



MSF'2019

**MATERIALS SCIENCE OF THE FUTURE:
RESEARCH, DEVELOPMENT, SCIENTIFIC TRAINING**

12-14 FEBRUARY, 2019, NIZHNY NOVGOROD, RUSSIA

SCIENTIFIC PROGRAM

2019

Organizers

Russian Professor Assembly Lobachevsky University



**The conference is held in the framework of the events
dedicated to the year of the Periodic table of elements (2019)**

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Ph.D. Philosophy

Journal «Higher Education in Russia»

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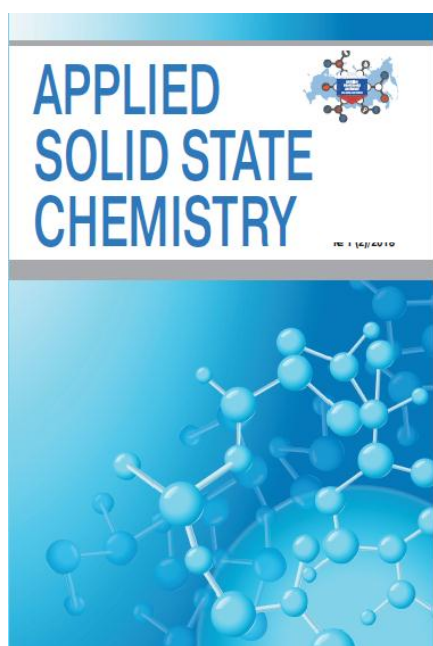
Presentation of reports

Speakers can use the multimedia projector for the presentation of their reports on a big screen. Computer presentations should be represented in MS Office PowerPoint *.ppt or *.pptx formats. Time for a speech provided by this program includes 2-3 minutes to answer the questions.

Publication of papers

Brochures with the scientific program and an abstracts digest will be given to the participants during the registration. ISBN was assigned to an online issue of the abstracts digest.

Organizing committee invites all authors of the reports to publish their materials in the special issue of «**Applied Solid State Chemistry**» journal (**Issue 2, 2019**). Participants should provide papers up to 10 pages to the e-mail appssc@gmail.com before 1 April 2019. All papers submitted for publication will pass through a standard reviewing process. Instructions for authors can be found on the journal website <http://appssc.me/contacts/>.

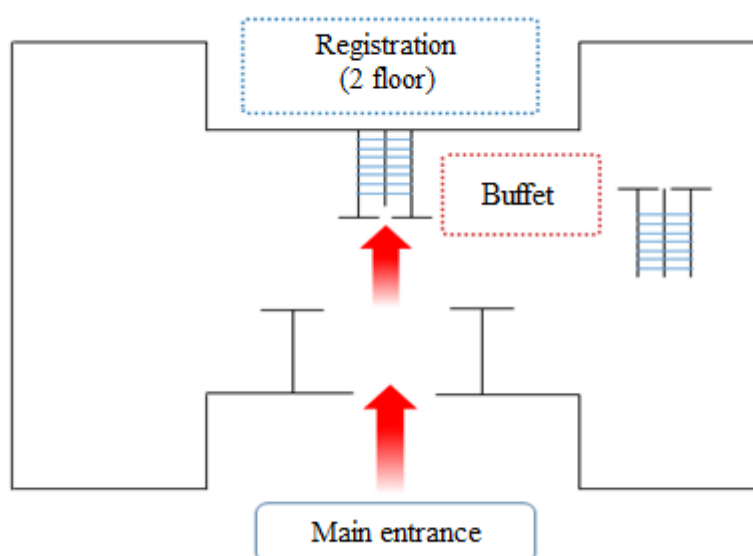


Venue

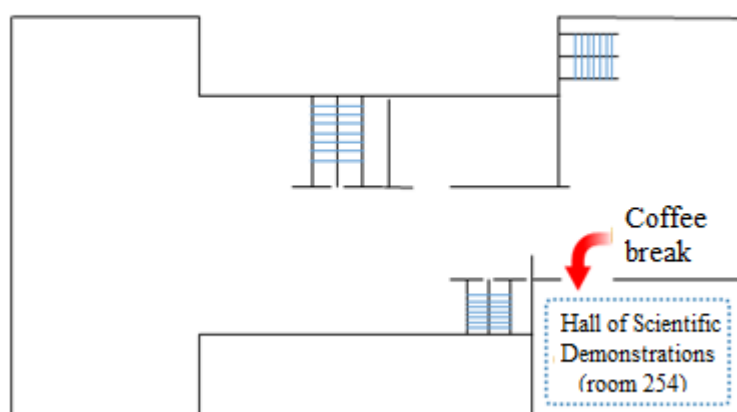


The «Materials Science of the Future: Research, Development, Scientific Personnel Training» conference will take place in N. I. Lobachevsky State University of Nizhny Novgorod (UNN) (Nizhni Novgorod, Prospekt Gagarina, 23, building 2). Scientific sessions of the conference will take place in building 2 of the University – in the Hall of Scientific Demonstrations (Prospekt Gagarina 23, building 2, 2 floor, room №254).

