

September 3-7, 2017

Košice, Slovakia

# INCOME2017

9<sup>th</sup> International Conference on Mechanochemistry and Mechanical Alloying



## Program





Form-Tech Scientific



## GENERAL INFORMATION

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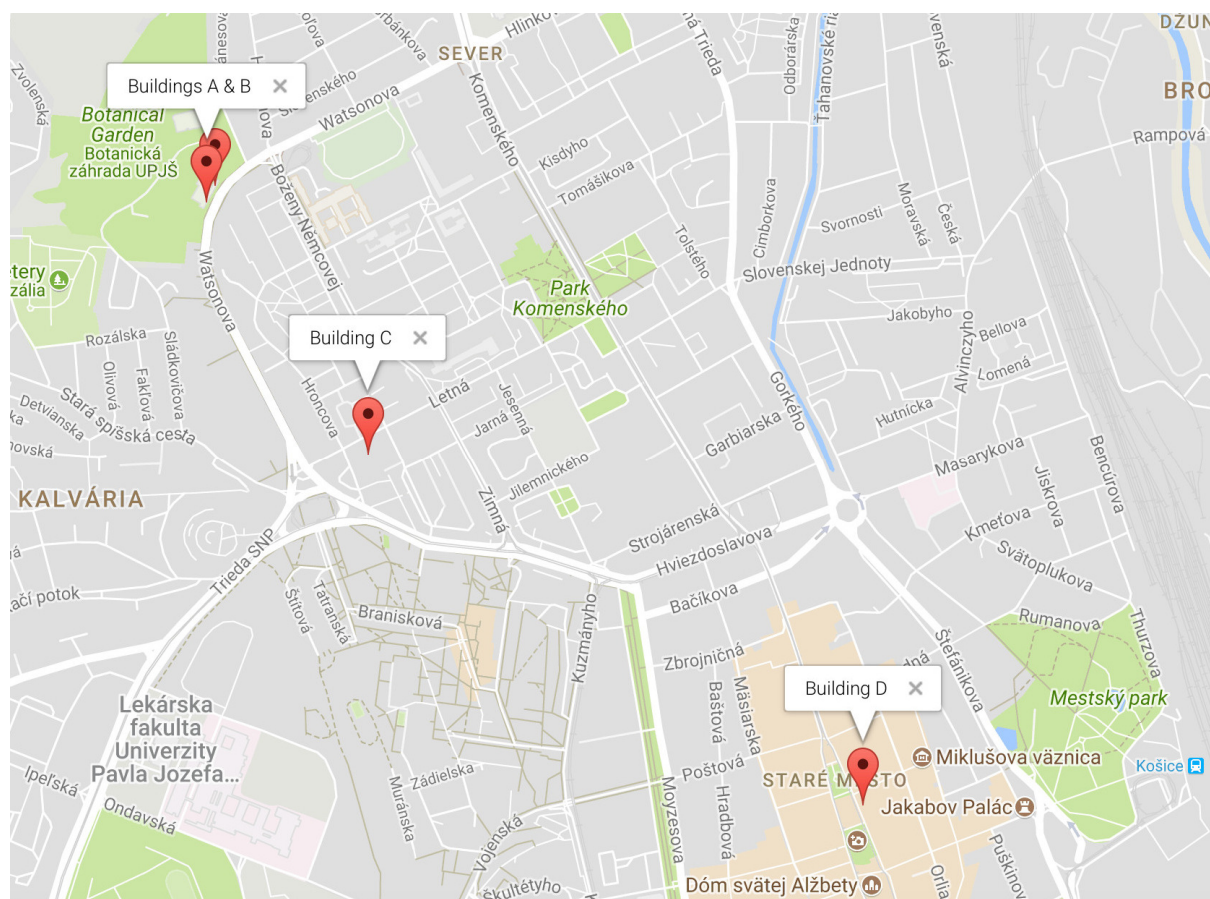
### WEB PAGE

<http://income2017.saske.sk/>

### WI-FI

Free of charge in Buildings A and B.

