

## Timetable of the FBMT 2013

<b>Tuesday, June 25</b>	
10:00 - 19:00	Registration at the Hotel "Zolotaya Dolina" ("Golden Valley")
16:00 - 18:00	Excursions to the Institute of Solid State Chemistry and Mechanochemistry SB RAS and Siberian Synchrotron and Terahertz Radiation Centre
<b>Wednesday, June 26</b>	
8:00 – 9:00	Registration at the House of Scientists
9:00 - 9:10	<b>Opening Remarks</b>
9:10 - 11:10	<b>Plenary Session</b>
11:10 - 11:30	Coffee Break
11:30 - 13:30	<b>Section I</b>
13:30 - 14:30	Lunch Break
14:30 - 17:10	<b>Section III</b>
17:10 - 17:30	Coffee Break
17:30 - 18:30	<b>Poster Session I</b>
19:00 <b>Welcome Reception in the restaurant of the House of Scientists</b>	
<b>Thursday, June 27</b>	
9:00 - 11:10	<b>Plenary Session</b> dedicated to the memory of Prof. Pavel Yu. Butyagin
11:10 - 11:30	Coffee Break
11:30 - 13:30	<b>Plenary Session</b>
13:30 - 14:30	Lunch Break
14:30 - 17:10	<b>Section III</b>
17:10 - 17:30	Coffee Break
17:30 - 18:30	<b>Poster Session II</b>
18:30 - 19:30	Meeting of the International Advisory Committee
20:00 - 23:00	Guided City Bus Tour " <b>Lights of Novosibirsk</b> "
<b>Friday, June 28</b>	
9:00 - 11:10	<b>Plenary Session</b>
11:10 - 11:30	Coffee Break
11:30 - 13:10	<b>Section I</b>
13:10 - 14:30	Lunch Break
14:30 - 17:10	<b>Section III</b>
17:10 - 17:30	Coffee Break
17:30 - 18:10	<b>Poster Session III</b>
18:10 - 18:30	<b>Discussion. End of the Conference</b>
19:00	<b>Conference Banquet in the restaurant "Pechki-Lavochki"</b>

**IV International Conference  
Fundamental Bases of Mechanochemical Technologies  
FBMT 2013**

June 25-28, 2013, Novosibirsk, Russia

**PROGRAM**

**Tuesday, June 25, 2013**

- 10:00 – 19:00** Registration at the Hotel “Zolotaya Dolina” (“Golden Valley”)  
**16:00 – 18:00** Excursions to the Institute of Solid State Chemistry and Mechanochemistry SB RAS and Siberian Synchrotron and Terahertz Radiation Centre

**Wednesday, June 26, 2013**

- 8:00 – 9:00** Registration at the House of Scientists

**Chairmen: Prof. Nikolai Z. Lyakhov**

**9:00** Opening Remarks

**9:10** M. Senna (*Keio University, Japan*). **ANALYSES OF MECHANOCHEMICAL REACTIONS AT THE BOUNDARY BETWEEN METAL OXIDE - ORGANIC FINE PARTICLES AND THEIR PRACTICAL APPLICATION.**

**9:40** V. Šepelák (*Institute of Nanotechnology, Karlsruhe Institute of Technology, Germany; Slovak Academy of Sciences, Slovakia*). **MECHANOCHEMICAL REACTIONS AND SYNTHESSES OF OXIDES.**

**10:10** B.P. Tolochko, M.R. Sharafutdinov, N.Z. Lyakhov, K.A. Ten, E.R. Prueel (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Hydrodynamics SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL PROCESS INVESTIGATION USING OF SYNCHROTRON RADIATION: MODEL AND REAL EXPERIMENTS.**

**10:30** Jung-Ho Ahn, Jinsung Jang (*Andong National University, Gyungbuk, South Korea; Korea Atomic Energy Research Institute, Daejeon, South Korea*). **EFFECT OF PCA ON THE PROPERTIES OF MECHANICALLY ALLOYED HIGH-TEMPERATURE ALLOYS.**

**10:50** M. Iturbe, S. Couillaud, A.S. Awad, J-L. Bobet (*Institut de Chimie de la Matière Condensée de Bordeaux, CNRS-UPR, Université Bordeaux, France*). **A COMPARISON BETWEEN THE SUPER CRITICAL FLUID TECHNOLOGY AND BALL MILLING TO PRODUCE NEW BASED MAGNESIUM MATERIALS WITH IMPROVED HYDROGEN SORPTION PROPERTIES.**

**11:10** Coffee Break

## Section I

**Chairmen: Prof. Eugeny A. Levashov**

- 11:30** A.S. Rogachev, S.G. Vadchenko, N.F. Shkodich, D.Yu. Kovalev, F. Baras, A.A. Nepapushev, S. Rouvimov, N.V. Sachkova, A.S. Mukasyan (*Institute of Structural Macrokinetics and Materials Science RAS, Chernogolovka, Russia; National University of Science and Technology "MISiS", Moscow, Russia; Laboratoire Interdisciplinaire Carnot de Bourgogne CNRS - Université de Bourgogne, Dijon, France; University of Notre Dame, Indiana, USA*) **MECHANICAL ACTIVATION OF THE REACTIVE POWDER MIXTURES.**
- 11:50** J.J. Liu, S.L. Zuo, P.W. Chen, N.F. Cui (*Beijing University of Chemical Technology, Beijing, China; State Key Laboratory of Explosion Science and Technology, Institute of Technology, Beijing, China*). **ACTIVATION AND REACTION OF Ti-Si POWDERS BY BALL-MILLING AND SHOCK LOADING.**
- 12:10** T.A. Udalova, T.F. Grigorieva, T.L. Talako, A.I. Letsko, S.V. Vosmerikov, I.A. Vorsina, P.A. Vityaz, N.Z. Lyakhov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Powder Metallurgy NAS of Belarus, Minsk*). **NON-CARBON PREPARATION OF Si BY MECHANICALLY ACTIVATED THERMAL SYNTHESIS.**
- 12:30** D.V. Dudina, V.I. Mali, A.G. Anisimov, M.A. Korchagin, O.I. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Lavrentiev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia*). **SPARK PLASMA SINTERING OF  $Ti_3SiC_2$ -Cu COMPOSITES PRODUCED BY MECHANICAL MILLING: THE ROLE OF IN SITU CONSOLIDATION.**
- 12:50** I.A. Massalimov, AU. Shayakhmetov, A.G. Mustafin, B.S. Ahmetshin (*Bashkir State University, Ufa, Russia*). **EVALUATION OF EXCESS ENTHALPY IN MECHANICALLY ACTIVATED SUBSTANCES.**
- 13:10** M.Sh. Akchurin, R.M. Zakalyukin, A.A. Kaminskii (*Shubnikov Institute of Crystallography RAS, Moscow, Russia*). **TWINNING MECHANISM OF SOLID STATE REACTIONS.**

## Section II

**Chairmen: Prof. Eugeny P. Yelsukov**

- 11:30** S.P. Kiselev, E.V. Zhirov (*Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia*). **NUMERICAL MOLECULAR DYNAMICS SIMULATION BINARY MIXTURE Ti - Al SYNTHESIS.**

- 11:50 R.B. Abylkalykova, G.S. Bektasova, A.A. Kalitova, A.K. Abkarian, L.I. Kveglis (*Amanzholov East Kazakhstan State University, Ust-Kamenogorsk, Kazakhstan; Siberian Federal University, Krasnoyarsk, Russia*). **MECHANOCHEMICAL PROCESSES IN LEAD-COPPER AT INTENSIVE DYNAMIC LOADS.**
- 12:10 R.B. Abylkalykova, G.S. Bektasova, A.A. Kalitova, F.M. Noskov, L.I. Kveglis (*Amanzholov East Kazakhstan State University, Ust-Kamenogorsk, Kazakhstan; Siberian Federal University, Krasnoyarsk, Russia*). **FEATURES OF MECHANOCHEMICAL PROCESSES IN IRON-COPPER AT HIGH DYNAMIC LOADING.**
- 12:30 P.A. Loginov, E.A. Levashov, V.V. Kurbatkina (*National University of Science and Technology "MISIS", Moscow, Russia*). **MICROGRANULE STRUCTURE EVOLUTION UNDER MECHANICAL ALLOYING OF POWDER MIXTURE Cu-Fe-Ni-Co AS APPLIED TO NEW GENERATION OF DIAMOND TOOL PRODUCTION.**
- 12:50 I.D. Kovalev, N.A. Kochetov (*Institute of Structural Macrokineics and Materials Science RAS, Chernogolovka, Russia*). **XRD STUDY OF PHASE FORMATION DURING COMBUSTION OF MECHANICALLY ACTIVATED Ni-Al SYSTEM.**
- 13:10 N.F. Uvarov, A.A. Iskakova, A.V. Anikeenko, N.N. Medvedev (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia; Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia*). **CONCENTRATION PRESSURE CONCEPT FOR SOLID SOLUTIONS OF IONIC SALTS.**
- 13:30 **Lunch Break**

### Section III

**Chairman: Prof. Jung-Ho Ahn**

- 14:30 A.A. Ilyin, R.N. Rumyantsev, A.P. Ilyin, N.N. Smirnov (*Ivanovo State University of Chemistry and Technology, Ivanovo, Russia*) **MECHANOCHEMICAL SYNTHESIS OF RAW MATERIALS AND CATALYSTS.**
- 14:50 L.A. Isupova, L.G. Pinaeva, D.V. Ivanov, E.Yu. Gerasimov, D.I. Bronin (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Institute of High Temperature Electrochemistry UB RAS, Yekaterinburg, Russia*). **PEROVSKITE-LIKE COMPOSITE MATERIALS FOR HIGH-TEMPERATURE APPLICATION. SYNTHESIS BY MECHANOCHEMICAL ROUTE AND PROPERTIES.**