1st floor



2nd floor



PROGRAM OF MSF-2019



12 February 2019, Tuesday
23 (building 2), Prospekt Gagarina,
Hall of scientific demonstrations (2nd floor №254)

- 8.30-10.00** **Registration**
- 10.00-10.20** **Opening ceremony**
- 10.20-10.40** Obiedkov A.M., Kremliev K.V., Kaverin B.S., Semenov N.M., Zabrodina G.S. G.A. Razuvaev Institute of Organometallic Chemistry of RAS, Nizhny Novgorod, Russia
New hybrid materials based on multiwall carbon nanotubes decorated with metal-containing nanoparticles or coatings. Synthesis. Characterization. Application.
- 10.40-11.00** Vorotyntsev V.M., Vorotyntsev A.V., Vorotyntsev I.V., Petukhov A.N., Trubyanov M.M., Atlaskin A.A., Makarov D.A., Sergeeva M.S. Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Nizhny Novgorod, Russia
Progress and perspective in high purity substances production for semiconductor industry
- 11.00-11.20** Egiazaryan T.A., Moskalev M.V., Razborov D.A. G.A. Razuvaev Institute of Organometallic Chemistry of RAS, Nizhnij Novgorod, Russia
Synthesis of Lactide from Lactic Acid via Alkyl Lactates Catalytic Oligomerization
- 11.20-11.40** Sukhanov M.V. G.G. Devyatykh Institute of Chemistry of High-Purity Substances of the Russian Academy of Sciences, Russia
Physicochemical properties of high-pure sulfur ^{32}S , ^{34}S and their mixtures
- 11.40-12.00** D.A. Permin¹, S.S. Balabanov¹, A.V. Novikova¹, Ye. E. Rostokina¹, I.L. Snetkov², O.V. Palashov², A.I. Yakovlev²
¹*G.G. Devyatykh Institute of Chemistry of High-Purity Substances RAS, Nizhnij Novgorod, Russia*
²*Institute of Applied Physics RAS, Nizhnij Novgorod, Russia*
Novel optical ceramic materials based on the rare earth oxides
- 12.20-12.40** Zamyshlyayeva O.G. National Research Nizhny Novgorod State University, Nizhny Novgorod, Russia
Perfluorinated hydrides of germanium in the synthesis of copolymers varying structures

- 12.40-13.00** Grishin I.D., Stakhy S.A., Grishin D.F.
Lobachevsky State University of Nizhni Novgorod, Nizhni Novgorod, Russia
Novel methods of synthesis of polyacrylonitrile-based copolymers as precursors for well-defined carbon fiber precursors
- 13.00-14.30** **Lunch**
- 14.30-14.50** М.С. Болдин, А.А. Попов, Е.А. Ланцев, А.В. Нохрин, В.Н. Чувильдеев
Национальный исследовательский Нижегородский государственный университет им. Н.И. Лобачевского, Научно-исследовательский физико-технический институт, Нижний Новгород, Россия
Электроимпульсное плазменное спекание высокопрочных композитов на основе оксида алюминия
- 14.50-15.10** Kozlov V. I., Stepanov A. V., Kamentsev K. E., Bush A. A., Spitsin A.I.
MIREA - Russian Technological University, Russian Federation, Moscow
Preparation and x-ray diffraction and dielectric studies of the (1-x)Ba(Ti_{0,75}Sn_{0,25})O₃·xPbTiO₃ solid solution samples
- 15.10-15.30** Khabibullia I.A., Mitin D.I.
Federal State Unitary Enterprise Keldysh Research Center, Moscow, Russia
Study of the structure of the amorphous alloy Ti₅₀Ni₂₅Cu₂₅ under the influence of electropulse heat treatment
- 15.30-15.50** Pudov V.I., Dragoshanskii Yu.N.
Institute of Metal Physics im. Mikheeva, Ural Branch of RAS, Ekaterinburg, Russia
Control of domain structure and magnetic losses in stacked core for transformer
- 15.50-16.10** Dragoshanskii Yu.N., Pudov V.I.
Institute of Metal Physics im. Mikheeva, Ural Branch of RAS, Ekaterinburg, Russia
Effect of domain structure dynamic on magnetic properties of Fe-Si alloys at the texture-deformation influence
- 16.10-16.30** V.E. Zhivulin¹, A.A. Bush², D.A. Vinnik¹, E.V. Vasil'ev², K.E. Kamentsev^{1,2},
¹*SUSU – South Ural State University, Chelyabinsk, Russia*
²*MIREA – Russian Technological University, Moscow, Russia*
Growth and dielectric properties of substituted lead germanate (Pb_{1-x}Ba_x)₅Ge₃O₁₁ crystals
- 16.30-16.50** Milyaev I.M., Alymov M.I., Yusupov V.S., Zelenskiy V.A., Laysheva N.V.
Institution of Russian Academy of Sciences A.A. Baikov Institute of Metallurgy and Material Science RAS, Moscow, Russia
Magnetic hysteresis properties of powder hard magnetic Fe-27Cr-12Co alloy
- 16.50-17.10** Smetanina K.E., Andreev P.V., Lantsev E.A.
Lobachevsky University, Nizhniy Novgorod, Russia
Study of the effect of free carbon content in the initial powder of WC – Co on the phase content of sintered ceramics
- 17.10-17.30** **Coffee break**



