

The 8th Asian Symposium on Advanced Materials



Scientific Program



2023

Boreskov Institute of Catalysis
Siberian Branch of the Russian Academy of Sciences

**8th Asian Symposium on Advanced Materials
ASAM-8**

July 03 - 07, 2023
Novosibirsk, Russia

Scientific Program

Novosibirsk-2023



ИНСТИТУТ КАТАЛИЗА
ИМ. Г.К. БОРЕСКОВА

Organised by

Boreskov Institute of Catalysis,

Novosibirsk, Russia



СО РАН

Siberian Branch of the Russian Academy of

Sciences, Novosibirsk, Russia

Symposium Partners



LABTEST RCC
Moscow, Russia



MTEON – ООО НТЦ «ЭМТИОН»
Moscow, Russia

Special Issues



Journal of
Composites Science

Special Issue "**Nanocomposite Materials
for Energy, Environment and Sustainable
Development**"



C Journal of
Carbon Research

Special Issue "**Advanced Carbon
Nanomaterials and Hybrids**"



materials

Special Issue "**Synthesis and Structure of
Advanced Materials**"

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Boreskov Institute of Catalysis, Novosibirsk, Russia

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Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia

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Kyushu University, Fukuoka, Japan

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Chulalongkorn University, Bangkok, Thailand

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Fudan University, Shanghai, China

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Fudan University, Shanghai, China

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SECRETARY

Svetlana Logunova,

Boreskov Institute of Catalysis, Novosibirsk, Russia

SCIENTIFIC PROGRAM

The Scientific Program includes plenary (45 min), keynote (35 min) and invited (25 min) lectures, oral (15 min) and poster presentations.

The main topics are:

I. Synthesis and Structure of Advanced Materials

- Porous, 2D, and 3D Nanomaterials
- Nanocomposite Materials
- Nanostructured Catalysts, Adsorbents, and Ceramics
- Carbon Nanomaterials and Hybrids
- Green Chemistry

II. Biomaterials and Bionanocomposites

- Biocompatible and Biodegradable Materials
- Materials for Biomedical Engineering
- Materials for Drug Delivery

III. Applications

- Energy
- Catalytic Technologies
- Optoelectronics
- Sensors and Biosensors
- Biomedicine
- Environment and Sustainable Development

Working language of the Symposium – English

SOCIAL PROGRAM

Group Photo

July 03, Monday, 12.55 – 13.05

Academpark, Nikolaeva St. 12, main entrance

Excursion (one to choose from)

July 03, Monday, 14.30-16.30

Excursion to Central
Siberian Geological
Museum

Excursion to Museum
of History and Culture
of the Peoples of
Siberia and Russian
Far East

Excursion to Boreskov
Institute of Catalysis

Excursions start from the Academpark.

Walking tour around Akademgorodok

Walking tour of Akademgorodok will begin after the end of the previous excursion. Akademgorodok is the scientific center of the Siberian Branch of the Russian Academy of Sciences. Appearing in the 1950s, it became one of the centers not only of science, but also of everything progressive that was then in the USSR. During the tour you will walk along the main streets and see the sights of Akademgorodok. You will be able to see the House of Scientists, Novosibirsk State University, the monument to the founder of Akademgorodok - Mikhail Lavrentiev, the monument to the Laboratory mouse.

The walk will end at the venue of the welcome reception.

Welcome reception

July 03, Monday, 18.00 – 22.00

Café Kukuruzza, Nikolaeva St. 12, 2 floor

Singing Party

July 05, Wednesday, 18.00-22.00

Outdoor Pavilion on the inner territory of the Academpark
Nikolaeva St. 12

Banquet

July 06, Thursday, 18.00-22.00

Banquet hall "Teplitsa", Nikolaeva St. 12/2, 3 floor

Post-Tour

July 07, Friday, 09.30-17.00

meeting point 1 - hotel Park Wood – 08.50;

meeting point 2 - hotel Golden Valley – 09.00;

meeting point 3 – Boreskov Institute of Catalysis – 09.30.

The post-tour is a combination of several excursions. To begin with, participants will have the opportunity to visit the **Boreskov Institute of Catalysis** - one of the largest research centers worldwide specialized in catalysis. Then the group will move to the **Historical-Architectural Open Air Museum**. There are several recreational areas, archaeological, ethnographic, architectural monuments. The central exhibit is a masterpiece of Russian wooden architecture - a unique church built in 1700. After viewing the exposition, the participants will be presented with a performance by the Russian folk song ensemble. After lunch, the post-tour will continue with an excursion to the **Novosibirsk Museum of the Railway Technology**. The museum presents 17 steam locomotives, 15 diesel locomotives, 12 electro locomotives, carriages and paraphernalia from the 19th and 20th century, mainly from Russian and Soviet production. The museum has also a collection of mainly Soviet cars and since 2006 some foreign classic cars from other countries.

TRANSFER

«Academpark»

Novosibirsk, Akademgorodok, Nikolaeva St. 12, 2 floor

«Golden Valley» Hotel

Novosibirsk, Akademgorodok, Ilyicha St., 10

«Park Wood» Hotel

Novosibirsk, Akademgorodok, Arbuzova St., 6/2

For participants staying at the «**Golden Valley**» Hotel and «**Park Wood**» Hotel will be organized a transfer to the venue according to the following schedule:

July 03, Monday	
09.40	«Golden Valley» Hotel → Academpark
09.40	«Park Wood» Hotel → Academpark
July 04, Tuesday	
08.20	«Golden Valley» Hotel → Academpark
08.20	«Park Wood» Hotel → Academpark
July 05, Wednesday	
08.20	«Golden Valley» Hotel → Academpark
08.20	«Park Wood» Hotel → Academpark
July 06, Thursday	
08.20	«Golden Valley» Hotel → Academpark
08.20	«Park Wood» Hotel → Academpark
July 07, Friday (Post-tour)	
08.50	«Park Wood» Hotel → Boreskov Institute of Catalysis
09.00	«Golden Valley» Hotel → Boreskov Institute of Catalysis

Scientific Program

July 03, Monday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Plenary Session

09.00-11.00 Registration

OPENING CEREMONY

11.00-11.30

SYMPOSIUM REMARKS

SR-01

Reporter: Professor Aleksey Vedyagin

Vedyagin A.A., Zibareva I.V.

Asian Symposium on Advanced Materials:

Scientometric Trajectory

Boreskov Institute of Catalysis, Novosibirsk, Russia

SR-02

Reporter: Professor Aleksey Vedyagin

Alperin B.L., Zibareva I.V., Vedyagin A.A.

The Conference Database for ASAM

Boreskov Institute of Catalysis, Novosibirsk, Russia

Chair: Professor Aleksey Vedyagin

PLENARY LECTURE

11.30-12.15 PL-1

Online

Reporter: Professor Chang-Sik Ha

Ha C.-S.

Polyimides and/or Their Hybrid Films for Tailor-Made Applications

School of Chemical Engineering, Pusan National University, Busan, Korea

KEYNOTE LECTURE

12.15-12.45 KL-1

Reporter: Professor Yury Shchipunov

Postnova I.V.^{1,2}, Shchipunov Y.A.¹

Polysaccharides and Polyphenols as Structure-Directing and Functionalizing Constituents of Bionanocomposites

1 –Institute of Chemistry, Far-East Department, Vladivostok, Russia

2 – Far-Eastern Federal University, Vladivostok, Russia

SPONSOR PRESENTATION

12.45-12.55 SP-01

Aleksandr Kamenshikov

Altamira Instruments equipment for structured porous materials evaluation by gas-adsorption methods

LABTEST RCC, Moscow, Russia

12.55-13.05 GROUP PHOTO

Academpark, Nikolaeva St. 12, main entrance

13.05-14.30 Lunch

Café Kukuruzza – Nikolaeva St. 12, 2 floor

14.30-16.30

Excursion

(one to choose from)

Central Siberian Geological Museum	Museum of History and Culture of the Peoples of Siberia and Russian Far East	Boreskov Institute of Catalysis
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16.30-18.00

Walking tour around Akademgorodok

18.00-22.00

Welcome reception

Café Kukuruzza – Nikolaeva St. 12, 2 floor

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Plenary Session

Chair: Professor Yury Shchipunov

PLENARY LECTURE

09.00-09.45

PL-2

Online

Reporter: Professor Ajayan Vinu

Vinu A.

Nanoporous Materials for Energy and Environment

Global Innovative Center for Advanced Nanomaterials

(GICAN), The University of Newcastle, Newcastle

Callaghan, Australia

KEYNOTE LECTURES

09.45-10.20

KL-2

Online

Reporter: Professor Liqiang Jing

Jing L.

Charge Modulation for Photocatalytic CO₂ Conversion

Key Lab of Functional Inorganic Materials Chemistry

(MOE), School of Chemistry and Materials Science,

Heilongjiang University, Harbin City, China

10.20-10.55

KL-3

Reporter: Dr. Ilya Mishakov

Mishakov I.V.

**Catalytic Growth of Carbon Nanomaterials as a Tool
for Designing Novel Nanostructured Catalysts**

Boreskov Institute of Catalysis, Novosibirsk, Russia

10.55-11.25

Coffee

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Professor Aleksey Vedyagin

INVITED LECTURE

11.25-11.50 IL-I-1

Online

Reporter: Professor Toyoko Imae

Imae T.

Physical Production of Clusters and their Catalytic Activity

*Graduate Institute of Applied Science and Technology,
National Taiwan University of Science and Technology,
Taipei, Taiwan*

ORAL PRESENTATIONS

Section IA. Synthesis and Structure of Advanced Materials

11.50-12.05 OP-IA-01

Reporter: Anastasia Abdulmenova

Abdulmenova A.V., Krotkevich D.G., Mingazova Y.R.,
Kashkarov E.B.

**Spark Plasma Sintering of Nb/Ti₃Al(Si)C₂
Nanolaminated Composites**

Tomsk Polytechnic University, Tomsk, Russia

12.05-12.20 OP-IA-02

Reporter: Dr. Maria Grabchenko

Grabchenko M.V., Chernykh M.V., Mikheeva N.N.,
Savel'eva A.S., Dorofeeva N.V., Mamontov G.V.,
Salaev M.A.

**CeO₂-ZrO₂-MnO_x Composites for Oxidative Purification
of Exhaust Gas**

Tomsk State University, Tomsk, Russia

- 12.20-12.35 OP-IA-03**
Reporter: Dr. Alexander Goloveshkin
Goloveshkin A.S., Lenenko N.D., Ushakov I.E.,
 Golub A.S.
**Organic Cations Improve the Properties of MoS₂-
 Based Hybrid Materials by Enhancing of 1T Phase
 Stability**
*A.N. Nesmeyanov Institute of Organoelement
 Compounds, Moscow, Russia*
- 12.35-12.50 OP-IA-04**
Reporter: Irina Kuznetsova
 Matus E.V.^{1,2}, Kuznetsova I.O.^{1,2}, Sukhova O.B.¹,
 Ismagilov I.Z.¹, Ushakov V.A.¹, Stonkus O.A.¹,
 Kapishnikov A.V.¹, Kerzhentsev M.A.¹, Ismagilov Z.R.^{1,3}
**Genesis and Structural Properties of (Ce_{1-x}Al_x)_{0.8}Ni_{0.2}O_y
 Materials for Hydrogen Production through Methane
 Reforming Processes**
1 – Borekov Institute of Catalysis, Novosibirsk, Russia
*2 – Novosibirsk State Technical University, Novosibirsk,
 Russia*
*3 – Federal Research Center of Coal and Coal Chemistry,
 Kemerovo, Russia*
- 12.50-13.05 OP-IA-05**
Online Reporter: Dr. Svetlana Laletina
Laletina S.S.^{1,2}, Yudanov I.V.^{2,3}
**Size-Dependence of the Properties of Metal
 Nanoparticles: A Computational Density Functional
 Study**
*1 – Institute of Chemistry and Chemical Technology SB
 RAS, Federal Research Center “Krasnoyarsk Science
 Center SB RAS”, Krasnoyarsk, Russia*
2 – Borekov Institute of Catalysis, Novosibirsk, Russia
*3 – Institute of Solid State Chemistry and
 Mechanochemistry SB RAS, Novosibirsk, Russia*
- 13.05-14.30 Lunch**
 Café Kukuruzza – Nikolaeva St. 12, 2 floor

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Afternoon Session

Chair: Dr. Olga Belskaya

ORAL PRESENTATIONS

Section IA. Synthesis and Structure of Advanced Materials

14.30-14.45 OP-IA-06

Reporter: Dr. Anna Ozerova

Ozerova A.M., Komova O.V., Prosvirin I.P.,

Bulavchenko O.A., Netskina O.V.

Synthesis of Magnetically Recovered Co and Co@Pt Catalysts by Galvanic Replacement Method for Hydrolysis of NaBH₄

Boreskov Institute of Catalysis, Novosibirsk, Russia

14.45-15.00 OP-IA-07

Reporter: Dr. Vera Pakharukova

Pakharukova V.P., Potemkin D.I., Stonkus O.A.,

Saraev A.A., Gorlova A.M, Gladky A.Y.

Structural Features and Reduction – Induced Structural Evolution of Pt/Ce_{0.75}Zr_{0.25}O₂ Catalyst for Water Gas Shift Reaction

Boreskov Institute of Catalysis, Novosibirsk, Russia

15.00-15.15 OP-IA-08

Reporter: Dr. Alexey Philippov

Philippov A.A., Nesterov N.S., Chibiryaev A.M.,

Martyanov O.N.