### LOCATIONS



- **Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)**  
Registration (Sunday, 3<sup>rd</sup> September 2017)  
Welcome drink (Sunday, 3<sup>rd</sup> September 2017)  
Coffee breaks (Monday, 4<sup>th</sup> September – Thursday, 7<sup>th</sup> September 2017)
- **Building B (Slovak Academy of Sciences, Watsonova 47, Košice)**  
Registration (Monday, 4<sup>th</sup> September – Thursday, 7<sup>th</sup> September 2017)  
Opening remarks (Monday, 4<sup>th</sup> September)  
Invited and oral presentations (Monday, 4<sup>th</sup> September – Thursday, 7<sup>th</sup> September 2017)  
Poster presentations (Monday, 4<sup>th</sup> September – Tuesday, 5<sup>th</sup> September 2017)  
Discussion/Concluding remarks (Thursday, 7<sup>th</sup> September 2017)

- **Building C (Café – Restaurant Malá Praha, Letná 40, Košice)**

Lunches (Monday, 4<sup>th</sup> September – Thursday, 7<sup>th</sup> September 2017)

- **Building D (Slávia – Café, Hlavná 63, Košice)**

Conference dinner (Wednesday, 6<sup>th</sup> September 2017)

## **PRESENTATIONS**

Invited and oral will be held in Building B (conference hall, ground floor). Computers running the presentations will be using Microsoft based Powerpoint software. Please upload your presentation named Surname.pptx in the morning or at least two hours prior the lecture on the day of your presentation. A technician will be available to help you.

Invited presentations are limited to 20 minutes maximum plus 5 minutes for discussion. Oral presentations are limited to 10 minutes maximum plus 5 minutes for discussion. Speakers are asked to keep strictly with time schedule. To overrun into the next speaker's allocated time is not allowed.

The poster sessions will be held in Building B (1<sup>st</sup> floor). The delegates should pin up their posters in time. Each poster has a number (see conference program) and the delegates are asked to place them on the appropriate poster board. Poster size must be max. 70 x 115 cm, vertical/portrait orientation. Everything necessary to mount the posters will be provided. The presenters of posters are asked to stand by their boards during the poster session for discussion. The authors are advised to retrieve their posters immediately after the session. The abandoned posters will be discarded.

## **LUNCHES/DINNER**

During registration, delegates will obtain lunch/dinner tickets. You are kindly asked to bring them with you to the restaurant. The participants will be split into 2 lunch sections, 12:00 - 13:00 and 13:00 - 14:00. Lunch will be provided in Building C and the dinner will take place in Building D. Lunch, as well as dinner, is not included for any accompanying person(s).

## **TRANSPORTATION**

All participants will receive a name badge after registration. This badge will also serve as a public transportation ticket @ Košice throughout the conference.



Sunday, 3 <sup>rd</sup> September 2017	Monday, 4 <sup>th</sup> September 2017	Tuesday, 5 <sup>th</sup> September 2017	Wednesday, 6 <sup>th</sup> September 2017	Thursday, 7 <sup>th</sup> September 2017
	8:00-16:00 Registration	8:00-16:00 Registration	8:00-16:00 Registration	8:00-12:00 Registration
		8:00-10:05 Invited lectures		
	8:20-8:45 Opening remarks			
	8:45-10:00 Invited lectures		8:55-10:10 Invited lectures	9:20-10:10 Invited lectures
	10:00-10:20 Coffee break	10:05-10:30 Coffee break	10:10-10:30 Coffee break	10:10-10:30 Coffee break
	10:20-10:45 Invited lecture	10:30-12:00 Oral presentations	10:30-12:00 Oral presentations	10:30-12:00 Oral presentations
	10:45-12:00 Oral presentations			
	12:00-14:00 Lunch	12:00-14:00 Lunch	12:00-14:00 Lunch	12:00-14:00 Lunch
	14:00-15:15 Invited lectures	14:00-15:40 Invited lectures	14:00-14:50 Invited lectures	14:00-15:15 Oral presentations
			14:50-15:20 Oral presentations	
16:00-21:00 Registration	15:15-15:35 Coffee break		15:20-15:40 Coffee break	15:15-15:45 Concluding remarks
	15:35-17:05 Oral presentations	15:40-16:00 Coffee break	15:40-16:40 Oral presentations	
	17:05-18:05 Poster session I	16:00-17:45 Oral presentations		
		17:45-18:10 Invited lecture		
		18:10-19:10 Poster session II		
		19:30-22:00 Meeting of the International Advisory Committee of INCOME	19:00-22:00 Conference dinner	
19:00-21:00 Welcome drink				



- I - Invited lecture  
O - Oral presentation  
P - Poster presentation

Time	Sunday, 3 <sup>rd</sup> September 2017	
16:00 – 21:00	Registration	Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)
19:00 – 21:00	Welcome Drink	Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)
Time	Monday, 4 <sup>th</sup> September 2017	
08:00 – 16:00	Registration	Building B (Slovak Academy of Sciences, Watsonova 47, Košice)
08:20 – 08:45	Opening Remarks <u>V. Šepelák</u>	
Session Chair: S.L. James		
08:45 – 09:10	I-01	Two important periods in the history of mechanochemistry <u>L. Takacs</u>
09:10 – 09:35	I-02	A quest for mechanisms of mechanically activated transformations <u>F. Delogu</u>
09:35 – 10:00	I-03	Modeling mechanochemical reaction mechanisms <u>W.T. Tysoe</u>
10:00 – 10:20	Coffee Break	Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)

