INSTITUTE OF SOLID STATE CHEMISTRY AND MECHANOCHEMISTRY SB RAS

IV International conference «Hot Topics of Solid State Chemistry: Oriented Fundamental Research»

HTSSC 2024

PROGRAM

Novosibirsk

2024

ORGANIZER BY:

Institute of Solid State Chemistry and Mechanochemistry SB RAS

GENERAL SPONSORS:

TOPAZ Research Center (Russia)

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Monday, July 1		
11:00 - 17:00	Registration at the Hotel “Zolotaya Dolina” (“Golden Valley”)	
16:00 - 17:00	Excursion to the Siberian Synchrotron and Terahertz Radiation Centre (facilities of the Institute of Solid State Chemistry and Mechanochemistry)	
Tuesday, July 2		
9:00 - 9:30	Registration at the Academpark (Nikolaev str., 11, 13th floor)	
9:30 - 9:40	**Opening Remarks** (Big Conference hall)	
9:40 - 11:25	**Plenary Session** (Big Conference hall)	
11:25 - 11:55	Coffee Break. **Poster Session I**	
11:55 - 13:10	**Section I** (Big Conference hall)	**Section II** (Hall №2)
13:10 - 14:30	Lunch Break	
14:30 - 16:00	**Section I** (Big Conference hall)	**Section II** (Hall №2)
16:00 - 16:30	Coffee Break. **Poster Session I**	
16:30 - 18:30	**Section I** (Big Conference hall)	**Section II** (Hall №2)
19:00	**Welcome Reception at the Banqueting hall «KUKURUZA»** (Nikolaev str., 12, 2nd floor)	
Wednesday, July 3		
9:30 - 11:10	**Plenary Session** (Big Conference hall)	
11:10 - 11:40	Coffee Break. **Poster Session II**	
11:40 - 13:10	**Section I** (Big Conference hall)	**Section II** (Hall №2)
13:10 - 14:30	Lunch Break	
14:30 - 16:00	**Section I** (Big Conference hall)	**Young Scientists Session** (Hall №2)
16:00 - 16:30	Coffee Break. **Poster Session II**	
16:30 - 19:00	**Section I** (Big Conference hall)	**Young Scientists Session** (Hall №2)
Thursday, July 4		
9:30 - 11:10	**Plenary Session** (Big Conference hall)	
11:10 - 11:40	Coffee Break. **Poster Session III**	
11:40 - 13:10	**Section III** (Big Conference hall)	
13:10- 14:30	Lunch Break	
14:30 - 15:00	**Section III** (Big Conference hall)	
15:00 - 15:45	**General discussion. End of the Conference** (Big Conference hall)	
16:00 - 18:00	**Ceremonial Meeting dedicated to the 80th anniversary of the ISSCM SB RAS** (Big Conference hall, Nikolaev str., 12, 2nd floor)	
18:00	**Get-together Party (Banqueting hall “KUKURUZA”** (Nikolaev str., 12, 2nd floor)	

Section I

- Mechanisms of solid-phase processes.
- Generation and evolution of defects, transfer phenomena and chemical transport in solids.
- Chemical processes for additive technologies.

Section II

- New materials and design methods, including the ones for renewable, sustainable and green energy.

Section III

- Innovative technologies for mineral processing, including rare metals.
- New processes in pharmaceutical technology and herbal preparations.

PROGRAM

Monday, July 1, 2024

11:00 – 17:00 Registration at the Hotel "Zolotaya Dolina" ("Golden Valley").

16:00 – 17:00 Excursion to the Siberian Synchrotron and Terahertz Radiation Centre (facilities of the Institute of Solid State Chemistry and Mechanochemistry SB RAS).

Thuesday, July 2, 2024

9:00 – 9:30 Registration at the Academpark "Boiling Point" (Nikolaev str., 11, 13th floor).

9:30 Opening Remarks.
Welcome speech by Prof. Nikolay Z. Lyakhov

Plenary Session (Big Conference hall)

Chairman: Prof. Nikolay Z. Lyakhov

9:40 Yaroslavtsev A.B. *(N.S. Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow; TVEL Company, ROSATOM, Moscow)* **CHEMICAL CURRENT SOURCES: MATERIALS AND PROSPECTS.**

10:05 Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **OXYGEN TRANSPORT IN NONSTOICHIOMETRIC OXIDES.**

10:30 Ospennikova O.G. (*TVEL Company, ROSATOM, Moscow)* **PROMISING SCIENTIFIC RESEARCHES IN ADDITIVE TECHNOLOGIES AND THEIR IMPLEMENTATION IN INDUSTRY. EXPANDING THE RANGE OF MATERIALS USED AND OPTIMIZING THE TECHNOLOGIES BEING DEVELOPED.**

10:55 Kosova N.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia).* **HIGH-ENTROPY OXIDES/OXIFLUORIDES (HEO) AS ELECTRODE MATERIALS FOR LITHIUM-ION BATTERIES.**

11:15 Khakhanov S. (*Melytec LLC, Russia*). **Electron microscopy as a basic method of fundamental research. Review of current models from Melytek LLC.**

11:25 Coffee Break. Poster Session I

Section I (Big Conference hall)

Chairman: Prof. Alexander P. Nemudry

11:55 Titkov A.I., Logutenko O.A., Vorobyev A.M., Malbakhova I.A., Bagishev A.S., Borisenko T.A., Baev S.G., Bessmeltsev V.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Automation and Electrometry SB RAS, Novosibirsk, Russia)* **MATERIALS AND HYBRID 2D- AND 3D-PRINTING TECHNOLOGIES TO PRODUCE COMPONENTS FOR ELECTRONICS AND ELECTROCHEMICAL DEVICES.**

12:10 Razumov N.G., Popovich A.A. (*Institute of Machinery, Materials and Transport, Peter the Great St. Petersburg Polytechnic University, Saint-Petersburg, Russia)* **SYNTHESIS OF COMPLEX ALLOYED POWDER MATERIALS FOR ADDITIVE MANUFACTURING IN PETER THE GREAT ST. PETERSBURG POLYTECHNIC UNIVERSITY.**

12:25 Tuzhikov O.O., Buravov B.A., Al-Hamzawi Ali, Trubachev S.A., Shmakov A.G., Tuzhikov O.I. *(Volgograd State Technical University, Volgograd, Russia; Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia)* **BINDERS FOR RPKM AND 3D DLP AND SLA PRINTING PRODUCTS WITH REDUCED FLAMMABILITY.**

12:40 Ivanova L.Yu., Bakina O.V., Svarovskaya N.V. *(National Research Tomsk State University, Tomsk, Russia; Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia)* **DEVELOPMENT OF POROUS BIOMATERIALS BASED ON ELECTROEXPLOSIVE NANOPARTICLES Ti/Al: PROPERTIES OF COMPOSITION SELECTION, MODES OF 3D-PRINTING AND PROCESSING.**

12:55 Uvarov N.F., Ulihin A.S., Mateyshina Yu.G., Gainutdinov I.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **TRANSPORT PROPERTIES OF PLASTIC PHASES IN ORGANIC SALTS OF SUBSTITUTED AMMONIUM SALTS.**

13:10 Lunch Break

Section II (Hall No. 2)

Chairman: Prof. Valentina G. Ponomareva

11:55 Bagryantseva I.N., Kungurtsev Yu.E., Ponomareva V.G. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **POLYMER COMPOSITE ELECTROLYTES BASED ON CsH_2PO_4.**

12:10 Ivanov A.V., Chikishev S.A., Stepanova O.S., Kuzmin A.V. *(Vyatka State University, Kirov, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **FORMATION AND PHYSICOCHEMICAL PROPERTIES OF METAL-CERAMIC AND ALLOY-CERAMIC ANODE MATERIALS BASED ON STABILIZED ZIRCONIA CERAMIC FOR SOLID OXIDE FUEL CELLS.**

12:25 Shutilov A.A., Simonov M.N., Marchuk A.S., Zenkovets G.A., Valeev K.R. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **DEVELOPMENT, INVESTIGATION AND APPLICATION OF NEW MATERIALS BASED ON γ-Al_2O_3 SPINEL, MODIFIED WITH Ca^{2+} AND Ni^{2+} IONS, AS HIGHLY ACTIVE AND CARBONIZATION RESISTANT CATALYSTS FOR THE REACTION DRM INTO SYNGAS FOR ENVIRONMENTALLY FRIENDLY ENERGETIC.**

12:40 Ulihin A.S., Kyzlasova D.A., Izmodenova A.V., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*) **SYSTEMS WITH LITHIUM-ION CONDUCTIVITY BASED ON PIPERIDINIUM SALTS.**

12:55 Kovalskii V.Yu., Zilberberg I.L. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **EFFECT OF ELECTROPHILIC OXYGEN FORMATION IN Fe(IV) OXIDES: IMPLICATIONS FOR CATALYSIS AND SOLID STATE CHEMISTRY.**