- 15:10 I.S. Yakovleva, E.Yu. Gerasimov, L.A. Isupova (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*). **ADVANTAGES OF MECHANOCHEMICAL APPROACH FOR PEROVSKITE CATALYSTS SYNTHESIS.**
- 15:30 T.A. Fedushchak, M.A. Uyimin, A.Ye. Ermakov, A.S. Akimov, N.N. Shchegoleva, A.V. Vosmerikov, S.P. Zhuravkov, T.V. Petrenko (*Institute of Petroleum Chemistry SB RAS, Tomsk, Russia; Institute of Metal Physics UB RAS, Yekaterinburg, Russia*). **USE OF MECHANOACTION FOR THE PREPARATION OF SULPHIDE HYDROGENOLYSIS CATALYSTS.**
- 15:50 I.A. Streltsov, O.B. Vinokurova, I.V. Mishakov, V.P. Isupov, A.A. Vedyagin (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF THE NICKEL-COPPER OXIDE CATALYSTS FOR THE PRODUCTION OF CARBON NANOFIBERS.**
- 16:10 O.A. Bulavchenko, T.N. Afonassenko, P.G. Tsyulnikov, O.A. Knyazheva, O.N. Baklanova, S.V. Tsybulya (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Novosibirsk State University, Russia; Institute of Hydrocarbons Processing SB RAS, Omsk, Russia*). **MnO<sub>x</sub> / Al<sub>2</sub>O<sub>3</sub> CATALYSTS FOR DEEP OXIDATION PREPARED BY MECHANOCHEMICAL TECHNOLOGIES. INFLUENCE OF SYNTHESIS ON THE CATALYTIC AND STRUCTURAL PROPERTIES.**
- 16:30 V.A. Poluboyarov, Z.A. Korotaeva, E.V. Voloskova, L.K. Baykina, F.K. Gorbunov, A.A. Zhdanok (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **PROPERTIES OF THE MATERIALS MODIFIED BY MECHANOCHEMICALLY RECEIVED CERAMIC NANOPOWDERS.**
- 16:50 T.S. Yusupov, L.K. Kazantseva, L.G. Shumskaya (*Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia*). **INNOVATIVE ASPECTS OF ZEOLITES MECHANOCHEMISTRY.**

## Section IV

**Chairwoman: Prof. Elena Boldyreva**

- 14:30 B.N. Kuznetsov, S.V. Baryshnikov, V.I. Sharypov, I.G. Sudakova (*Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk, Russia; Siberian Federal University, Krasnoyarsk, Russia*). **INFLUENCE OF MECHANOCHEMICAL ACTIVATION ON THE STRUCTURE AND REACTION ABILITY OF ASPEN-WOOD AND CELLULOSE.**

- 14:50** A.V. Dushkin, T.G. Tolstikova, M.I. Khvostov, N.E. Polyakov, K.V. Gaidul (*Institute of Solid State Chemistry SB RAS, Novosibirsk, Russia; N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry SB RAS, Russia; Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia; Institute of Clinical Immunology SB RAMS, Novosibirsk, Russia*). **MECHANOCHEMICAL APPROACHES TO CREATION OF DRUG DELIVERY SYSTEMS.**
- 15:10** D.S. Rybin, G.N. Konygin, V.E. Porsev, E.P. Yelsukov, V.V. Boldyrev (*Physical-Technical Institute UB RAS, Izhevsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICALLY INDUCED STRUCTURAL TRANSFORMATIONS IN MOLECULAR CRYSTALS.**
- 15:30** I.A. Tumanov, A.F. Achkasov, E.V. Boldyreva, S.A. Myz, V.V. Boldyrev (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **COMPARING DIFFERENT TYPES OF MECHANICAL TREATMENT ON SEVERAL “DRUG – CARBOXYLIC ACID” SYSTEMS.**
- 15:50** S.A. Myz, A.G. Ogienko, N.A. Tumanov, A.S. Stoporev, T.P. Shakhtshneider, E.V. Boldyreva, V.V. Boldyrev (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; REC “Molecular Design and Ecologically Safe Technologies” at Novosibirsk State University, Novosibirsk, Russia; Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia*). **HOW GOOD ARE THE METHODS FOR CO-CRYSTALS? A COMPARATIVE STUDY OF MELOXICAM.**
- 16:10** E.A. Losev, E.V. Boldyreva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **THE EFFECT OF WATER ON THE OUTCOME OF MECHANICAL TREATMENT IN L-SERINE-OXALIC ACID SYSTEM.**
- 16:30** T.S. Demina, T.A. Akopova, A.N. Zelenetskii (*Enikolopov Institute of Synthetic Polymer Materials RAS, Moscow, Russia*). **SOLID-STATE COPOLYMERIZATION OF CHITOSAN WITH LACTIDE.**
- 16:50** I.A. Vorsina, T.F. Grigorieva, S.V. Vosmerikov, T.A. Udalova, V.A. Struk, E.V. Ovchinnikov, N.Z. Lyakhov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Yanka Kupala Grodno State University, Grodno, Belarus*). **MECHANOCHEMICAL INTERACTION IN THE SYSTEMS POLYMER-MODIFIER.**
- 17:10** Coffee Break

**17:30 – 18:30 POSTER SESSION I**

19:00 Welcome Reception in the restaurant of the House of Scientists

Thursday, June 27, 2013

*Session dedicated to the memory of Prof. Pavel Yu. Butyagin*

**Chairman: Prof. Mamoru Senna**

- 9:00 A.N. Streletskii, P.Yu. Butyagin A.B. Borunova (*Semenov Institute of Chemical Physics RAS, Moscow, Russia*). **ENERGY APPROACH TO ANALYSIS OF MECHANOCHEMICAL TRANSFORMATION. ACHIEVEMENTS AND PROBLEMS.**
- 9:30 A.A. Politov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*) **MECHANOCHEMICAL PROCESSING OF RENEWABLE BIOMASS INTO BIO FUEL AND NEW GREEN MATERIALS.**
- 10:00 E.P. Yelsukov, A.L. Ulyanov, D.A. Kolodkin (*Physical-Technical Institute UB RAS, Izhevsk, Russia*). **PROBE MÖSSBAUER SPECTROSCOPY STUDY OF GRAIN BOUNDARIES AND INITIAL STAGES OF MECHANICAL ALLOYING IN Mo, Mg, Al, Si – BASED NANOSYSTEM WITH Fe.**
- 10:30 A.A. Firsova, O.S. Morozova, A.N. Streletskii, A.V. Leonov, N.G. Berezkina (*Semenov Institute of Chemical Physics RAS, Moscow, Russia; Lomonosov Moscow State University, Chemical Department, Moscow, Russia; Talrose Institute of Energetic Problems of Chemical Physics, Moscow, Russia*). **CuO/CEO<sub>2</sub> AND Cu/CEO<sub>2</sub> NANOCOMPOSITE CATALYSTS FOR H<sub>2</sub> PURIFICATION FROM CO.**
- 10:50 A.Al. Michalchuk, I.A. Tumanov, V.A. Drebushchak, E.V. Boldyreva (*The School of Chemistry, The University of Edinburgh, Edinburgh, UK; Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia*). **ELUCIDATING THE NATURE OF MECHANOCHEMICAL REACTIONS IN A MODEL ORGANIC SYSTEM.**
- 11:10 Coffee Break

**Chairman: Prof. Vladimir Sepelak**

- 11:30 K. Chattopadhyay, K. Biswas, C. Tiwari (*Indian Institute of Science, Bangalore, India; Indian Institute of Technology, Kanpur, India*). **NOVEL SYNTHESIS THROUGH TEMPERATURE CONTROLLED MECHANICAL MILLING.**

- 12:00 N.V. Kosova (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL REACTIONS AND PROCESSING OF NANOMATERIALS FOR LITHIUM-ION BATTERIES.**
- 12:30 O.G. Terekhova, A.A. Magaeva, E.P. Nayden, V.I. Itin (*Department for Structural Macrokinetics, Tomsk Scientific Center SB RAS, Tomsk, Russia; Tomsk State University, Tomsk, Russia*). **NANOSIZED MAGNETIC POWDERS BASED ON OXIDE IN MEDICINE AND BIOLOGY.**
- 12:45 V.V. Zyryanov, N.F. Uvarov, A.S. Ulihin, N.V. Bulina (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **CERAMIC SCZ/ZIRCONIA NANOCOMPOSITE WITH HIGH CONDUCTIVITY.**
- 13:00 T.A. Ketegenov, M.U. Leksin, T. Oserov, F.Kh. Urakaev (*"KAC" Company by National Atomic Company "Kazatomprom", Astana, Kazakhstan; Sobolev Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF SODIUM POLYSULFIDES AND THEIR APPLICATION.**
- 13:20 S.G. Zakhvaev (*BRUKER AXS, Novosibirsk, Russia*). **MODERN X-RAY ANALYSIS FROM BRUKER.**
- 13:30 **Lunch Break**