MSF'2019

13 February 2019, Wednesday
23 (building 2), Prospekt Gagarina,
Hall of scientific demonstrations (2nd floor №254)

- 10.00-10.20** B.I. Bednyi
Lobachevsky University, Nizhny Novgorod, Russia
The new model of Russian doctoral education: problems and prospects
- 10.20-10.40** Vorozhtsova E.V., Degtyareva S.P.
St. Petersburg State Marine Technical University, Russia
The Loading of the object for X-ray study of macro-stresses and the mechanism for its implementation.
- 10.40-11.00** Rybakov N.V.
Lobachevsky University, Nizhny Novgorod, Russia
Russian PhD Students' motives when studying a post-graduate program
- 11.00-11.20** Klyucharev V.V.
Institute of problems of chemical physics of RAS, Chernogolovka, Russia
Chemical education for materials science in secondary school
- 11.20-11.40** Degtyareva S.P., Tikhomirova E.A..
St. Petersburg State Marine Technical University, Russia.
X-ray methods for studying single crystals by the Laue method (Laboratory practice)
- 11.40-12.00** B.I. Bednyi, O.A. Kuzenkov
Lobachevsky University, Nizhny Novgorod, Russia
A model of the system for research staff training for academic activities
- 12.00-13.30** **Lunch**
- 13.30-13.50** Goncharov I.A.
Lomonosov Moscow State University, Moscow, Russia
Modeling of metal grains refinement under superplastic deformation conditions
- 13.50-14.10** Isaeva N.V.¹, Blagoveshchenskiy Y.V.¹, Terent'ev A.V.¹, Lantcev E.A.²,
Murashov A.A.²
¹*Baikov Institute of Metallurgy and Material Science RAS, Moscow, Russia*
²*Nizhny Novgorod State University. Department of Physical Material Studies, Nizhny Novgorod, Russia*
Consolidation of fine-grained WC-Co composites with high mechanical properties
- 14.10-14.30** Ivanova N.M., Filippova E.O.
Tomsk Polytechnic University, Tomsk, Russia
The effect of plasma treatment on the surface properties of films based on polylactic acid