**Session Chair: T. Frišćić**

<b>10:20 – 10:45</b>	<b>I-04</b>	<b>Structure and ion dynamics in mechanosynthesized fluorides</b> <u>M. Wilkening</u>
<b>10:45 – 11:00</b>	<b>O-01</b>	<b>Mechanochemical preparation of ultra disperse powders of Si, Ge, Cu, Ag</b> <u>N.Z. Lyakhov</u> , T.F. Grigoreva, E.N. Gorina, T.A. Udalova, S.V. Vosmerikov, E.T. Devyatkina, I.A. Vorsina, E.A. Pavlov
<b>11:00 – 11:15</b>	<b>O-02</b>	<b>Mechanically induced self-sustaining reactions (MSR) in the LiNH<sub>2</sub>-xAlCl<sub>3</sub> system</b> <u>G. Mulas</u> , L. Pisano, S. Enzo, L. Fernández Albanesi, F.C. Gennari, S. Garroni
<b>11:15 – 11:30</b>	<b>O-03</b>	<b>Chalcogenide quaternary nanocrystals for solar cells: Mechanochemical synthesis and properties of kesterite Cu<sub>2</sub>ZnSnS<sub>4</sub></b> <u>P. Baláž</u> , M. Baláž, M. Hegeduš, M. Fabián, M. Achimovičová, E. Dutková, M. Kaňuchová, J. Briančin, M. Tešínský, E. Gock
<b>11:30 – 11:45</b>	<b>O-04</b>	<b>Gas-solid reactions induced by mechanochemical activation</b> <u>M. Felderhoff</u> , F. Schüth, S. Immohr, R. Eckert, H. Schreyer
<b>11:45 – 12:00</b>	<b>O-05</b>	<b>Advances in surface functionalization of silicon nanoparticles formed by reactive high energy ball milling (RHEBM)</b> <u>B.S. Mitchell</u> , M.J. Fink
<b>12:00 – 14:00</b>	<b>Lunch Break</b> <span style="float: right;">Building C (Café - Restaurant Malá Praha, Letná 40, Košice)</span>	

**Session Chair: A.Ye. Yermakov**

<b>14:00 – 14:25</b>	<b>I-05</b>	<b>Nanocrystalline and nanoglassy ceramics by mechanical treatment – effect on ion dynamics</b> <u>P. Heitjans</u>
<b>14:25 – 14:50</b>	<b>I-06</b>	<b>How does mechanical stressing rationalize solid-state synthesis of functional complex oxide nanoparticles?</b> <u>M. Senna</u>
<b>14:50 – 15:15</b>	<b>I-07</b>	<b>Mechanochemical synthesis, structure and characterization of fluorine-containing alkaline earth metal compounds</b> <u>G. Scholz</u>
<b>15:15 – 15:35</b>	<b>Coffee Break</b> <span style="float: right;">Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)</span>	

**Session Chair: A. Calka**

<b>15:35 – 15:50</b>	<b>O-06</b>	<b>If at first you don't succeed: Fabricating low-defect materials by high-energy ball milling</b> <u>A. Düvel</u> , L. Morgan, C.V. Chandran, P. Heitjans, D.C. Sayle
<b>15:50 – 16:05</b>	<b>O-07</b>	<b>Mechanochemical/thermal preparation of <math>\text{Li}_4\text{Ti}_5\text{O}_{12}</math>. Structural and electrochemical properties</b> <u>M. Fabián</u> , M. Žukalová, L. Kavan, E. Tóthová, V. Šepelák, M. Senna
<b>16:05 – 16:20</b>	<b>O-08</b>	<b>Mechanochemical synthesis of solid solutions of <math>\text{M}_x\text{Pb}_{1-x}\text{F}_2</math> (M = Ca, Sr, Ba)</b> <u>M. Heise</u> , G. Scholz, E. Kemnitz
<b>16:20 – 16:35</b>	<b>O-09</b>	<b>Au supported catalysts for CO-oxidation by in-situ ball milling: Influences of synthesis conditions on support and catalytic activity</b> <u>H. Schreyer</u> , M. Felderhoff, F. Schüth
<b>16:35 – 16:50</b>	<b>O-10</b>	<b>New approach using a dry coating process for solid-supported catalyst synthesis: Effects of support properties and operation conditions</b> <u>X. Liu</u> , N. Fatah
<b>16-50-17:05</b>	<b>O-11</b>	<b>Mechanocatalytic preferential CO oxidation</b> <u>R. Eckert</u> , M. Felderhoff, F. Schüth
<b>17:05 – 18:05</b>	<b>Poster Session I</b> Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)	