Primary Alcohols as Hydrogen Donors in Ni-Catalyzed Transfer Hydrogenation

Boreskov Institute of Catalysis, Novosibirsk, Russia

- 15.15-15.30 OP-IA-09**
Reporter: Olesia Reutova
Reutova O.A., Pimenov A.D., Fakhrutdinova E.D.,
Goncharova D.A., Kharlamova T.S., Svetlichnyi V.A.,
Vodyankina O.V.
**Ways of Dark TiO₂ Modification by Copper
Nanoparticles to Increase Photocatalytic Activity in
the Hydrogen Generation Reaction**
Tomsk State University, Tomsk, Russia
- 15.30-15.45 OP-IA-10**
Online Reporter: Professor Yuriy Zakharov
Zakharov Yu.A.¹, Popova A.N.¹, Pugachev V.M.^{1,2},
Zakharov N.S.¹, Tikhonova I.N.¹, Russakov D.M.¹,
Dodonov V.G.¹, Yakubik D.G.^{1,2}, Ivanova N.V.²,
Lobanov A.A.², Sadykova L.R.¹
**Specifics of Particles Morphology and Structural-
Phase Properties of Nanostructured FePt and CoPt**
*1 – Federal Research Center of Coal and Coal Chemistry
SB RAS, Kemerovo, Russia*
2 – Kemerovo State University, Kemerovo, Russia
- 15.45-16.00 OP-IA-11**
Online Reporter: Dmitry Zelentsov
Zelentsov D.O.¹, Petrova Yu.Yu.¹, Korobkin A.V.¹,
Ivanova A.A.^{1,2}, Cheremisin A.N.^{1,2}, Shanenkov I.I.^{3,4},
Sivkov A.A.⁴
**Synthesis of Nanoparticles and their Modification in
Solutions of Anionic Surfactants for Obtaining Stable
Dispersions**
1 – Surgut State University, Surgut, Russia
*2 – Skolkovo Institute of Science and Technology,
Moscow, Russia*
3 – Tyumen State University, Tyumen, Russia
4 – Tomsk Polytechnic University, Tomsk, Russia
- 16.00-16.30 Coffee**

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Evening Session

Chair: Professor Sergey Gurevich

ORAL PRESENTATIONS

Section IA. Synthesis and Structure of Advanced Materials

16.30-16.45 OP-IA-12

Reporter: Dr. Evgeny Gerasimov

Gerasimov E.Yu.¹, Kapishnikov A.V.^{1,2}, Smal E.A.¹,
Simonov M.N.¹

**Soft Modification of La-Based Perovskite Crystalline
Structure and its Influence on Catalytic Activity in
Methane Oxidation**

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

16.45-17.00

Online

OP-IA-13

Reporter: Professor Valentina Matveeva

Sulman A.M.¹, Tikhonov B.B.¹, Grebennikova O.V.¹,
Sidorov A.I.¹, Stadolnikova P.Yu.¹, Doluda V.Yu.¹,
Molchanov V.P.¹, Matveeva V.G.^{1,2}

**Effect of Pore Size on the Activity of an Immobilized
Enzyme in Mesoporous Magnetic Silica**

1 – Tver State Technical University, Tver, Russia

2 – Tver State University, Tver, Russia

17.00-17.15

Online

OP-IA-14

Reporter: Dr. Ivan Komarov

Komarov I.A.^{1,2}, Danilov E.A.¹

**Spin-Coating of Thin Graphene Oxide Films from
Multicomponent Dispersions**

1 - SC Research Institute «Graphite», Moscow, Russia

2 - GraphApta LLC, Moscow Region, Russia

- 17.15-17.30** **OP-IA-15**
Online **Reporter: Jin-Hyeong Lee**
Lee J.-H.¹, Kim D.-G.², Ahn S.-k.¹
Molecular Engineering of Exchangeable Liquid Crystal Elastomers toward Body-Temperature Shape-Morphing Materials
1 – School of Chemical Engineering, Pusan National Univ., Busan, Korea
2 – Advanced Materials Division, Korea Research Institute of Chemical Technology, Daejeon, Korea
- 17.30-17.45** **OP-IA-16**
Reporter: Pavel Vorontsov
Vorontsov P.A., Salnikov V.D., Ershov P.A., Omelyanchik A.S., Rodionova V.V.
Synthesis and Characterization of PVDF-CFO Composite Films
Immanuel Kant Baltic Federal University, Kaliningrad, Russia
- 17.45-18.00** **OP-IA-17**
Online **Reporter: Soojeong Choi**
Choi S.¹, Seo J.-H.², Ahn S.-k.¹
Dynamic- and Mechanical-Damping in Liquid Crystal Elastomers with Slidable Polyrotaxane Network
1 – School of Chemical Engineering, Pusan National University, Busan, Korea
2 – Department of Materials Science and Engineering, Korea University, Seoul, Korea

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 2

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Dr. Ilya Mishakov

INVITED LECTURE

11.25-11.50 IL-II-1

Reporter: Professor Mikhail Moshkin

Moshkin M.P., Romashchenko A.V.

Trans-Synaptic Nose-to-Brain Transport of Nanoparticles and its Modulation by Odor, Aging, and Diseases

The Federal Research Center Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

ORAL PRESENTATIONS

Section IB. Synthesis and Structure of Advanced Materials

11.50-12.05 OP-IB-01

Online

Reporter: Professor Vadim Levin

Artyukov I.A.¹, Bellucci S.², Levin V.M.³, Morokov E.S.³,
Petronyuk Yu.S.³

***In-Situ* Studies of Fractal Microstructure in Nanocarbon-Polymer Composites**

1 – P.N. Lebedev Physical Institute, Russian Academy of Sciences, Moscow, Russia

2 – National Frascati Laboratory, National Institute of Nuclear Physics, Rome, Italy

3 – N.M. Emanuel Institute of Biochemical Physics, Russian Academy of Sciences, Moscow, Russia

- 12.05-12.20 OP-IB-02**
Reporter: Alexey Zavorin
Zavorin A.V.^{1,2}, Moseenkov S.I.¹, Kuznetsov V.L.¹, Selytin A.G.³,
Ishchenko A.V.¹
Investigation of the Change in the Structure of MWCNT-Si Composites during Heat Treatment
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – Synchrotron radiation facility SKIF, Boreskov Institute of Catalysis, Novosibirsk, Russia
- 12.20-12.35 OP-IB-03**
Online
Reporter: Dr. Andrey Fedorov
Fedorov A.L.¹, Petukhova E.S.¹, Argunova A.G.¹, Afonnikova S.D.², Potylitsina A.R.^{2,3}, Bauman Yu.I.^{2,3}, Mishakov I.V.^{2,3}
Modifying Effect of Carbon Nanofibers on Polyethylene Depending on their Synthesis Condition
1 – Institute of Oil and Gas Problems of the SB of the RAS, Yakutsk, Russia
2 – Boreskov Institute of Catalysis, Novosibirsk, Russia
3 – National Technology Initiative Hydrogen Research Center of Boreskov Institute of Catalysis, Novosibirsk, Russia
- 12.35-12.50 OP-IB-04**
Reporter: Professor Galina Kovalenko
Kovalenko G.A., Perminova L.V., Moseenkov S.I., Serkova A.N., Salanov A.N., Kuznetsov V.L.
Development and Characterization of Carbon–Silica Composite Materials and Their Study for Preparing Heterogeneous Catalysts for the Enzymatic Low-Temperature Synthesis of Esters
Boreskov Institute of Catalysis, Novosibirsk, Russia
- 12.50-13.05 OP-IB-05**
Online
Reporter: Dr. Anna Popova
Popova A.N., Nikitin A.P., Sozinov S.A., Gavriluk O.M., Ismagilov Z.R.
Investigation of the Structure and Morphology of Coal Pitches
FRC of Coal and Coal Chemistry SB RAS, Kemerovo, Russia
- 13.05-14.30 Lunch**
Café Kukuruzza – Nikolaeva St. 12, 2 floor

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 2

Academpark, Nikolaeva St. 12, 2 floor

Afternoon Session

Chair: Professor Aleksey Vedyagin

ORAL PRESENTATIONS

Section IB. Synthesis and Structure of Advanced Materials

14.30-14.45 OP-IB-06

Online

Reporter: Dr. Oksana Gavrilyuk

Ismagilov Z.R., Gavrilyuk O.M., Nikitin A.P.

Comparative Study of Group Properties of Three Varieties of Coal Pitches

FRC of Coal and Coal Chemistry SB RAS, Kemerovo, Russia

14.45-15.00 OP-IB-07

Reporter: Georgii Golubtsov

Golubtsov G.V.^{1,2}, Selyutin A.G.¹, Ishchenko A.V.^{1,2}, Gorokhov G.V.³, Misiyuk P.Y.³, Valynets N.I.³, Kazakova M.A.¹

Effects of Ag Doping on the Structure and Electromagnetic Properties of Ag/MWCNT-PMMA Composite

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – Institute for Nuclear Problems Belarusian State University, Minsk, Belarus

15.00-15.15 OP-IB-08

Reporter: Dr. Tikhon Kurkin

Kurkin T.S.¹, Lebedev O.V.¹, Gatin A.K.², Golubev E.K.¹,
Vasiliev A.L.³, Ozerin A.N.¹

**Hybrid Graphite/Nanodiamond Carbon Nanoparticles
as a Model Filler for Polymer Composite Materials**

*1 – Enikolopov Institute of Synthetic Polymer Materials
Russian Academy of Sciences, Moscow, Russia*

*2 – N. N. Semenov Federal Research Center for
Chemical Physics Russian Academy of Sciences,
Moscow, Russia*

*3 – Federal Scientific Research Center “Crystallography
and Photonics” Russian Academy of Sciences, Moscow,
Russia*

15.15-15.30 OP-IB-09

Reporter: Dr. Mikhail Uvarov

Uvarov M.N.¹, Kobeleva E.S.¹, Kravets N.V.¹,
Ponomarev S.A.², Gurova O.A.³, Okotrub A.V.³,
Kazantzev M.S.⁴, Degtyarenko K.M.⁵, Kulik L.V.¹

**Fluorinated Carbon Nanotubes Incorporated into the
Active Layer of Organic Photovoltaic Cells**

*1 – V.V. Voevodsky Institute of Chemical Kinetics and
Combustion, SB RAS, Novosibirsk, Russia*

*2 – A.V. Rzhanov Institute of Semiconductor Physics, SB
RAS, Novosibirsk, Russia*

*3 – A.V. Nikolaev Institute of Inorganic Chemistry, SB
RAS, Novosibirsk, Russia*

*4 – N.N. Vorozhtsov Novosibirsk Institute of Organic
Chemistry, SB RAS, Novosibirsk, Russia*

*5 – Siberian Physico-Technical Institute, Tomsk State
University, Tomsk, Russia*

- 15.30-15.45 OP-IB-10**
Reporter: Dr. Nataliya Satonkina
Satonkina N.P.^{1,2}, Ershov A.P.¹, Kashkarov A.O.¹,
Rubtsov I.A.¹, Kuzminykh A.A.²
**Comparison of the Kinetics of Chemical Reactions
during the Detonation of a Pure Explosive and One
Modified with Nanotubes**
*1 – Lavrentyev Institute of Hydrodynamics, SB RAS,
Novosibirsk, Russia*
2 – Novosibirsk State University, Novosibirsk, Russia
- 15.45-16.00 OP-IB-11**
Reporter: Biligma Tudupova
Tudupova B.B., Shvidchenko A.V.
**Disaggregation of Nanodiamonds Prepared by a Shock
Wave Compression Method**
Ioffe Institute, St. Petersburg, Russia
- 16.00-16.30 Coffee**

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 2

Academpark, Nikolaeva St. 12, 2 floor

Evening Session

Chair: Professor Pavel Krivoshapkin

ORAL PRESENTATIONS

Section IB. Synthesis and Structure of Advanced Materials

16.30-16.45 OP-IB-12

Reporter: Professor Alexander Volodin

Shmakov A.N., Volodin A.M., Vedyagin A.A.

First Observation of Superheating Phenomenon for Mayenite in Core-Shell Structures C12A7@C by an *In Situ* XRD Technique

Boreskov Institute of Catalysis, Novosibirsk, Russia

16.45-17.00 OP-IB-13

Online

Reporter: Anastasia Borodina

Borodina A.M., Kostromin S.V., Bronnikov S.V.

Carbon Quantum Dots Produced through Citric Acid Pyrolysis

Institute of Macromolecular Compounds, Russian Academy of Science, Saint Petersburg, Russia

17.00-17.15 OP-IB-14

Reporter: Dr. Yury Bauman

Bauman Y.I.¹, Shtol V.S.^{1,2}, Popov A.A.^{1,3}, Pervikov A.V.^{1,4}, Pustovalov A.V.^{1,4}, Shubin Y.V.^{1,2,3}, Volodin A.M.¹, Mishakov I.V.^{1,2}, Vedyagin A.A.¹

Synthesis of Multicomponent NiCoFeCoCu Alloys and their Study in Catalytic Pyrolysis of C₂ Hydrocarbons

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia

4 – Institute of Strength Physics and Materials Science SB PAS, Tomsk, Russia

17.15-17.30 OP-IB-15

Reporter: Dr. Elena Ushakova

Kosolapova K.D.¹, Koroleva A.V.², Arefina I.A.¹,
Miruschenko M.D.¹, Cherevko S.A.¹, Spiridonov I.G.¹,
Zhizhin E.V.², Ushakova E.V.¹, Rogach A.L.³

Functionalized Carbon Dots

1 – ITMO University, Saint Petersburg, Russia

2 – Saint Petersburg State University, Saint Petersburg, Russia

3 – City University of Hong Kong, Hong Kong SAR

17.30-17.45 OP-IB-16

Reporter: Sofya Afonnikova

Afonnikova S.D.¹, Veselov G.B.¹, Bauman Y.I.¹,
Gerasimov E.Y.¹, Shubin Y.V.², Mishakov I.V.¹,
Vedyagin A.A.¹

**Study on Carbon Erosion of Ni-Cu Bulk Alloys to
Produce an Effective Catalyst of CNF Synthesis**

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

*2 – Nikolaev Institute of Inorganic Chemistry,
Novosibirsk, Russia*

17.45-18.00 OP-IB-17

Online

Reporter: Dr. Sergey Boroznin

Zaporotskova I.V., Boroznin S.V., Zaporotskov P.A.

**Detection of Carbon Dioxide with Pure and Boron
Functionalized Carbon Nanotubes**

Volgograd State University, Volgograd, Russia

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 3

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Professor Elena Krivoshapkina

INVITED LECTURE

11.25-11.50 IL-III-1

Online Professor Ildoo Chung

Chung I.

Well-Defined Porous

Biodegradable/Thermoresponsive Microspheres

Department of Polymer Science and Engineering, Pusan

National University, Busan, Korea

ORAL PRESENTATIONS

Section III. Applications

11.50-12.05 OP-III-01

Reporter: Dr. Alexander Bedilo

Bedilo A.F.¹, Ilyina E.V.¹, Gerus Y.Y.^{1,2}, Shvtsov D.M.¹,
Shuvarakova E.I.¹, Veselov G.B.¹, Vedyagin A.A.¹

**Alumina-Based Aerogels for Application in Adsorption
and Catalysis**

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

12.05-12.20 OP-III-02

Reporter: Professor Anna Shlyakhtina

Shlyakhtina A.V.¹, Baldin E.D.¹, Vorobieva G.A.¹,
Kolbanev I.V.¹, Stolbov D.N.², Kasyanova A.V.^{3,4},
Lyskov N.V.^{5,6}

**Proton /Oxygen Ion Conductivity Ratio of Nd
Containing La₁₀W₂O₂₁/γ-La₆W₂O₁₅ Tungstates**

*1 – N.N. Semenov Federal Research Center for Chemical
Physics RAS, Moscow, Russia*

*2 – Lomonosov Moscow State University, Moscow,
Russia*

*3 – Institute of High Temperature Electrochemistry, UB
RAS, Ekaterinburg, Russia*

*4 – Ural Federal University named after the First
President of Russia B.N. Yeltsin, Ekaterinburg, Russia*

*5 – Federal Research Center of Problems of Chemical
Physics and Medical Chemistry RAS, Moscow region,
Chernogolovka, Russia*

*6 – National Research University “Higher School of
Economics”, Moscow, Russia*

12.20-12.35 OP-III-03

Reporter: Dr. Anton Shalygin

Shalygin A.S.¹, Predein A.Y.¹, Savelieva M.D.¹,
Kacjin A.A.², Kononov S.A.^{2,3}, Kravchenko E.A.³,
Barnyakov A.Yu.², Danilyuk A.F.¹

**Aerogels in High Energy Physics, Collaboration of
Boreskov Institute of Catalysis and Budker Institute of
Nuclear Physics**

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

*2 – Budker Institute of Nuclear Physics, Novosibirsk,
Russia*

3 - Novosibirsk State University, Novosibirsk, Russia

12.35-12.50 OP-III-04

Reporter: Anna Sushnikova

Sushnikova A.A.¹, Pechishcheva N.V.¹, Zaitseva P.V.¹,
Valeeva A.A.², Rempel A.A.¹

**Application of Nanotubular Titanium Dioxide for the
Removal of Cr(VI) from Aqueous Solutions**

*1 – Institute of Metallurgy, Ural Branch of the Russian
Academy of Sciences, Yekaterinburg, Russia*

*2 – Institute of Solid State Chemistry, Ural Branch of the
Russian Academy of Sciences, Yekaterinburg, Russia*

12.50-13.05 OP-III-05

Online

Reporter: Dr. Evgeniy Korotaev

Korotaev E.V., Syrokvashin M.M., Filatova I.Yu.