### Section III

**Chairman: Prof. Kamanio Chattopadhyay**

- 14:30 E.G. Avvakumov, G.G. Lepezin, A.A. Gusev, O.B. Vinokurova (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia*). **EFFECT OF MECHANICAL ACTIVATION ON SYNTHESIS CORDIERITE FROM TALC AND SILLIMANITE GROUP MINERALS.**
- 14:50 T.C. Alex, S.K. Nath, A.M. Kalinkin, B.I. Gurevich, E.V. Kalinkina, V.V. Tyukavkina, S. Kumar (*CSIR-National Metallurgical Laboratory, Jamshedpur, India; Tananaev Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials, Kola Scientific Center RAS, Apatity, Russia*). **GEOPOLYMERS BASED ON Zn SLAG MECHANICALLY ACTIVATED IN AIR AND IN CO<sub>2</sub> ATMOSPHERE.**
- 15:10 V.P. Isupov, N.V. Eremina, Y.E. Tatarinova, N.V. Bulina (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **APPLICATION OF MECHANOCHEMISTRY FOR THE SYNTHESIS**

## OF FINE LITHIUM MONOALUMINATE.

- 15:30** A.A. Gusev, I.P. Raevsky, E.G. Avvakumov, V.P. Isupov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Physics, Southern Federal University, Rostov-on-Don, Russia*). **MECHANOCHEMICAL SYNTHESIS OF THE FERROELECTROMAGNET LEAD IRON NIOBATE.**
- 15:50** O.A. Knyazheva, O.N. Baklanova, N.N. Leontyeva, A.V. Lavrenov, V.A. Likholobov (*Institute of Hydrocarbons Processing SB RAS, Omsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF LAYERED AMMONIUM NICKEL MOLYBDATES.**
- 16:10** T.S. Kharlamova, Yu.N. Bespalko, S.N. Pavlova, T.A. Krieger, V.A. Sadykov, Y.A. Chesalov, A.S. Ulihin, N.F. Uvarov (*Tomsk State University, Tomsk, Russia; Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **SYNTHESIS AND PROPERTIES OF LANTHANUM MOLIBDATES.**
- 16:30** M.V. Chaikina, N.V. Bulina, I.Yu. Prosanov, A.V. Ishchenko (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Boreskov Institute of Catalysts SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF APATITE WITH  $\text{SiO}_4^{4-}$  AND  $\text{ZrO}_4^{4-}$  SUBSTITUTION.**
- 16:50** A.A. Lyamkina, N.E. Lyamkina, S.P. Moshchenko, L.D. Pokrovskii, N.V. Abuzova, G.A. Chiganova (*Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia; Siberian Federal University, Krasnoyarsk, Russia*). **OBTAINING HIGHLY DISPERSED  $\text{Al}_2\text{O}_3\text{-CrO}_3$  POWDERS FROM HYDROXIDES BY SHOCK-WAVE SYNTHESIS.**

## Section IV

**Chairwoman: Prof. Tatiana Akopova**

- 14:30** S.S. Khalikov, A.V. Dushkin, R.D. Davletov, V.I. Evseenko (*A.N. Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Scientific Technological Institute of Herbicides and Plant Regulatory of Bashkortostan Academy of Science, Ufa, Russia*). **FEATURES OF MECHANOCHEMICAL TECHNOLOGY TO CREATE INNOVATIVE FUNGICIDES.**
- 14:50** V.I. Evseenko, A.V. Dushkin, K.V. Gaidul', N.Z. Lyakhov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Research Institute of Clinical Immunology SB RAMS, Novosibirsk, Russia*). **PHYSICAL AND CHEMICAL PROPERTIES AND ANTIMICROBIAL ACTIVITY OF MECHANOCHEMICALLY**

**SYNTHESIZED COMPOSITES OF ANTIBIOTICS AND NANOSTRUCTURED SILICON DIOXIDE.**

- 15:10** E.G. Shapolova, O.I. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL INTERACTION OF FLAVONOIDS WITH SILICA.**
- 15:30** N.A. Pankrushina, A.N. Mikheev, E.A. Paukshtis, A.V. Voronovich, O.I. Lomovsky (*Novosibirsk Institute of Organic Chemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia; Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia; Borekov Institute of Catalysis SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANICALLY INDUCED INTERACTION OF ALKALOIDS WITH ALUMINA AND SILICA.**
- 15:50** V.A. Babkin, L.A. Ostroukhova, E.N. Medvedeva, A.A. Levchuk (*A.E. Favorsky Irkutsk Institute of Chemistry SB RAS, Irkutsk, Russia*). **ARABINO GALACTAN SIBERIAN LARCH AS DRUG CARRIER.**
- 16:10** Y.S. Chistyachenko, A.V. Dushkin, N.E. Polyakov, T.G. Tolstikova, M.V. Khvostov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia; N.N. Vorozhtsov Institute of Organic Chemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL OBTAINING OF SOLID DISPERSIONS OF SALICYLIC AND ACETYSALICYLIC ACIDS WITH POLYSACCHARIDE ARABINO GALACTAN AND INVESTIGATION OF THEIR PROPERTIES IN SOLID PHASES AND WATER SOLUTIONS.**
- 16:30** S.A. Kuznetsova, T.P. Shakhtshneider (*Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk, Russia; Siberian Federal University, Krasnoyarsk; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THE APPLICATION OF MECHANOCHEMICAL METHODS FOR EXTRACTION AND MODIFICATION OF BIOLOGICALLY ACTIVE SUBSTANCES FROM BIRCH BARK.**
- 16:50** G. Cagnetta, G. Intini, L. Liberti, V.V. Boldyrev, O.I. Lomovsky (*Technical University of Bari, Bari, Italy; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **BIOMECHANICAL PROCESS FOR MECHANOCHEMICAL BIODEGRADATION OF PAHs IN MARINE SEDIMENTS.**
- 17:10** **Coffee Break**

**17:30 – 18:30 POSTER SESSION II**

**18:30 – 19:30 Meeting of the Advisory Committee**

**20:00 – 23:00 Guided City Bus Tour “Lights of Novosibirsk”**

**Friday, June 28, 2013**

**Chairman: Prof. Andrey N. Streletskii**

- 9:00** E.V. Boldyreva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **MECHANOCHEMISTRY OF ORGANIC AND COORDINATION COMPOUNDS - IS ANYTHING BASICALLY DIFFERENT FROM INORGANIC SYSTEMS?**
- 9:30** O.I. Lomovsky, T.A. Aseeva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of General and Experimental Biology SB RAS, Ulan-Ude, Russia*). **MECHANOCHEMICAL APPROACHES IN THE PRODUCTION OF TRADITIONAL MEDICINES.**
- 10:00** J. Lang, N. Skryabina, D. Fruchart, M. Danaie, J. Huot (*Université du Québec à Trois-Rivières, Trois-Rivières, Québec, Canada; Perm State University, Perm, Russia; Institut Néel BP Grenoble, France; McMaster University, Hamilton, Ontario, Canada*). **MICROSTRUCTURE OF COLD ROLLED MAGNESIUM AND MAGNESIUM HYDRIDES FOR HYDROGEN STORAGE APPLICATIONS.**
- 10:20** G. Scholz, A. Düvel, P. Heitjans, E. Kemnitz (*Humboldt-Universität zu Berlin, Berlin, Germany; Institute of Physical Chemistry and Electrochemistry and ZFM - Center for Solid State Chemistry and New Materials, Leibniz Universität Hannover, Hannover, Germany*). **NANOCRYSTALLINE ALKALINE EARTH METAL FLUORIDES – MECHANOCHEMICAL SYNTHESIS AND PROPERTIES.**
- 10:40** Yang Jun, Chen Meiling, Gao Hong (*School of Material Science & Engineering, Dalian Jiaotong University, Dalian, China*). **RESEARCH ON MECHANICAL AND THERMAL SHOCK PROPERTIES OF CAST IRON REINFORCED BY MODIFIED CERAMIC POWDERS.**
- 11:00** V. Kazarezov (*Scientific Equipment, Ltd, Novosibirsk, Russia*). **A NEW CONCEPT OF OPTICAL MICROSCOPY: DIGITAL OPTICAL MICROSCOPES OF DSX (OLYMPUS) SERIES FOR SOLID-STATE RESEARCH.**
- 11:10** **Coffee Break**

## Section I

**Chairman: Prof. Gao Hong**

- 11:30** E.A. Levashov, E.I. Patsera, V.V. Kurbatkina, N.A. Kochetov (*National University of Science and Technology "MISIS", Moscow, Russia; Institute of Structural Macrokineitics and Material Science Problems RAS, Chernogolovka, Moscow Region, Russia*). **CONTRIBUTION OF MECHANICAL ACTIVATION TO SHS IN SYSTEMS WITH GAS TRANSPORT CHEMICAL REACTIONS.**
- 11:50** M.A. Korchagin (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THERMAL EXPLOSION IN MECHANICALLY ACTIVATED POWDER MIXTURES OF LOW-CALORIE COMPOSITIONS.**
- 12:10** V.Yu. Filimonov, M.A. Korchagin, A.V. Afanasyev, A.Z. Negodyaev, M.V. Loginova, V.I. Yakovlev, A.A. Sytnikov, N.Z. Lyakhov (*Altai State Technical University, Barnaul, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **KINETICS OF HEATING AND PHASE FORMATION IN MECHANICALLY ACTIVATED POWDER MIXTURE 3Ti+Al DURING THE SYNTHESIS IN THE THERMAL EXPLOSION MODE.**
- 12:30** I.A. Ditenberg, K.I. Denisov, A.N. Tyumentsev, Yu.P. Pinzhin, M.A. Korchagin (*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia, Siberian Physical-Technical Institute, Tomsk, Russia; Tomsk State University, Tomsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **FEATURES OF HIGH-GRADIENT NANOSTRUCTURAL STATES FORMATION IN METALLIC MATERIALS OF DIFFERENT KIND DURING MECHANICAL ACTIVATION.**
- 12:50** A.N. Tyumentsev, I.A. Ditenberg, M.A. Korchagin, K.I. Denisov (*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia; Tomsk State University, Tomsk, Russia; Siberian Physical-Technical Institute, Tomsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **QUASIVISCOUS MECHANISM OF DEFORMATION AND NANOCRYSTAL STRUCTURES FORMATION UNDER MECHANICAL ACTIVATION IN PLANETARY BALL MILL AND BRIDGMAN ANVILS.**