- 14.30-14.50** Grishakov K.S.¹, Merinov V.B.¹, Gimaldinova M.A.¹, Katin K.P.^{1,2}, Maslov M.M.^{1,2}
¹*National Research Nuclear University MEPhI, Moscow, Russia*
²*Research Institute for the Development of Scientific and Educational Potential of Youth, Moscow, Russia*
Numerical simulation of high-energy nitrogen nanosystems
- 14.50-15.10** Belozerov Yu.S.¹, Bulanov A.D.¹, Kirillov Yu.P.¹
¹*Devyatykh Institute of Chemistry of High-Purity Substances, Russian Academy of Sciences, Nizhny Novgorod, Russia*
Distillation and decomposition of iron pentacarbonyl to produce a high-purity iron
- 15.10-15.30** Katin K.P.^{1,2}, Grishakov K.S.^{1,2}, Gimaldinova M.A.¹, Maslov M.M.^{1,2}
¹*National Research Nuclear University "MEPhI", Moscow, Russia*
²*Research Institute for the Development of Scientific and Educational Potential of Youth, Moscow, Russia*
Pyrolysis of substituted derivatives of CL-20: Computational study
- 15.30-15.50** Grigorovich K.V., Volchenkova V.A., Alpatov A.V., Kazenas E.K., Smirnova V.B., Sprygin G.S. and Fomina A.A.
Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences (IMET RAS). Moscow, Russia
Development of the methods for quantitative determination of contents of main and impurity elements in heat-resistant nickel alloys
- 15.50-16.10** Katin K.P.^{1,2}, Grishakov K.S.^{1,2}, Gimaldinova M.A.¹, Maslov M.M.^{1,2}
¹*National Research Nuclear University "MEPhI", Moscow, Russia*
²*Research Institute for the Development of Scientific and Educational Potential of Youth, Moscow, Russia*
Silicon polyprismanes: Insight from *ab initio* calculations
- 16.10-16.30** Komolikov Yu. I., Pudov V. I.
Institute of Metal Physics im. Mikheeva, Ural Branch of RAS, Ekaterinburg, Russia
The formation of the phase structure ZrO₂ ceramics two-stage thermal effect
- 16.30-16.50** Fadeeva I.V.¹, Grabovenko F.I.², Fomin A.S.¹, Trofimchuk E.S.², Barinov S.M.¹
¹*IMET RAS, Moscow, Russia*
²*Lomonosov Moscow State University, Moscow, Russia*
A novel biocompatible polyvinylpyrrolidone/calcium phosphates composite materials for medical applications
- 16.50-17.10** Volchenkova V.A., Kazenas E.K., Penkina T.N, Fomina A.A., Podzorova L.I., Ilyicheva A.A.
Baikov Institute of Metallurgy and Materials Science of the Russian Academy of Sciences (IMET RAS). Moscow, Russia
Improvement of metrological characteristics of aes-icp determination of impurity elements in ceramic materials for medical purposes
- 17.10-17.30** **Coffee break**



MSF'2019

14 February 2019, Thursday
23 (building 2), Prospekt Gagarina,
Hall of scientific demonstrations (2nd floor №254)

9.00-9.20

Ptak M.¹, Collings I.E.², Svane K.L.^{3,4}, Paraguassu W⁵

¹*Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Wrocław, Poland*

²*European Synchrotron Radiation Facility, Grenoble, France*

³*Department of Chemistry, University of Bath, Bath, UK*

⁴*Department of Energy Conversion and Storage, Technical University of Denmark, Kgs. Lyngby, Denmark*

⁵*Faculty of Physics, Federal University of Para, Belem, Brazil*

Pressure-enhanced polarization in polar perovskite-like [C₂H₅NH₃]Na_{0.5}Cr_{0.5}(HCOO)₃ metal-organic framework

9.20-9.40

Ciupa-Litwa A.¹, Ptak M.¹, Mączka M.¹, Peksa P.²

¹*Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Wrocław, Poland*

²*Faculty of Fundamental Problems of Technology, Wrocław University of Science and Technology, Wrocław, Poland*

Mechanism of temperature-induced phase transitions in hydrogen and deuterated zinc perovskite-type metal-formate frameworks

9.40-10.00

Bulanov E.N.¹, Stasenko K.S.¹, Knyazev A.V.¹, Aleinik D.Ya.², Egorikhina M.N.², Charykova I.N.²

¹*Lobachevsky State University of Nizhny Novgorod, 603950 Nizhny Novgorod, Russia*

²*Nizhny Novgorod Research Institute of Traumatology and Orthopedics Institute of Physics, 603950 Nizhny Novgorod, Russia*

Obtaining and studying the biocompatibility of bismuth-apatite ceramics

10.00-10.20

Komshina M.E.¹, Ignatova K.F.², Troshin O.Yu.¹, Kuzhelev I.A.²

¹*G.G. Devyatikh Institute of Chemistry of High-Purity Substances, Russian Academy of Sciences, Nizhnii Novgorod, Russia*

²*Lobachevsky University, Nizhnii Novgorod, Russia*

Preparation of ²⁸SiO₂ with high chemical and isotopic purity.

10.20-10.40

Kovylin R.S., Yudin V.V., Vlasova O.V., Len'shina N.A., Mensov S.N., Chesnokov S.A.