**Thermoelectric, Magnetic Properties and Electronic
Structure of Solid Solutions $\text{CuCr}_{1-x}\text{La}_x\text{S}_2$**

*Nikolaev Institute of Inorganic Chemistry SB RAS,
Novosibirsk, Russia*

13.05-14.30

Lunch

Café Kukuruzza – Nikolaeva St. 12, 2 floor

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 3

Academpark, Nikolaeva St. 12, 2 floor

Afternoon Session

Chair: Professor Artem Abakumov

ORAL PRESENTATIONS

Section III. Applications

14.30-14.45

OP-III-06

Online

Reporter: Professor Xu Xiang

Xu Xiang

Ultrathin Carbon Layer-Coated Mn-Based Ion Sieve for Lithium Extraction by Electrosorption Method

State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing, China

14.45-15.00

OP-III-07

Online

Reporter: Dr. Ilya Menshchikov

Menshchikov I.E., Shkolin A.V., Khozina E.V., Grinchenko A.E., Fomkin A.A.

Thermodynamics of Long-Term Adsorption Storage System of Liquefied Natural Gas Vapors Based on Advanced Mesoporous Carbon Xerogel

Frumkin Institute of Physical Chemistry and Electrochemistry, Moscow, Russia

15.00-15.15

OP-III-08

Online

Reporter: Dr. Yulia Yarkaeva

Yarkaeva Y.A., Nazyrov M.I., Maistrenko V.N.

Enantioselective Voltammetric Sensors Based on New Chiral Materials

Ufa University of Science and Technology, Ufa, Russia

- 15.15-15.30 OP-III-09**
Reporter: Nikita Akhmetov
Akhmetov N.O.¹, Stevenson K.J.²
Development of Polymer-Ceramic Li-Conducting Membranes for Li-Metal Hybrid Flow Batteries
1 – Skolkovo Institute of Science and Technology, Moscow, Russia
2 – Lomonosov Moscow State University, Moscow, Russia
- 15.30-15.45 OP-III-10**
Reporter: Danil Shiltsov
Shiltsov D.M.¹, Ilyina E.V.¹, Mateyshina Yu.G.²,
Pochtar A.A.¹, Bedilo A.F.¹
Electrochemical Properties of Composite Solid Electrolytes Based on NaNO₂ and Aerogel Oxides
1 – Borekov Institute of Catalysis, Novosibirsk, Russia
2 – Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia
- 15.45-16.00 OP-III-11**
Reporter: Alena Komayko
Komayko A.I.¹, Shraer S.D.¹, Fedotov S.S.¹,
Nikitina V.A.^{1,2}
Single-Phase vs. Two-Phase Intercalation Pathways in Polyanion-Type Cathode Materials for Low-Temperature Sodium-Ion Batteries
1 – Skolkovo Institute of Science and Technology, Moscow, Russia
2 – Lomonosov Moscow State University, Moscow, Russia
- 16.00-16.30 Coffee**

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 3

Academpark, Nikolaeva St. 12, 2 floor

Evening Session

Chair: Professor Aleksey Vedyagin

ORAL PRESENTATIONS

Section III. Applications

16.30-16.45

OP-III-12

Online

Reporter: Professor Alexander Sidorov

Manaenkov O.V.¹, Kislitsa O.V.¹, Sidorov A.I.¹,

Demidenko G.N.¹, Nikoshvili L.Zh.¹, Matveeva V.G.^{1,2}

**Hydrolytic Oxidation of Cellobiose using Catalysts
Containing Noble Metals**

1 – Tver State Technical University, Tver, Russia

2 – Tver State University, Tver, Russia

16.45-17.00

OP-III-13

Reporter: Dr. Aleksei Salanov

Salanov A.N., Serkova A.N., Zhirnova A.S., Isupova L.A.

**Catalytic Etching and Oxidation of Pt, Pd and Rh in O₂
and During NH₃ Oxidation at 1133 K**

Boreskov Institute of Catalysis, Novosibirsk, Russia

17.00-17.15

OP-III-14

Online

Reporter: Dr. Lyudmila Okhlopkova

Okhlopkova L.B.¹, Prosvirin I.P.¹, Kerzhentsev M.A.¹,

Sukhova O.B.¹, Ismagilov Z.R.^{1,2}

**Combined H₂O and CO₂ Reforming of Methane over Ni
Based CeO₂-MgO Catalysts: Impacts of Preparation
Mode and Pd Addition**

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

*2 – Federal Research Center of Coal and Coal-Chemistry
SB RAS, Kemerovo, Russia*

- 17.15-17.30** **OP-III-15**
Reporter: Dr. Olga Koroleva
Koroleva O.N., Nevolina L.A., Korobatova N.M.
Glass-Ceramic Matrices Based on Borosilicate Glasses for the Immobilization of Radioactive Wastes
South Urals Federal Research Center of Mineralogy and Geoecology of the Urals Branch of the Russian Academy of Sciences, Miass, Russia
- 17.30-17.45** **OP-III-16**
Reporter: Dr. Maya Kulikova
Kulikova M.V., Maximov A.L.
Design of Novel Catalysts for Environmental Processes
A.V.Topchiev Institute of Petrochemical Synthesis, RAS, Moscow, Russia
- 17.45-18.00** **OP-III-17**
Online **Reporter: Professor Yury Kosivtsov**
Lugovoy Yu.V.¹, Chalov K.V.¹, Tarabonko V.E.², Kosivtsov Yu.Yu.¹, Sulman M.G.¹
Thermal Catalytic Refining of Gases from Fast Pyrolysis of Flax Processing Waste
1 – Tver State Technical University, Tver, Russia
2 – Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk, Russia

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 4

Academpark, Nikolaeva St. 12, 3 floor

Afternoon Session

Chair: Professor Tatiana Rostovshchikova

ORAL PRESENTATIONS

Section IC. Synthesis and Structure of Advanced Materials

14.30-14.45 OP-IC-01

Reporter: Anastasia Dmitrieva

Dmitrieva A.P., Fomkina A.S., Romanenko E.A.,
Krivoshapkina E.F.

**Development of a Model for Predicting Efficient
Catalysts for the Process of Urea Electrooxidation**

ITMO University, Saint Petersburg, Russia

14.45-15.00 OP-IC-02

Reporter: Elgina Lebedeva

Lebedeva E.M.^{1,2}, Nizameeva G.R.^{1,2}, Nizameev I.R.^{1,2},
Minzanova S.T.^{1,2}, Morozov V.I.¹, Mansurov R.N.²,
Gainullin R.R.¹, Kadirov M.K.^{1,2}

**Copper Complexes of Sodium Pectate as Oxygen
Reduction Catalysts**

*1 – Arbuzov Institute of Organic and Physical Chemistry,
Kazan, Russia*

*2 – Kazan National Research Technological University,
Kazan, Russia*

15.00-15.15 OP-IC-03

Reporter: Aleksey Taratayko

Taratayko A.V., Mamontov G.V.

**Design of Ag/Graphene Oxide Catalysts Modified with
Transition Metal Oxides for Reduction Reactions**

Tomsk State University, Tomsk, Russia

- 15.15-15.30** **OP-IC-04**
Online **Reporter: Dr. Daria Yurpalova**
Yurpalova D.V.¹, Afonassenko T.A.¹, Prosvirin I.P.²,
Bukhtiyarov A.V.², Vinokurov Z.S.², Khramov E.V.³,
Shlyapin D.A.¹
**Design of Efficient Supported Bimetallic Palladium
Catalysts for Selective Hydrogenation of Acetylene**
*1 – Center of New Chemical Technologies BIC, Boreskov
Institute of Catalysis, Omsk, Russia*
2 – Boreskov Institute of Catalysis, Novosibirsk, Russia
*3 – National Research Center "Kurchatov Institute",
Moscow, Russia*
- 15.30-15.45** **OP-IC-05**
Reporter: Dr. Irina Danilova
Danilova I.G.¹, Moroz B.L.², Bukhtiyarova G.A.¹
**Effect of Magnesium Doping on the Interaction of Au^{III}
Precursor Complexes and Au⁰ Nanoparticles with
Alumina Surface in Au/Mg²⁺/γ-Al₂O₃ Catalysts**
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
- 15.45-16.00** **OP-IC-06**
Reporter: Iuliana Porukova
Porukova Iu.I., Samoilov V.O., Ramazanov D.N.,
Kniazeva M.I., Maximov A.L.
***In Situ* Synthesized Cu-ZnO Catalysts for the Catalytic
Hydrogenolysis of Glycerol**
*A.V. Topchiev Institute of Petrochemical Synthesis,
Moscow, Russia*
- 16.00-16.30** **Coffee**

July 04, Tuesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 4

Academpark, Nikolaeva St. 12, 3 floor

Evening Session

Chair: Dr. Maksim Mel'gunov

ORAL PRESENTATIONS

Section IC. Synthesis and Structure of Advanced Materials

16.30-16.45 OP-IC-07

Online

Reporter: Dr. Linda Nikoshvili

Bakhvalova E.S.¹, Bykov A.V.², Nikoshvili L.Z.²

**One-Step Synthesis of Aromatic Polymeric Supports
for Palladium-Containing Catalytic Systems**

1 – Tver State University, Tver, Russia

2 – Tver State Technical University, Tver, Russia

16.45-17.00 OP-IC-08

Online

Reporter: Dr. Nadezhda Kirik

Kirik N.P.¹, Rabchevskii E.V.¹, Shishkina N.N.¹,
Kopytov M.A.², Solovyov L.A.¹, Anshits A.G.^{1,3}

**Composite Catalysts Based on the CaO-Fe₂O₃ System
for the Oxidative Conversion of Hydrocarbons**

*1 – Institute of Chemistry and Chemical Technology SB
RAS, Krasnoyarsk, Russia*

*2 – Institute of Petroleum Chemistry SB RAS, Tomsk,
Russia*

3 – Siberian Federal University, Krasnoyarsk, Russia

17.00-17.15 OP-IC-09

Reporter: Andrey Varygin

Varygin A.D.¹, Popov A.A.¹, Plyusnin P.E.¹,
Afonnikova S.D.², Maksimova T.A.², Shvtsov D.M.^{2,3},
Shubin Yu.V.¹

**Porous Alloys Based on Fe and Co as Catalysts for the
Decomposition of Hydrocarbons**

*1 – Nikolaev Institute of Inorganic Chemistry,
Novosibirsk, Russia*

2 – Borekov Institute of Catalysis, Novosibirsk, Russia

*3 – Novosibirsk State Technical University, Novosibirsk,
Russia*

17.15-17.30 OP-IC-10

Reporter: Professor Serguei Tikhov

Tikhov S.F., Valeev K.R., Sadykov V.A., Salanov A.N.,
Dokuchits E.V., Minyukova T.P.

**Nanostructured Catalysts Based upon Porous
Ceramometal Composites**

Borekov Institute of Catalysis, Novosibirsk, Russia

17.30-17.45 OP-IC-11

Reporter: Evgeny Baksheev

Alikin E.A.¹, Baksheev E.O.^{1,2}, Rychkov V.N.²,
Veselov G.B.³, Kenzhin R.M.³, Stoyanovskii V.O.³,
Plyusnin P.E.⁴, Shubin Yu.V.⁴, Vedyagin A.A.³

**Influence of BaO Addition on the Thermal Stability of
Pd-Rh/Al₂O₃-ZrO₂ Three-Way Catalysts: Lab-Scale and
Pilot-Scale Studies**

1 – Ecoalliance LLC, Novouralsk, Russia

2 – Ural Federal University, Yekaterinburg, Russia

3 – Borekov Institute of Catalysis, Novosibirsk, Russia

*4 – Nikolaev Institute of Inorganic Chemistry,
Novosibirsk, Russia*

17.45-18.00

Online

OP-IC-12

Reporter: Dr. Nouredine Ouarab

Ouarab N.¹, Redjdal N.¹, Bouachma S.¹, Sekrane N.², Manseri A.³, Toumert I.⁴, Drici N.³, Benabderazak K.³, Cheraga H.³, Menari H.³

Acid Impregnation of Raw Kaolin for Synthesis of Automotive Exhaust Catalyst

1 – Division of Emerging Semiconductor Technologies for Energy (TESE), Semiconductor Technology Research Center for Energetic-(CRTSE), Algiers, Algeria

2 – Department of NanoPhysics, Faculty of Science, University of Blida-1, Blida, Algeria

3 – Semiconductor Technology Research Center for Energetic-(CRTSE), Algiers, Algeria

4 – Division of Nuclear Techniques (DTN), Nuclear Research Centre of Algiers, (CRNA), BP N° 399 Algiers, Algeria

July 05, Wednesday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Plenary Session

Chair: Professor Valerii Bukhtiyarov

PLENARY LECTURE

09.00-09.45 PL-3

Reporter: Professor Evgeny Antipov

Antipov E.V.

Novel Electrode Materials for Metal-Ion Batteries

Lomonosov Moscow State University, Moscow, Russia

Skolkovo Institute of Science and Technology (Skoltech),

Moscow, Russia

KEYNOTE LECTURES

09.45-10.20 KL-4

Online

Reporter: Professor Sang-Young Lee

Lee S.-Y.

Exploring Binder Chemistry for High-Energy Li Battery Cathodes

Department of Chemical and Biomolecular Engineering,

Yonsei University, Seoul, Korea

10.20-10.55 KL-5

Reporter: Professor Artem Abakumov

Abakumov A.M.

How Advanced Transmission Electron Microscopy Can Contribute to Battery Research?

Skolkovo Institute of Science and Technology, Moscow,

Russia

10.55-11.25 Coffee

July 05, Wednesday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Dr. Maxim Kazakov

INVITED LECTURE

11.25-11.50 IL-I-2

Online

Reporter: Professor Jian Ping Gong

Gong J.P.

Remodelling Double Network Hydrogels by Force Triggered Polymerization

Hokkaido University, Sapporo, Japan

ORAL PRESENTATIONS

Section IA. Synthesis and Structure of Advanced Materials

11.50-12.05 OP-IA-18

Reporter: Dr. Maksim Mel'gunov

Ivanov A.D., Mel'gunov M.S.