## Section II

**Chairman: Prof. Eugeny G. Avvakumov**

- 11:30** S. Tikhov, V. Sadykov, O. Lomovsky (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia, Novosibirsk State University, Russia*;

- Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia*). **MECHANICALLY ALLOYED Fe-Al POWDERS FOR DESIGN OF POROUS CERAMOMETAL SUPPORTS, PERMEABLE MATERIALS AND CATALYSTS OF REDOX PROCESSES.**
- 11:50** I.G. Konstanchuk, K.B. Gerasimov, A.G. Demkin (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **HYDROGEN CAPACITY OF MECHANOCHEMICALLY PREPARED MAGNESIUM-BASED MATERIALS.**
- 12:10** N.F. Shkodich, A.S. Rogachev, S.G. Vadchenko, A.S. Mukasyan, D.O. Moskovskikh, A.E. Sytshev, S. Rouvimov (*Institute of Structural Macrokinetics and Materials Science RAS, Chernogolovka, Russia; University of Notre Dame, Notre Dame, IN, USA; National University of Science and Technology "MISiS", Moscow, Russia*). **STRUCTURE FORMATION OF Cu-Cr NANOCOMPOSITES DURING HIGH-ENERGY BALL MILLING.**
- 12:30** L.E. Bodrova, E.Yu. Goyda, E.A. Pastukhov, T.F. Grigorieva (*Institute of Metallurgy UB RAS, Yekaterinburg, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THE INFLUENCE OF MECHANICAL ACTIVATION OF BPX1 BRONZE MELT BY LOW-FREQUENCY OSCILLATIONS ON ITS PRECIPITATION HARDENING.**
- 12:50** V.A. Shabashov, A.V. Litvinov, V.V. Sagaradze, K.A. Kozlov, N.F. Vil'danova, N.V. Kataeva, A.E. Zamatovsky, K.A. Lyashkov (*Institute of Metal Physics UB RAS, Yekaterinburg, Russia*). **STRUCTURE-PHASE SPECIALTIES OF IRON NANOALLOYS WITH INTERSTITIAL ELEMENTS OBTAINED BY MECHANICAL ACTIVATION.**
- 13:10** Lunch Break

### Section III

**Chairman: Prof. Zhai Yu-Chun**

- 14:30** Yu.A. Khon, P.P. Kaminskii, E.V. Tuch (*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia*). **NON-CLASSICAL MASS TRANSFER MECHANISMS IN PLASTICALLY DEFORMED MEDIA.**
- 14:50** M.A. Eryomina, S.F. Lomayeva, E.P. Yelsukov, A.L. Ul'yanov (*Physical-Technical Institute UB RAS, Izhevsk, Russia*) **STRUCTURE AND PHASE COMPOSITION OF Cu-Fe-C NANOCOMPOSITES PREPARED BY MECHANOSYNTHESIS IN AN INERT AND ORGANIC MEDIA.**

- 15:10 A.V. Vasilevich, O.N. Baklanova, A.V. Lavrenov, O.A. Knyazheva, N.N. Leontyeva, E.A. Buluchevskii, V.A. Likholobov (*Institute of Hydrocarbons Processing SB RAS, Omsk, Russia*). **SYNTHESIS OF FINE CARBIDE CONTAINING Mo<sub>2</sub>C-C COMPOSITE.**
- 15:30 E.F. Sutormina, L.A. Isupova, N.A. Kulikovskaya, L.M. Plyasova (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*). **THE EFFECT OF MECHANOCHEMICAL ACTIVATION ON THE PROPERTIES OF Mn-MODIFIED CORDIERITE CERAMICS.**
- 15:50 D.A. Sidorenko, A.A. Zaitsev, E.A. Levashov, V.V. Kurbatkina, S.I. Rupasov, P.A. Loginov, V.A. Andreev (*National University of Science and Technology "MISIS", Moscow, Russia; Kermet Co., Moscow, Russia*). **APPLICATION OF MECHANICAL ACTIVATION IN MANUFACTURING PROCESS OF DIAMOND TOOL WITH NANOMODIFIED BINDERS.**
- 16:10 M.V. Grigoriev, S.P. Buyakova, S.N. Kulkov (*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia; The National Research Tomsk Polytechnic University, Tomsk, Russia*). **MECHANICAL ACTIVATION OF TITANIUM CARBIDE POWDERS.**
- 16:30 A.N. Mikheev, A.V. Arzhannikov (*Novosibirsk State University, Novosibirsk, Russia; Nikolayev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia*). **EFFECT OF MECHANOCHEMICAL PRE-TREATMENT ON MICROWAVE HEATING OF SOLIDS AND MATERIALS.**
- 16:50 A.S. Artemov (*Prokhorov General Physics Institute RAS, Moscow, Russia*). **MECHANOCHEMICAL ASPECT OF THE TECHNOLOGY OF CHEMICAL MECHANICAL POLISHING.**

## Section IV

**Chairman: Prof. Oleg I. Lomovsky**

- 14:30 I.O. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; REC "MDEST" at Novosibirsk State University, Novosibirsk, Russia*). **SOLID STATE MECHANOCHEMICAL REACTIONS FOR PRODUCING OF ANTIOXIDANTS PREPARATIONS FROM PLANT MATERIAL.**
- 14:50 E.V. Maltseva, N.V. Yudina, L.V. Nechaev, O.I. Lomovsky (*Institute of Petroleum Chemistry SB RAS, Tomsk, Russia; Tomsk State University, Siberian Physical Technical Institute, Tomsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **PROPERTIES AND REACTIVITY OF HUMIC ACIDS FROM MECHANICALLY ACTIVATED CAUSTOBIOLITHS.**

- 15:10 T.S. Urazova, A.L. Bychkov, O.I. Lomovsky (*Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL MODIFICATION OF HUMIC ACIDS TO CREATE "CORE-SHELL" SORBING PARTICLES.**
- 15:30 A.A. Ivanov, N.V. Yudina, A.V. Savelyeva, O.I. Lomovsky, J. Dugarjav (*Institute of Petroleum Chemistry SB RAS, Tomsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Chemistry and Chemical Technology, Mongolian Academy of Sciences, Ulaanbaatar, Mongolia*). **THE CHANGE OF SORPTION ACTIVITY AND COMPOSITION OF HUMIC ACIDS OF BRAUN COAL AFTER MECHANOACTION.**
- 15:50 A.P. Burdukov, V.I. Popov, O.I. Lomovsky, T.S. Yusupov (*Institute of Thermal Physics SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia*). **UTILIZATION OF MECHANICALLY ACTIVATED COAL AND BIOMASS IN ENERGY TECHNOLOGIES.**
- 16:10 N.I. Kopylov, Yu.D. Kaminskiy, J. Dugarjav, B. Avid (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Chemistry and Chemical Technology MAS, Ulaanbaatar, Mongolia*). **INFLUENCE OF MECHANICAL ACTIVATION ON COAL THERMOLYSIS.**
- 16:30 V.V. Libanov, A.A. Kapustina, N.V. Dombay, N.P. Shapkin, V.B. Kolycheva (*Far Eastern Federal University, Vladivostok*). **THE INTERACTION OF POLYPHENYLSILOXANES WITH BORON COMPOUNDS BY MECHANOCHEMICAL ACTIVATION.**
- 16:50 A.N. Maratkanova, A.V. Syugaev, A.A. Shakov, S.F. Lomayeva (*Physical-Technical Institute UB RAS, Izhevsk, Russia*). **CHEMICAL STRUCTURE OF THIN ORGANIC LAYERS GROWN ON IRON UNDER CO-MILLING OF Fe POWDER AND PARAFFIN WITH PRESENCE OF SURFACTANTS.**
- 17:10 Coffee Break

### 17:30 – 18:10 POSTER SESSION III

18:10 – 18:30 Discussion. End of the Conference

19:00 Conference Banquet in the restaurant “Pechki-Lavochki”

