF SHORT ORALS**

**HUNYADI JANOS HALL**

**SHORT ORALS I.**

**Chair: Prof. Dr. Sergey N. Kulkov**, SB-RAS and Tomsk State University (Russia)  
**Co-Chairs: Prof. Dr. Nicky Eshtiaghi** (Australia), **Jean-Marie Drezet** (Switzerland),  
**Prof. Dr. Urakov** (Russia), **Prof. Dr. Jun Yang** (China), **Prof. Dr. Pawel Keblinski** (USA),  
**Prof. Dr. Emad M. M. Ewais** (Egypt)

<b>SO-01</b>	14:30 - 14:35	<b>Diagnostics of Optical and Thermal Characteristics of Semitransparent Media at Modeling Phase Action of Oscillating Convection and Thermoradiation</b> Fedor Zagumennov, Vladimir Merzlikin, and Andrei Bystrov
<b>SO-02</b>	14:35 - 14:40	<b>Nano-Hybridization of Titania Nanotubes and Polyaniline by Novel Photopolymerization Process</b> Kota Tsukatani, Satoshi Tsukuda, Tomoyo Goto, Sung Hun Cho, Hisataka Nishida and Tohru Sekino
<b>SO-03</b>	14:40 - 14:45	<b>Osteoreplacement Ceramic Composite Material ZrO<sub>2</sub>-MgO with Bimodal Pore Structure</b> Ales Buyakov, Sergey N. Kulkov
<b>SO-04</b>	14:45 - 14:50	<b>Effect of Composition and Heat Treatment on Porosity, Microstructures and Phase Composition of Technical Ceramics Made From Kaolin and IG-017 Additive</b> Emese Kurovics, László A. Gömze
<b>SO-05</b>	14:50 - 14:55	<b>Sintering of Al - ZrW<sub>2</sub>O<sub>8</sub> powder Mixtures Characterized by In Situ XRD Analysis</b> V.S. Shadrin and S.N. Kulkov
<b>SO-06</b>	14:55 - 15:00	<b>The Effect of Short Carbon Fibers on Rheological Behaviour and Mechanical Properties of Metakaolin-Slag Geopolymer Binder</b> David Rieger, Michal Pola, Petr Franče, Jaroslav Kadlec and Tomáš Kovářík
<b>SO-07</b>	15:00 - 15:05	<b>Examination of the Utilization of Aluminum Dross in Road Construction</b> Bella Udvardi, Róbert Géber, István Kocserha
<b>SO-08</b>	15:05 - 15:10	<b>Structure &amp; Mechanical Properties of Heteromodulus ZrC/C Ceramics</b> Aleksandr Rygin, Yuriy Mirovoy, Aleksandr Burlachenko, Svetlana Buyakova and Sergey Kulkov
<b>SO-09</b>	15:10 - 15:15	<b>The Thermal Deformation Reducing in Sheet Metal on Manufacturing Parts by CNC Cutting Machines</b> Petunin A.A., Polyshuk E.G., Chentsov P.A., Krotov V.I.
<b>SO-10</b>	15:15 - 15:20	<b>Amorphous Iron Formation Following Occupancy of Iron Atoms in Vacant Sites of Epsilon-Iron that Transformed from Alpha-Iron during Rubbing in a Low Vacuum</b> Hiroshi Furuichi
<b>SO-11</b>	15:20 - 15:25	<b>Aisi 420 Steel Surface Layer Strengthening by Friction Stir Processing with Subsequent Milling at the Machining Center</b> Vladimir Voropaev, Viktor Kuznetsov, Andrey Skorobogatov, Aleksandr Petunin
<b>SO-12</b>	15:25 - 15:30	<b>Characteristics of Perovskite Nanocrystallines and Their Photocatalytic Properties in Degradation of Waste Water Using Liquid Phase Plasma</b> Sang-Chul Jung, Kyong-Hwan Chung, and Hangun Kim
<b>SO-13</b>	15:30 - 15:35	<b>Highly Purified Pectin Polysaccharides From the Food Industry Waste Obtained by a New Method</b> Dara Slobodova, Raisa Gorshkova, Aleksandr Slobodov
<b>SO-14</b>	15:35 - 15:40	<b>Decomposition of polysaccharid matrix in a column type reactor</b> Dara Slobodova, Raisa Gorshkova, Aleksandr Slobodov
<b>SO-15</b>	15:40 - 15:45	<b>The Interfacial Contact Pressure Between Two Deformable Cylinders Simulate by 3D Finite Element Approach. Application to a Spur Gear</b> Toufik Outtas, Djemoui Mohamedi



**BEATRIX HALL**

**OPEN DISCOSSIONS**

**THEME 1: CONFERENCE IC-CMTP5**

**THEME 2: FUTURE CONFERENCES IN 2019**

**EC-SILICONF1**AND **IC-RMM4**

**THEME 3: CONFERENCE IC-CMTP6 IN 2020**

**Chair: Prof. Dr. László A. Gömze**

See you again in our conferences **es-siloconf1**, **ic-rmm4** and **ic-cmtp6**

The conference **ic-cmtp6** will be held in October 5-9, 2020