Advances in the Analysis of the Materials Porous Structure by Means of the Machine Learning Methods

Boreskov Institute of Catalysis, Novosibirsk, Russia

12.05-12.20 OP-IA-19

Reporter: Dr. Ekaterina Komarova

Komarova E.G.¹, Kazantseva E.A.^{1,2}, Prosolov K.A.¹, Luginin N.A.¹, Uvarkin P.V.¹, Tolkacheva T.V.¹

Electrochemical and Mechanical Properties of the Composite "PLGA/CaP/Ti" Scaffolds for Targeted Drug Delivery

1 – Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia

2 – Tomsk State University, Tomsk, Russia

- 12.20-12.35 OP-IA-20**
Reporter: Dr. Daniil Kolokolov
Khudozhnikov A.E.¹, Veselovskaya J.V.¹, Ludwig R.³,
Kolokolov D.I.^{1,2}
Ionic Mobility in the Composite (Ionic Liquids)@MOF Electrolytes Probed by Solid State NMR
1 – Borekov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – University of Rostock, Rostock, Germany
- 12.35-12.50 OP-IA-21**
Reporter: Grigory Veselov
Veselov G.B., Stoyanovskii V.O., Afonnikova S.D.,
Vedyagin A.A.
Sol-Gel Synthesis of Nanostructured Ni-Ce-Mg-O Ternary Systems
Borekov Institute of Catalysis, Novosibirsk, Russia
- 12.50-13.05 OP-IA-22**
Reporter: Dr. Artem Sergeev
Sergeev A.V.^{1,2}, Rudyak V.Yu.², Samodelkin R.A.²,
Fatikhova A.V.², Kozhunova E.Yu.², Chertovich A.V.^{1,2},
Khokhlov A.R.²
Impact of Microgel's Structure on its Functional Group's Mobility and Availability
1 – Semenov Federal Research Center for Chemical Physics, Moscow, Russia
2 – Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia
- 13.05-14.30 Lunch**
Café Kukuruzza – Nikolaeva St. 12, 2 floor

Chair: Dr. Ilya Mishakov

14.30-16.30

POSTER SESSION
Flash-Poster Presentations

Section IA;

Section IB

16.30-17.00 **Coffee**

16.30-18.00

POSTER SESSION
Poster Demonstration

18.00-22.00 **Singing Party**

Outdoor Pavilion on the inner territory of the
Academpark, Nikolaeva St. 12

July 05, Wednesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 2

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Dr. Ilya Mishakov

INVITED LECTURE

11.25-11.50 IL-II-2

Online

Reporter: Professor Suk-kyun Ahn

Ahn S.

Designing Intelligent Materials from Anisotropic Rubbers: Liquid Crystal Elastomers in Action

*Department of Polymer Science and Engineering,
Pusan National University, Busan, Korea*

ORAL PRESENTATIONS

Section IB. Synthesis and Structure of Advanced Materials

11.50-12.05 OP-IB-18

Online

Reporter: Kirill Vinogradov

Vinogradov K.Yu., Davydov V.M., Shafigulin R.V.,
Bulanova A.V.

Bimetallic Catalysts for Oxygen Electroreduction Based on Carbon Nanotubes and Cobalt, Copper, and Nickel Phthalocyanines

Samara University, Samara, Russia

12.05-12.20 OP-IB-19

Reporter: Dr. Anton Kuzmin

Kuzmin A.V., Shainyan B.A.

Catalytic Oxygen Reduction Reaction Activity of Lattice Carbons of Metal Doped Nitrogen Codoped Carbons. Theoretical Analysis

*A.E. Favorsky Irkutsk Institute of Chemistry of SB RAS,
Irkutsk, Russia*

- 12.20-12.35 OP-IB-20**
Reporter: Dr. Vladimir Lopatkin
Lopatkin V.A., Evtushok V.Y.
Heterogeneous Catalysts Based on POM and N-Doped Multiwalled Carbon Nanotubes Impregnated with Zn²⁺ Ions for Synthesis of Acid-Sensitive Epoxides
Borsov Institute of Catalysis, Novosibirsk, Russia
- 12.35-12.50 OP-IB-21**
Reporter: Yuliya Rudneva
Rudneva Y.V.¹, Bauman Y.I.², Potylitsyna A.R.², Shubin Y.V.¹, Plyusnin P.E.¹, Mishakov I.V.², Vedyagin A.A.²
Ni_{1-x}Mo_x, Ni_{1-x}W_x and Ni_{1-x-y}Mo_xW_y Dispersed Alloy Catalysts: Synthesis, Structure and Transformation in 1,2-Dichloroethane Decomposition Process
1 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia
2 – Borsov Institute of Catalysis, Novosibirsk, Russia
- 12.50-13.05 OP-IB-22**
Reporter: Anastasiya Navrotskaya
Navrotskaya A.G., Krivoschapkin P.V., Krivoschapkina E.F.
Oxidized Carbon Nanomaterials as Efficient Adsorbents for Nd³⁺ Removal
ITMO University, St. Petersburg, Russia
- 13.05-14.30 Lunch**
Café Kukuruzza – Nikolaeva St. 12, 2 floor

Chair: Dr. Maksim Mel'gunov

14.30-16.30

POSTER SESSION
Flash-Poster Presentations
Section IC;
Section II

16.30-17.00 **Coffee**

16.30-18.00

POSTER SESSION
Poster Demonstration

18.00-22.00 **Singing Party**

Outdoor Pavilion on the inner territory of the
Acadepark, Nikolaeva St. 12

July 05, Wednesday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 3

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Professor Aleksey Vedyagin

INVITED LECTURE

11.25-11.50 IL-III-2

Reporter: Professor Sergey Gurevich

Gurevich S.A.

**Amorphous Nanostructures: Fabrication, Properties,
and Applications in Catalysis and Energy Storage**

Ioffe Institute, Saint Petersburg, Russia

ORAL PRESENTATIONS

Section III. Applications

11.50-12.05 OP-III-18

Reporter: Dr. Anton Gabrienko

Gabrienko A.A., Arzumanov S.S., Stepanov A.G.

Propane Transformation on In-Modified BEA Zeolite

Boreskov Institute of Catalysis, Novosibirsk, Russia

12.05-12.20 OP-III-19

Online

Reporter: Alexander Tokranov

Tokranov A.A., Tokranova E.O., Shafigulin R.V.,

Bulanova A.V.

**Selective Hydrogenation of 1-Heptene/1-Heptyne
Mixture on Mesoporous Silica, Doped with Dy and
Modified with Ag**

Samara University, Samara, Russia

- 12.20-12.35 OP-III-20**
Reporter: Professor Maria Timofeeva
Timofeeva M.N.¹, Jhung S.H.², Panchenko V.N.¹
Zeolitic Imidazolate Frameworks for Acid-Base Catalysis: the Structure-Property-Activity Relationship
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Department of Chemistry and Green-Nano Materials Research Center, Kyungpook National University, Republic of Korea
- 12.35-12.50 OP-III-21**
Online Reporter: Aigul Sabirova
Sabirova A.F.^{1,2}, Morozov V.I.¹, Kadirov D.M.²,
Minzanova S.T.^{1,2}, Nizameeva G.R.^{1,2}, Mansurov R.N.²,
Sultanov T.P.^{1,2}, Gainullin R.R.¹, Kadirov M.K.^{1,2}
Catalytic Properties of Sodium Pectate Manganese Complexes
1 – Arbuzov Institute of Organic and Physical Chemistry, Kazan, Russia
2 – Kazan National Research Technological University, Kazan, Russia
- 12.50-13.05 OP-III-22**
Reporter: Ekaterina Vorobyeva
Vorobyeva E.E., Shamanaeva I.A., Polukhin A.V.,
Lysikov A.I., Parkhomchuk E.V.
SAPO-Containing Alumina CoMoNi-Catalysts for Hydrotreatment of Heavy Oil: Pore Hierarchy as a Key Parameter for Catalyst Stabilization
Boreskov Institute of Catalysis, Novosibirsk, Russia
- 13.05-14.30 Lunch**
Café Kukuruzza – Nikolaeva St. 12, 2 floor

Chair: Professor Aleksey Vedyagin

14.30-16.30

POSTER SESSION
Flash-Poster Presentations
Section III

16.30-17.00 Coffee

16.30-18.00

POSTER SESSION
Poster Demonstration

18.00-22.00 **Singing Party**

Outdoor Pavilion on the inner territory of the
Acadepark, Nikolaeva St. 12

July 06, Thursday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Plenary Session

Chair: Professor Evgeny Antipov

PLENARY LECTURE

09.00-09.45

PL-4

Online

Reporter: Professor Dongyuan Zhao

Zhao D.

Interfacial Oriented Assembly of Hierarchical-Pore Functional Mesoporous Materials from Monomicelles

Department of Chemistry, Laboratory of Advanced Materials, Faculty of Chemistry and Materials, Fudan University, Shanghai, China

KEYNOTE LECTURES

09.45-10.20

KL-6

Reporter: Professor Elena Krivoshapkina

Krivoshapkina E.F.

Optically Active Carbon Dot-Based Hybrids for Practical Applications

EnergyLab, ITMO University, St. Petersburg, Russia

10.20-10.55

KL-7

Online

Reporter: Professor Il-Doo Kim

Kim I.-D.

Multidimensional Composite Nanomaterials for Sensing Applications

Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea

10.55-11.25

Coffee

July 06, Thursday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Professor Sergey Gurevich

ORAL PRESENTATIONS

Section IA. Synthesis and Structure of Advanced Materials

11.25-11.40 OP-IA-23

Online

Reporter: Anjali Nagapadi Preman

Anjali Nagapadi Preman, Suk-kyun Ahn

Multiple Hydrogen Bonded Polymer Binders for High-Capacity Si Anode

School of Chemical Engineering, Pusan National University, Busan, Korea

11.40-11.55 OP-IA-24

Online

Reporter: Andrey Snegirev

Snegirev A.V.^{1,2}, Kovalev V.M.^{1,3}, Entin M.V.¹

Electron Diffusion Induced Valley Hall Effect and Nonlinear Galvanodiffusive Transport in Hexagonal 2D Dirac Monolayer Materials

1 – Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – Novosibirsk State Technical University, Novosibirsk, Russia

11.55-12.10 OP-IA-25

Online

Reporter: Dr. Dina Markovskaya

Markovskaya D.V., Zhurenok A.V., Potapenko K.O., Sidorenko N.D., Kozlova E.A.

The Halide-Modified Materials Based on g-C₃N₄ for Photocatalytic Hydrogen Production and Photocurrent Generation under Visible Light

Boreskov Institute of Catalysis, Novosibirsk, Russia

- 12.10-12.25 OP-IA-26**
Reporter: Professor Alexei Emeline
Emeline A.V., Rudakova A.V., Murashkina A.A.
Heterostructured Materials for Photochemical Solar Energy Conversion: Basic Approaches
Laboratory "Photoactive Nanocomposite Materials", Saint Petersburg State University, Saint Petersburg, Russia
- 12.25-12.40 OP-IA-27**
Reporter: Dr. Zaliya Fedorova
Stroeveva A.Y.¹, Borisov V.A.², Ichetovkin Z.N.¹, Fedorova Z.A.³, Shlyapin D.A.², Snytnikov P.V.³, Kuzmin A.V.¹
Functional Materials for Protonic Ceramic Fuel Cells Powered by Ammonia
1 – Vyatka State University, Kirov, Russia
2 – Center of New Chemical Technologies BIC, Boreskov Institute of Catalysis SB RAS, Omsk, Russia
3 – Boreskov Institute of Catalysis, Novosibirsk, Russia
- 12.40-12.55 OP-IA-28**
Reporter: Peter Khovental
Khovental P.A.¹, Kopanichuk I.¹, Kevorkyants R.², Vishnyakov A.^{3,4}
Contact Angles between Crude Oil and Brine on Minerals in Reservoir Conditions Studied with Molecular Dynamics Simulations
1 – Skolkovo Institute of Science and Technology, Moscow, Russia
2 – Hong Kong Quantum AI Lab, The University of Hong Kong, HKSAR, China
3 – Moscow State University, Department of Physics, Moscow, Russia
4 – Krestov Institute of Solution Chemistry RAS, Ivanovo, Russia

12.55-13.10 OP-IA-29

Online

Reporter: Dr. Veronika Grigorieva

Grigorieva V.D.^{1,2}, Kremlev A.D.^{1,2}, Shlegel V.N.¹

**Growth of Polymolybdate Scintillating Crystals by
the Low-Thermal-Gradient Czochralski Technique**

*1 – Nikolaev Institute of Inorganic Chemistry,
Novosibirsk, Russia*

2 – Novosibirsk State University, Novosibirsk, Russia

13.10-14.30

Lunch

Café Kukuruzza – Nikolaeva St. 12, 2 floor

July 06, Thursday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Afternoon Session

Chair: Professor Aleksey Vedyagin

INVITED LECTURE

14.30-14.55 IL-I-3

Online

Reporter: Professor Aleksandr Stakheev

Mashkovsky I.S.¹, Bukhtiyarov A.V.², Markov P.V.¹,
Melnikov D.P.¹, Stakheev A.Yu.¹

**Single-Atom Alloy Pd-based Catalysts:
Characterization and Catalytic Performance in
Liquid-Phase and Gas-Phase Selective Alkyne
Hydrogenation**

*1 – Zelinsky Institute of Organic Chemistry, Moscow,
Russia*

*2 – Borekov Institute of Catalysis, Novosibirsk,
Russia*

ORAL PRESENTATIONS

Section IA. Synthesis and Structure of Advanced Materials

14.55-15.10 OP-IA-30

Reporter: Daria Khramtsova

Khramtsova D.M.^{1,2}, Kuznetsov A.B.², Kokh A.E.²,
Kokh K.A.²

**Testing of New Solvents for CaMO₄ (M=Mo,W)
Crystal Growth**

1 – Novosibirsk State University, Novosibirsk, Russia

*2 – Sobolev Institute of Geology and Mineralogy,
Novosibirsk, Russia*

- 15.10-15.25** **OP-IA-31**
Online **Reporter: Dr. Marina Konon**
Konon M.¹, Polyakova I.¹, Saratovskii A.^{1,2},
 Danilovich D.², Anfimova I.¹
**Crystallization of Cristobalite in Sodium Borosilicate
 Glass in the Presence of Chromium**
*1 – Institute of Silicate Chemistry, RAS, Saint
 Petersburg, Russia*
*2 – Saint Petersburg State Institute of Technology
 (Technical University), Saint Petersburg, Russia*
- 15.25-15.40** **OP-IA-32**
Reporter: Alina Bragina
Bragina A.A.¹, Babina K.A.^{1,2}, Parkhomchuk E.V.^{1,2}
**Steam-Assisted Crystallized Fe-Silicalite-1
 Nanocrystals as Heterogeneous Fenton Catalyst**
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
- 15.40-15.55** **OP-IA-33**
Reporter: Dr. Ekaterina Orlova
Orlova E.I.^{1,2}, Kharitonova E.P.^{1,2}, Voronkova V.I.¹
**The Fluorite-Like $\text{LiLn}_4\text{Mo}_3\text{O}_{15}\text{F}$ (Ln = La-Dy)
 Ceramics: Synthesis and Properties**
*1 – Lomonosov Moscow State University, Faculty of
 Physics, Moscow, Russia*
*2 – Shubnikov Institute of Crystallography of Federal
 Scientific Research Centre 'Crystallography and
 Photonics' of Russian Academy of Sciences Moscow,
 Russia*
- 15.55-16.30** **Coffee**

July 06, Thursday

Novosibirsk Local time UTC +7

Place: GRAND HALL

Academpark, Nikolaeva St. 12, 2 floor

Evening Session

Chair: Dr. Ilya Mishakov

ORAL PRESENTATIONS

Section IA. Synthesis and Structure of Advanced Materials

16.30-16.45 OP-IA-34

Reporter: Professor Alexey Panin

Panin A.V., Kazachenok M.S., Perevalova O.B.,
Martynov S.A.

**The Mechanisms of Microstructure Formation in
Ti-6Al-4V Titanium Alloy Produced by Wire-Feed
Electron Beam Additive Manufacturing**

*Institute of Strength Physics and Materials Science SB RAS,
Tomsk, Russia*

16.45-17.00 OP-IA-35

Reporter: Professor Gennady Pribytkov

Pribytkov G.A., Baranovskiy A.V., Korthova V.V.,
Firsina I.A.