13:10 Lunch Break

Section I (Big Conference hall)

Chairman: Prof. Nikolay F. Uvarov

14:30 Nizovskii A.I., Shmakov A.N., Kulikov A.V., Suprun E.A., Bukhtiyarov V.I. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **ACTIVATED ALUMINUM BASED HYDROGEN CARTRIDGE MATERIAL FOR USE IN COMPACT ENERGY SYSTEMS.**

14:45 Chzhou V.R., Bakina O.V. *(Institute of Strength Physics and Materials SB RAS, Tomsk, Russia; Tomsk State University, Tomsk, Russia)* **BICOMPONENT CuO/ZnO NANOPARTICLES FOR PERSISTENT ORGANIC COMPOUNDS DEGRADATION.**

15:00 Dranik M.S., Yagudin L.D., Ponomarchuk A.A. *(Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia)* **STRUCTURE OF MECHANICALLY ALLOYED Zr-B4C-Al COMPOSITE POWDERS AND PRODUCTS OF THEIR SHS TRANSFORMATION.**

15:15 Bogatyreva E.V., Ermilov A.G. *(University of Science and Technology MISIS, Moscow, Russia)* **THE EFFECT OF MECHANICAL ACTIVATOR TYPE ON THE CHANGE IN THE ENERGY CONTENT OF RARE METALS MINERALS AND THEIR REACTIVITY.**

15:30 Sivak A.V. (*TOPAZ Research Center, Moscow, Russia*) **COMPACT ELECTROCHEMICAL GENERATORS BASED ON MICROTUBULAR SOLID OXIDE FUEL CELLS**. (online)

15:45 Pribytkov G.A., Baranovskiy A.V., Firsina I.A. *(Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia)* **ROLE OF HYDROCARBON DESTRUCTION IN MECHANOCHEMICAL TECHNOLOGY OF TITANOMATRIX COMPOSITES WITH CARBIDE HARDENING PRODUCTION.**

16:00 **Coffee Break. Poster Session I**

Section I (Big Conference hall)

Chairman: Prof. Oleg I. Lomovsky

16:30 Aryshenskii E.V., Konovalov S.V., Lepikhov V.S. *(Siberian State Industrial University, Kemerovo Region - Kuzbass, Novokuznetsk, Russia)* **NEW APPROACHES TO MODELING THE FORMATION OF RECRYSTALLIZATION NUCLEI IN ALUMINUM ALLOYS.**

16:45 Larina T.V. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **APPROACHES OF THE UV-VIS DR SPECTROPHOTOMETRY METHOD TO ANALYZE THE NATURE OF DEFECTS IN MATERIALS OF VARIOUS APPLICATIONS.**

17:00 Cherepanova S.V., Sinitsa N.A., Yatsenko D.A., Sidelnikov A.A., Matvienko A.A. *(Boreskov Institute of Catalysis, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia)* **OXIDATIVE THERMOLYSIS OF $FeC_2O_4 \cdot 2H_2O$: DETERMINATION OF DISORDERED STRUCTURES OF INTERMEDIATE PHASES.**

17:15 Cherkasova N.Yu. (*Novosibirsk State Technical University, Novosibirsk, Russia)* **CERIUM HEXAALUMINATE FORMATION IN ALUMINA-ZIRCONIA MATRIX.**

17:30 Nechaev G.V., Berestenko V.I., Lyskov N.V., Kurbatov V.G., Malkov G.V. *(Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS, Chernogolovka, Moscow Region, Russia)* **PRODUCTION OF NANOCRYSTALLINE OXIDE MATERIALS BY PLASMA-CHEMICAL SYNTHESIS.**

17:45 Knyazeva A.G. *(Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia)* **SECOND-ORDER STRESSES IN A TWO-LEVEL MODELS OF COMPOSITE SYNTHESIS.**

18:00 Kuzavov V.T. *(Lavrentyev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia)* **MODEL OF MICROCRACK FORMATION UNDER STATIC AND DYNAMIC LOADS.**

18:15 Ivanova Yu.A., Pavlova S.N., Isupova L.A., Nartova A.V., Gorkusha A.S., Tsybulya S.V. (*Boreskov Institute of Catalysis, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*) **OXIDATIVE CONDENSATION OF METHANE ON CATALYSTS $Sr_{n+1}Ti_nO_{3n+1}$ (n= 1, 2, ∞) OBTAINED BY MECHANOCHEMICAL ACTIVATION.**

18:30 Chernyshev A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia)* **THEORETICAL STUDY OF THE EFFECT OF MORPHOLOGY ON THE OPERATING TEMPERATURE AND OXYGEN EXCHANGE CAPACITY OF NANOSTRUCTURED CeO_2 DURING WATER SPLITTING.**

19:00 Welcome Reception at the Banqueting hall «KUKURUZA»

Section II (Hall No. 2)

Chairman: Dr. Irina N. Bagryantseva

14:30 Volkova N.N., Zholudev A.F., Kislov M.B., Baykov A.V., Yanovskii L.S. *(Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS, Chernogolovka, Russia; Moscow Aviation Institute (National Research University), Moscow, Russia)* **NANODIAMONDS AS A COMPONENT OF HIGH ENERGY COMPOSITIONS. (online)**

14:45 Gainutdinov I.G., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MOLECULAR DYNAMIC SIMULATION OF THE STRUCTURE AND TRANSPORT PROPERTIES OF IONIC SALTS $N(C_nH_{2n+1})4BF_4$.**

15:00 Vorotnikov V.A., Stroeva A.Yu., Chikishev S.A., Duvakin A.M., Ivanov A.V., Kuzmin A.V. *(Vyatka State University, Kirov, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **PHYSICO-CHEMICAL PROPERTIES OF R.E.E. ZIRCONATES DEPENDING ON THE CATIONIC COMPOSITION AND MICROSTRUCTURE.**

15:15 Gerasimov E.Yu., Kapishnikov A.V., Smal E.A., Tsybulya S.V. *(Institute of Catalysis SB RAS, Novosibirsk, Russia; Novosibirsk*

State University, Novosibirsk, Russia) **FORMATION OF NANOHETEROGENIC STATES IN LA-CONTAINING PEROVSKITES UNDER THE INFLUENCE OF MEDIA WITH LOW OXYGEN PARTIAL PRESSURE.**

15:30 Mikhnenko M.D., Cherepanova S.V., Pakharukova V.P., Bulavchenko O.A. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **DEFECT STRUCTURE EVOLUTION OF THE NiO-SiO_2 CATALYST.**

15:45 Tyapkin P.Yu., Nurtazina N.D., Khusnutdinov V.R., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Al-Farabi Kazakh National University, Almaty, Republic of Kazakhstan)* **SYNTHESIS OF PURE BORNITE FROM MIXTURE OF ELEMENTS BY MECHANICAL ACTIVATION.**

16:00 **Coffee Break. Poster Session I**

Section II (Hall No. 2)

Chairman: Dr. Alexander I. Titkov

16:30 Lozanov V.V., Nikiforov Y.A., Golosov M.A., Bannykh D.A., Baklanova N.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **THE EVALUATION OF THE ABLATION RESISTANCE OF IRIDIUM-BASED MATERIALS AT ULTRA-HIGH TEMPERATURE IN TERMS OF THEIR THERMOPHYSICAL PROPERTIES.**

16:45 Golosov M.A., Utkin A.V., Lozanov V.V., Baklanova N.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **JOINING OF SiC CERAMICS USING IRIDIUM: PHASE FORMATION, MICROSTRUCTURE, STRENGTH.**

17:00 Grigoriev M.V., Ruseikina A.V., Locke R.J.C., Elyshev A.V., Schleid Th. *(Tyumen State University, Russia; Institute for Inorganic Chemistry, Stuttgart, Germany)* **SYNTHESIS, PATTERNS OF CHANGES IN STRUCTURAL PARAMETERS OF NEW QUATERNARY TELLURIDES EuRECuTe$_3$ (RE = Ho, Tm and Sc).**

17:15 Kalenskii A.V., Zvekov A.A., Ivanov A.V. *(Kemerovo State University, Kemerovo, Russia)* **THE PROPERTIES OF CARBONACEOUS MAGNETIC ADSORBENTS PREPARED BY THERMOLYSIS OF IRON OXALATE PRECIPITATED ONTO ACTIVATED CARBONS.**

17:30 Mikhailenko M.A., Antonov I.M., Sharafutdinov M.R., Eltsov I.V.,

Korobeinikov M.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Shared Research Facility "Siberian Ring Photon Source" Institute of Catalysis SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia; Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia)* **EFFECT OF ELECTRON BEAM TREATMENT OF POLYLACTIDE IN CRYSTALLINE AND AMORPHOUS STATE ON CRACKING AND THERMAL TRANSFORMATIONS.**