Time	Tuesday, 5 <sup>th</sup> September 2017	
08:00 – 16:00	Registration	Building B (Slovak Academy of Sciences, Watsonova 47, Košice)
Session Chair: M. Senna		
08:00 – 08:25	I-08	<b>Chemistry 2.0: Developing a new, solvent- free system of chemical synthesis based on mechanochemistry</b> <u>T. Friščić</u>
08:25 – 08:50	I-09	<b>New insights in formation pathways: In situ investigations of mechanochemical reactions</b> <u>F. Emmerling</u> , H. Kulla, S. Haferkamp, F. Fischer, M. Wilke
08:50 – 09:15	I-10	<b>May the mechanical force be with you: The case of peptides and organometallics</b> <u>F. Lamaty</u>
09:15 – 09:40	I-11	<b>Transformation of pharmaceuticals induced by milling</b> <u>M. Descamps</u> , J.-F. Willart, E. Dudognon
09:40 – 10:05	I-12	<b>Composites of drugs with inorganic and organic excipients obtained by the mechanochemical methods</b> <u>T.P. Shakhtshneider</u>
10:05 – 10:30	Coffee Break Conference Photo	Building A (Slovak Academy of Sciences, Watsonova 47A, Košice) Entrance of Building A (Slovak Academy of Sciences, Watsonova 47A)
Session Chair: N.Z. Lyakhov		
10:30 – 10:45	O-12	<b>In situ monitoring as tools to study mechanochemical reactions</b> <u>I. Halasz</u> , K. Užarević, S. Lukin, T. Friščić
10:45 – 11:00	O-13	<b>Transformations of dexamethasone drug induced by mechanical milling</b> <u>P.F. M. Oliveira</u> , J.-F. Willart, J. Siepmann, F. Siepmann, M. Descamps
11:00 – 11:15	O-14	<b>From molecules to biohybrid nanomaterials by ball-milling</b> M. Lupacchini, A. Mascitti, L. Tonucci, N. d'Alessandro, C. Charnay, <u>E. Colacino</u>

11:15 – 11:30	O-15	<b>Quantitative in situ monitoring of mechanochemical selectivity in pharmaceutical cocrystal polymorphs</b> <u>S. Lukin</u> , T. Stolar, M. Tireli, M. V. Blanco, D. Babić, T. Friščić, K. Užarević, I. Halasz
11:30 – 11:45	O-16	<b>2D correlation spectroscopy in step-by-step study of deformation-induced conversions and transformations of molecular crystals</b> <u>D.S. Rybin</u> , G.N. Konygin, V.E. Porsev, D.R. Sharafutdinova, I.P. Arsentyeva, V.V. Boldyrev
11:45 – 12:00	O-17	<b>Mechanoradicals, anions and cations as precursors in chemical reactions and production of composite materials</b> <u>B. Baytekin</u> , Ö. Bayrak, T. Bedük
12:00 – 14:00	<b>Lunch Break</b> Building C (Café - Restaurant Malá Praha, Letná 40, Košice)	
Session Chair: L. Takacs		
14:00 – 14:25	I-13	<b>Recent progress in mechanochemical organic reactions</b> L. Li, H.-G. Li, H. Xu, <u>G.-W. Wang</u>
14:25 – 14:50	I-14	<b>Mechanochemical multicomponent transformations and mechanoenzymatic reactions by ball-milling</b> <u>J.G. Hernández</u>
14:50 – 15:15	I-15	<b>Mechanochemistry, an easy technique to boost the synthesis of new luminescent coordination polymers</b> <u>L. Maini</u>
15:15 – 15:40	I-16	<b>Solvent-free mechanochemical synthesis – fundamentals, scale-up and commercialisation</b> <u>S.L. James</u>
15:40 – 16:00	<b>Coffee Break</b> Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)	
Session Chair: P. Heitjans		
16:00 – 16:15	O-18	<b>Synthesis by twin screw extrusion (TSE)</b> <u>D.E. Crawford</u> , S.L. James, C. Miskimmin, A. Albadmin, G. Walker
16:15 – 16:30	O-19	<b>Main group mechanochemical synthesis</b> <u>F. Garcia</u>