G. A. Razuvaev Institute of Organometallic Chemistry of Russian Academy of Sciences, Nizhny Novgorod, Russia

Monolithic and porous photopolymer materials based on dimethacrylic monomers

10.40-11.00

Fadeeva I.V.¹, Fomin A.S.¹, Safronova T.V.², Filippov Ya.Yu.², Shatalova T.B.²

¹*IMET RAS, Moscow, Russia*

²*Lomonosov Moscow State University, Moscow, Russia*

Calcium Phosphate Powders for Stereolithographic Printing

- 11.00-11.20** Мустахиева Д.¹, Жуматаева И.¹, Козловский А.Л.²
¹*Евразийский национальный университет им. Л.Н. Гумилева, Астана, Казахстан*
²*Астанинский филиал Института ядерной физики, Астана, Казахстан*
Синтез двойных перовскитов на основе оксидов церия, титана и железа
- 11.20-11.40** Bogolitsin K.G., Druzhinina A.S., Kaplitsin P.A., Ovchinnikov D.V., Parshina A.E.
Northern (Arctic) federal university named after M.V. Lomonosov, Moscow, Russia
Relationship of antioxidant activity and polymolecular properties of polyphenols from the arctic brown algae
- 11.40-12.00** Bogolitsin K.G., Kaplitsin P.A., Parshina A.E., Druzhinina A.S., Ovchinnikov D.V.
Northern (Arctic) federal university named after M.V. Lomonosov, Moscow, Russia
Algal cellulose: isolation, structure and sorption properties
- 12.00-12.20** Podzorova L.I., Il'icheva A.A., Kutusova V.E., Pen'kova O.I., Antonova J.C., Baikin A.C., Sirotinkin V.P.
Institute of Metallurgy and Material Science, RAS, Moscow, Russia
Dispersion hardening of composites on aluminum oxide basis
- 12.20-12.40** Chizhov A.S.¹, Drozdov K.A.¹, Batuk M.², Khmelevsky N.O.³, Maltseva L.N.¹, Rumyantseva M.N.¹.
¹*Lomonosov Moscow State University, Moscow, Russia*
²*University of Antwerp, Antwerp, Belgium*
³*Moscow State Technological University Stankin, Moscow, Russia*
Nanocomposites based on wide-gap metal oxides and semiconductor quantum dots for gas sensing applications
- 12.40-13.00** Glebov E.M.^{1,2}, Lazareva S.K.², Smolentsev A.B.¹, Lonshakov D.V.³, Lvov A.G.³, Shirinian V.Z.³
¹*V.V. Voevodsky Institute of Chemical Kinetics and Combustion, Novosibirsk, Russia*
²*Novosibirsk State University, Novosibirsk, Russia*
³*N.D. Zelinsky Institute of Organic Chemistry, Moscow, Russia*
Fluorescence modulation of eosin y in pmma film by photochromic switching
- 13.00-13.20** Kazantsev S.O., Lozhkomoiev A.S., Bakina O.V., Fomenko A.N., Kondranova A.M., Pervikov A. V.
Institute of Strength Physics and Materials Science of Siberian Branch of Russian Academy of Sciences, Russia, Tomsk
Al/Ag and Al/Cu bimetal nanoparticles oxidation by water