**A Novel Route to Produce Titanium Matrix Composites
Strengthened with Titanium Carbide Particles**

*Institute of Strength Physics and Materials Sciences,
Tomsk, Russia*

17.00-17.15 OP-IA-36

Online

Reporter: Professor Valery Kolosov

Kolosov V.N., Miroshnichenko M.N.

**On the Synthesis of Molybdenum - Carbide Powder by
the Reaction of Molybdenum with Hexane**

*Tananaev Institute of Chemistry-Subdivision of the Federal
Research Centre "Kola Science Centre of the Russian
Academy of Sciences", Russian Academy of Sciences,
Apatity, Russia*

- 17.15-17.30** **OP-IA-37**
Online **Reporter: Dr. Jaejun Lee**
Junwoo Park, Jaejun Lee
Generation of 2D Micro Patterns Using Laser-Induced Shockwave
*Department of Polymer Science and Engineering,
Pusan National University, Busan, Republic of Korea*
- 17.30-18.00** **CLOSING CEREMONY**
- 18.00-22.00** **Banquet**
Banquet hall "Teplitsa", Nikolaeva St. 12/2, 3 floor

July 06, Thursday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 2

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Professor Aleksey Vedyagin

ORAL PRESENTATIONS

Section II. Biomaterials and Bionanocomposites

11.25-11.40 OP-II-01

Reporter: Alexander Kashin

Kashin A.D., Sedelnikova M.B.

**Development and Research of Composite
Corrosion-Resistant and Bioactive Coatings with
ZrO₂ Particles**

*Institute of Strength Physics and Materials Science SB
RAS, Tomsk, Russia*

11.40-11.55 OP-II-02

Online

Reporter: Professor Andrey Gnedenkov

Gnedenkov A.S., Sinebryukhov S.L., Filonina V.S.,
Gnedenkov S.V.

**Novel Electrochemical Studies of the Bioresorbable
Magnesium Alloys: Corrosion Phenomena and
Hybrid Coating Formation**

Institute of Chemistry FEB RAS, Vladivostok, Russia

11.55-12.10 OP-II-03

Reporter: Dr. Lyudmila Parfenova

Parfenova L.V.¹, Parfenov E.V.²

**Development of Biomimetic Organic-Inorganic
Coatings for Titanium Implants**

*1 – Institute of Petrochemistry and Catalysis, Ufa
Federal Research Center RAS, Ufa, Russia*

*2 – Ufa University of Science and Technology, Ufa,
Russia*

12.10-12.25 OP-II-04

Reporter: Dr. Konstantin Prosolov

Prosolov K.A.¹, Komarova E.G.¹, Kazantseva E.A.^{1,2},
Lozhkomoev A.S.¹, Kazantsev S.O.¹, Senkina E.I.¹

Vancomycin-Loaded Porous Calcium Phosphate Coatings with PLGA Fabricated by Ultrasound-Assisted Micro-Arc Oxidation and Dip-Coating for Drug Delivery

1 – Institute of Strength Physics and Materials Science, Siberian Branch of Russian Academy of Sciences, Tomsk, Russia

2 – National Research Tomsk State University, Tomsk, Russia

12.25-12.40 OP-II-05

Online

Reporter: Dr. Sung Soo Park

Park S.S.¹, Kong J.², Ha C.-S.²

Functionalized Mesoporous Silicas Nanocarrier for Anticancer Chemotherapy

1 – Division of Advanced Materials Engineering, Dong-Eui University, Busan, Republic of Korea

2 – Department of Polymer Science and Engineering, Pusan National University, Busan, Republic of Korea

12.40-12.55 OP-II-06

Reporter: Dr. Anastasia Parshina

Parshina A.E.¹, Bogolitsyn K.G.^{1,2}, Polomarchuk D.A.¹,
Prosankov D.S.¹

Cellulose Complex of Arctic Brown Algae as a Basis for the Production of New Materials

1 – Northern (Arctic) Federal University, Arkhangelsk, Russia

2 – Institute of Ecological Problems of the North, Arkhangelsk, Russia

12.55-13.10 OP-II-07

Reporter: Maria Kozadaeva

Kozadaeva M.¹, Grubova I.Y.¹, Koptuyug A.²,
Surmeneva M.A.¹, Surmenev R.A.¹

**Investigation of the RF Magnetron Sputter
Deposited Mg- and Sr-Substituted HA Coatings on a
Titanium-Niobium Alloy Produced by Additive
Manufacturing**

*1 – National Research Tomsk Polytechnic University,
Tomsk, Russia*

2 – Mid Sweden University, Östersund, Sweden

13.10-14.30 Lunch

Café Kukuruzza – Nikolaeva St. 12, 2 floor

July 06, Thursday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 2

Academpark, Nikolaeva St. 12, 2 floor

Afternoon Session

Chair: Professor Mikhail Moshkin

INVITED LECTURE

14.30-14.55 IL-II-3

Reporter: Professor Long Yu

Mao Yang¹, Mahafooj Alee¹, Jun Fu², Long Yu^{1,2}

Recewnt Development of Starch-Based Materials

1 – Centre for Polymers from Renewable Resources, SFSE, SCUT, Guangzhou, China

2 – Institute of Chemistry, Henan Academy of Sciences, Zhengzhou, China

ORAL PRESENTATIONS

Section II. Biomaterials and Bionanocomposites

14.55-15.10 OP-II-08

Online

Reporter: Dr. Tatyana Tsyganova

Tsyganova T.A.

Modified Porous Glasses for Medical Applications

Institute of Silicate Chemistry RAS, Saint Petersburg, Russia

Saint Petersburg Scientific Center, Saint Petersburg, Russia

15.10-15.25 OP-II-09

Online

Reporter: Dr. Inna Klimenko

Klimenko I.V.¹, Lobanov A.V.^{1,2}, Trusova E.A.³

Phthalocyanine-Graphene Complex for Biomedical Applications

1 – Emanuel Institute of Biochemical Physics RAS, Moscow, Russia

2 – Moscow Pedagogical State University, Moscow, Russia

3 – Baikov Institute of Metallurgy and Materials Science RAS, Moscow, Russia

- 15.25-15.40** **OP-II-10**
Online **Reporter: Dr. Boris Tikhonov**
Matveeva V.G.^{1,2}, Tikhonov B.B., Lisichkin D.R.,
Stadolnikova P.Yu., Sulman M.G.,
Ajay Shivajirao Desai³, José Cleiton Sousa dos Santos⁴
**Supports for Enzyme Immobilization on the Basis of
Chitosan and Magnetic Nanoparticles**
*1 – Department of Biotechnology, Chemistry and
Standardization, Tver State Technical University, Tver,
Russia*
*2 – Regional Technological Centre, Tver State
University, Tver, Russia*
*3 – Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth,
Dapoli, India, College of Fisheries, Ratnagiri,
Maharashtra, India*
*4 – University of International Integration of Afro-
Brazilian Lusophony, Brazilia*
- 15.40-15.55** **OP-II-11**
Online **Reporter: Dr. Aleksandrina Sulman**
Sulman A.M.¹, Grebennikova O.V.¹, Sidorov A.I.¹,
Matveeva V.G.^{1,2}
**Immobilization of Cellulase on Nanostructured
Supports for Processing Biomass Waste**
1 – Tver State Technical University, Tver, Russia
2 – Tver State University, Tver, Russia
- 15.55-16.30** **Coffee**

July 06, Thursday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 2

Academpark, Nikolaeva St. 12, 2 floor

Evening Session

Chair: Dr. Anton Gabrienko

ORAL PRESENTATIONS

Section II. Biomaterials and Bionanocomposites

16.30-16.45 OP-II-12

Online

Reporter: Dr. Polina Tyubaeva

Tyubaeva P.M.^{1,2}, Olkhov A.A.^{1,2}, Popov A.A.^{1,2}

**Development of Biomedical Fibrous Materials
Based on PHB and Hemin**

*1 – Plekhanov Russian University of Economics,
Moscow, Russia*

*2 – Emanuel Institute of Biochemical Physics of the
Russian Academy of Sciences, Moscow, Russia*

16.45-17.00 OP-II-13

Online

Reporter: Diana Evtushenko

Evtushenko D.N., Vodyankina O.V.

**Conformers of L-Ascorbic Acid in Molecular
Structure of Vitamin C and co-Crystals with
Nicotinic and Picolinic Acids**

Tomsk State University, Tomsk, Russia

- 17.00-17.15** **OP-II-14**
Online **Reporter: Margarita Chetyrkina**
Chetyrkina M.¹, Abalymov A.^{1,2}, Dozmorov S.¹,
Cvjetinovic J.¹, Fedorov F.S.¹, Goldt A.¹, Gorin D.A.¹,
Nasibulin A.¹
**Where Well-Known Drugs Meet New Perspectives:
Single-Walled Carbon Nanotubes as a Drug Delivery
System for Prednisolone and Doxorubicin for
Anticancer Therapy**
*1 – Skolkovo Institute of Science and Technology,
Moscow, Russia*
*2 – Science Medical Center, Saratov State University,
Saratov, Russia*
- 17.15-17.30** **OP-II-15**
Online **Reporter: Alina Lokteva**
Lokteva A.
**Autocatalytic Hydrogen Peroxide Production by
Bacteria as a New Advantage of Hybrid Living
Materials**
ITMO University, Saint Petersburg, Russia
- 17.30-18.00** **CLOSING CEREMONY**
(Grand Hall)
- 18.00-22.00** **Banquet**
Banquet hall "Teplitsa", Nikolaeva St. 12/2, 3 floor

July 06, Thursday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 3

Academpark, Nikolaeva St. 12, 2 floor

Morning Session

Chair: Dr. Maxim Kazakov

ORAL PRESENTATIONS

Section III. Applications

11.25-11.40 OP-III-23

Reporter: Dr. Ivan Shamanaev

Shamanaev I.V., Vlasova E.N., Shamanaeva I.A.,
Parkhomchuk E.V., Bukhtiyarova G.A.

**Methyl Palmitate HDO-Hydroisomerization over
SAPO-11-Containing Ni-Phophide Catalysts**

Boreskov Institute of Catalysis, Novosibirsk, Russia

11.40-11.55 OP-III-24

Online

Reporter: Marina Gryaznova

Gryaznova M.I., Lugvishchuk D.S., Gryaznov K.O.,
Filimonenkov I.S., Mitberg E.B., Karaeva A.R.,
Mordkovich V.Z.

**Problems of Screen-Printed Carbon Electrodes for
Biosensor**

*FSBI Technological Institute for Superhard and Novel
Carbon Materials, Troitsk, Moscow, Russia*

11.55-12.10 OP-III-25

Reporter: Dr. Vladimir Andryushchenko

Andryushchenko V.A.

Graphene-Based Flow Rate Sensor

Novosibirsk State University, Novosibirsk, Russia

- 12.10-12.25 OP-III-26**
Reporter: Professor Yuri Pakharukov
Pakharukov Yu.V.^{1,2}, Shabiev F.K.^{1,2}, Safargaliev R.F.^{1,2},
 Ezdin B.S.³, Vasiliev S.A.³
**Application of Graphene Nanofluids in Oil
 Production Industry**
 1 – Tyumen State University, Tyumen, Russia
 2 – Tyumen Industrial University, Tyumen, Russia
 3 - Novosibirsk State University, Novosibirsk, Russia
- 12.25-12.40 OP-III-27**
Online Reporter: Jihye Choi
Choi J.-H.¹, Choi Y.-G.², Yoon T.-H.², Ahn S.-k.¹
**Programmable Mechanochromic Response in 3D
 Printed Chiral Photonic Elastomers**
 1 – School of Chemical Engineering, Pusan National
 University, Busan, Korea
 2 –Department of Electronics Engineering, Pusan
 National University, Busan, Korea
- 12.40-12.55 OP-III-28**
Reporter: Anna Gorlova
Gorlova A.M.¹, Pakharukova V.P.^{1,2}, Stonkus O.A.^{1,2},
 Rogozhnikov V.N.¹, Snytnikov P.V.¹, Potemkin D.I.^{1,2}
**Platinum Ceria-Zirconia Supported Catalysts for the
 Water Gas Shift Reaction: Structure Diagnostics and
 Approaches to Boost the Performance**
 1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
 2 – Novosibirsk State University, Novosibirsk, Russia
- 12.55-13.10 OP-III-29**
Reporter: Valeriya Chzhou
Chzhou V.R.^{1,2}, Bakina O.V.^{1,2}, Suliz K.V.¹
**Photocatalytic Degradation of Dexamethazone and
 Ceftriaxone by TiO₂/Ag Nanoparticles**
 1 – Institute of Strength Physics and Materials SB RAS,
 Tomsk, Russia
 2 – Sevastopol State University, Sevastopol, Russia
- 13.10-14.30 Lunch**
 Café Kukuruza – Nikolaeva St. 12, 2 floor

July 06, Thursday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 3

Academpark, Nikolaeva St. 12, 2 floor

Afternoon Session

Chair: Dr. Ilya Mishakov

INVITED LECTURE

14.30-14.55 IL-III-3

Reporter: Dr. Olga Belskaya

Belskaya O.B.