<b>16:30 – 16:45</b>	<b>O-20</b>	<b>Mechanochemical synthesis of highly-ordered microporous zirconium-based metal-organic frameworks</b> <u>K. Užarević</u> , A. Fidelli, A.J. Howarth, O.K. Farha, T. Friščić
<b>16:45 – 17:00</b>	<b>O-21</b>	<b>Mechanosynthesis of functional metal-organic frameworks based on acylhydrazone and dicarboxylate linkers</b> <u>D. Matoga</u> , K. Roztocki, M. Szufła, D. Jędrzejowski, M. Lupa, M. Hodorowicz, I. Senkovska, S. Kaskel
<b>17:00 – 17:15</b>	<b>O-22</b>	<b>Mechanochemistry and protein self-assembly – a promising combination</b> <u>N. Solin</u>
<b>17:15 – 17:30</b>	<b>O-23</b>	<b>Solvation and surface effects on polymorph stabilities</b> <u>A.M. Belenguer</u> , G.I. Lampronti, A.J. Cruz-Cabeza, C.A. Hunter, J.K.M. Sanders
<b>17:30 – 17:45</b>	<b>O-24</b>	<b>Effective and selective reduction of <math>\alpha</math>, <math>\beta</math>-unsaturated carbonyl compounds to the corresponding alcohol under milling conditions</b> <u>A. Barranco</u> , M. Felderhoff, F. Schüth
<b>17:45 – 18:10</b>	<b>I-17</b>	<b>Do we always know, what we do not know? Challenges of mechanochemistry</b> <u>E.V. Boldyreva</u>
<b>18:10 – 19:10</b>	<b>Poster Session II</b> Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)	
<b>19:30 – 22:00</b>	<b>Meeting of the International Advisory Committee of INCOME</b>	

Time	Wednesday, 6 <sup>th</sup> September 2017	
08:00 – 16:00	Registration	Building B (Slovak Academy of Sciences, Watsonova 47, Košice)
Session Chair: A.F. Fuentes		
08:55 – 09:20	I-18	<b>Scenarios and possible mechanisms of structural-phase transformations in alloys at intensive plastic deformation</b> <u>A.Ye. Yermakov</u> , Yu.N. Gornostyrev, I.K. Razumov
09:20 – 09:45	I-19	<b>Spark plasma sintering of mechanically milled powders: Gaining advantages from a combination of two non-equilibrium powder processing techniques</b> <u>D.V. Dudina</u> , M.A. Korchagin, B.B. Bokhonov, V.I. Mali, A.G. Anisimov
09:45 – 10:10	I-20	<b>Odyssey in mechanical activation of solids – SMILE and beyond</b> <u>R. Kumar</u>
10:10 – 10:30	Coffee Break	Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)
Session Chair: F. Delogu		
10:30 – 10:45	O-25	<b>Mechanochemical redox reactions as non-conventional pathway in the synthesis of nanostructured alloys</b> <u>V.F. Ruiz-Ruiz</u> , I. Zumeta-Dubé, R. González-Olvera, I. Betancourt, R. Díaz-Pardo, D. Díaz, N. Farfán, J. Arellano-Jiménez, M. José-Yacamán
10:45 – 11:00	O-26	<b>Nanocrystalline alloy of molybdenum with sodium produced by mechanical alloying</b> <u>B. Bergk</u> , U. Mühle, I. Povstugar, N. Koutná, D. Holec, H. Clemens, B. Kieback
11:00 – 11:15	O-27	<b>Early stages of mechanical alloying of Al-Cu and Al-Cu-Fe powder mixtures in a high-energy ball mill</b> S.F. Tikhov, <u>D.V. Dudina</u> , O.I. Lomovsky, V.A. Sadykov
11:15 – 11:30	O-28	<b>Microstructure, porosity and wear resistance of new Ti-10Ta-8Mo (wt.%) biomedical alloy prepared by high-energy ball milling and annealed processes</b> G. Dercz, <u>I. Matuła</u> , M. Zubko, J. Maszybrocka, M. Boruszewska
11:30 – 11:45	O-29	<b>Mössbauer study of the kinetics of mechanical amorphization in Fe<sub>70</sub>Zr<sub>30</sub></b> A.F. Manchón-Gordón, J.J. Ipus, <u>J.S. Blázquez</u> , C.F. Conde, A. Conde
11:45 – 12:00	O-30	<b>Mechanochemically-driven amorphization in overstoichiometric arsenic sulfides</b> <u>O. Shpotyuk</u> , Z. Bujňáková, P. Baláž, P. Demchenko, Ya. Shpotyuk, J. Cebulski