13.20

Closing ceremony

Virtual participation

1. Afanasieva L.E.
Tver State Technical University, Tver, Russia
Chemically non-separating mechanism of crystallization of high-speed steel granules
2. Alekseeva E.G.¹, Alekseev A.A.²
¹*Bauman Moscow State Technical University, Moscow, Russia*
²*Tver State Technical University, Tver, Russia*
Olympiads on strength of materials as tool for developing abilities to engineering and scientific activities
3. Pet'kov V.I.¹, Alekseev A.A.¹, Kovalsky A.M.²
¹*National Research Lobachevsky State University, Nizhny Novgorod, Russia*
²*Moscow Institute of Steel and Alloys (National University of Science and Technology), Moscow, Russia*
Phosphates with langbeynite structure as a form of HLW immobilization
4. Zubchaninov V.G., Gultiaev V.I., Alekseev A.A.
Tver State Technical University, Tver, Russia
Experimental studies of mechanical properties of structural steels under complex loading
5. Alyeva A.B., Kolyakina E.V., Grishin D.F.
Lobachevsky University, Nizhniy Novgorod, Russia
Dinitrons in radical colymerization of methyl methacrylate in the presence of a small amount comonomers
6. Balueva K.V., Plekhovich A.D., Kut'in A.M.
G.G. Devyatykh Institute of Chemistry of High Purity Substances of the Russian Academy of Sciences, Nizhny Novgorod, Russia
New Method for Processing Thermodynamic data on High-purity As_xSe_{1-x} ($x = 0.3 - 0.5$) Glasses
7. Blokhina A.G., Knyazev A.V., Demidov D.N., Zhakupova A.A., Zhakupov R.M.
Lobachevsky University, Nizhniy Novgorod, Russia
Spectroscopic, thermodynamic and thermal investigations of compounds of pyrochlore structure
8. Bobreva L.A., Sidorov N.V., Palatnikov M.N., Masloboeva S. M.
Tananaev Institute of Chemistry and Technology of rare Elements and Mineral Raw Materials, Kola Scientific Center RAS. Apatity, Russia
Complex defects in a co-doping crystal $LiNbO_3: Mg (5.05 \text{ mol\%}):Fe (0.009 \text{ mol\%})$
9. Chernyaeva O. Yu.
National Research Mordovia State University, Saransk, Russia
Synthesis of RuO_2 by atomic layer deposition
10. Yao B.¹, Doan H.V.², Ting V.P.², Dong Z.¹
¹*School of Materials Science and Engineering, Nanyang Technological University, Singapore*
²*Department of Mechanical Engineering, University of Bristol, Bristol, United Kingdom*
Facile synthesis of hollow bimetallic zeolitic imidazolate frameworks
11. Emel'yanenko V.N.¹, Turovtsev V.V.^{4,5}, Fedina Y.A.^{5,4}
¹*Department of Physical Chemistry, University of Rostock, Germany*

²Department of Physics, Mathematics and Medical Informatics, Tver State Medical University, Tver, Russia

³Department of General Physics, Physics and Technical Faculty, Tver State University, Tver, Russia

⁴EAHS DCSD 1701 Mountain Industrial Blvd, Stone Mountain, GA 30083, USA

Thermodynamic properties of cyclic imines

12. Filippova E.O., Pichugin V. F.
Tomsk Polytechnic University, Tomsk, Russia
Mechanical properties of PET track-etched membranes after steam and gamma sterilization
13. Filyakov A.D., Romanov D.A. Sosnin K.V.
Siberian State Industrial University
XDR analysis of bioinert electric explosion binary Ti-Nb coatings
14. Filyakov A.D., Romanov D.A.
Siberian State Industrial University
The test for electroerosion resistance in arc erosion's conditions of CuO-Ag coatings
15. Goncharova O.A.¹, Istakova O.I.^{2,3}, Medvedeva T.O.¹, Konev D.V.^{2,3}, Vorotyntsev M.A.^{1,2,3,4}
¹*M. V. Lomonosov Moscow State University, Moscow, Russia*
²*Institute for Problems of Chemical Physics of the Russian Academy of Sciences, Chernogolovka, Russia*
³*D. I. Mendeleev University of Chemical Technology of Russia, Moscow, Russia*
⁴*ICMUB - UMR 6302 CNRS - Université de Bourgogne, Dijon, France*
Study of polypyrrole films possessing an extended potential range of their electroactivity by the method of electrochemical quartz crystal microbalance (EQCM)
16. Gorshkova N.A.¹, Brovko O.S.², Palamarchuk N.A.², Bogolitsyn K.G.^{1,2}, Ivakhnov A.D.^{1,2}
¹*N. Laverov Federal Center for Integrated Arctic Research, Arkhangelsk, Russia*
²*Federal University named after M.V. Lomonosov, Arkhangelsk, Russia*
Preparation and structural-mechanical properties of hydrogels and aerogels based on sodium alginate-chitosan complex
17. Istakova O.I.^{1,2}, Medvedeva T.O.³, Goncharova O.A.³, Konev D.V.^{1,2}, Vorotyntsev M.A.^{1,2,3}
¹*Institute for Problems of Chemical Physics of the Russian Academy of Sciences, Chernogolovka, Russia*
²*D. I. Mendeleev University of Chemical Technology of Russia, Moscow, Russia*
³*M. V. Lomonosov Moscow State University, Moscow, Russia*
Synthesis of Polypyrrole Films Possessing an Extended Potential Range of Their Electroactivity
18. Samoilenko Z.A.¹, Ivakhnenko N.N.^{1,2}, Pushenko E.I.¹, Varyukhin V.N.¹
¹*Donetsk Institute of Physics and Technology named after A.A. Galkina, Donetsk*
²*Donetsk National University of Economics and Trade named after M.Tugan-Baranovsky, Donetsk*
The evolution of atomic order in intensively deformed technical aluminum
19. Kadetova A.V.¹, Sidorov N.V.¹, Teplyakova N.A.¹, Palatnikov M.N.¹, Aleshina L. A.², Sidorova O. V.²
¹*Tananaev Institute of Chemistry - Subdivision of the Federal Research Centre "Kola Science Centre of the Russian Academy of Sciences", Apatity, Murmansk region, Russia*
²*Petrozavodsk State University, Petrozavodsk, Russia*
Superstructure sublattice defects of lithium niobate crystals