Porous Carbon Materials from Available Resources as Adsorbents and Catalyst Supports

Center of New Chemical Technologies BIC, Boreskov Institute of Catalysis, Omsk, Russia

ORAL PRESENTATIONS

Section III. Applications

14.55-15.10 OP-III-30

Online

Reporter: Dr. Levan Ichkitidze

Batrakova I.A.¹, Gorina A.V.¹, Ichkitidze L.P.^{1,2}

Resistive Tactile Sensor Prototype Based on Biological Nanomaterial

1 – Institute for Regenerative Medicine, Sechenov First Moscow State Medical University (Sechenov University), Moscow, Russia

2 – Institute of Biomedical Systems, National Research University of Electronic Technology (MIET), Zelenograd, Moscow, Russia

- 15.10-15.25 OP-III-31**
Reporter: Dr. Tatiana Khlebnikova
Khlebnikova T.B., Pai Z.P., Yushchenko D.Y.,
Simonov P.A., Bukhtiyarov V.I.
Oxidation of N-(Isopropyl)-N-(Phosphonomethyl)-
Glycine with Hydrogen Peroxide in the Presence of
Nanostructured Au/Sibunit™ Catalysts
Boreskov Institute of Catalysis, Novosibirsk, Russia
- 15.25-15.40 OP-III-32**
Online Reporter: Professor Gang Zhou
Gang Zhou
Ring-Expansion from Thiophene to Thiopyran
Laboratory of Advanced Materials, Fudan University,
Shanghai, China
- 15.40-15.55 OP-III-33**
Reporter: Dr. Chantal Talena Tracey
Tracey C.T.¹, Bhatt T.K.¹, Timofeyev M.², Dagbaev M.²,
Kurilova O.², Krivoschapkin P.V.¹, Krivoschapkina E.F.¹
Edible Chitosan/Spider Silk Food Coating for Fruit
Preservation
1 – ITMO University, St. Petersburg, Russia
2 – Institute of Biology at Irkutsk State University,
Irkutsk, Russia
- 15.55-16.30 Coffee**

July 06, Thursday

Novosibirsk Local time UTC +7

Place: CONFERENCE HALL - 3

Academpark, Nikolaeva St. 12, 2 floor

Evening Session

Chair: Dr. Maxim Kazakov

ORAL PRESENTATIONS

Section III. Applications

16.30-16.45 OP-III-34

Online

Reporter: Dr. Evgeniy Kiselev

Kiselev E.G.^{1,2}, Volova T.G.^{1,2}

Composites of Polyhydroxyalkanoates with Pesticides - a Biodegradable Basis for the Creation of New Generation Preparations for the Protection of Cultivated Plants from Weeds and Phytopathogens

1 – Institute of Biophysics SB RAS Krasnoyarsk, Russia

2 – Siberian Federal University Krasnoyarsk, Russia

16.45-17.00 OP-III-35

Reporter: Andrey Sheshkovas

Sheshkovas A.Z.^{1,2}, Veselovskaya J.V.¹, Rogov V.A.^{1,2}, Kozlov D.V.¹

Absorption of Carbon Dioxide Using Composite Materials Based on Polyethylenimine

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

- 17.00-17.15** **OP-III-36**
Online **Reporter: Elena Rogovenko**
Rogovenko E.S.¹, Fomenko E.V.¹, Gareeva A.S.^{1,2},
Anshits A.G.^{1,2}
**Silica Glass/Mullite Composites Based on Coal Fly
Ash Cenospheres as Effective Gas Separation
Membranes**
*1 – Federal Research Center “Krasnoyarsk Science
Center of Siberian Branch of the Russian Academy of
Sciences”, Institute of Chemistry and Chemical
Technology, Krasnoyarsk, Russia*
2 – Siberian Federal University, Krasnoyarsk, Russia
- 17.15-17.30** **OP-III-37**
Reporter: Dr. Dmitriy Potemkin
Potemkin D.I., Rogozhnikov V.N., Gorlova A.M.,
Shilov V.A., Ruban N.V., Sobyandin V.A., Snytnikov P.V.
**Design of Polyfunctional Composite Catalysts for
Hydrogen Production Reactions**
Boreskov Institute of Catalysis, Novosibirsk, Russia
- 17.30-18.00** **CLOSING CEREMONY**
(Grand Hall)
- 18.00-22.00** **Banquet**
Banquet hall "Teplitsa", Nikolaeva St. 12/2, 3 floor

POSTER PRESENTATIONS

Section I. Synthesis and Structure of Advanced Materials

PP-I-01

Reporter: Sayara Aga-Tagiyeva

Aga-Tagiyeva S.E.¹, Omelyanchik A.S.¹, Magomedov K.E.^{1,2},
Orudzhev F.F.^{1,2}, Rodionova V.V.¹

PEGylated Magnetic Nanoparticles for Water Purification from Organic Dyes

1 – Immanuel Kant Baltic Federal University, Kaliningrad, Russia

2 – Dagestan State University, Makhachkala, Dagestan, Russia

PP-I-02

FLASH-Presentation, Section IC

Reporter: Albert Akimov

Akimov A.S.^{1,2}, Akimov Al.S.¹, Petrenko T.V.¹

Synthesis and Study of the Properties of Catalytic Systems Based on Nanocluster Polyoxometalates

1 – Institute of Petroleum Chemistry SB of the RAS, Tomsk, Russia

2 – National Research Tomsk State University, Tomsk Russia

PP-I-03

Reporter: Dmitriy Alekseev

Alekseev D.V.^{1,2}, Mateyshina Yu.G.^{1,2}

Study of the Physico-Chemical Properties of Composite Solid Electrolytes CsNO₂-Nanodiamonds

1 – Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-04 Online

Reporter: Dr. Envyar Bikyashev

Bikyashev E.A.

Synthesis and Photocatalytic Properties of Nanocomposites Fe₂O₃/C₃N₄ under UV and Visible Light

Southern Federal University, Rostov-on-Don, Russia

PP-I-05 Online

Reporter: Dr. Envyar Bikyashev

Bikyashev E.A.

Effect of Reduction/Nitriding on Structure and Photocatalytic Activity of Tin Dioxide

Southern Federal University, Rostov-on-Don, Russia

PP-I-06

Reporter: Irina Arefina

Arefina I.A., Kosolapova K.D., Ushakova E.V.

Room-Temperature Phosphorescence of Nanocomposites Based on Carbon Dots and Polyvinyl Alcohol

ITMO University, Saint Petersburg, Russia

PP-I-07

FLASH-Presentation, Section IA

Reporter: Dr. Anton Babaev

Babaev A.A., Skurlov I.D., Cherevko S.A., Fedorov A.V.

NIR Emitting Core/Shell PbSe/PbS Nanoplates

PhysNano Department, ITMO University, Saint Petersburg, Russia

PP-I-08

Reporter: Egor Baldin

Baldin E.D., Vorobieva G.A., Kolbanev I.V., Shlyakhtina A.V.

Mechanism of Ln₂MoO₆ (Ln = La, Nd, Sm) Phase Formation from a Mechanically Activated Oxide Mixture

N.N. Semenov Federal Research Center for Chemical Physics, Russian Academy of Sciences, Moscow, Russia

PP-I-09

Reporter: Egor Baldin

Baldin E.D.¹, Lyskov N.V.^{2,3}, Vorobieva G.A.¹, Kolbanev I.V.¹, Karyagina O.K.⁴, Stolbov D.N.⁵, Voronkova V.I.⁶, Shlyakhtina A.V.¹

Synthesis of Hexagonal Nanophases in the La₂O₃ – MO₃ (M = Mo, W) Systems

1 – N.N. Semenov Federal Research Center for Chemical Physics RAS, Moscow, Russia

2 – *Federal Research Center of Problems of Chemical Physics and Medical Chemistry RAS, Moscow region, Chernogolovka, Russia*

3 – *National Research University “Higher School of Economics”, Moscow, Russia*

4 – *Emanuel Institute of Biochemical Physics RAS, Moscow, Russian Academy of Sciences, Russia*

5 – *Department of Chemistry, Lomonosov Moscow State University, Moscow, Russia*

6 – *Department of Physics, Lomonosov Moscow State University, Moscow, Russia*

PP-I-10

FLASH-Presentation, Section IA

Reporter: Dr. Evgeniy Baranov

Baranov E.A.¹, Zamchiy A.O.¹, Lunev N.A.¹, Konstantinov V.O.¹, Merkulova I.E.¹, Morozova M.A.¹, Vorobyov Y.V.²

Study of Au-Induced Crystallization Kinetics of α -SiO_x Thin Films

1 – *Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia*

2 – *Ryazan State Radio Engineering University named after V.F. Utkin, Ryazan, Russia*

PP-I-11

Reporter: Dr. Evgeniy Baranov

Baranov E.A.¹, Zamchiy A.O.¹, Lunev N.A.¹, Konstantinov V.O.¹, Merkulova I.E.¹, Morozova M.A.¹, Nepomnyashchikh V.A.¹, Volodin V.A.²

Thermal Annealing of Au/Al₂O₃/ α -Ge Thin Film Structure

1 – *Kutateladze Institute of Thermophysics SB RAS, Novosibirsk, Russia*

2 – *Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk, Russia*

PP-I-12 Online

Reporter: Dmitry Beloborodov

Beloborodov D.¹, Vishnyakov A.²

Modeling of Interparticle Forces Modified with Mobile Surfactant Chains

1 – *Skolkovo Institute of Science and Technology, Moscow, Russia*

2 – *Moscow State University, Moscow, Russia*

PP-I-13 Online

FLASH-Presentation, Section IB

Reporter: Maxim Borodaevskiy

Borodaevskiy M.M., Dubinin Y.V., Yeletsy P.M., Yakovlev V.A.

Experimental Study of Organic and Inorganic Compound Adsorption on Biochar Samples

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-14 Online

FLASH-Presentation, Section IB

Reporter: Professor Natalia Boroznina

Boroznina N.P., Zaporotskova I.V., Boroznin S.V., Zaporotskov P.A.

Study of the Sensory Interaction of a Modified Bocarbon BC Nanotube with a Carbon Dioxide Molecule

Volgodrad State University, Volgograd, Russia

PP-I-15

FLASH-Presentation, Section IC

Reporter: Andrei Botin

Botin A.A.^{1,2}, Boldushevskii R.E.², Mozhaev A.V.², Ghashghaee M.³,
Nikulshin P.A.^{1,2}

Influence of Support Composition on the HDS/HYD Selectivity of Ni-Zn Sorbents in Reactive Desulfurization of FCC Gasoline

1 – National University of Oil and Gas «Gubkin University», Moscow, Russia

2 – All-Russia Research Institute of Oil Refining, Moscow, Russia

3 – Iran Polymer and Petrochemical Institute, Tehran, Iran

PP-I-16

Reporter: Dmitriy Chepenko

Chepenko D.S., Usmanov R.T., Emelyanov A.I., Pozdnyakov A.S.

Development of a Method for the Synthesis of Water-Soluble Nanocomposites with Carbon Nanoparticles in a Poly-N-Vinylpyrrolidone Matrix

A.E. Favorsky Irkutsk Institute of Chemistry, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russian Federation

PP-I-17

Reporter: Dr. Sergei Cherevko

Cherevko S.A., Vedernikova A.A., Miruschenko M.D.,
Sandzhieva M.A., Arefina I.A., Stepanidenko E.A., Spiridonov I.G.,
Ushakova E.V.

Application of Amphiphilic Carbon Dots for Improvement of Light Harvesting in Optoelectronic Devices

ITMO University, St. Petersburg, Russia

PP-I-18

FLASH-Presentation, Section IC

Reporter: Kirill Dmitruk

Dmitruk K.A.^{1,2}, Mazina O.I.¹, Veselovskaya J.V.¹, Prosvirin I.P.¹,
Ishchenko A.V.¹, Rogov V.A.¹, Pochtar A.A.¹, Bulavchenko O.A.¹,
Netskina O.V.¹

Solvent-Free Solid-State Combustion Synthesis of Nickel Nanoparticles

for CO₂ Methanation

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-19

Reporter: Dr. Nataliya Dorofeeva

Dorofeeva N.V.¹, Kharlamova T.S.¹, Grabchenko M.V.¹, Simonov M.N.²,
Larichev Yu.V.², Salaev M.A.¹, Vodyankina O.V.¹

Cu-Promoted Ni-LaCeO_x/SBA-15 Catalysts for Dry Reforming of Methane and Ethanol Steam Reforming

1 – Tomsk State University, Tomsk, Russia

2 – Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-20 Online

Reporter: Evgeniy Dryuchkov

Dryuchkov E.S., Zaporotskova I.V., Zaporotskov P.A.

Effect of Boron Doping on Sensing Properties of CNTs Functionalized with Nitro Group

Volgograd State University, Volgograd, Russia

PP-I-21 Online

Reporter: Professor Konstantin Dubkov

Semikolenov S.V., Kharitonov M.A., Dubkov K.A.

Unsaturated Polyketones — a New Type of Functionalized Rubbers

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-22

FLASH-Presentation, Section IA

Reporter: Dmitry Dubovtsev

Dubovtsev D.I.¹, Vepreva A.I.¹, Saetova N.S.^{1,2}, Krainova D.A.¹,
Kuzmin A.V.^{1,2}

**Replacement of Al₂O₃ by Y₂O₃ in Aluminosilicate Glass Sealants:
Effect on Properties and Compatibility with Solid Oxide Fuel Cell
Components**

1 – Vyatka State University, Kirov, Russia

*2 – Institute of Solid-State Chemistry and Mechanochemistry,
Novosibirsk, Russia*

PP-I-23

Reporter: Kirill Ershov

Ershov K.S., Bogomolov A.S., Slepneva I.A., Baklanov A.V.

**The Active Oxygen Intermediates Appearing from UV-Irradiation of
Oxygen-Rich TiO₂ Photocatalyst**

*Voevodsky Institute of Chemical Kinetics and Combustion, Novosibirsk,
Russia*

PP-I-24

Reporter: Dr. Elena Fakhrutdinova

Fakhrutdinova E.D., Zinina E.V., Reutova O.A., Svetlichnyi V.A.,
Vodyankina O.V.

**Pt Modification of Dark TiO₂ Prepared by Pulsed Laser Ablation: the
Effect of Precursor Nature and Preparation Method on Photocatalytic
Properties**

Tomsk State University, Tomsk, Russia

PP-I-25**Reporter: Dr. Natalya Garyntseva**Levdansky V.A., Garyntseva N.V., Levdansky A.V.**Solvent-Free Synthesis of Birch Wood Xylan Sulfates***Institute of Chemistry and Chemical Technology SB RAS, FRC KSC SB RAS, Krasnoyarsk, Russia***OP-I-26****Reporter: Yury Gerus**Gerus Y.Y.^{1,2}, Bedilo A.F.¹, Ilyina E.V.¹**Synthesis and Characterization of Carbon-Coated Calcium Aluminate Aerogels***1 – Borekov Institute of Catalysis, Novosibirsk, Russia**2 – Novosibirsk State University, Novosibirsk, Russia***PP-I-27****Reporter: Evgeny Golubev**Lebedev O.V., Golubev E.K., Kurkin T.S., Shevchenko V.G.,

Tikunova E.P., Ozerin A.N.

Aspects of Solid-State Processing of UHMWPE-Based Electrically Conductive Nanocomposites*Enikolopov Institute of Synthetic Polymer Materials Russian Academy of Sciences, Moscow, Russia***PP-I-28 Online****Reporter: Yaroslav Gorbunov**Gorbunov Y.K.^{1,2}, Chaplygin D.A.¹, Fershtat L.L.¹**Synthesis of Novel Arylbitetrazole-Based Energetic Materials***1 – Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia**2 – Lomonosov Moscow State University, Chemistry Department, Moscow, Russia***PP-I-29****Reporter: Aleksandr Gorkusha**Gorkusha A.S.^{1,2}, Pavlova S.N.², Ivanova Y.A.², Gerasimov E.Y.²,Isupova L.A.², Tsybulya S.V.^{1,2}**Synthesis Conditions and Real Structure of $\text{Sr}_{n+1}\text{Ti}_n\text{O}_{3n+1}$ Oxides***1 – Novosibirsk State University, Novosibirsk, Russia**2 – Borekov Institute of Catalysis, Novosibirsk, Russia*

PP-I-30 Online

Reporter: Dr. Dmitriy Bokarev

Paramoshin I.V., Bokarev D.A., Kanaev S.A., Stakheev A.Y.

Correlation between the Activity of Transition Metals Oxides in Ozone Decomposition and O₃-Assisted Catalytic Oxidation of n-C₄H₁₀

Zelinsky Institute of Organic Chemistry, Moscow, Russia

PP-I-31

Reporter: Roman Gulyaev

Gulyaev R.O., Guselnikova O.A., Postnikov P.S.

Selective Separation of Chlorobenzenes by Halogen Bonding in MOF Deposited on Upcycled PET

Research School of Chemistry and Applied Biomedical Sciences, Tomsk Polytechnic University, Tomsk, Russia

PP-I-32 Online

Reporter: Dr. Niyazbek Ibrayev

Ibrayev N., Seliverstova E., Amanzholova G.

Plasmon-Enhanced Luminescence of S,N-Doped Carbon Dots

Institute of Molecular Nanophotonics, Buketov Karaganda University, Karaganda, Kazakhstan

PP-I-33

Reporter: Dr. Ekaterina Ilyina

Ilyina E.V.¹, Yurpalova D.V.², Shlyapin D.A.², Veselov G.B.¹, Shvitsov D.M.¹, Stoyanovskii V.O.¹, Vedyagin A.A.¹

Acetylene Hydrogenation over Pd/MgO Nanocrystalline system: Effect of the Synthesis Route on Catalytic Performance

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Center of New Chemical Technologies BIC, Omsk, Russia

PP-I-34 Online

Reporter: Dr. Yuliya Ivanova

Ivanova Y.A., Isupova L.A.