17:45 Prosanov I.Yu. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **INCLUSION COMPOUNDS OF POLYVINYL ALCOHOL.**

18:00 Tretyakova I.S., Rychkov D.A *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Voevodsky Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **STUDY OF THE MECHANICAL PROPERTIES RELATIONSHIP AND CRYSTAL STRUCTURES ANISOTROPY USING THE EXAMPLE OF ELASTIC AND BRITTLE TRICHLOROBENZENES CRYSTALS.**

18:15 Vasilev N.A. (*G.A. Krestov Institute of Solution Chemistry, Ivanovo, Russia)* **PHYSICAL AND CHEMICAL PROPERTIES OF MULTICOMPONENT MOLECULAR CRYSTALS FOR PHARMACEUTICAL PURPOSE BASED ON BENZIMIDAZOLE AND TRIAZOLE DERIVATIVES. (online)**

19:00 **Welcome Reception at the Banqueting hall «KUKURUZA»**

Wednesday, July 3, 2024

Plenary session (Big Conference hall)

Chairman: Prof. Andrey B. Yaroslavtsev

9:30 Tolochko B.P., Sharafutdinov M.R., Lyakhov N.Z. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **EXPERIMENTAL CAPABILITIES OF NEW SOURCES OF SYNCHROTRON RADIATION IN RUSSIA FOR MECHANOCHEMISTRY AND SOLID STATE CHEMISTRY.**

9:55 Ponomareva V.G. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MEDIUM TEMPERATURE PROTON MEMBRANES AND FUEL CELLS: ANALYSIS, PROSPECTS.**

10:20 Uspenskii S.A., Khaptakhanova P.A. *(MARTIN'EX International*

Research and Development Center, Moscow, Russia; Enikolopov Institute of Synthetic Polymer Materials RAS, Moscow, Russia; Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia) **MECHANOCHEMICAL APPROACHES TO OBTAINING BORON NANOPARTICLES IN POLYMER COMPOSITIONS AND THEIR APPLICATION IN BORON-NEUTRON CAPTURE THERAPY.**

10:45 Boronin A.I. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **CERIUM OXIDE AS A BASE MATERIAL FOR COMPOSITE OXIDATION CATALYSTS.**

11:10 Coffee Break. Poster Session II

Section I (Big Conference hall)

Chairman: Prof. Oleg O. Tuzhikov

11:40 Bulavchenko O.A.**,** Afonasenko T.N., Vinokurov Z.S., Mishchenko D.D., Konovalova V.P. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; SKIF Synchrotron Radiation Facility, Kol'tsovo, Russia)* **FORMATION AND DECOMPOSITION OF Mn-CONTAINING SOLID SOLUTIONS AS WAY TO DEVELOP EFFECTIVE CATALYSTS FOR OXIDATION REACTIONS.**

11:55 Shefer K.I., Rogozhnikov V.N., Kovtunova L.M., Stonkus O.A., Suprun E.A., Chetyrin I.A., Larina T.V. (*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Center for Collective Use "SKIF", Koltsovo, Novosibirsk Region, Russia*) **STUDY OF PLATINUM-RHODIUM CATALYSTS SUPPORTED ON BAYERITE ALUMINA FOR PARTIAL OXIDATION OF HYDROCARBONS.**

12:10 Salanov A.N., Zhirnova A.S. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **CATALYTIC ETCHING OF POLYCRYSTALLINE PLATINUM DURING AMMONIA OXIDATION WITH AIR AT 1133 K.**

12:25 Aryshenskii E.V., Malkin K.A., Ragazin A.A., Aryshenskii V.Yu., Konovalov S.V. *(Siberian State Industrial University, Kemerovo Region - Kuzbass, Novokuznetsk, Russia; Samara University, Samara, Russia)* **STUDY OF THE EFFECT OF HAFNIUM ON THE MICROSTRUCTURE OF ALUMINUM-MAGNESIUM ALLOY DURING HIGH-TEMPERATURE ANNEALING.**

12:40 Buravov B.A., Tuzhikov O.O., Solomakhin S.M. *(Volgograd State Technical University, Volgograd, Russia)* **MAGNESIUM HYDROXOSILICATE OBTAINED FROM MINERAL RAW MATERIALS OF THE VOLGOGRAD REGION.**

12:55 Wang J.H., Uvarov N.F., Rykov A.I. (*Mössbauer Effect Data Center, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **NEW IDEAS FOR THE LUNAR SOILS MöSSBAUER STUDIES IN VIEW OF THE RECENT ADVANCES OF THE «CHANG'E» MISSIONS.**

13:10 Lunch Break

Section III (Hall No. 2)

Chairman: Prof. Alexander A. Zvekov

11:40 Matveeva A.G., Skripkina T.S., Nikiforova U.E., Bukhtoyarov V.A., Bychkov A.L., Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **DUST AGGREGATES: FROM PROTOPLANET DISKS TO A PLANETARY BALL MILL.**

11:55 Bukhtoyarov V.A., Bychkov A.L., Matveeva A.G., Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **PREPARATION OF COAL-LIGNOCELLULOSE MECHANOCOMPOSITE FOR SUBSEQUENT COMBUSTION.**

12:10 Mamylov S.G., Lomovsky I.O., Lomovsky O.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **THERMODYNAMIC EVALUATION OF SEROTONIN-QUERCETIN INTERACTION.**

12:25 Politov A.A., Myz S.A., Aksenov V.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **INTENSIFICATION OF THE DESTRUCTION PROCESSES OF STARCH GRAINS, GELATINIZATION AND HYDROLYSIS DURING WATER-STARCH SUSPENSION MECHANICAL PROCESSING.**

12:40 Slautin O.V., Shmorgun V.G., Kulevich V.P., Pronichev D.V. *(Volgograd State Technical University, Volgograd, Russia)* **STRUCTURE AND PROPERTIES OF COATINGS BASED ON TITANIUM CUPRIDS DOPED WITH ALUMINUM (online).**

12:55 Kalinkin A.M., Kalinkina E.V., Kruglyak E.A., Ivanova A.G. *(Tananaev Institute of Chemistry - Subdivision of the Federal Research Centre «Kola Science Centre RAS», Apatity, Russia)* **ALKALI ACTIVATED BINDERS BASED ON FLY ASH AND COPPER-NICKEL SLAG. (online)**

13:10 Lunch Break

Section I (Big Conference hall)

Chairman: Prof. Boris P. Tolochko

14:30 Chernikov D.R., Krokhalev A.V., Kharlamov V.O., Kuzmin S.V., Lysak V.I. *(Volgograd State Technical University, Volgograd, Russia)* **PREPARATION OF MATERIALS BASED ON THE METASTABLE Ti2Fe PHASE BY EXPLOSIVE PRESSING AND SUBSEQUENT SINTERING OF MIXTURES OF TITANIUM AND IRON POWDERS. (online)**

14:40 Krokhalev A.V., Chernikov D.R., Kharlamov V.O., Kuzmin S.V., Lysak V.I. *(Volgograd State Technical University, Volgograd, Russia)* **PHASE COMPOSITION AND SOLUBILITY OF HYDROGEN IN Ti-Fe SYSTEM MATERIALS WITH HIGH TITANIUM CONTENT. (online)**

14:55 Sobachkin A.V., Loginova M.V., Sitnikov A.A., Filimonov V.Yu., Yakovlev V.I., Myasnikov A.Yu., Negodyaev A.Z. *(Polzunov Altai State Technical University, Barnaul, Russia; Institute for Water and Environment Problems, Barnaul, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **EFFECT OF TIME AND ENERGY INTENSITY OF MECHANICAL ACTIVATION TREATMENT ON THE STRUCTURAL AND PHASE STATE OF Ti + Al POWDER MIXTURE.**

15:10 Vidyuk T.M., Dudina D.V., Grigoreva T.F., Devyatkina E.T., Vosmerikov S.V., Ukhina A.V., Kovaleva S.A., Lyakhov N.Z. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia; Lavrentyev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia; Joint Institute of Mechanical Engineering, National Academy of Sciences of Belarus, Minsk, Belarus)* **TiC-Ni COMPOSITES OBTAINED BY HIGH-ENERGY BALL MILLING AND SPARK PLASMA SINTERING.**

15:25 Tikhov S.F., Pomazanov A.A., Valeev K.R., Kardash T.Yu., Gerasimov E.Yu., Salanov A.N., Petrov S.A., Lomovsky O.I., Dudina D.V. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MECHANOCHEMICAL SYNTHESIS OF Fe-Co-Al POWDERED NANOCOMPOSITES.**

15:40 Zvekov A.A., Stasenko A.A., Pugachev V.M., Kalenskii A.V. *(Kemerovo State University, Kemerovo, Russia)* **MECHANOCHEMICAL SYNTHESIS OF COPPER GLYCINATE**

FROM COPPER CARBONATE BASIC.