12:00 – 14:00	Lunch Break		Building C (Café - Restaurant Malá Praha, Letná 40, Košice)
Session Chair: D. Oleszak			
14:00 – 14:25	I-21	Plasma assisted absorption and reversible desorption of hydrogen gas in Zr, Ti, V powders using electric discharge assisted mechanical milling method <u>A. Calka</u> , A.M. Aksenczuk	
14:25 – 14:50	I-22	Cryomilling, nanoparticles and ink: Do they represent a new possibility? <u>K. Chattopadhyay</u> , C.S. Tiwari, K. Malaviya, H. Prabha	
14:50 – 15:05	O-31	Mechanochemical synthesis of mohite (Cu <sub>2</sub> SnS <sub>3</sub> ) <u>M. Baláž</u> , M. Hegedüs, M. Fabián, N. Daneu, E. Dutková, M. Rajňák, J. Kurimský, P. Baláž	
15:05 – 15:20	O-32	Mechanochemistry – an effective method for producing complex BiFeO <sub>3</sub> -based high-temperature piezoelectric materials <u>M. Makarovič</u> , A. Benčan Golob, B. Malič, T. Rojac	
15:20 – 15:40	Coffee Break		Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)
Session Chair: F. Lamaty			
15:40 – 15:55	O-33	The synthesis of niobium silicides by a mechanochemical process <u>D. Ovalı</u> , D. Ağaoğulları, M. L. Öveçoğlu	
15:55 – 16:10	O-34	Mechanochemical synthesize of nanocrystalline soft magnetic ferrite in order to investigate structural, magnetic, dielectric and electrical characteristics <u>A. Hajalilou</u>	
16:10 – 16:25	O-35	Mechanical activation of zeolite and its influence on the nanostructure <u>K. Bohács</u> , F. Kristály, Z. Dallos, G. Mucsi	
16:25 – 16:40	O-36	Mechanochemical synthesis and silica encapsulation of iron boride nanoparticles <u>S. Mertdinç</u> , D. Ağaoğulları, M.L. Öveçoğlu	
19:00 – 22:00	Conference Dinner		Building D (Slávia - Café, Hlavná 63, Košice)



Time	Thursday, 7 <sup>th</sup> September 2017	
08:00 – 12:00	Registration	Building B (Slovak Academy of Sciences, Watsonova 47, Košice)
Session Chair: P. Baláž		
09:20 – 09:45	I-23	<b>c-LLZO – towards single phase compound by mechanochemical processes</b> <u>D. Oleszak</u> , P. Billik, M. Pawlyta
09:45 – 10:10	I-24	<b>Mechanical activation effect in the chemistry of a typical float glass batch</b> <u>A.F. Fuentes</u> , P. Rodríguez-Salazar, O. Burciaga-Díaz
10:10 – 10:30	Coffee Break	Building A (Slovak Academy of Sciences, Watsonova 47A, Košice)
Session Chair: R. Kumar		
10:30 – 10:45	O-37	<b>Effect of particle density on powder mixing in a rotating drum for hydrogen generation</b> <u>J. Kano</u> , S. Ishihara, M. Yamamoto
10:45 – 11:00	O-38	<b>Thermal and mechanical properties of fluorinated ethylene and polyphenylene sulfide based composites obtained by high energy ball milling</b> <u>V.V. Tcherdyntsev</u> , L.K. Olifirov, S.D. Kaloshkin, M.Yu. Zadorozhnyy, V.D. Danilov
11:00 – 11:15	O-39	<b>Mechanical alloying and electric current assisted sintering adopt for metal matrix composite materials processing</b> <u>A. Miklaszewski</u>
11:15 – 11:30	O-40	<b>Synthesis of sodium polysulfide through the mechanical treatment</b> <u>T. Ketegenov</u> , N. Khan, O. Tyumentseva, T. Oserov
11:30 – 11:45	O-41	<b>X-ray and Mössbauer study of solid-state reactions in heat treated nanocrystalline Fe-Cr alloys, obtained by mechanical alloying</b> <u>V.E. Porsev</u> , A.L. Ulyanov
11:45 – 12:00	O-42	<b>Mechanocomposites in the system UPTFE + silicate</b> <u>I.A. Vorsina</u> , T.F. Grigoreva, T.A. Udalova, E.T. Devyatkina, S.V. Vosmerikov, N.Z. Lyakhov
12:00 – 14:00	Lunch Break	Building C (Café - Restaurant Malá Praha, Letná 40, Košice)