20. M.P. Kashchenko^{1,2}, V.F. Balakirev³, M.B. Smirnov¹, Yu.L. Chepelev¹, V.V. Ilyushin¹, N.V. Nikolaeva⁴, V.G. Pushin^{2,4}
¹ Ural State Forestry University, Yekaterinburg, Russia
² Ural Federal University, Yekaterinburg, Russia
³ Institute of Metallurgy, Ural Branch of the RAS, Yekaterinburg, Russia
⁴ Institute of Metal Physics, Ural Branch of the RAS, Yekaterinburg, Russia
Synthesis of chemical elements at electric current pulses in water and transmutation of a part of extracted material of copper electrodes
21. Khviyuzov S.S.¹, Bogolitsyn K.G.^{1,2}, Gusakova M.A.¹, Volkov A.S.², Koposov G.D.²
¹Federal Center for Integrated Arctic Research of RAS, Arkhangelsk, Russia
²Northern (Arctic) Federal University, Arkhangelsk, Russia
Conductive properties of coniferous and deciduous lignins
22. Knyazev A.V.¹, Shipilova A.S.¹, Emel'yanenko V.N.², Knyazeva S.S.¹, Zaitsau D.H.², Ishmayana S.³, Soedjanaatmadja U.M.S.³, Gusarova E.V.¹, Amosov A.A.¹, Kortikova A.E.¹
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Thermodynamic study of materials for medicinal chemistry
23. Kostryukov S.G., Petrov P.S., Kalyazin V.A.
National Research Mordovia State University, Saransk, Russia
On the possibilities of using ¹³C CP-MAS NMR spectroscopy in the study of the chemical structure of polysaccharides
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National Research Mordovia State University, Saransk, Russia
Mechanical and hydrophobic properties of composite materials on base cellulose and isocyanates
25. Korokin V.Zh., Bulanov E.N., Knyazev A.V.
Lobachevsky University, Nizhny Novgorod, Russia
Formation of fish collagen/nanohydroxyapatite composite material
26. E.G. Kurzina¹, A.G. Kolmakov², Yu.N. Aksenov¹, A.Yu. Bogachev¹, A.M. Kurzina¹, A.V. Semak¹
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Management of elastic and hysteresis properties of the damping polymeric composite materials
27. Lavrenova Zh.A., Knyazev A.V.
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Thermoelectric materials based on Ca₃Co₄O₉
28. Lavrenov D.A.¹, Pet'kov V.I.¹, Kovalskii A.M.², Borovikova E.Yu.³
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Phosphate mineral-like framework materials containing zirconium (titanium) and metals in

oxidation state +2

29. Lugovaya K.I.¹, Popov A.A.¹, Petrov R.I.¹, Popov N.A.¹
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The influence of heat treatment conditions on the precipitation of Ti_3Al in titanium alloys
30. Medvedeva T.O.¹, Istakova O.I.^{2,3}, Goncharova O.A.¹, Konev D.V.^{2,3}, Vorotyntsev M.A.^{1,2,3,4}
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Study of polypyrrole films possessing an extended potential range of their electroactivity by spectroelectrochemical method
31. Maćzka M., Ptak M.
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Simple, fast and non-destructive method for detection of dimethylammonium impurity in photovoltaic methylammonium lead halides
32. Muratova E.I., Voyakina E. Yu.
Tambov State Technical University, Tambov
Competence formation in the field of research methodology for postgraduate students
33. Muslov S.A.
A.I. Evdokimov MSMSU, Moscow, Russia
Biomechanical properties of dental hard tissues as anisotropic media, related to the hexagonal crystal system
34. Pagnacco M.C.¹, Maksimović J.P.², Nedić Z.², Čupić Ž.¹
¹*University of Belgrade, Institute for Chemistry, Technology and Metallurgy, Department of Catalysis and Chemical Engineering, Njegoseva 12, Beograd*
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The oscillatory reaction as an innovative research tool for materials investigation
35. Pelipenko D.I., Samoylov A.M., Ryabtsev S.V., Ivkov S.A., Tsyganova V.O.
Voronezh State University, Voronezh, Russia
Impact of oxidation temperature on crystal structure of palladium (II) oxide thin films
36. Plekhovich A.D., Balueva K.V., Kut'in A.M.
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Volumetric Properties of High-purity $\text{As}_x\text{Se}_{1-x}$ ($x = 0.3-0.5$) Glasses
37. Poletaev G.M.¹, Zorya I.V.²
¹*Altai State Technical University, Barnaul, Russia*
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Molecular dynamics study of interaction of hydrogen atom with edge and screw dislocations in Pd and Ni