15:45 Kuzmina E.S., Uspenskaya E.V. (*Department of Pharmaceutical and Toxicological Chemistry, Peoples Friendship University of Russia named after Patrice Lumumba, Moscow, Russia)* **STUDY OF THE ACTIVATION MECHANISM OF PHARMACEUTICAL SUBSTANCES: FROM MICRONIZATION TO MECHANICAL ACTIVATION. (online)**

16:00 **Coffee Break. Poster Session II**

Section I (Big Conference hall)

Chairman: Prof. Nikolay E. Polyakov

16:30 Pripisnov O.N., Shelekhov E.V., Rupasov S.I. *(University of Science and Technology MISiS, Moscow, Russia)* **PHASE TRANSFORMATIONS IN Cr-B MIXTURES DURING THE MECHANOCHEMICAL SYNTHESIS OF CHROMIUM BORIDES. (online)**

16:45 Utkin A.V., Orbant R.A., Shershov Ya.M., Bannykh D.A., Golosov M.A., Baklanova N.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **THE PROPERTIES OF COMPOSITES WITH REFRACTORY BORIDES MATRICES OBTAINED FROM PRECERAMIC SUSPENSIONS.**

17:00 Zaytseva N.A., Samigullina R.F., Ivanova I.V., Krasnenko T.I. *(Ural State Mining University, Yekaterinburg, Russia; Institute of Solid State Chemistry UB RAS, Yekaterinburg, Russia)* **THE MECHANISM OF FORMATION OF $ZnMn_2O_4$ SPINEL FROM SIMPLE OXIDES DURING CERAMIC SYNTHESIS.**

17:15 Zima T.M., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia)* **HYDROTHERMAL SYNTHESIS OF MOLYBDEUM TRIOXIDE ONE-DIMENSIONAL STRUCTURES AND THE EFFECT OF AQUEOUS SUCROSE SOLUTION ON THEIR TREATMENT.**

17:30 Yakubov R.N., Lenchenkova L.E., Strizhnev V.A., Politov A.A., Gusarova E.I., Teptereva G.A., Telin A.G. *(Ufa State Petroleum Technological University, Ufa, Russia; "Ufa Scientific and Technical Centre" LLC, Ufa, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **APPLICATION OF POLYACRYLAMIDE HYDROGELS CROSS-LINKED WITH COMPLEX CROSS-LINKER OF PHENOL-ALDEHYDE NATURE,**

STRUCTURED WITH MICRO- AND NANODISPERSE ADDITIVES FOR WATER SHUTOFF AND FLUID LOSS CONTROL IN WELLS.

17:45 Nastovjak A.G., Shwartz N.L., Tsamo G., Monier G., Robert-Goumet C., Bideux L. *(Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia; Université Clermont Auvergne, Clermont Auvergne INP, CNRS, Institut Pascal, Clermont-Ferrand, France)* **GaN NANOCLUSTER DROPLET EPITAXY ON GaAs SUBSTRATE (MONTE CARLO SIMULATION).**

18:00 Ishutin A.V., Bulatnikov D.A., Timakov A.V. *(Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia)* **DETERMINATION OF HEXANE DEGRADATION PRODUCTS DURING SYNTHESIS OF "ALUMINUM-ACTIVATED CARBON-GRAPHITE" COMPOSITION.**

18:15 Bulatnikov D.A., Ishutin A.V., Timakov A.V. *(Institute of Physical Chemistry and Electrochemistry RAS), Moscow, Russia)* **STUDY OF KINETIC LAWS OF PRE-FLAME OXIDATION OF «ALUMINUM-ACTIVATED CARBON-GRAPHITE» COMPOSITE POWDERS OBTAINED BY SYNTHESIS IN THE PRESENCE OF EMULSION.**

18:30 Yagudin L.D., Dranik M.S., Ponomarchuk A.A. *(Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia)* **MECHANICAL ALLOYING OF ZIRCONIUM WITH BORON NITRIDE.**

18:45 Ponomarchuk A.A., Yagudin L.D., Dranik M.S., Markin A.V. *(Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia)* **THERMODESORPTION SPECTROSCOPY OF Zr MECHANOACTIVATED IN HYDROCARBON MEDIUM.**

Young Scientists Session (Hall No.2)

Chairman: Igor O. Lomovsky

14:30 Sbytov O.P., Shundrik Y.A., Kochubey E.A., Andreeva A., Bychkova E.S., Lomovsky I.O. *(ITMO University, Saint Petersburg, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **DEVELOPMENT OF FUNCTIONAL FOOD PRODUCTS UTILIZING MECHANO–CHEMICAL TECHNOLOGY. (online)**

14:37 Akimov Al.S., Zhirov N., Akimov A.S. *(Institute of Petroleum Chemistry SB RAS, Tomsk, Russia)* **SYNTHESIS AND STUDY OF THE PROPERTIES OF MECHANICALLY ACTIVATED COMPOSITES BASED ON WS_2.**

14:44 Antropova K.A. (*Novosibirsk State Technical University, Novosibirsk, Russia*) **INVESTIGATION OF Al_2O_3-BaO CERAMIC MATERIALS.**

15:51 Aryshenskii E.V., Levagina A.A., Cherkasov S.O., Alekseeva E.A., Konovalov S.V. *(Siberian State Industrial University, Kemerovo Region - Kuzbass, Novokuznetsk, Russia; University of Science and Technology MISIS, Moscow, Russia)* **INVESTIGATION FORMATION OF THE MICROSTRUCTURE AND MECHANICAL PROPERTIES DURING ROLLING OF THE ALTEK SYSTEM.**

15:58 Bondareva A.F., Grigorieva V.D. *(Novosibirsk State University, Novosibirsk, Russia; Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia)* **GROWTH OF $Na_6Mo_{11}O_{36}$ SCINTILLATION CRYSTALS BY THE LOW-THERMAL-GRADIENT CZOCHRALSKI TECHNIQUE.**

16:05 Coffee Break. Poster Session II

Young Scientists Session (Hall No.2)

Chairman: Dr. Daniel V. Maslennikov

16:30 Soloboeva T.P., Dabizha O.N., Shilova O.A. *(Irkutsk State Transport University, Irkutsk, Russia; I.V. Grebenshchikov Institute of Silicate Chemistry of NRC «Kurchatov Institute», Saint Petersburg, Russia)* **STABILITY OF ELECTRICAL CHARACTERISTICS OF NATURAL ZEOLITES MODIFIED WITH AMMONIUM, POTASSIUM AND SODIUM HYDROPHOSPHATES. (online)**

16:37 Dik D.V., Burkhinova N.Y., Filippov A.A. *(Khristianovich Institute of Theoretical and Applied Mechanics, Novosibirsk, Russia)* **B_4C-CrB_2 CERAMICS OBTAINED BY HOT PRESSING SIMULTANEOUSLY WITH THE REACTION OF BORON-CARBIDE REDUCTION.**

16:44 Zenin M.N., Ivanov S.G. *(I.I. Polzunov Altai State Technical University, Barnaul, Russia)* **THE INFLUENCE OF HEAT TREATMENT MODES ON THE STRUCTURAL AND PHASE STATE AND MICROSTRUCTURE OF STEEL ShKh15 FOR FUEL EQUIPMENT PARTS COMMON RAIL. (online)**

17.01 Vinogradov V.Yu., Kalinkin A.M. *(Tananaev Institute of Chemistry - Subdivision of the Federal Research Centre «Kola Science Centre of the Russian Academy of Sciences», Apatity, Russia)* **APPLICATION OF NATURAL AND TECHNOGENIC MINERAL RAW MATERIALS OF THE KOLA PENINSULA FOR SYNTHESIS OF CERIUM-CONTAINING ZIRCON USING MECHANICAL ACTIVATION. (online)**

17.08 Isupova I.A., Rychkov D.A. *(Institute of Solid State Chemistry and*

Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia) **PLASTIC POLYMORPHOUS MODIFICATION OF 4-BROMOPHENYL 4-BROMOBENZOATE VIA COMPUTATIONAL METHODS.**

17:15 Krasnov D.A., Tolochko B.P., Zhdanok A.A., Berdnikova L.K., Korotaeva Z.A., Kuznetsov V.A., Mikhailenko M.A., Bulgakov V.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **PROPERTIES OF LANTHANUM HEXABORIDE CERAMIC MATERIALS OBTAINED BY HOT PRESSING, DEPENDING ON THE CHARGE COMPOSITION.**

17:22 Kuskov T.E., Podgorbunskikh E.M., Bukhtoyarov V.A., Bychkov A.L. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **INVESTIGATION OF THE DEACETYLATION PROCESS OF α- AND β- CHITIN.**

17:29 Nashivochnikov A.A., Kostyukov A.I., Snytnikov V.N. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **LASER SYNTHESIS OF HIGHLY ACTIVE ZrO_2 CATALYSTS FOR DEHYDROGENATION OF LIGHT ALKANES AND STUDY OF THE INFLUENCE OF OXYGEN VACANCIES ON THEIR CATALYTIC CHARACTERISTICS.**