**Session Chair: K. Chattopadhyay**

<b>14:00 – 14:15</b>	<b>O-43</b>	<b>Acid leaching performance of mechanically activated pyrophyllite ore for Al<sub>2</sub>O<sub>3</sub> extraction</b> <u>M. Erdemoğlu</u> , M. Birinci, T. Uysal, E. Porgalı, T.S. Barry
<b>14:15 – 14:30</b>	<b>O-44</b>	<b>Synthesis and characterization of Al–Cu–Fe quasicrystal reinforced AA 6082 Al matrix composite by mechanical milling</b> <u>Y. Shadangi</u> , K. Chattopadhyay, J. Basu, R. Manna, N.K. Mukhopadhyay
<b>14:30 – 14:45</b>	<b>O-45</b>	<b>A novel route to synthesize micro-laminated TiAl matrix composite sheets with high performance</b> <u>X. Cui</u> , L. Geng, J. Zhang, G. Fan
<b>14:45 – 15:00</b>	<b>O-46</b>	<b>Structural and optical properties of nanostructured copper sulfide semiconductor synthesized in an industrial mill</b> <u>M. Achimovičová</u> , E. Dutková, E. Tóthová, Z. Bujňáková, J. Briančin
<b>15:00 – 15:15</b>	<b>O-47</b>	<b>Mechanochemical methods in the production of high purity gases</b> V.L. Kozhevnikov, A.O. Ivanov, B. Verbitsky, <u>K. Chuntanov</u>
<b>Chairs: M. Senna and V. Šepelák</b>		
<b>15:15 – 15:45</b>	<b>Discussion/Concluding Remarks</b>	

<b>Poster Session I</b> <b>Monday, 4<sup>th</sup> September 2017; 17:05 – 18:05</b>		<b>Poster Session II</b> <b>Tuesday, 5<sup>th</sup> September 2017; 18:10 – 19:10</b>	
P-I-01	<b>The effect of Sn as the process control agent on the fabrication and structural properties of new Ti-Ta-Mo-Sn biomedical alloy synthesized by high energy ball milling</b> <u>G. Dercz</u> , I. Matuła, M. Zubko	P-II-01	<b>Mechanochemical synthesis of aluminium metal-organic frameworks</b> <u>S. Lavery</u> , J. Casaban, S.L. James
P-I-02	<b>Alloying behavior and mechanical properties of AlCoCrFeNiMn high entropy alloy (HEA) processed by mechanical alloying and microwave sintering</b> <u>V. Shivam</u> , N.K. Mukhopadhyay	P-II-02	<b>BaF-benzenedicarboxylate: Mechanochemical synthesis of a new representative of coordination polymers without organofluorine linkers</b> <u>S. Breitfeld</u> , G. Scholz, F. Emmerling, E. Kemnitz
P-I-03	<b>Effect of Co content on phase structure and hydrogenation properties of La-Mg-Ni alloys</b> <u>M. Balcerzak</u> , M. Nowak, M. Jurczyk	P-II-03	<b>Inadvertent liquid-assisted grinding – possible key to organic mechanochemical co-crystallisation</b> <u>I.A. Tumanov</u> , A.A.L. Michalchuk, A.A. Politov, E.V. Boldyreva
P-I-04	<b>In-situ Raman spectroscopic monitoring of ball milling preparations of amidoboranes</b> <u>N. Biliškov</u> , I. Halasz, K. Užarević, J. Grbović Novaković, I. Milanović, S. Lukin, S. Milošević, A. Borgschulte, E. Callini	P-II-04	<b>In situ monitoring and mechanism of the mechanochemical Knoevenagel reaction</b> <u>M. Tireli</u> , S. Lukin, T. Stolar, M. di Michieli, I. Halasz, K. Užarević
P-I-05	<b>Characterization of phases in the V<sub>2</sub>O<sub>5</sub>–Yb<sub>2</sub>O<sub>3</sub> system obtained by high-energy ball milling and high-temperature treatment</b> <u>M. Piz</u> , P. Dulian, E. Filipek, K. Wieczorek-Ciurowa, P. Kochmanski	P-II-05	<b>Mechanochemical protease-catalyzed peptide and amide bond formation</b> <u>K. J. Ardila-Fierro</u> , D. Crawford, S.L. James, C. Bolm, J.G. Hernández
P-I-06	<b>Dielectric behaviour of (Ba<sub>1-x</sub>Sr<sub>x</sub>)(Ti<sub>1-x</sub>Sn<sub>x</sub>)O<sub>3</sub> ceramics obtained by a mechanochemical syntheses</b> <u>W. Bąk</u> , P. Dulian, B. Garbarz-Glos, C. Kajtoch, W. Żukowski	P-II-06	<b>Mechanochemical synthesis of colossal dielectric permittivity electroceramics for capacitors applications</b> <u>P. Dulian</u> , W. Bąk, B. Grabarz-Glos, M. Piz, W. Żukowski
P-I-07	<b>The mechanochemical synthesis for the preparation of advanced ceramics based on barium titanate</b> <u>B. Garbarz-Glos</u> , P. Dulian, W. Bąk, H. Noga	P-II-07	<b>Influence of mechanochemical treatment and sintering conditions on final dielectric properties of (Ba,Ca)TiO<sub>3</sub> ceramics</b> <u>K. Feliksik</u> , L. Kozielski, I. Szafraniak-Wiza, D. Radoszewska, M. Adamczyk-Habrajska