38. Rubannikova Yu. A., Gromov V.E., Romanov D.A., Kormyshev V.E., Kondratova O.A.
Siberian State Industrial University, Novokuznetsk, Russia
Structure and properties of layer deposited on Hardox 450 steel by Fe - C - Ni – B wire
39. Ryabinina N.V.
Perm National Research Polytechnic University, Perm, Russia
Analytical Research in Application of High-silica Composite Materials
40. Al.A. Zemlyanov^{1,2}, A.V. Trifonova¹, R.V. Ryamov¹
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Generation characteristics of polymethylmethacrylate plates with introduced silver nanoparticles
41. R. S. Safin, E. A. Korchagin
Kazan State University of Architecture and Engineering
Doctoral training(on the example of Kazan State University of Architecture and Engineering
42. Sibirkin A.A.^{1,2}, Churbanov M.F.^{1,2}
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New Approach to Preparation of Tellurite Molybdate Glasses with Improved Optical Transparency
43. Smirnov A.S., Gribchenkova N.A., Alikhanyan A.S.
Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia
Vaporization behavior of the In₂O₃–SnO₂ system
44. Syrov E.V., Knyazev A.V., Krasheninnikova O.V.
Lobachevski University, Nizhniy Novgorod, Russia
Synthesis and structural refinement of a new layered perovskite RbLaNaNb₃O₁₀
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Tananaev Institute of Chemistry - Subdivision of the Federal Research Centre “Kola Science Centre of the Russian Academy of Sciences”, Apatity, Russia.
Structural particularities and optical properties of LiNbO₃:B
46. Akhunova A.Kh.^{1,3}, Valeeva A.Kh.^{1,2}, Valeev I.Sh.^{1,2}
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On the using of Cockcroft-Leitham criterion in DEFORM-2D for fracture predicting
47. Valeev I.Sh.^{1,2}, Valeeva A.Kh.^{1,2}
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Effect of electro-current pulse treatment on structural changes in nickel
48. Vatulyan A.O.^{1,2}, Lyapin A.A.¹, Nesterov S.A.²
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Analysis of the stress-strain state of thermoelastic coatings

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Синтез фосфатов Na, Zr, Co и Ca, Zr, Co со структурой NZP. Исследование их теплового расширения методом высокотемпературной рентгенографии
50. Банных И.О.¹, Бецофен С.Я.², Сарычев С.М.²
¹*ИМЕТ РАН им. А.А.Байкова*, ²*МАИ*
Влияние ионного азотирования на фазовый состав и остаточные напряжения в сталях ЭИ961 и 12Х18Н10Т
51. Банных И.О.¹, Бецофен С.Я.², Глезер А.М.³, Костыкова О.С.²
¹*ИМЕТ РАН им. А.А.Байкова*, ²*МАИ*, ³*МИСиС*
Особенности формирования фазового состава в азотистых сталях
52. Егизбек К.¹, Козловский А.Л.²
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Синтез и температурные изменения свойств наночастиц магнетита
53. Зеленцов С.В., Лебедев В.И.
Национальный исследовательский Нижегородский государственный университет им. Н.И. Лобачевского, Нижний Новгород, Россия
Роль физико-химического и математического моделирования в химическом материаловедении
54. Козловский А.Л.¹, Гладких Т.М.²
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Процессы дефектообразования в керамике AlN при облучении ионами He²⁺
55. Козловский А.Л.
Астанинский филиал Института ядерной физики, Астана, Казахстан
Исследование влияния облучения ионами Fe⁷⁺ на свойства пленок TiO₂
56. Рыскулов А.¹, Козловский А.Л.², Кислицин С.Б.¹
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Исследование процессов дефектообразования в результате радиационного облучения и последующего отжига BeO
57. К.Ю. Филиппов
Сибирский государственный университет науки и высшего образования имени академика М.Ф. Решетнева, Россия, Красноярск
Механика резания стеклопластика