17:36 Nikiforov Ya.A., Baklanova N.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **EFFECT OF GRAIN STRUCTURE EVOLUTION ON SOLID STATE REACTION KINETICS: CASE OF REACTION BETWEEN IRIDIUM AND ZIRCONIUM CARBIDE.**

17:43 Novikov A.D., Bragina O.A., Shubnikova E.V., Arapova M.V., Cherendina O.V., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **STUDY OF OXYGEN PERMEABILITY OF HOLLOW FIBER MEMBRANES BASED ON COMPOSITE MATERIAL $SrFe_{1-x}W_xO_{3-\delta}$-$Ce_{0.9}Gd_{0.1}O_{2-\delta}$ AND THEIR CATALYTIC ACTIVITY IN THE REACTION OF OXIDATIVE DEHYDROGENATION OF ETHANE.**

17:50 Orbant R.A., Utkin A.V., Shershov YA.M., Bannykh D.A., Golosov M.A., Baklanova N.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **INVESTIGATION OF THE EFFECT OF SLURRIES COMPOSITIONON FORMATION OF ZrB_2-SiC/C COMPOSITES BY THE METHOD OF PRECERAMIC PREPREGS.**

17:57 Ilinykh D.S., Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **QUERCETIN**

INTERACTION WITH CARBOHYDRATES BY MECHANICAL ACTIVAION.

18:04 Ridel N.S., Gusev A.A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **THE SYNTHESIS OF Pb_2MgWO_6 USING MECHANOCHEMICAL ACTIVATION AND THE ADDITION OF AN ALLOYING COMPONENT ZnO.**

18:11 Sheina O.D., Daminov A.S., Yukhin Yu.M. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Rare Metals Plant Co. Ltd., Novosibirsk Region, Koltsovo, Russia)* **PROCESSING OF LEAD BISMUTHITE TO OBTAIN LEAD AND BISMUTH COMPOUNDS.**

18:18 Shershov Ya.M., Bannykh D.A., Orbant R.A., Baklanova N.I., Utkin A.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **INVESTIGATION OF RHEOLOGICAL PROPERTIES OF SUSPENSIONS BASED ON ZrB_2/HfB_2 POWDERS AND PHENOL-FORMALDEHYDE RESIN.**

18:25 Shivtsov D.M., Bauman Y.I., Shubin Y.V., Mishakov I.V. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia; Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk)* **SYNTHESIS AND INVESTIGATION OF SINGLE-PHASE $Ni_{100-x}Sn_x$ ALLOYS BY MECHANOCHEMICAL METHOD.**

18:32 Stebnitskii I.A., Mateyshina Yu.G., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **THE EFFECT OF THE STRUCTURE OF THE CATION AND ANION ON THE TRANSPORT PROPERTIES OF COMPOSITES BASED ON SUBSTITUTED AMMONIUM SALTS.**

18:39 Vakhrushev A.A., Rychkov D.A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **COMPARISON OF SEMI-EMPIRICAL METHODS OF THE PMX FAMILY FOR DETERMINING THE MOST STABLE CONFORMERS OF GLYCOSYLATED QUERCETIN.**

18:46 Valiaev D.V., Golosov M.A., Lozanov V.V., Baklanova N.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **EFFECT OF HEAT TREATMENT AND OXIDATION ON PROPERTIES OF SILICON CARBIDE FIBERS.**

18:53 Yudina L.I., Skripkina T.S., Lomovsky I.O., Shatskaya S.S. *(Novosibirsk State University, Novosibirsk, Russia; Institute of Solid*

State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia) **STUDY OF THE INFLUENCE OF MECHANICAL PROCESSING ON THE REDISTRIBUTION OF RARE EARTH ELEMENTS IN BROWN COALS.**

19:00 Dubok A.S., Rychkov D.A. *(Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **COMPUTATIONAL APPROACHES FOR STUDYING STRUCTURE-PROPERTY RELATION OF BENDING CRYSTALS - CASE STUDY OF 2-PYRAZINAMIDE POLYMORPHS.**

Thursday, July 4, 2024

Plenary Session (Big Conference hall)

Chairman: Prof. Alexander P. Nemudry

9:30 Shicheng Xu, Ben Ma, Li Su, Qinglei Wang, Faqiang Li (*School of Chemistry & Chemical Engineering, Linyi University, Linyi, China)* **STUDY ON THE WHOLE INDUSTRY CHAIN OF EXTRACTION, APPLICATION AND RECOVERY OF LITHIUM RESOURCES.**

9:55 Akopova T.A., Zelenetskii A.N. *(Enikolopov Institute of Synthetic Polymer Materials RAS, Moscow, Russia)* **MECHANISMS OF MECHANOCHEMICAL ORGANIC REACTIONS DURING SOLID-STATE REACTIVE EXTRUSION.**

10:20 Zhang Q.H., Xu W., Evseenko V.I., Meteleva E.S., Tolstikova T.G., Khvostov M.V., Polyakov N.E., Selyutina O.Yu., Dushkin A.V., Lyakhov N.Z., Su W. *(Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, Hangzhou, China; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk Institute of Organic Chemistry SB RAS, Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia)* **MECHANOCHEMICALLY SYNTHESIZED SUPRAMOLECULAR DRUG DELIVERY SYSTEMS.**

10:45 Турова И.В. (*Новосибирский областной инновационный фонд*) **Меры поддержки инновационных проектов в Новосибирской области** (информационное сообщение).

10:55 Coffee Break. Poster Session III

Section I (Big Conference hall)

Chairman: Prof. Tatyana A. Akopova

11:40 Xu W., Zhang Q., Su W., Dushkin A.V., Polyakov N.E. *(Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, China; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **OVERCOMING SOLUBILITY AND STABILITY CHALLENGES IN DRUG DEVELOPMENT: THE POTENTIAL OF MECHANO-CHEMICAL PROCESSING TECHNIQUES.**

11:55 Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MECHANOCHEMISTRY AND SOLID STATE CHEMISTRY IN APPLICATION TO SYNTHESIS.**

12:10 Khaptakhanova P.A., Uspensky S.A., Aleksandrov A.I., Ryzhikov Yu.L., Okhrimenko I.P. (*Institute of Synthetic Polymer Materials named after N.S. Enikolopov, Moscow; International Research Center for Innovative Technologies Martinex, Moscow; Moscow University of Physics and Technology, Moscow Region, Dolgoprudny, Russia*) **SYNTHESIS OF POLY-L-LACTIC ACID - ε-POLYLYSINE COPOLYMER USING PULSED MECHANOACTIVATION TO OBTAIN AMPHIPHILIC COPOLYMERS.**

12:25 Libanov V.V., Kapustina A.A., Shapkin N.P. *(Institute of High Technologies and Advanced Materials, Far Eastern Federal University, Vladivostok, Russia)* **INTERACTION OF POLYPHENYL-SILSESQUIOXANE WITH COBALT (II) AND (III) ACETYLA-CETONATES BY MECHANOCHEMICAL ACTIVATION.**

12:40 Timakov A.V., Bulatnikov D.A., Ishutin A.V. *(The Institute of Physical Chemistry and Electrochemistry RAS, Moscow, Russia)* **STUDY OF THE ACTIVATED CARBON ADDITION INFLUENCE AS A GAS-FORMING PROMOTER ON THE PRE-FLAME OXIDATION OF "Al-C" COMPOSITE POWDERS KINETICS PRODUCED IN THE SURFACE-INACTIVE MILLING LIQUID.**

12:55 Khalikov S.S. *(A.N. Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia)* **TRANSFORMATIONS OF THE ANHELMINTH SUBSTANCE TRICLABENDAZOLE DURING MECHANOCHEMICAL TREATMENT (online)**

13:10 Lunch Break

Section III (Hall No.2)

Chairman: Prof. Oleg O. Tuzhikov

11:40 Podgorbunskikh E.M., Kuskov T.E., Bukhtoyarov V.A., Bychkov A.L. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS,*

Novosibirsk, Russia) **INFLUENCE OF SUPRAMOLECULAR STRUCTURE OF LIGNOCELLULOSIC RAW MATERIALS ON THE PROCESS OF CELLULOSE RECRYSTALLIZATION. (online)**

11:55 Maslennikov D.V., Dogadina A.A., Voroshnina A.A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **RESISTANT STARCH AS AN OBJECT OF SOLID STATE CHEMISTRY.**

12:10 Polyakov N.E., Dushkin A.V., Weike Su *(Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, Hangzhou, China)* **MECHANOCHEMICAL PREPARATION AND PHYSICOCHEMICAL PROPERTIES OF SUPRAMOLECULAR COMPLEXES OF CAROTENOIDS.**