**Poster Session I**

1. Zhai YuChun (*School of Materials and Metallurgy, Northeastern University, Shenyang, China*). **PREPARATION OF Al-Cu-SiC METAL MATRIX NANOCOMPOSITE MATERIALS.**
2. V.I. Lad'yanov, R.M. Nikonova, N.S. Larionova (*Physical-Technical Institute UB RAS, Izhevsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF NANOCOMPOSITES Cu-C WITH VARIOUS CARBON FORMS.**
3. V.I. Lad'yanov, G.A. Dorofeev, A.N. Lubnin, O.M. Kanunnikova, S.S. Mikhailova (*Physical-Technical Institute UB RAS, Izhevsk, Russia*). **SOLID PHASE AND SOLID-LIQUID MECHANOCHEMICAL SYNTHESIS OF NANOCRYSTALLINE INTERSTITIAL TITANIUM COMPOUNDS.**
4. G.A. Dorofeev, V.I. Lad'yanov, I.V. Sapegina (*Physical-Technical Institute UB RAS, Izhevsk, Russia*). **MECHANOCHEMICAL DISSOLUTION OF NITRIDES IN POWDER METALLURGY OF NANOCRYSTALLINE HIGH-NITROGEN STEELS.**
5. O.M. Klimenko, A.V. Zhukov, S.V. Chizhevskaya, E.P. Magomedbekov, A.V. Davydov, G.D. Polenov, S.A. Bocharova (*Mendeleev University of Chemical Technology of Russia, Moscow, Russia*) **SYNTHESIS OF NANO-SIZE ZIRCONIA AND HAFNIA BY SOLID-PHASE INTERACTION OF TETRAFLUORIDES WITH MECANICALLY ACTIVATED SILICA.**
6. S.V. Chizhevskaya, E.P. Magomedbekov, A.V. Davydov, O.M. Klimenko, A.V. Zhukov, G.D. Polenov (*Mendeleev University of Chemical Technology of Russia, Moscow, Russia*). **THE INTENSIFICATION OF DEPLETED URANIUM TETRAFLUORIDE SOLID-PHASE CONVERSION INTO URANIUM OXIDES USING MECHANICAL ACTIVATION.**
7. R.N. Rumyantsev, A.A. Ilyin, A.B. Zhukov, A.P. Ilyin (*Ivanovo State University of Chemical Technology, Ivanovo, Russia*). **PRODUCTION OF IRON MOLYBDATES  $Fe_2(MoO_4)_3$  FOR CATALYST OF METHANOL OXIDATION TO FORMALDEHYDE USING MECHANOCHEMICAL SYNTHESIS.**
8. A.S. Abraamyan, G.R. Karagedov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICALLY STIMULATED LOW-TEMPERATURE SYNTHESIS OF AlN.**
9. A.L. Myz, G.R. Karagedov, N.Z. Lyakhov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **EFFECT OF MECHANOCHEMICALLY PRODUCED SEEDS ON ALUMINO-HYDROXIDE GEL TRANSFORMATION.**

10. M.A. Kovalenko, A.L. Myz, G.R. Karagedov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **SYNTHESIS OF  $\text{LiYO}_2$ .**
11. A.M. Kalinkin, K.V. Balyakin, E.V. Kalinkina (*Tananaev Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials, Kola Scientific Center RAS, Apatity, Russia*). **KINETICS OF MECHANOCHEMICAL SYNTHESIS OF  $\text{CaZrO}_3$ .**
12. N.V. Bulina, V.R. Khusnutdinov, E.G. Avvakumov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **EFFECT OF MECHANICAL ACTIVATION ON THE FORMATION OF SPINEL IN THE MIXTURES OF MAGNESIUM AND ALUMINIUM HYDROXIDES.**
13. V.P. Isupov, N.V. Eremina, N.V. Bulina (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **STRUCTURAL AND MORPHOLOGICAL CHARACTERISTICS AND DISPERSION OF LITHIUM CARBONATE AFTER MECHANICAL ACTIVATION AND HEAT TREATMENT.**
14. Ya.E. Tatarinova, V.P. Isupov (*Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **INVESTIGATION OF THE EFFECT OF MECHANOCHEMICAL SYNTHESIS CONDITIONS ON THE SPECIFIC SURFACE AREA AND PHASE COMPOSITION OF  $\gamma\text{-LiAlO}_2$ .**
15. V.P. Isupov, M.O. Khokhlova, A.A. Gusev, N.V. Bulina (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF LITHIUM NIOBATE.**
16. A.I. Katunina, V.P. Isupov, S.S. Shatskaya, O.B. Vinokurova (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF Mg-Fe LDH.**
17. B.N. Dudkin, I.V. Loukhina, A.G. Krasnov (*Institute of Chemistry RAS, Syktyvkar, Russia*) **MECHANOCHEMICAL SYNTHESIS OF THE LAYERED MAGNESIUM SILICATE.**
18. A.M. Tsapina, N.V. Kosova (*Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICALLY ASSISTED SYNTHESIS OF PYROPHOSPHATE CATHODE MATERIALS  $\text{Li}_2\text{Fe}_{1-y}\text{Mn}_y\text{P}_2\text{O}_7$  FOR LITHIUM-ION BATTERIES.**
19. V.R. Podugolnikov, N.V. Kosova (*Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*).  **$\text{Na}_2\text{FePO}_4\text{F}$  AS A NEW POSITIVE MATERIAL FOR LITHIUM-ION BATTERIES.**

20. Yu.G. Mateyshina, D.O. Kolesnikov, N.F. Uvarov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Novosibirsk State University, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk Russia*). **SYNTHESIS OF LITHIUM CERAMIC SUPERIONIC CONDUCTOR  $\text{Li}_3\text{XLa}_2/3\text{-XTiO}_3$  WITH CONTROLLED POROSITY USING MECHANICAL ACTIVATION.**
21. Yu.G. Mateyshina, V. Sheryakov, A.S. Ulihin, N.F. Uvarov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANICAL SYNTHESIS OF CARBON-BASED NANOCOMPOSITES FOR SUPERCAPACITORS.**
22. V.G. Ponomareva, I.N. Bagryantseva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **SUPERPROTON CONDUCTIVITY AND SPECTROSCOPY STUDIES IN  $\text{Cs}(\text{H}_2\text{PO}_4)_{1-x}(\text{HSO}_4)_x$  SYSTEM.**
23. I.N. Bagryantseva, V.G. Ponomareva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **COMPOSITE PROTON ELECTROLYTES BASED ON  $(1-x)\text{CsHSO}_4\text{-xKH}_2\text{PO}_4$  SYNTHESIZED BY MECHANOCHEMICAL ACTIVATION.**
24. O.A. Savinskaya, A.P. Nemudry (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **STUDY OF FUNCTIONAL PROPERTIES OF  $\text{SrCo}_{0.8-x}\text{Fe}_{0.2}\text{Mo}_x\text{O}_{3-z}$  PEROVSKITES PREPARED BY MECHANOCHEMICAL TECHNOLOGIES.**
25. E.V. Artimonova, O.A. Savinskaya, A.P. Nemudry (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL SYNTHESIS OF  $\text{SrCo}_{0.8-x}\text{Fe}_{0.2}\text{W}_x\text{O}_{3-z}$  PEROVSKITES AND STUDY OF STRUCTURAL FEATURES AND OXYGEN TRANSPORT.**
26. M.P. Popov, I.A. Starkov, S.F. Bychkov, A.P. Nemudry (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **INVESTIGATION OF OXYGEN PERMEABILITY OF MEMBRANE MATERIALS BASED ON  $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8-x}\text{Fe}_{0.2}\text{W}_x\text{O}_{3-z}$  PREPARED BY MECHANOCHEMICAL TECHNOLOGY.**
27. I.V. Belenkaya, A.P. Nemudry (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **STRUCTURE AND MICROSTRUCTURE INVESTIGATIONS OF CERAMIC MEMBRANE MATERIALS  $\text{SrCo}_{0.8-x}\text{Fe}_{0.2}\text{M}_x\text{O}_{3-\delta}$  ( $\text{M}=\text{Ta}, \text{Nb}; 0 \leq x \leq 0.1$ ) PREPARED BY MECHANOCHEMICAL TECHNOLOGIES.**
28. E.N. Lysenko, A.P. Surzhikov, A.V. Malyshev, V.A. Vlasov (*Tomsk Polytechnic University, Tomsk, Russia*). **NONISOTHERMAL SYNTHESIS OF MECHANICALLY ACTIVATED LITHIUM-SUBSTITUTED FERRITES.**
29. M.A. Mikhailenko, U.V. Ancharova, B.P. Tolochko, M.R. Sharafutdinov, N.Z. Lyakhov E.A. Shtarklev, V.S. Eliseev, A.Yu Vlasov, M.V. Korobeynikov, A.A.

Bryazgin (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia*). **REACTIVITY OF MECHANICALLY ACTIVATED MIXTURES IN THE PROCESS OF RADIATION-THERMAL SYNTHESIS OF FERRO-SPINELS.**

30. T.F. Grigorieva, S.A. Kovaliova, T.Yu. Kiseleva, S.V. Tsybulya, P.A. Vityaz, N.Z. Lyakhov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Powder Metallurgy, NAS of Belarus, Minsk, Belarus; Lomonosov Moscow State University, Department of Physics, Russia; Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*). **INVESTIGATION OF MECHANOCHEMICAL INTERACTION OF THE SOLID AND LIQUID METALS.**
31. T.L. Talako, A.I. Letsko, T.A. Kuznetsova, T.F. Grigorieva, P.A. Vityaz, N.Z. Lyakhov (*Institute of Powder Metallurgy, Minsk, Belarus; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **STRUCTURE OF MECHANOCOMPOSITES FOR OBTAINING COMPOSITE SHS-POWDERS IN METAL OXIDE SYSTEMS.**
32. S.A. Kovaliova, P.A. Vityaz, T.F. Grigorieva, S.V. Vosmerikov (*Joint Institute of Mechanical Engineering NAS of Belarus, Minsk, Belarus; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **STUDIES ON THE STRUCTURAL FORMATION OF POWDERS Fe/Ti AND Fe/Zr UNDER INTENSIVE MECHANICAL ACTIVATION.**
33. S.A. Kovaliova, P.A. Vityaz, V.I. Zornik, T.F. Grigorieva (*Joint Institute of Mechanical Engineering NAS of Belarus, Minsk, Belarus; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **INFLUENCE OF MECHANICAL ACTIVATION OF Cu AND Sn POWDER MIXTURES ON MICROSTRUCTURE OF SINTERED ALLOYS.**
34. T. Kiseleva, S. Zholudev, A. Novakova, I. Il'nykh, T. Grigorieva (*Lomonosov Moscow State University, Department of Physics, Moscow, Russia; National University of Science and Technology "MISIS", Moscow, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOSYNTHESIZED Fe-Ga PARTICLES AS FILLERS FOR MAGNETOSTRICTIVE FUNCTIONAL METAL/POLYMER COMPOSITES.**
35. V.Yu. Zadorozhnyy, S.D. Kaloshkin, Ju.V. Borisova, E.V. Kaevitser, M.N. Churyukanova (*National University of Science and Technology "MISIS", Moscow, Russia*). **FORMATION OF INTERMETALLIC, CERAMICS AND SALT COATINGS BY MECHANICAL ALLOYING ON THE METALLIC SUBSTRATES.**
36. S. Moseenkov, A. Selyutin, A. Shmakov, V. Kuznetsov, A. Ishchenko, N. Rudina, D. Dudina, S. Abramov, O. Lomovsky (*Boreskov Institute of Catalysis SB RAS, Russia; Novosibirsk State University, Russia; Institute of*