Influence of Preparation Conditions on Activity of Bulk Co₃O₄-Based Catalysts in the N₂O Decomposition

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-35

FLASH-Presentation, Section IC

Reporter: Dr. Mikhail Ivantsov

Ivantsov M.I.¹, Bulgakov N.S.^{1,2}, Sotnikova A.E.^{1,3}, Krysanova K.O.¹, Kulikova M.V.¹

Composite Materials Based on Ni-Cu-PVA Systems as Catalysts for Production of Natural Gas Synthetic Analog

1 – A.V. Topchiev Institute of Petrochemical Synthesis, RAS, Moscow, Russia

2 – Mendeleev University of Chemical Technology, Moscow, Russia

3 - National University of Oil and Gas «Gubkin University», Moscow, Russia

PP-I-36

FLASH-Presentation, Section IA

Reporter: Aleksandr Kapishnikov

Kapishnikov A.V.^{1,2}, Mironova M.I.², Snytnikov V.N.¹, Geydt P.V.², Volodin A.M.¹

Features of C12A7 Formation from Amorphous Precursor Obtained by Laser Evaporation

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-37

Reporter: Nadezhda Kharchenko

Kharchenko N.A.^{1,2}, Pakharukova V.P.^{1,2}, Gorlova A.M.^{1,2}, Stonkus O.A.¹, Saraev A.A.¹, Rogozhnikov V.N.¹, Potemkin D.I.¹

Structural Analysis of Ru/Ce_{1-x}Zr_xO₂ Catalysts for the Carbon Dioxide Methanation

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-38

FLASH-Presentation, Section IC

Reporter: Dr. Tamara Kharlamova

Timofeev K.L., Morilov D.P., Kharlamova T.S.

NH₂-Modified UiO-66 as Support for Bimetallic PdCu and PdAu Catalysts for 5-Hydroxymethylfurfural Reduction

Tomsk State University, Tomsk, Russia

PP-I-39

Reporter: Dr. Tamara Kharlamova

Kharlamova T.S., Timofeev K.L., Morilov D.P., Vodyankina O.V.

Designing ZrO₂-Supported Bimetallic AuPd Catalysts for 5-Hydroxymethylfurfural Oxidation

Tomsk State University, Tomsk, Russia

PP-I-40

Reporter: Dr. Marina Bukhtiyarova

Bukhtiyarova M.V., Shamanaev I.V., Pakharukova V.P., Pochtar A.A., Bukhtiyarova G.A.

Ammonia Evaporation Method for Synthesis of Nickel-Supported Catalysts with High Ni Dispersion

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-41

Reporter: Dmitry Kogolev

Kogolev D.A., Metalnikova N.M., Postnikov P.S.

Design of Composite with Enhanced Photothermal and Conductive Properties Based on Recycled PET and UiO-66

Tomsk Polytechnic University, Tomsk, Russia

PP-I-42

Reporter: Dr. Ekaterina Komarova

Komarova E.G.¹, Kazantseva E.A.^{1,2}, Akimova E.B.³, Khimich M.A.^{1,2}

Effect of Micro-Arc Oxidation Voltage and Duration on the Morphology, Phase Structure, Chemical Composition of Calcium Phosphate Coatings

1 – Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia

2 – Tomsk State University, Tomsk, Russia

3 – Tomsk Polytechnic University, Tomsk, Russia

PP-I-43 Online

FLASH-Presentation, Section IC

Reporter: Sergei Stepanenko

Stepanenko S.A., Koskin A.P., Alekseeva (Bykova) M.V., Kaichev V.V.,
Yakovlev V.A.

**Nickel-Tin Alloy Catalysts for Liquid Organic Hydrogen Carrier
Dehydrogenation**

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-44

FLASH-Presentation, Section IC

Reporter: Andrey Kotov

Kotov A.V., Vodiankina O.V.

**Pathways to Control the Activity and Selectivity of UiO-66-Based
Catalysts in Cascade Conversion of Polyols**

Tomsk State University, Tomsk, Russia

PP-I-45

Reporter: Elizaveta Kovalenko

Matus E.V.^{1,2}, Kovalenko E.N.^{1,2}, Sukhova O.B.¹, Ismagilov I.Z.¹,
Yashnik S.A.¹, Ushakov V.A.¹, Gerasimov E.Y.¹, Kerzhentsev M.A.¹,
Ismagilov Z.R.^{1,3}

**Design of High-Performance Supported Bimetallic Catalysts for
Hydrogen Production**

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State Technical University, Novosibirsk, Russia

*3 – Federal Research Center of Coal and Coal Chemistry, Kemerovo,
Russia*

PP-I-46

FLASH-Presentation, Section IA

Reporter: Dr. Elena Kozhunova

Sentyurin V.V.¹, Kozhunova E.Yu.^{1,2}, Khokhlov A.R.², Magdesieva T.V.¹

The Study of Aqueous Redox-Active Polymer Microgels

*1 – Chemistry Department, Lomonosov Moscow State University,
Moscow, Russia*

*2 – Physics Department, Lomonosov Moscow State University,
Moscow, Russia*

PP-I-47

Reporter: Dr. Sergey Kransnoborodko

Andreev A.V., Volpyn O.D., Kransnoborodko S.Yu., Vysokikh Yu.E.,
Dronskii R.V.

**Atomically Smooth Nanoscale SiO₂+TiO₂ Film Deposition by
Magnetron Sputtering**

*"Scientific and Technological Center of Unique Instrumentation" of the
Russian Academy of Sciences, Moscow, Russia*

PP-I-48

Reporter: Olga Kruglyakova

Kruglyakova O.V., Yushchenko D.Y., Sergeev E.E., Pai Z.P.,
Khlebnikova T.B.

**Development of a Strategy for the Synthesis of [2,2]-
Paracyclophanes, Precursors of Poly-Para-Xylylen Coatings, Using
High-Performance Catalysts**

Boreshkov Institute of Catalysis, Novosibirsk, Russia

PP-I-49 Online

Reporter: Dr. Arthur Krupnin

Krupnin A.E.^{1,2}, Zakirov A.R.², Krasheninnikov S.V.¹, Sedush N.G.¹,
Chvalun S.N.¹

**Computational and Experimental Investigation of 3D-Printed
Polylactide Laminate Composites' Mechanical Properties**

1 – National Research Centre "Kurchatov Institute", Moscow, Russia

2 – Bauman Moscow State Technical University, Moscow, Russia

PP-I-50 Online

Reporter: Kristina Krysanova

Krysanova K.O.^{1,3}, Sotnikova A.E.², Ivantsov M.I.¹, Grabchak A.A.¹

**Composite CO Hydrogenation Catalysts Based on Lignin and Metal
Salts**

*1 – A.V.Topchiev Institute of Petrochemical Synthesis, RAS (TIPS RAS),
Moscow, Russia*

*2 – National University of Oil and Gas «Gubkin University», Moscow,
Russia*

*3 – Samara State Technical University (Samara Polytech), Samara,
Russia*

PP-I-51 Online

Reporter: Marina Kubanova

Kubanova M.S., Kuriganova A.B., Chernysheva D.V., Smirnova N.V.

Adsorption and Electrooxidation of Dimethyl Ether on Pt/MO_x-C Electrocatalysts

Platov South Russian State Polytechnic University, Novocherkassk, Russia

PP-I-52 Online

FLASH-Presentation, Section IA

Reporter: Dr. Bayan Kurbanova

Kurbanova B.¹, Aimaganbetov K.², Karibayev M.¹, Almas N.¹, Ospanov K.¹, Kuanyshbekov T.³, Akatan K.³, Kabdrakhmanova S.⁴

Formation of Nanochannels by Heavy Ions in Graphene Oxide Reinforced Carboxymethylcellulose Membranes for Proton Exchange Membrane Fuel Cells Applications

1 – Institute of Hydrogen Energy, International Science Complex Astana, Astana, Kazakhstan

2 – Satbayev University, Institute of Physics and Technology, Almaty, Kazakhstan

3 – Sarsen Amanzholov East Kazakhstan University, Ust-Kamenogorsk, Kazakhstan

4 – Satbayev University, Almaty, Kazakhstan

PP-I-53

Reporter: Maria Kurmanova

Kurmanova M.D., Kurmanbaeva K.A., Torbina V.V., Svetlichnyi V.A., Vodyankina O.V.

Selective Oxidation of Glycerol to Lactic Acid on hybrid Pd-Bi@UiO-66-HSO₃ Catalyst

Tomsk State University, Tomsk, Russia

PP-I-54

Reporter: Ekaterina Kurtsevich

Kurtsevich E.A., Kogolev D.A., Postnikov P.S.

Laser-Assisted Carbonization of Surface-Grown Ni-BDC towards Waste-Based Smart Materials

Tomsk Polytechnic University, Tomsk, Russia

PP-I-55

Reporter: Dr. Artem Kuznetsov

Kuznetsov A.B.¹, Zholdas Y.A.², Kokh K.A.¹, Gorelova L.A.³, Sofich D.O.⁴,
Kokh A.E.¹

Synthesis, Growth and Luminescence Properties of Rare Earth Borates $\text{KSrY}(\text{BO}_3)_2 : \text{R}^{3+}$ (R=Ce, Tb, Er)

1 – Sobolev Institute of Geology and Mineralogy SB RAS, Novosibirsk, Russia

2 – Al-Farabi Kazakh National University, Almaty, Kazakhstan

3 – Saint Petersburg State University, Saint Petersburg, Russia

4 – Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russia

PP-I-56

FLASH-Presentation, Section IA

Reporter: Dr. Oleg Lebedev

Lebedev O.V.¹, Golubev E.K.¹, Kurkin T.S.¹, Piskarev M.S.¹,
Goncharuk G.P.¹, Nepomnyashchikh V.V.¹, Yablokov M.Yu.¹,
Shchegolikhin A.N.², Ozerin A.N.¹

Effect of Annealing on the Characteristics of Polymer Nanocomposites

1 – Enikolopov Institute of Synthetic Polymer Materials Russian Academy of Sciences, Moscow, Russia

2 – N. M. Emanuel Institute of Biochemical Physics Russian Academy of Sciences, Moscow, Russia

PP-I-57 Online

Reporter: Chaijun Lee

Chaijun Lee¹, Md Hasan Turabee¹, Jinwoong Jung², Ildoo Chung¹

Synthesis and Characterization of Stretchable Polyurethane through Movable Polyrotaxane-Based Sliding Effect

1 – Department of Polymer Science and Engineering, Pusan National University, Busan, Korea

2 – Dongah Chemical Co., Ltd, Yangsan, Korea

PP-I-58 Online

Reporter: Chaijun Lee

Chaijun Lee¹, Jihyun Lee¹, Jinwoong Jung², Ildoo Chung¹

Synthesis and Characterization of Polyrotaxane based on Mono-6-Tosyl- β -Cyclodextrin

1 – Department of Polymer Science and Engineering, Pusan National University, Busan, Korea

2 – Dongah Chemical Co., Ltd, Yangsan, Korea

PP-I-59 Online

Reporter: Jihyun Lee

JiHyun Lee¹, SuMin Kwak¹, KyungMan Choi², Ildoo Chung¹

Synthesis and Characterization of Flexible and Strong Polyurethane using PPG- β CD-Polyrotaxane as a Chain Extender

1 – Pusan National University, Busan, Korea

2 – Korea Institute of Footwear and Leather Technology, Busan, Korea

PP-I-60 Online

Reporter: Jihyun Lee

JiHyun Lee¹, SuMin Kwak¹, JinWoog Chung², Ildoo Chung¹

Synthesis and Characterization of Highly Stretchable Polyurethane Based on Polyrotaxane Composed of Movable Non-Covalent Bonds

1 – Pusan National University, Busan, Korea

2 – Dongah Chemical Co., Ltd, Yangsan, Korea

PP-I-61 Online

Reporter: Dr. Artem Lobinsky

Kaneva M.V., Tenevich M.I., Lobinsky A.A.

SILD Synthesis of $Mn_3[Fe(CN)_6]_2 \cdot nH_2O$ Nanosheets as Novel 2D Analogue of Prussian Blue for High-Performance Metal-Ion Batteries

loffe Institute, Saint Petersburg, Russia

PP-I-62

Reporter: Svetlana Makarova

Makarova S.V., Bulina N.V., Vinokurova O.B.

Mechanochemical Synthesis of Magnesium Substituted Hydroxyapatite

Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia

PP-I-63

Reporter: Tatiana Maksimova

Maksimova T.A.^{1,2}, Popov A.A.², Varygin A.D.^{2,3}, Shvtsov D.M.^{1,4},
Bauman Y.I.¹, Mishakov I.V.^{1,3}, Shubin Y.V.^{2,3}, Vedyagin A.A.¹

Microdispersed Ni_{1-x}Sn_x Alloys as Catalysts for Synthesis of Carbon Nanofibers

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

3 – Novosibirsk State University, Novosibirsk, Russia

4 – Novosibirsk State Technical University, Novosibirsk, Russia

PP-I-64 Online

FLASH-Presentation, Section IC

Reporter: Dr. Mariia Markova

Markova M.E., Stepacheva A.A., Matveeva V.G., Sulman M.G.

Effect of the Modifying Ruthenium Additive on the Structure and Activity of Iron-Containing Catalysts

Tver State Technical University, Tver, Russia

PP-I-65

FLASH-Presentation, Section IA

Reporter: Dr. Mikhail Matsko

Matsko M.A.¹, Panchenko V.N.¹, Shundrina I.K.², Zakharov V.A.¹

Novel Polyethylene Composite Materials, Obtained via *In-Situ* Ethylene Polymerization over the Titanium-Magnesium Catalyst Supported on Nano-Oxides and Carbon Nano-Materials

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry, Novosibirsk, Russia

PP-I-66

Reporter: Dr. Ekaterina Matus

Matus E.V., Kerzhentsev M.A., Ismagilov I.Z., Nikitin A.P., Sozinov S.A., Ismagilov Z.R.

Finely Controlled Nanocatalysts for Coal Mine Methane Conversion

Federal Research Center of Coal and Coal Chemistry, Kemerovo, Russia

PP-I-67

FLASH-Presentation, Section IA

Reporter: Aleksandr Nashivochnikov

Nashivochnikov A.A., Kostyukov A.I., Snytnikov V.N.

Laser Synthesis and Study of the Optical Properties of $ZrO_2:Eu^{3+}$ Depending on the Particle Size

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-68

FLASH-Presentation, Section IC

Reporter: Semyon Nikulaichev

Nikulaichev S.N., Kurmanbayeva K., Torbina V.V., Vodyankina O.V.