12:25 Selyutina O.Yu., Wenjing Su, Mastova A.V., Ul'yanova M., Kononova P.A., Evseenko V.I., Meteleva E.S., Zelikman M.V., Dushkin A.V., Weike Su, Polyakov N.E. *(Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, Hangzhou, China)* **MECHANOCHEMICALLY PREPARED MIXED MICELLES OF WATER SOLUBLE CAROTENOID CROCIN WITH NATURAL SAPONIN GLYCYRRHIZIC ACID: PHYSICOCHEMICAL STUDY OF WATER SOLUTIONS AND MOLECULAR MODELLING.**

12:40 Gurova D.V., Lomovsky I.O., Rozhdestvenskaya L.N. *(Novosibirsk State Technical University, Novosibirsk, Russia; Novosibirsk Research Institute of Hygiene, Russia; Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia)* **RESEARCH THE APPLICATIONS OF STARCH-BASED FILMS IN FOOD PACKAGING.**

12:55 Skripkina T.S., Bychkov A.L., Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MECHANOCHEMISTRY OF LIGNITE AND ITS COMPONENTS FOR THE PRODUCTION OF HEAVY METAL SORBENTS, SOIL REMEDIATION PRODUCTS AND RARE EARTH ELEMENT CONCENTRATES.**

13:10 Eryomina M.A., Lomayeva S.F. *(Udmurt Federal Research Center UB RAS, Izhevsk, Russia)* **THE EFFECT OF SURFACTANT ON THE THERMAL STABILITY OF MECHANOSYNTHESIZED $Ti_5Si_3C_x$ (online)**

13:25 Lunch Break

Section III (Big Conference hall)

Chairman: Prof. Nikolay Z. Lyakhov

14:30 Aksenov V.V. (*Institute of Solid State Chemistry and Mechanochemistry SB RAS)* **BIOCONVERSION OF PEAS AND PEA STARCH IN A MECHANO-ENZYMATIC REACTOR.**

14:45 Lomovsky O.I., Lomovsky I.O., Ilinykh D.S. (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **PROMISING MECHANOCHEMICAL PREPARATIONS FROM PLANT RAW MATERIALS FOR THE REHABILITATION OF THE WOUNDED.**

15:00 General Discussion. End of the Conference.

Big Conference hall (Nikolaev str., 12, 2nd floor)

16:00 Ceremonial Meeting dedicated to the 80th anniversary of the Institute of Solid State Chemistry and Mechanochemistry SB RAS

18:00 Get-together Party at the Banqueting hall "KUKURUZA"

POSTER SESSIONS

Tuesday, July 2, 2024

Poster Session I

1. Antonova E.P., Gordeev E.V., Fedorova K.A. *(Institute of High–Temperature Electrochemistry UB RAS, Ekaterinburg, Russia; Ural Federal University, Ekaterinburg, Russia)* **COMPOSITE ELECTRODES BASED ON $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\delta}$ IN CONTACT WIRG PROTON-CONDUCTING ELECTROLYTE $BaCe_{0.7}Zr_{0.1}Y_{0.1}Yb_{0.1}O_{3-\delta}$: ELECTRODE KINETICS STUDY.**
2. Smirenin A.Y., Pinaeva E.A., Stroeva A.Y., Kuzmin A.V. *(Vyatka State University, Kirov, Russia)* **FORMATION AND STUDY OF CATHODS LAYERS OF SOLID OXIDE FUEL CELLS.**

3. Ustyuzhaninov I.D., Dubovtsev D.I., Saetova N.S., Kuzmin A.V. *(Vyatka State University, Kirov, Russia)* **CONDUCTIVE COMPOSITE MATERIALS FOR SWITCHING IN SOLID OXIDE FUEL CELLS.**
4. Buzmakov I.N., Sivak A.V., Levchenko E.A., Nemudry A.P. *(TOPAZ Research Center, Moscow, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **GEOMETRY OPTIMIZATION OF SILVER-PALLADIUM CURRENT COLLECTORS FOR MICROTUBE SOLID OXIDE FUEL CELLS.**
5. Skachilova M.G., Shindrov A.A., Kosova N.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **OPTIMIZATION OF SOLID STATE SYNTHESIS CONDITIONS FOR LITHIUM CONDUCTIVE $LiTa_2PO_8$ SOLID ELECTROLYTE.**
6. Shindrov A.A., Kosova N.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **STUDY OF THE CONDUCTIVE PROPERTIES OF THE PEO-$LiPF_6$/$NaClO_4$ SOLID POLYMER ELECTROLYTE USED IN HYBRID Li/Na-ION BATTERIES.**
7. Tsydypylov D.Z., Kosova N.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **EFFECT OF Fe^{3+} DOPING ON THE ELECTROCHEMICAL PERFORMANCE OF $Ti_2Nb_{10}O_{29}$, AN ANODE MATERIAL FOR LITHIUM-ION BATTERIES.**
8. Ichetovkin Z.N., Stroeva A.Yu., Gerasimov E.Yu., Fedorova Z.A., Shlyapin D.A., Kuzmin A.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Vyatka State University, Kirov, Russia; Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **LANTHANUM-CONTAINING COMPOSITE MATERIALS FOR PROTON CERAMIC FUEL CELLS OPERATING ON AMMONIA FUEL.**
9. Sivtsev V.P., Kovalev I.V., Popov M.P., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **STUDYING ELECTROCHEMICAL CHARACTERISTICS OF MT SOFC WITH VARIOUS CATHODE MATERIALS.**
10. Shivtsov D.M., Ilyina E.V., Mateyshina Y.G. (*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 INVESTIGATION OF ELECTROCHEMICAL PROPERTIES OF $NaNO_2$@A (A = MgO, Al_2O_3, MgO-Al_2O_3) SOLID COMPOSITE ELECTROLYTES.**
11. Mateyshina Yu.G., Stebnitskii I.A., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **INVESTIGATION OF THE EFFECT OF THE NATURE OF A HETEROGENEOUS ADDITIVE ON THE TRANSPORT PROPERTIES OF COMPOSITES BASED ON SUBSTITUTED AMMONIUM SALTS.**

12. Chemberlidi V.I., Ulihin A.S., Mikhailenko M.A., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry Sb RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **SYNTHESIS AND TRANSPORT PROPERTIES OF THE COMPOUND $1.5Al_2O_3 \cdot TiO_2 \cdot 2.25K_2O$.**
13. Kyzlasova D.A., Ulihin A.S., Ukhina A.V., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia*) **PHYSICOCHEMICAL PROPERTIES OF N-METHYL-N-PROPILPIPERIDINIUM PERCHLORATE DOPED BY LITHIUM PERCHLORATE**.
14. Rubilkin P.A., Ulihin A.S., Uvarov N.F. *(Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*) **DEVELOPMENT OF ELECTROLYTE FOR ALUMINUM BATTERIES.**
15. Khokhlova M.O., Shubnikova E.V., Tropin E.S., Lyskov N.V., Bragina O.A., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry, Chernogolovka, Russia)* **PERFORMANCE AND STABILITY OF MICROTUBULAR SOLID OXIDE CELL WITH LNO-SDC AIR ELECTRODE OPERATING IN FUEL CELL AND ELECTROLYSIS MODES.**
16. Guskov R.D., Popov M.P., Kovalev I.V., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **STRUCTURAL AND FUNCTIONAL PROPERTIES OF MODIFIED STRONTIUM COBALTITES.**
17. Shubnikova E.V., Cherendina O.V., Khokhlova M.O., Arapova M.V., Bragina O.A., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MICROTUBULAR OXYGEN-PERMEABLE MEMBRANES BASED ON LANTHANUM-STRONTIUM FERRITES.**
18. Cherendina O.V., Shubnikova E.V., Bragina O.A., Khokhlova M.O., Arapova M.V., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **«PEROVSKITE-FLUORITE» DUAL-PHASE SYSTEMS AS CATALYTIC MEMBRANE REACTORS FOR ETHYLENE PRODUCTION.**
19. Gongola M.I., Popov M.P., Chizhik S.A., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MATHEMATICAL MODEL OF OXYGEN PARTIAL PRESSURE RELAXATION IN A FLOW REACTOR.**
20. Kovalev I.V., Guskov R.D., Popov M.P., Chizhik S.A., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **OXYGEN EXCHANGE KINETICS ON $La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.75}W_{0.05}O_{3-\delta}$.**