*Solid State Chemistry and Mechanochemistry SB RAS, Russia*).  
**CHARACTERIZATION OF ALUMINUM-CARBON COMPOSITES OBTAINED VIA MECHANICAL MILLING OF ALUMINUM AND CARBON NANOTUBES.**

37. M.G. Krinitcyn, Yu.P. Pinzhin, K.I. Denisov, I.A. Ditenberg, A.N. Tyumentsev, M.A. Korchagin, V.L. Kuznetsov (*Tomsk State University, Tomsk, Russia; Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia; Siberian Physical-Technical Institute, Tomsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*). **ELECTRON MICROSCOPY INVESTIGATION OF MICROSTRUCTURE OF MECHANOCOMPOSITES BASED ON COPPER AND CARBON NANOTUBES.**
38. E.Yu. Goyda, L.E. Bodrova, A.G. Meylakh, E.A. Pastukhov, M.A. Eremina (*Institute of Metallurgy UB RAS, Yekaterinburg, Russia; Physico-Technical Institute UB RAS, Izhevsk, Russia*). **INFLUENCE OF COPPER MELT-CHROMIUM CARBIDE METALLIZED POWDERS SUSPENSION MECHANOACTION ON STRUCTURE AND PROPERTIES OF COMPOSITES.**
39. O.N. Sidelnikova, G.A. Pozdnyakov, A.N. Salanov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia; Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*). **EFFECTIVE LIGHT SCATTERING GLASS MATERIAL MODIFIED BY ION EXCHANGE PROCESS FOR LIGHTING AND LIGHT DECORATION.**
40. G.E. Remnev, G.M. Mokrousov, A.V. Yurchenko, V.I. Yurchenko (*Tomsk Polytechnic University, Tomsk, Russia*). **APPLICATION OF MECHANOCHEMICAL METHODS TO PRODUCE PURE SILICON AND QUARTZITE, INCLUDING NANO AND COMPOSITE ONES.**
41. D.N. Lapshin, A.V. Kunin, K.V. Shuvalova (*Ivanovo State University of Chemistry and Technology, Ivanovo, Russia*). **HYDROPHOBIZATION OF COMPONENTS OF FIRE EXTINGUISHING POWDERS: MECHANOCHEMICAL MODIFICATION METHOD.**

**Thursday, June 27, 2013**

**Poster Session II**

1. M. Veverka, J. Gallovič, Ľ. Ratkovská, V. Jorík, P. Šimon, T. Dubaj, M. Mičušík (*EUROFINS BEL/NOVAMANN Ltd., Slovakia; Faculty of Chemical and Food Technology, Slovak University of Technology, Bratislava, Slovakia; Polymer institute, Slovak Academy of Sciences, Bratislava,*

- Slovakia*). **SCREENING FOR COMPLEXES OF BETA GLUCAN AND ARABINOGLACTAN WITH NUTRACEUTICALS VIA NEAT GRINDING AND CRYSTALLIZATION: SYNTHESIS AND PRELIMINARY CHARACTERIZATION.**
2. M. Veverka, J. Gallovič, L. Ratkovská, E. Švajdlenka, B. Meľuchová, T. Dubaj, V. Jorík, P. Šimon (*EUROFINS BEL/NOVAMANN Ltd., Slovakia; Faculty of Chemical and Food Technology, Slovak University of Technology, Bratislava, Slovakia*). **EDARAVONE COCRYSTALS: SYNTHESIS, SCREENING AND PRELIMINARY CHARACTERIZATION.**
  3. T.P. Shakhtshneider, S.A. Myz, I.A. Tumanov, E.A. Losev (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **COMPARATIVE STUDY OF MECHANICAL ACTIVATION OF DRUG-POLYMER SYSTEMS IN CRYOGENIC AND ROOM TEMPERATURE MILLS.**
  4. A.I. Nizovskii, A.V. Kalinkin, T.P. Shakhtshneider, S.A. Myz, Rakesh Kumar (*Boreskov Institute of Catalysis SB RAS, Novosibirsk; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk; REC "Molecular Design and Ecologically Safe Technologies" at the Novosibirsk State University, Novosibirsk, Russia; National Metallurgical Laboratory, Jamshedpur, India*). **XPS AND EDS STUDY OF CORE-SHELL MECHANOCOMPOSITES OF DRUGS WITH INORGANIC OXIDES AND HYDROXIDES.**
  5. V.S. Minkov, E.V. Boldyreva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **DECREASING PARTICLE SIZE HELPS TO PRESERVE METASTABLE POLYMORPH OF DL-CYSTEINE.**
  6. T.N. Drebushchak, E.V. Boldyreva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*). **TWINNING AFTER REVERSIBLE PRESSURE- AND TEMPERATURE-INDUCED PHASE TRANSITIONS, CHLORPROPAMIDE AS AN EXAMPLE.**
  7. S.A. Kuznetsova, Yu.N. Malyar, T.P. Shakhtshneider, M.A. Mikhailenko, G.P. Skvortsova, V.V. Boldyrev (*Institute of Chemistry and Chemical Technology SB RAS; Siberian Federal University, Krasnoyarsk; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCOMPOSITES OF BETULIN ESTERS WITH ARABINOGLACTAN AND THEIR PROPERTIES.**
  8. X.X. Sheng, X.X. Zhu, J. Xie, P. Wang, W.K. Su (*College of Pharmaceutical Sciences, Zhejiang University of Technology, Key Laboratory for Green Pharmaceutical Technologies and Related Equipment of Ministry of Education, Hangzhou, China*). **MECHANOCHEMICAL-ASSISTED EXTRACTION OF GARDENIA YELLOW PIGMENT FROM GARDENIA JASMINOIDES ELLIS.**

9. X.Y. Zhu, W.F. Huang, L.Y. Pan, J. Xie, P. Wang (*College of Pharmaceutical Science, Zhejiang University of Technology, Key Laboratory of Pharmaceutical Engineering of Ministry of Education, Hangzhou, China*). **MECHANOCHEMICAL-ASSISTED EXTRACTION OF QUERCITRIN FROM BUDS OF CHRYSANTHEMUM INDICUM L.**
10. L.P. Suntsova, E.S. Petrova, E.S. Meteleva, A.V. Dushkin, N.E. Polyakov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia*). **SOLID DISPERSIONS OF PLANT FLAVONOIDS WITH AUXILIARY SUBSTANCES. MECHANOCHEMICAL SYNTHESIS AND PROPERTIES.**
11. A.L. Bychkov, V.A. Bukhtoyarov, O.I. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, REC "Molecular Design and Ecologically Safe Technologies" at NSU, Novosibirsk, Russia*). **MECHANICAL PRETREATMENT AND ENZYMATIC HYDROLYSIS OF LIGNOCELLULOSE MATERIALS.**
12. E.M. Podgorbunskikh, A.L. Bychkov, O.I. Lomovsky (*Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANICAL PRETREATMENT OF RICE HUSK TO ACTIVATE THE ENZYMATIC HYDROLYSIS.**
13. V.A. Buchtoyarov, A.L. Bychkov, O.I. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THERMAL AND MECHANICAL DENATURATION OF ENZYMES IN THE PRESENCE OF WATER.**
14. O.V. Golyazimova, A.A. Politov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANICAL ACTIVATION OF LIGNOCELLULOSE ENZYME DEGRADATION: AN INFLUENCE OF LIGNIN.**
15. S.K. Volonchuk, A.N. Sapozhnikov, O.I. Lomovsky (*Siberian Research Institute of Agricultural Production Processing, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THE USE OF MECHANOCHEMISTRY IN FOOD PRODUCTION.**
16. O.N. Tchaikovskaya, I.V. Sokolova, L.V. Nechaev, N.V. Yudina, A.A. Ivanov (*Tomsk State University, Tomsk, Russia; Institute of Petroleum Chemistry SB RAS, Tomsk, Russia*). **PHOTOCHEMICAL PROPERTIES OF HUMIC ACID AFTER MECHANICAL ACTIVATION.**
17. V.G. Surkov, A.K. Golovko, M.V. Mozhayskaya (*Institute of Petroleum Chemistry SB RAS, Tomsk, Russia*). **MECHANOCHEMICAL CONVERSIONS OF HIGH-MOLECULAR OIL COMPONENTS IN THE PRESENCE OF A SOLID PHASE.**