P-I-08	<b>Production of nanocomposition colloidal systems for cosmetic application</b> N.N. Mofa, Z.A. Mansurov, <u>A. M. Kaliyeva</u> , T.V. Chernoglazova, B.S. Sadykov	P-II-08	<b>Preparation and dielectric properties of <math>K_{1/2}Na_{1/2}NbO_3</math> ceramics obtained from mechanically activated powders</b> I. Szafraniak-Wiza, <u>D. Radoszewska</u> , J. Dzik, D. Bochenek, M. Adamczyk-Habajska
P-I-09	<b>Effect of diluting agent on the synthesis of silver iodide nanoparticles during co-milling</b> <u>B.B. Tatykayev</u> , Zh.S. Shalabayev, S.B. Tugelbay, B.M. Uralbekov, M.M. Burkitbayev, F.Kh. Urakaev	P-II-09	<b>Synthesis of intermetallic based nanocomposites via mechanochemical route</b> <u>M.H. Enayati</u>
P-I-10	<b>Mechanochemical synthesis of <math>LiFeGe_2O_6</math> and <math>LiFeTi_2O_6</math></b> <u>E. Tóthová</u> , R. Witte, K.L. Da Silva, A. Zorkovská, M. Senna, H. Hahn, P. Heitjans, V. Šepelák	P-II-10	<b>Mechanochemical synthesis of sulfur nanoparticles via reaction of sodium thiosulfate with crystalline acids</b> <u>Zh.S. Shalabayev</u> , B.B. Tatykayev, B.M. Uralbekov, M.M. Burkitbayev, F.Kh. Urakaev
P-I-11	<b>Influence of transition metals on quasicrystalline phase formation in Al-Cu-Fe mechanically alloyed powder</b> <u>M. Mitka</u> , A. Goral, L. Litynska-Dobrzynska	P-II-11	<b>Characterization of sintering process of high-energy milled Cu-TiB<sub>2</sub> materials</b> <u>H. Dębecka</u> , M. Hebda, J. Kazior
P-I-12	<b>Determination of the activation energy of <math>Re_2C</math> by high-energy ball milling</b> <u>A. Martínez-García</u> , M.G. Granados-Fitch, M. Avalos-Borja, B. Winkler, A.K. Navarro-Mtz., E.A. Juarez-Arellano	P-II-12	<b>Mechanochemical treatment of micrometric aluminium with organic modifiers for solid-propellant rockets</b> <u>B.S. Sadykov</u> , N.N. Mofa, L. Galfetti, Z.A. Mansurov
P-I-13	<b>Characterization of nanostructured materials using TEM and SEM microscopy</b> <u>P. Snopiński</u> , T. Tański	P-II-13	<b>Mechanochemical synthesis of coal based magnetic carbon for As(V) and Cd(II) removal</b> <u>A. Zubrik</u> , M. Matik, M. Lovás, Z. Danková, S. Hredzák, V. Šepelák
P-I-14	<b>Mechanochemical plant-mediated synthesis of silver nanoparticles and their biological activity</b> M. Baláž, Z. Bujňáková, N. Daneu, E. Dutková, <u>Ľ. Balážová</u> , M. Vargová, A. Salayová, Z. Bedlovičová, Ľ. Tkáčiková	P-II-14	<b>The influence of microwave radiation on crushability and grindability of raw materials</b> <u>I. Znamenáčková</u> , M. Lovás, S. Dolinská, V. Čablík, S. Hredzák
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P-I-16	<b>Physical properties of the lead-free BaFe<sub>1/2</sub>Nb<sub>1/2</sub>O<sub>3</sub> ceramics obtained from mechanochemically synthesized powders</b> <u>D. Bochenek</u> , P. Niemiec, M. Adamczyk-Habajska, I. Szafraniak-Wiza	P-II-16	<b>Stability of magnetite based nanoparticles dispersed in different types of polymers using ultra-fine milling approach</b> <u>Z. Bujňáková</u> , E. Dutková, E. Tóthová, J. Briančin, Z. Cherkezova-Zheleva, J. Kováč
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