21. Fouad M., Kovalev I., Guskov R., Popov M., Nemudry A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **OXYGEN EXCHANGE IN MIEC PEROVSKITE-LIKE OXIDE LANTHANUM STRONTIUM FERRITE DOPED TANTALUM: KINETICS AND EQUILIBRIUM PARAMETERS.**
22. Malbakhova I.A., Bagishev A.S., Vorobyev A.M., Titkov A.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **DEVELOPMENT OF APPROACHES TO THE FORMATION OF FUNCTIONAL LAYERS OF SOFC USING HYBRID INKJET 3D PRINTING.**
23. Afimchenko N.A., Zilberberg I.L. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **RELATIONSHIP BETWEEN THE ELECTRONIC STATE OF OXYGEN ON THE SURFACE OF PEROVSKITE SRFEO(3-D) AND ITS OXIDATIVE ACTIVITY USING THE EXAMPLE OF METHANE DECOMPOSITION.**
24. Tantardini C., Fazylbekova D., Levchenko S., Novikov I. *(Department of Materials Science and NanoEngineering, Rice University, Houston, Texas, USA; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Skolkovo Institute of Science and Technology, Moscow, Russia; Moscow Institute of Physics and Technology, Dolgoprudny, Moscow Region, Russia; Emanuel Institute of Biochemical Physics RAS, Moscow, Russia)* **CONSTRAINED DENSITY FUNCTIONAL THEORY AND HUBBARD MODEL TO DESCRIBE MAGNETISM IN THE CASE OF $YBaCo_4O_7$.**

Wednesday, July 3, 2024

Poster Session II

1. Lapushkina E.Y., Levakova A.S., Sivtsev V.P., Nemudry A.P. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia)* **INFLUENCE OF THE ELECTROLYTE LAYER OF MT SOFC ON THE MECHANICAL PROPERTIES OF HALF-CELLS.**
2. Levakova A.S., Lapushkina E.Y., Nemudry A.P. *(Novosibirsk State Technical University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **STUDY OF MECHANICAL PROPERTIES OF MT SOFC DEPENDING ON MICROSTRUCTURE.**
3. Zvekov A.A., Zaharova K.E., Kalenskii A.V. *(Kemerovo State University, Kemerovo, Russia)* **MECHANOCHEMICAL EFFECTS AT SOLIDS' HYDRATES FORMATION.**
4. Akimov A.S., Zhuravko S.P., Zhirov N., Akimov Al.S. *(Institute of Petroleum Chemistry SB RAS, Tomsk, Russia; National Research Tomsk Polytechnic University, Tomsk, Russia)* **SYNTHESIS OF MoW-CONTAINING POLYOXOMETALATES USING MECHANOCEMISTRY.**

5. Aleksandrova N.S. *(Novosibirsk State Technical University, Novosibirsk, Russia)* **INVESTIGATION ON PHASE STABILITY IN L12-TiAl3-BASED ALLOYS USING DENSITY FUNCTIONAL THEORY.**
6. Baranovskiy A.V., Pribytkov G.A. *(Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia)* **INVESTIGATION OF SINTERED IRON MATRIX COMPOSITES WITH CARBIDE STRENGTHNING.**
7. Baranov E.A., Zamchiy A.O., Konstantinov V.O., Samokhvalov F.A., Rodionov A.A., Starinskaya E.M. *(Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia)* **INFLUENCE OF AMORPHOUS SILICON THICKNESS ON THE ALUMINUM-INDUCED CRYSTALLIZATION PROCESS.**
8. Borisenko T.A., Titkov A.I., Vorobyev A.M., Logutenko O.A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **DEPENDENCE OF THE MORPHOLOGY OF SILVER NANOPARTICLES STABILIZED WITH OXYETHYLATED CARBOXYLIC ACID ON SYNTHESIS CONDITIONS.**
9. Vorobyev A.M., Logutenko O.A., Borisenko T.A., Titkov A.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **SYNTHESIS, STRUCTURE AND PROPERTIES OF NICKEL NANOPARTICLES PREPARED BY THE POLYOL METHOD.**
10. Bulina N.V., Eremina N.V., Mikhailenko M.A., Prosanov I.Y., Vinokurova O.B. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **Mn-SUBSTITUTED HYDROXYAPATITE: SYNTHESIS, STRUCTURE, THERMAL PROPERTIES.**
11. Evteeva A.A. Eremina N.V., Makarova S.V., Vinokurova O.B., Bulina N.V. *(Novosibirsk State Technical University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MECHANOCHEMICAL SYNTHESIS OF Na- AND K-SUBSTITUTED HYDROXYAPATITE.**
12. Makarova S.M., Bulina N.V., Borodulina I.A., Eremina N.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **INFLUENCE OF CATION-CARRIER REAGENT TYPE ON THE MECHANOCHEMICAL SYNTHESIS OF Ag-SUBSTITUTED HYDROXYAPATITE.**
13. Dyachkova L.N., Grigoreva T.F., Devyatkina E.T., Vosmerikov S.V., Osipov V.A., Ilyushchenko A.F., Lyakhov N.Z. *(Acad. O.V. Roman Powder Metallurgy Institute, Minsk, Belarus; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **PSEUDO-ALLOYS BASED ON TUNGSTEN FOR PROTECTION AGAINST IONIZING RADIATION.**
14. Drebushchak T.N., Timakova E.V., Afonina L.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk*

State Technical University, Novosibirsk, Russia) **STRUCTURAL FEATURES OF BISMUTH SALTS BY THE EXAMPLE OF SUCCINATES.**

15. Isupova I.A., Rychkov D.A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **EXPLORING THE SIGNIFICANCE OF RESULT VALIDATION IN RESEARCHING BROMINE-CONTAINING SYSTEMS USING COMPUTATIONAL APPROACHES.**
16. Filatova N.V., Kosenko N.F., Artyushin A.S., Maloivan M.S., Zonina I.I., Vlasenkov A.S. *(Ivanovo State University of Chemistry and Technology, Ivanovo, Russia)* **REACTIVITY OF ALUMINA PRECURSORS IN $MgAl_2O_4$ SPINEL SOLID-STATE FORMATION.**
17. Gorev N.D., Bakulin A.V., Kulkova S.E. *(Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia; National Research Tomsk State University, Tomsk, Russia)* **DIFFUSION PECULIARITIES OF A NUMBER OF SUBSTITUTIONAL IMPURITIES IN α-Ti.**
18. Khabirov R.R., Kuzmin R.I., Mass A.V. *(Novosibirsk State Technical University, Novosibirsk, Russia)* **SINTERING OF Mn-Zn FERRITES USING SOL-GEL SYNTHESIS POWDERS.**
19. Kiseleva T.Yu., Grigoreva T.F., Yakuta E.V., Lazareva E.V., Devyatkina E.T., Vosmerikov S.V. *(Moscow M.V. Lomonosov State University, Physics Faculty, Moscow, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MECHANOCHEMICAL SYNTHESIS OF YTTRIUM FERRITE GARNET PARTICLES AND COMPOSITES CONTAINING THEM.**
20. Kovaliova S.A., Grigoreva T.F., Ukhina A.V., Dudina D.V., Devyatkina E.T., Zhornik V.I., Vosmerikov S.V., Vityaz P.A., Lyakhov N.Z. *(Joint Institute of Mechanical Engineering of National Academy of Sciences of Belarus, Minsk, Belarus; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Lavrentyev Institute of Hydrodynamics SB RAS, Novosibirsk, Russia)* **MECHANOCHEMICAL SYNTHESIS HfC IN REACTION MIXTURES Ni-Hf-C.**
21. Senyut V.T., Kovaliova S.A. *(Joint Institute of Mechanical Engineering National Academy of Belarus, Minsk, Belarus)* **IR SPECTROSCOPY STUDIES OF THE MECHANICAL ACTIVATION EFFECT ON THE STRUCTURE OF GRAPHITE-LIKE AND WURTZITE BN POWDERS.**
22. Zhdanok A.A., Korotaeva Z.A., Berdnikova L.K., Tolochko B.P., Bulgakov V.V., Krasnov D.A. (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **MANGANESE-SUBSTITUTED CERAMICS BASED ON BARIUM ALUMINATE.**
23. Korotaeva Z.A., Berdnikova L.K., Zhdanok A.A., Tolochko B.P., Bulgakov V.V. (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **LOW- AND HIGH-TEMPERATURE BINDER BASED**

ON α-ALUMINUM OXIDE AND CORUNDUM REFRACTORIES BASED ON IT FOR USE IN EXTREME CONDITIONS.