18. V.G. Surkov, A.K. Golovko, M.V. Mozhayskaya (*Institute of Petroleum Chemistry SB RAS, Tomsk, Russia*). **EFFECT OF CHANGES IN CONDITIONS OF MECHANICAL TREATMENT ON CONVERSIONS OF HIGH-MOLECULAR OIL COMPONENTS.**
19. V.V. Savelev, A.K. Golovko, O.I. Lomovsky (*Institute of Petroleum Chemistry SB RAS, Tomsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THE MECHANOCHEMICAL TRANSFORMATIONS OF ORGANIC MATTER OF OIL SHALE.**
20. A.G. Ponomarenko, A.S. Burlov, A.G. Kalmykova, T.A. Shiriaeva (*Institute of Physical and Organic Chemistry, Southern Federal University, Rostov-on-Don, Russia*). **THE RESEARCH OF MECHANOCHEMICAL REACTIONS IN LUBRICANT COMPOSITIONS BASED ON POLYORGANOSILOXANES CONTAINING AZOMETHINE METAL COMPLEXES.**
21. A.A. Dorofeev, S.D. Kaloshkin, V.V. Cherdyntsev (*FSUE RFNC-VNIIEF, Sarov, Russia; MISA, Moscow, Russia*). **PROPERTIES OF A NANOCOMPOSITE BASED ON POWDER POLYPROPYLENE AND NANO-SIZE FILLERS.**
22. F.K. Gorbunov, V.A. Poluboyarov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **PROPERTIES OF THE COMPOSITES ON THE BASIS OF POLYURETHANES AND CERAMIC PARTICLES.**
23. L.K. Baykina, V.A. Poluboyarov, E.V. Voloskova (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THE COMPOSITES ON THE BASIS OF BIOPOLYMERS AND CERAMIC PARTICLES.**
24. S.G. Mamylov, A.I. Donchuk, V.G. Surkov, O.I. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; STEM Ltd, Novosibirsk, Russia; Institute of Petrochemistry SB RAS, Tomsk, Russia*). **INFLUENCE OF MECHACTIVATED ADDITIONS AT WINTER STORAGE BITUMEN THERMOLYSIS.**
25. I.A. Massalimov, R.M. Zaynitdinova, R.R. Ilyasova, A.G. Mustafin (*Bashkir State University, Ufa, Russia; The Research Institute of Technology Herbicides Academy of Sciences of the Republic of Bashkortostan, Ufa, Russia*). **OBTAINING A MECHANICALLY ACTIVATED AND NANOSCALE HEMATITE AND ITS BIOLOGICAL PROPERTIES.**

26. S.V. Vosmerikov, L.N. Djiachkova, T.F. Grigorieva, I.A. Vorsina, T.A. Udalova, N.Z. Lyakhov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Powder Metallurgy, NAS of Belarus, Minsk, Belarus*). **MECHANOCOMPOSITES W/Zr(Ta, Hf) FOR SINTERING.**
27. P. Billik, M. Gürth, T. Turányi (*Comenius University, Bratislava, Slovakia; Institute of Measurement Science, Slovak Academy of Sciences, Bratislava, Slovakia; Kadaň Ltd., Pohranice, Slovakia*). **MECHANOCHEMICAL SYNTHESIS IN THE NUTATION CENTRIFUGAL BALL MILL.**
28. M.G. Denisov, O.I. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **LABORATORY CENTRIFUGAL ELLIPTICAL MILL OF TSEM TYPE.**
29. Yu.D. Kaminskiy (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **PLANETARY-TYPE MECHANOCHEMICAL REACTORS.**
30. T.E. Shoeva, Yu.D. Kaminskiy (*Limited Liability Company "Techno Lab", Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MECHANOCHEMICAL TECHNOLOGY OF BRICKS FROM ACIDIC ASH.**
31. F.Kh. Urakaev, T.A. Ketegenov, V.S. Shevchenko, N.P. Pokhilenko (*Sobolev Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia; "KAC" Company by National Atomic Company "Kazatomprom, Astana, Kazakhstan*). **STUDY OF THE INFLUENCE OF GRAPHITE ADDITIVES ON ABNORMAL INCREASE THE WEAR DEGREE OF COPPER MILLING TOOLS DURING MECHANICAL ACTIVATION DIAMOND-SILICON SYSTEM.**
32. U.Sh. Shayakhmetov, A.R. Murzakova (*Bashkir State University, Ufa, Russia*). **NANOSTRUCTURED COMPOSITE CERAMICS ON THE BASIS OF THIN PYROPHYLLITE.**
33. G.A. Buzanov, N.N. Mal'tseva, K.Yu. Zhizhin, N.T. Kuznetsov (*Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia*). **MECHANOCHEMICAL SYNTHESIS OF ZINC COMPLEX HYDRIDE BY MEANS OF REACTION BETWEEN ZINC CHLORIDE AND LITHIUM HYDRIDE.**
34. R.V. Minin, E.P. Nayden, V.I. Itin, Yu.M. Maksimov (*Department for Structural Macrokinetics of Tomsk Scientific Center SB RAS, Russia, Tomsk; Tomsk State University, Russia, Tomsk*). **INFLUENCE OF MECHANICAL ACTIVATION ON THE PHASE COMPOSITION, STRUCTURAL PARAMETERS AND FUNDAMENTAL MAGNETIC PROPERTIES OF COMPLEX STRONTIUM HEXAFERRITES SYNTHESIZED BY COMBUSTION.**

35. K.I. Denisov, I.A. Ditenberg, A.V. Korznikov, M.A. Korchagin, A.N. Tyumentsev (*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia; Tomsk State University, Tomsk, Russia; Siberian Physical-Technical Institute, Tomsk, Russia; Institute for Metals Superplasticity Problems RAS, Ufa, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **FORMATION OF NANOBAND STRUCTURES IN Nb-Al AND Cu-Al MECHANOCOMPOSITES DURING COMPLEX DEFORMATION PROCESS.**
36. N. Golovchenko, A. Seisenova, B. Sadykov, A. Suleimenova (*Institute of Combustion Problems, Almaty, Kazakhstan*). **TESTING OF MECHANICAL ACTIVATION PARAMETERS OF SULFIDE ORES IN AQUEOUS SOLUTIONS.**
37. S.Kh. Aknazarov, N.Yu. Golovchenko, O.Yu. Golovchenko, O.S. Bayrakova (*Institute of Combustion Problems, Almaty, Kazakhstan*). **TRANSFORMATION OF ARSENOPIRITE AND MOLYBDENITE EXPOSED TO MECHANICAL ACTIVATION.**

**Friday, June 28, 2013**

### Poster Session III

1. A.A. Lyamkina, S.P. Moshchenko, M.A. Neklyudova, Yu.G. Galitsyn (*Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia*). **ELASTICALLY DRIVEN VERTICAL ALIGNMENT OF METAL DROPLET OVER InAs/GaAs QUANTUM DOTS.**
2. A.A. Lyamkina, Yu.G. Galitsyn, S.P. Moshchenko, A.I. Lyamkin (*Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia*). **HYBRID PLASMON SYSTEM BASED ON DETONATION ULTRADISPERSED DIAMONDS.**
3. T.V. Malin, V.G. Mansurov, Yu.G. Galitsyn, K.S. Zhuravlev, A.A. Lyamkina, S.P. Moshchenko (*Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia*). **KINETICS AND THERMODYNAMICS OF ELASTICALLY STRAINED AlN LAYER FORMATION ON (0001)Al<sub>2</sub>O<sub>3</sub> SURFACE.**
4. O.V. Lapshin, V.K. Smolyakov (*Department for Structural Macrokinetics of Tomsk Scientific Center SB RAS, Tomsk, Russia*). **EVOLUTION IN THE INTERNAL STRUCTURE OF MECHANOCOMPOSITES DURING MECHANICAL TREATMENT OF A POWDER MIXTURE.**
5. O.K. Lepakova, M.A. Dyukarev, A.M. Shulpekoy, N.I. Radishevskaya, N.I. Afanasyev (*Department for Structural Macrokinetic of Tomsk Scientific Center SB RAS, Tomsk, Russia*). **MECHANOACTION OF THE SHS PRODUCTS FeTi-Si-C AND AN ELECTRIC CONDUCTIVITY COMPOSITE COATINGS.**

6. N.I. Radishevskaya, A.Yu. Nazarova, O.V. L'vov, O.K. Lepakova, N.G. Kasatskiy (*Department for Structural Macrokinetics of Tomsk Scientific Center SB RAS, Tomsk, Russia*). **INFLUENCE OF MECHANOACTIVATION ON THE SH-SYNTHESIS SPINEL-TYPE PIGMENTS.**
7. O.A. Shkoda, N.G. Kasatskii (*Department for Structural Macrokinetics of Tomsk Scientific Center SB RAS, Tomsk, Russia*). **THE INFLUENCE OF MECHANICAL ACTIVATION CHARACTERISTICS ON THERMAL EXPLOSION FOR Ti-Ni SYSTEM.**
8. L.G. Raskolenko, O.A. Shkoda (*Department for Structural Macrokinetics of Tomsk Scientific Center SB RAS, Tomsk, Russia*). **REVEALED INTERACTION BETWEEN PHASE-STRUCTURE-FORMATION, THERMAL EXPLOSION AND MECHANICAL ACTIVATION PECULIARITIES OF MIXTURE Ti-Ni. HOLISTIC APPROACH.**
9. D.O. Moskovskikh, A.S. Rogachev, A.S. Mukasyan (*National University of Science and Technology "MISIS", Moscow, Russia; University of Notre Dame, Notre Dame, IN, USA; Institute of Structural Macrokinetics and Materials Science RAS, Chernogolovka, Russia*). **DIRECT COMBUSTION SYNTHESIS OF SILICON CARBIDE NANOPOWDER BY HIGH ENERGY BALL MILLING.**
10. V.I. Yakovlev, A.V. Sobachkin, M.V. Loginova, A.A. Sitnikov, A.A. Savin (*Polzunov Altai State Technical University, Barnaul, Russia*). **PERSPECTIVE COMPOSITE WELDING MATERIALS WITH CARBIDE REINFORCING GRAIN OBTAINED BY MECHANICALLY STIMULATED SHS IN NICKEL-CHROMIUM MATRIX.**
11. M.V. Loginova, A.A. Sitnikov, V.I. Yakovlev, A.A. Popova, B.P. Tolochko, M.R. Sharafutdinov (*Polzunov Altai State Technical University, Barnaul, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **EFFECT OF MECHANICAL ACTIVATION OF THE POWDER MIXTURE 3TiAl ON PARAMETERS OF HIGH-TEMPERATURE SYNTHESIS AND DYNAMICS OF PHASE TRANSFORMATIONS IN CONDITIONS FAST INDUCTION HEATING.**
12. A.E. Chesnokov, O.P. Solonenko (*Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia*). **COMBINED MECHANOCHEMICAL ACTIVATION AND SHS OF CERMET POWDERS TiC-Me PRODUCTION UNDER CONTROLLED VOLUME CONTENT OF CARBIDE PHASE FOR THERMAL SPRAYING.**
13. V.E. Ovcharenko, O.P. Solonenko, A.E. Chesnokov, V.A. Poluboyarov, A.A. Zhdanok (*Institute of Strength Physics and Material Science SB RAS, Tomsk, Russia; Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **MICROSTRUCTURE AND HARDNESS OF SHS-COMPACTS "TITANIUM**

**CARBIDE - NICHROME" AT VARIOUS POWER INFLUENCES ON INPUT POWDER COMPOSITIONS Ti-C-NiCr.**

14. Yu.F. Ivanov, O.P. Solonenko, V.E. Ovcharenko, A.E. Chesnokov (*Institute of High-Current Electronics SB RAS, Tomsk, Russia; Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia; Institute of Strength Physics and Material Science SB RAS, Tomsk, Russia*). **PULSED ELECTRON-BEAM TREATMENT OF CERMET PLASMA-SPRAYED COATINGS TiC-NiCr AT VARIOUS VOLUME CONTENTS OF CARBIDE PHASE.**
15. V.A. Plotnikov, S.V. Makarov, M.G. Olimov (*Altai State University, Barnaul, Russia*). **SYNTHESIS OF INTERMETALLIC COMPOUNDS AT INTERPHASE OF TITANIUM –ALUMINIUM.**
16. D.Yu. Kovalev, V.I. Ponomarev, N.A. Kochetov (*Institute of Structural Macrokinetics and Materials Science RAS, Chernogolovka, Russia*). **STRUCTURE AND PHASE STATE OF Ti-AI AND Ni-AI SYSTEMS DURING MECHANICAL ACTIVATION.**
17. V.A. Volkov, I.A. Elkin, A.A. Chulkina, A.I. Ulyanov, A.V. Zagaynov, E.P. Yelsukov (*Physical-Technical Institute UB RAS, Izhevsk, Russia*). **ON THE ROLE OF THE AMORPHOUS PHASE IN THE MECHANICAL ALLOYING PROCESSES IN THE Fe75C25 BASED ALLOYS DOPED Si, O, N.**
18. V.E. Porsev, D.A. Kolodkin, A.L. Ulyanov, E.P. Yelsukov (*Physical-Technical Institute UB RAS, Izhevsk, Russia*). **INITIAL STAGE OF MECHANICAL ALLOYING IN Si<sub>170</sub>Fe<sub>30</sub> AND Si<sub>99</sub>Fe<sub>1</sub> BINARY SYSTEMS.**
19. S.F. Lomayeva, A.N. Maratkanova, A.V. Syugaev, D.A. Petrov, K.N. Rozanov (*Physical-Technical Institute UB RAS, Izhevsk, Russia; Institute for Theoretical and Applied Electromagnetics RAS, Moscow, Russia*). **MECHANOCHEMICALLY FUNCTIONALIZED IRON PARTICLES AS FILLERS FOR MAGNETODIELECTRIC COMPOSITES.**
20. A.V. Syugaev, N.V. Lyalina, S.F. Lomayeva, A.N. Maratkanova (*Physical-Technical Institute UB RAS, Izhevsk, Russia*) **ELECTROCATALYTIC ACTIVITY OF MECHANOCHEMICALLY SYNTHESIZED CARBIDES Fe<sub>3</sub>C, Co<sub>3</sub>C, Ni<sub>3</sub>C IN HYDROGEN EVOLUTION REACTION.**
21. Yu.P. Pinzhin, I.A. Ditenberg, K.I. Denisov, A.N. Tyumentsev, M.A. Korchagin, A.S. Tsverova (*Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia; Tomsk State University, Tomsk, Russia; Siberian Physical-Technical Institute, Tomsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **INVESTIGATION OF MICROSTRUCTURE PARAMETERS AND STRENGTH LEVEL OF TITANIUM POWDER DEPENDING ON MECHANICAL ACTIVATION DURATION.**

22. L.A. Kuzovnikova, E.A. Denisova, R.F. Iskhakov, A.A. Kuzovnikov (*Kirensky Institute of Physics SB RAS, Krasnoyarsk, Russia; Krasnoyarsk Institute of Railways Transport, Krasnoyarsk, Russia; JSC «Pulse Technologies», Krasnoyarsk, Russia*). **BULK NANOSTRUCTURED COBALT-BASED MATERIALS RECEIVED WITH USING OF MECHANOCHEMICAL TECHNOLOGY.**
23. D.V. Dudina, V.Yu. Ulianitsky, I.S. Batraev, N.V. Bulina, M.A. Korchagin, O.I. Lomovsky (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Lavrentiev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia*). **DETONATION SPRAYED MULTIPHASE COATINGS FROM MECHANICALLY MILLED POWDERS: POSSIBILITIES OF MICROSTRUCTURE TAILORING.**
24. B.B. Bokhonov, D.V. Dudina, V.I. Mali, A.G. Anisimov (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Lavrentiev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia*). **NANOPOROUS SILVER BY DISSOLUTION OF MECHANICALLY MILLED AND SPARK PLASMA SINTERED Ag-Fe AND Ag-Ni NANOCOMPOSITES IN HYDROCHLORIC ACID.**
25. N.V. Kosova, E.T. Devyatkina (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **LITHIUM IRON PHOSPHATE: NANOSIZING, DOPING AND COMPOSITES.**
26. O.A. Podgornova, N.V. Kosova (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **STRUCTURE AND ELECTROCHEMISTRY OF  $\text{LiCo}_{1-y}\text{Fe}_y\text{PO}_4$  SOLID SOLUTIONS AS HIGH-VOLTAGE CATHODE MATERIALS.**
27. S.V. Stankus, O.P. Solonenko, V.A. Poluboyarov, A.E. Chesnokov, A.A. Zhdanok (*Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia; Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **THERMAL CONDUCTIVITY AND SPECIFIC HEAT CAPACITY OF COMPACTED POWDER COMPOSITES 'MAGNESIA - CARBON'.**
28. A.A. Zhdanok, V.A. Poluboyarov, Z.A. Korotaeva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **INFLUENCE OF MECHANICAL TREATMENT ON PRODUCTION OF TUNGSTEN CARBIDES WC AND  $\text{W}_2\text{C}$  IN THE SYSTEM W-Ti-C BY THE METHOD OF SELF-PROPAGATING HIGH-TEMPERATURE SYNTHESIS.**
29. A.A. Zhdanok, V.A. Poluboyarov, Z.A. Korotaeva (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **INFLUENCE OF NANOSIZED MODIFIERS ON SERVICE CHARACTERISTICS OF GREY CAST IRON.**

30. G.A. Zenkovets, I.G. Konstanchuk, A.A. Shutilov, V.Yu. Gavrillov (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*). **BALL MILLED TiO<sub>2</sub> (RUTILE) AS THE SUPPORT OF METAL CATALYSTS.**
31. S.G. Vadchenko, I.D. Kovalev, N.F. Shkodich, O.D. Boyarchenko, A.S. Rogachev (*Institute of Structural Macrokinetics and Materials Science RAS, Chernogolovka, Russia*). **PRODUCT FORMATION DURING MECHANICAL TREATMENT OF POWDER BLENDS.**
32. A.N. Husainov, I.A. Massalimov, R.M. Zaynitdinova, A.R. Shaynurova, A.G. Mustafin (*Bashkir State University, Ufa, Russia; The Research Institute of Technology Herbicides, Academy of Sciences of the Republic of Bashkortostan, Ufa, Russia*). **PROPERTIES OF MECHANICALLY ACTIVATED AND NANOSCALE SULFUR.**
33. A.A. Nepapushev, A.S. Rogachev, A.S. Mukasyan (*National University of Science and Technology "MISIS", Moscow, Russia; Institute of Structural Macrokinetics and Materials Science RAS, Chernogolovka, Russia; University of Notre Dame, Notre Dame, IN, USA*). **OBTAINING OF REACTIVE FOILS BY MEANS OF HIGH ENERGY BALL MILLING AND COLD ROLLING.**
34. D.N. Smirnova, A.V. Artamonov, A.A. Ilyin (*Ivanovo State University of Chemistry and Technology, Ivanovo, Russia; OAO «PhosAgro», Cherepovets, Russia*). **MECHANOCHEMICAL SYNTHESIS OF ADSORBENTS FOR CLEARING EXTRACTION PHOSPHORIC ACID.**