24. Shikalov V.S. *(Khristianovich Institute of Theoretical and Applied Mechanics SB RAS, Novosibirsk, Russia)* **APPROACHES TO OPTIMIZATION OF COLD SPRAYING OF COPPER-MATRIX COATINGS AND IMPROVEMENT OF THEIR FUNCTIONAL PROPERTIES.**

Thursday, July 4, 2024

Poster Session III

1. Tretyakova I.S., Rychkov D.A., Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Voevodsky Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia)* **COMPUTATIONAL STUDY OF DIRECT MECHANISM OF QUERCETIN CHEMICAL GLYCOSYLATION MECHANISM IN VARIOS MEDIA.**
2. Dubok A.S., Rychkov D.A. (*Novosibirsk State University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **COMPUTATIONAL STUDY OF MECHANICAL PROPERTIES OF α-PYRAZINAMIDE IDEAL CRYSTAL USING DEFORMCELL PYTHON SCRIPT AND VASP SOFTWARE.**
3. Ponomarev D.V., Lvova M.N., Augustinovich D.F., Meteleva E.S., Evseenko V.I., Dushkin A.V., Polyakov N.E., Selyutina O.Yu. *(Institute of Cytology and Genetic SB RAS, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, Hangzhou, China; Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia)* **PROSPECTS OF TREATING PARASITOSIS CAUSED BY OPISTHORCHIS FELINEUS WITH MECHANOCHEMICALLY OBTAINED COMPLEX OF ARTESUNATE WITH SODIUM GLYCYRRHIZINATE.**
4. Zelikman M.V., Titkov A.I. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **APPLICATION OF LASER LIGHT SCATTERING SPECTROSCOPY TO ASSESS THE SIZE OF SUPRAMOLECULAR FORMATIONS OF POLYMERS AND LOW MOLECULAR WEIGHT ORGANIC SUBSTANCES OBTAINED BY MECHANOCHEMICAL METHODS.**
5. Zhirnova A.S., Salanov A.N. *(Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia)* **RECONSTRUCTION OF POLYCRYSTALLINE PLATINUM DURING ANNEALING IN THE OXYGEN ATMOSPHERE AT T = 1100 K.**
6. Tikhomirova Yu.I., Evseenko V.I., Meteleva E.S., Zelikman M.V., Dushkin A.V., Karabintseva N.O. *(Novosibirsk State Medical University, Russia,*

Novosibirsk; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Russia, Novosibirsk) **DEVELOPMENT OF COMPOSITION AND TECHNOLOGY OF POWDERS FOR PREPARATION OF SUSPENSIONS BASED ON MECHANOCHEMICALLY OBTAINED SOLID DISPERSION OF ALBENDAZOLE.**

7. Timakova E.V., Afonina L.I., Koledova E.S., Yukhin Yu.M. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia)* **MAIN APPROACHES TO THE SYNTHESIS OF HIGH PURITY BISMUTH FUNCTIONAL MATERIALS.**
8. Evseenko V.I., Meteleva E.S., Selyutina O.Yu., Polyakov N.E., Dushkin A.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia)* **SOLUBILITY, ANTIOXIDANT PROPERTIES AND COMPLEXATION OF FLAVONOID QUERCETIN FROM ITS MECHANOCHEMICALLY OBTAINED SOLID DISPERSIONS.**
9. Dogadina A.A., Maslennikov D.V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **INVESTIGATION OF THE INFLUENCE OF THERMAL PRE-TREATMENT OF STARCH ON THE EFFECTIVENESS OF THE ETHERIFICATION REACTION WITH CITRIC ACID AND THE FUNCTIONAL PROPERTIES OF THE FINAL PRODUCTS.**
10. Shicheng Xu, Ben Ma, Qimeng Ren, Qinglei Wang, Li Su, Faqiang Li (*School of Chemistry & Chemical Engineering, Linyi University, Linyi, China)* **INORGANIC/ORGANIC COMPOSITE FLUORINATED INTERPHASE LAYERS FOR STABILIZING ETHER-BASED ELECTROLYTE IN HIGH-VOLTAGE LITHIUM METAL BATTERY.**
11. Xu W., Kiselev O.S., Zelikman M.V., Dushkin A.V., Polienko Yu.F., Kiriluk I.A. Selutina O.Y., Polyakov N.E. *(Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, Hangzhou, China; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk Institute of Organic Chemistry SB RAS, Novosibirsk, Russia; Voevodsky Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia)* **MECHANOCHEMICAL SOLID-STATE FORMATION OF WATER-SOLUBLE ELECTRON SPIN LABELED MATERIALS FOR IN VITRO RESEARCHES.**
12. Shakhtshneider T.P., Myz S.A., Skurydina E.S., Kuznetsova S.A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Institute of Chemistry and Chemical Technology SB RAS, Federal Research Center "Krasnoyarsk Scientific Center of the SB RAS", Krasnoyarsk, Russia)* **SOLUBILITY OF BETULIN IN A TERNARY SYSTEM WITH POLYMER.**
13. Myz S.A., Shakhtshneider T.P., Mikhailenko M.A., Kuznetsova S.A. (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk,*

Russia; Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk, Russia) **SOLID-PHASE SYNTHESIS OF BETULIN SEBACIC ACID CO-CRYSTALS**.

14. Antonov I., Tolochko B., Mikhailenko M., Shakhtshneider T., Eltsov I., Bryazgin A., Smirnov E. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Budker Institute of Nuclear Physics SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia; Russian Federal Nuclear Center – Zababakhin All-Russia Research Institute of Technical Physics, Snezhinsk, Russia)* **ELECTRON BEAM INDUCED POLYMERIZATION OF ISODECYL AND BENZYL METHACRYLATE. SYNTHESIS OF COPOLYMER OF ISODECYL AND BENZYL METHACRYLATE.**
15. Suldum A.A., Korpacheva S.M., Lomovsky I.O. **(***Novosibirsk State Technical University, Novosibirsk, Russia; Institute of Solid State Chemistry and Mechanochemistry SB RAS)* **USE OF NON-TRADITIONAL RAW MATERIALS IN THE PRODUCTION OF PUBLIC FOOD PRODUCTS.**
16. Lomovsky I.O., Zhelnova A.I., Baktybekova Zh.B., Rozhdestvenskaya L.N. (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia)* **STUDYING THE DISTRIBUTION OF MOLECULAR WEIGHTS OF PROTEINS IN HYDROLYSATES OF PLANT RAW MATERIALS.**
17. Yanovskiy M.D., Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **STUDY OF THERMAL STABILITY OF GREEN TEA CATECHINS UPON ENCAPSULATION WITH POLYSACCHARIDES.**
18. Agarkin S.A., Lomovsky I.O. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **OXIDATION OF LIGNIN BY MECHANOCHEMICAL METHODS IN ORDER TO IMPROVE SORPTION PROPERTIES.**
19. Avvakumov E.G., Politov A.A. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **PLACEMENT OF ISOTOPES OF ELEMENTS OF THE D.I. MENDELEEV TABLE IN SPACE.**
20. Grigoreva T.F., Auchynnikau Y.V., Eisymont E.I., Auchynnikau A.Y. *(Yanka Kupala State University of Grodno, Grodno, Belarus; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **TRIBOTECHNICAL MECHANOACTIVATED COMPOSITE MATERIALS.**
21. Hu Ke, Mengqing Zhao, Dushkin A.V., Evseenko V.I., Meteleva E.S. (*Collaborative Innovation Center of Yangtze River Delta Region Green Pharmaceuticals, Zhejiang University of Technology, Hangzhou, China; Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia)* **DEVELOPMENT OF TRIPTOLIDE DRUG DELIVERY SYSTEM FOR ENHANCE SOLUBILITY, STABILITY AND BIOAVAILABILITY.**

22. Povshok T.O., Eisymont E.I., Yadyk S.A., Grigoreva T.F., Auchynnikau Y.V. *(Yanka Kupala State University of Grodno, Grodno, Belarus; NST Group, Tel Aviv, Israel; Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **SILICON CARBON MODIFIERS FOR HIGH MOLECULAR COMPOUNDS.**
23. Fedorov N.A., Ulihin A.S., Uvarov N.F. (*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia)* **EFFECT OF THE PLASTICIZER TYPE ON THE PROPERTIES OF POLYMER ELECTROLYTES BASED ON POLYURETHANE ELASTOMER.**
24. Dormidonova D., Bagryantseva I., Alekseenko A., Ponomareva V. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Southern Federal University, Rostov-on-Don, Russia)* **RESEARCH ON THE ELECTROCHEMICAL CHARACTERISTICS OF MEDIUM-TEMPERATURE FUEL CELLS BASED ON CESIUM DIHYDROGEN PHOSPHATE.**
25. Kungurtsev Y.E., Bagryantseva I.N., Ponomareva V.G. *(Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia)* **DIHYDROGEN PHOSPHATE AND FLUOROPOLYMERS-F-42, F-2M.**
26. Sidorov I.E., Ponomareva V.G. *(Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia)* **PROTON MEDIUM-TEMPERATURE POLYMER ELECTROLYTE BASED ON CsH2PO4-SKF-32: CONDUCTIVITY, STRUCTURAL AND THERMAL PROPERTIES.**
27. Ponomareva V.G., Bagryantseva I.N., Shutova E.S., Dormidonova D.O., Uvarov N.F. *(Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia)* **ELECTROTRANSPORT, THERMODYNAMIC AND STRUCTURAL CHARACTERISTICS OF TETRASUBSTITUTED AMMONIUM SALTS Me_4NHSO_4 (Me = Me, Et, Bu) AND THEIR COMPOSITES.**