Tin-Modified Zr-UiO-66 Metal-Organic Framework as a Catalyst for Cascade Conversion of Dihydroxyacetone to Lactic Acid

Tomsk State University, Tomsk, Russia

PP-I-69 Online

Reporter: Seung-Joon Oh

Seung-Joon Oh, Suk-kyun Ahn

Tailored Mechanical Property of Liquid Crystal Elastomer Fiber Actuator

School of Chemical Engineering, Pusan National University, Busan, Republic of Korea

PP-I-70

FLASH-Presentation, Section IA

Reporter: Dr. Artem Okulov

Okulov A.V.¹, Korobov Yu.S.¹, Stepchenkov A.K.¹, Makarov A.V.¹, Iusupova O.S.¹, Kuznetsova T.V.¹, Korkh Yu.V.¹, Kharanzhevskiy E.V.²

Microhardness Evolution of Laser-Deposited Equiatomic FeNiCr Coatings *In Situ* Alloyed with B_4C

1 – Institute of Metal Physics, Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russia

2 – Udmurt State University, Izhevsk, Russia

PP-I-71 Online

Reporter: Dr. Mikhail Parfenov

Parfenov M.V.^{1,2}, Kazakova M.A.^{1,2}, Selyutin A.G.^{2,3}, Ishchenko A.V.^{1,2}, Kazakov M.O.^{1,2}

Graphitization as a Way to Stabilize Textural Characteristics of Alumina under Hydrothermal Conditions

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – Synchrotron Radiation Facility SKIF, Boreskov Institute of Catalysis, Kol'tsovo, Russia

PP-I-72 Online

Reporter: Dr. Svetlana Pavlova

Pavlova S.N.¹, Gorkusha A.S.², Tsybulya S.V.^{1,2}, Nartova A.V.¹, Rogov V.A.¹, Isupova L.A.¹

Ln/Fe-Doped Sr₂TiO₄ Layered Perovskites: Effect of Synthesis Method and Composition on Physical-Chemical and Catalytic Properties in Oxidative Coupling of Methane

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-73 Online

FLASH-Presentation, Section IA

Reporter: Professor Viktoria Petropavlovskaya

Petropavlovskii K.S., Petropavlovskaya V.B., Novicpenkova T.B., Zavadko M.Y., Sulman M.G.

Coal-Firing Waste to Nanocomposites for 3D Printing

Tver State Technical University, Tver, Russia

PP-I-74

FLASH-Presentation, Section IA

Reporter: Denis Petrukhin

Petrukhin D.A., Salnikov V.D., Omelyanchik A.S., Ershov P.A., Rodionova V.V.

Effect of Bismuth Ferrite Concentration on Magnetic and Structural Properties of PVDF-Based Composites

Immanuel Kant Baltic Federal University, Kaliningrad, Russia

PP-I-75

Reporter: Dr. Pavel Plyusnin

Plyusnin P.E.¹, Shubin Yu.V.¹, Asanov I.P.¹, Kenzhin R.M.²,
Stoyanovskii V.O.², Vedyagin A.A.²

Effect of Ruthenium Addition to Palladium-Rhodium Nanoalloys on Their Catalytic Activity in CO Oxidation

1 – Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia

2 – Borekov Institute of Catalysis, Novosibirsk, Russia

PP-I-76

Reporter: Arina Potylitsyna

Potylitsyna A.R.¹, Bauman Y.I.¹, Ozerova A.M.¹, Tayban E.S.¹,
Lipatnikova I.L.¹, Netskina O.V.¹, Vedyagin A.A.¹, Shubin Y.V.²,
Mishakov I.V.¹

Synthesis of Functionalized Carbon Nanomaterials from Organochlorine Compounds over Ni-Catalysts and Their Possible Application

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

PP-I-77

Reporter: Professor Gennady Pribytkov

Pribytkov G.A., Baranovskiy A.V. Korthova V.V., Firsina I.A.,
Krivopalov V.P.

Exothermic Reactions in Mechanoactivated Ti-Fe Powder Mixes

Institute of Strength Physics and Materials Sciences, Tomsk, Russia

PP-I-78 Online

Reporter: Dr. Tatiana Prokhorova

Orlov V.M., Prokhorova T.Yu., Kryzhanov M.V.

Synthesis of Nanoporous Materials by Magnesium-Thermal Reduction of Oxide Compounds of Tantalum and Niobium

Tananaev Institute of Chemistry - Subdivision of the Federal Research Centre «Kola Science Centre of the Russian Academy of Sciences», Apatity, Russia

PP-I-79 Online

Reporter: Artur Psyanchin

Psyanchin A.A., Zakharova E.M., Zakharov V.P.

The Effect of Polyethylene with Grafted Maleic Anhydride on the Properties of Secondary Polypropylene with the Inclusion of Aluminosilicate Microspheres

Ufa University of Science and Technology, Ufa, Russia

PP-I-80

FLASH-Presentation, Section IA

Reporter: Alexandra Rasmetyeva

Rasmetyeva A.V.¹, Ustinova M.I.², Kukharensko A.I.¹, Sarychev M.N.¹, Troshin P.A.², Zhidkov I.S.¹

The Effect of Partial Lead Substitution on the Stability of Hybrid Perovskites under Powerful Electron Fluxes

1 – Ural Federal University, Ekaterinburg, Russia

2 – FRC PCP and MC RAS, Chernogolovka, Russia

PP-I-81

Reporter: Professor Tatiana Rostovshchikova

Rostovshchikova T.N.¹, Shilina M.I.¹, Krotova I.N.¹, Gurevich S.A.², Yavsin D.A.², Udalova O.V.³, Veselov G.B.⁴, Vedyagin A.A.⁴

Advantages of Laser Electrodispersion for the Synthesis of CO Oxidation Catalysts with Low Loading of Precious Metals

1 – Lomonosov Moscow State University, Moscow, Russia

2 – Ioffe Institute, RAS, Saint Petersburg, Russia

3 – Semenov Federal Research Center for Chemical Physics, RAS, Moscow, Russia

4 – Borekov Institute of Catalysis, Novosibirsk, Russia

PP-I-82 Online

Reporter: Aigul Sabirova

Sabirova A.F.^{1,2}, Kadirov D.M.², Minzanova S.T.^{1,2}, Morozov V.I.¹, Nizameev I.R.^{1,2}, Drobyshev S.V.², Batulin R.G.³, Karakhanov A.T.³, Gafurov M.R.³, Kadirov M.K.^{1,2}

Magnetic Resonance and Magnetism of Carbonized Sodium Pectate Nickel Complex

1 – Arbuzov Institute of Organic and Physical Chemistry, Kazan, Russia

2 – Kazan National Research Technological University, Kazan, Russia

3 – Kazan Federal University, Kazan, Russia

PP-I-83 Online

FLASH-Presentation, Section IA

Reporter: Professor Vladislav Sadykov

Sadykov V.A.¹, Sadovskaya E.M.¹, Bespalko Yu.N.¹, Ereemeev N.F.¹,
Mikhailenko M.A.², Bryazgin A.A.³, Korobeynikov M.V.³

Radiation Thermal Sintering of Oxide and Composite Materials for Hydrogen Energy

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Institute of Solid State Chemistry and Mechanochemistry, Novosibirsk, Russia

3 – Budker Institute of Nuclear Physics, Novosibirsk, Russia

PP-I-84

FLASH-Presentation, Section IA

Reporter: Anton Sagun

Sagun A.I.¹, Toropkov N.E.¹, Lerner M.I.¹, Tkachev D.A.²

Development of a Thermoplastic Ceramic Feedstock for FGF 3D-Printing

1 – Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia

2 – Tomsk State University, Tomsk, Russia

PP-I-85 Online

Reporter: Dr. Natalya Sankova

Sankova N.N.¹, Shestakova D.O.^{1,2}, Parkhomchuk E.V.^{1,2}

Synthesis of Porous Materials Based on Poly(styrene-co-divinylbenzene) from High Internal Phase Emulsions

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-86 Online

FLASH-Presentation, Section IA

Reporter: Dr. Evgeniya Seliverstova

Ibrayev N., Seliverstova E., Kanapina A.

Influence of the Solvent on the Dynamics of Excited Electrons in Plasmonic Nanoparticles of Silver

Institute of Molecular Nanophotonics, Buketov Karaganda University, Karaganda, Kazakhstan

PP-I-87

FLASH-Presentation, Section IA

Reporter: Polina Serebrennikova

Serebrennikova P.S.^{1,2}, Lagunova V.I.², Zadesenets A.V.²,
Gromilov S.A.^{1,2}

Triple Alloys of the Pt-Mo-W System as the Thermal Decomposition Products of Complex Salts

1 – Novosibirsk State University, Novosibirsk, Russia

2 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

PP-I-88

Reporter: Dr. Artem Sergeev

Sergeev A.V.^{1,2}, Kondratyeva Y.¹

Atomistic Perspective on the Lithium Self-Diffusion and Crystallite Growth Using Machine Learning Interatomic Potential

1 – Semenov Federal Research Center for Chemical Physics, Moscow, Russia

2 – Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia

PP-I-89

Reporter: Dr. Marina Shilina

Shilina M.I.¹, Ivanin I.A.¹, Krotova I.N.¹, Udalova O.V.²

Synergistic Nanostructured Catalysts of CO Oxidation Based on Co/Ce and Cu/Ce Modified Zeolites ZSM-5

1 – Lomonosov Moscow State University, Moscow, Russia

2 – Semenov Federal Research Center for Chemical Physics, RAS, Moscow, Russia

PP-I-90

Reporter: Nikolai Shilov

Shilov N.R., Sobolev K.V., Omelyanchik A.S., Magomedov K.E.,
Rodionova V.V.

Development of Ti₃C₂T_x+Fe₃O₄ Nanocomposite Materials for Water Remediation

Immanuel Kant Baltic Federal University, Kaliningrad, Russia

PP-I-91

Reporter: Professor Anna Shlyakhtina

Gorshkov N.V.^{1,2}, Baldin E.D.¹, Rassulov V.A.³, Karyagina O.K.⁴,
Stolbov D.N.⁵, Shlyakhtina A.V.¹

**Ionic Conductivity, Dielectric Properties and Spectroscopic
Characterization of “Stuffed” $Tm_2(Ti_{2-x}Tm_x)O_{7-x/2}$ ($x = 0, 0.1, 0.18, 0.28,$
0.74) Pyrochlores**

*1 – N.N. Semenov Federal Research Center for Chemical Physics, Russian
Academy of Sciences, Moscow, Russia,*

2 – Yu.A. Gagarin Saratov State Technical University, Saratov, Russia

*3 – N.M. Fedorovsky All-Russian Scientific Research Institute of Mineral
Raw Materials, Moscow, Russia*

4 – Emanuel Institute of Biochemical Physics RAS, Moscow, Russia

*5 – Department of Chemistry, Lomonosov Moscow State University,
Moscow, Russia*

PP-I-92

Reporter: Dr. Ekaterina Shuvarakova

Shuvarakova E.I., Bedilo A.F.

**Synthesis and Characterisation of Alumina and Calcium Aluminate
with Deposited Sulfates**

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-93 Online

Reporter: Professor Oleg Sidorov

Sidorov O.I.¹, Belyakov D.A.¹, Dubkov K.A.², Semikolenov S.V.²

**Frost-Resistant Polymeric Material Based on Unsaturated Polyketone
and Chlorine-Containing Epoxy Oligomers**

*1 – Soyuz Federal Center for Dual-Use Technologies, Dzerzhinskyi,
Moscow oblast, Russia*

2 – Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-94 Online

Reporter: Dr. Irina Simentsova

Kovalenko O.N., Simentsova I.I., Paukshtis E.A.

**Support Properties in Applied to the Formation of Sulfur Dioxide
Oxidation Catalysts**

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-95

Reporter: Anastasia Sotnikova

Sotnikova A.E., Ivantsov M.I., Krysanova K.O.

Thermocatalytic Decomposition of Methane on Ni/PVA Composites Promoted with MgO

A.V. Topchiev Institute of Petrochemical Synthesis, RAS (TIPS RAS), Moscow, Russia

PP-I-96 Online

Reporter: Dr. Evgeniia Stepanidenko

Ondar S.O.^{1,2}, Vedernikova A.A.¹, Miruschenko M.D.¹, Badrieva Z.F.¹, Brui E.A.¹, Stepanidenko E.A.¹

Gd-Doped Carbon Nanodots as a Promising Contrast Agent for MRI

1 – ITMO University, Saint Petersburg, Russia

2 – Saint-Petersburg State Institute of Technology, Saint Petersburg, Russia

PP-I-97 Online

FLASH-Presentation, Section IA

Reporter: Professor Mikhail Sulman

Chalov K.V., Kosivtsov Yu.Yu., Lugovoy Yu.V., Sulman M.G.

The Use of Ash and Slag Waste as Components of Building Materials

Tver State Technical University, Tver, Russia

PP-I-98 Online

FLASH-Presentation, Section IA

Reporter: Dr. Mikhail Syrokvashin

Syrokvashin M.M.

Thermoelectric Properties and Valence Band Electronic Structure of Ln_xMn_{1-x}S Solid Solutions

Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia

PP-I-99

Reporter: Yulia Timkina

Timkina Yu.A.¹, Batueva E.A.¹, Skurlov I.D.¹, Litvin A.P.², Ushakova E.V.¹

Synthesis and Investigation of Optical Properties of Chiral CsPb(Cl,Br)₃ Perovskite Nanocrystals

1 – International Research and Education Centre for Physics of Nanostructures, ITMO University, Saint Petersburg, Russia

2 – Key Laboratory of Automobile Materials MOE, School of Material Science & Engineering, Jilin University, Changchun, China

PP-I-100 Online

Reporter: Dr. Elena Udoratina

Udoratina E.V., Sitnikov P.A., Legki Ph.V., Druz Yu.I., Ushakov N.V., Torlopov M.A.

Fabrication, Characterization and Biodegradability of Oil-in-Water Pickering Emulsions Stabilized by Cellulose Nanocrystals

Institute of Chemistry of Komi Science Centre of the Ural Branch of the Russian Academy of Sciences, Syktyvkar, Russia

PP-I-101

Reporter: Ruslan Usmanov

Bolgova Yu.I., Usmanov R.T., Chepenko D.S., Trofimova O.M., Pozdnyakov A.S.

Functional Polysilsesquioxanes Containing Imidazole/Triazole Side-Chain Groups

A.E. Favorsky Irkutsk Institute of Chemistry, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russian Federation

PP-I-102 Online

Reporter: Kseniya Verevkina

Verevkina K.Yu., Verevkin I.Yu., Belonenko M.B.

Light Bullets in a Disordered System of Carbon Nanotubes

Federal State Autonomous Educational Institution of Higher Education "Volgograd State University", Volgograd, Russia

PP-I-103**Reporter: Grigory Veselov**

Veselov G.B.¹, Ilyina E.V.¹, Shivtsov D.M.^{1,2}, Stoyanovskii V.O.¹,
Vedyagin A.A.¹

**Highly Dispersed Pd/MgO Catalysts Based on Nanocrystalline MgO
Prepared via Sol-Gel Method**

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State Technical University, Novosibirsk, Russia

PP-I-104 Online**Reporter: Nikita Vlasenko**

Vlasenko N.E., Lermontov S.A., Sipyagina N.A., Malkova A.N.

SiO₂ Aerogels Modified by Organic Chelating Groups

IPAC RAS, Chernogolovka, Russia

PP-I-105**Reporter: Dr. Maxim Vlasov**

Vlasov M.I.¹, Tymbarenko D.M.², Pershina S.V.¹

Local Structure of LiGe₂(PO₄)₃ Glasses and Glass-Ceramics

*1 – Institute of High-Temperature Electrochemistry UB RAS,
Yekaterinburg, Russia*

2 – Lomonosov Moscow State University, Moscow, Russia

PP-I-106**Reporter: Anastasia Zarubina**

Zarubina A.O., Zhinzhiro V.A., Uflyand I.E.

**Preparation of Silver Nanocomposites by Thermolysis of Metal-
Containing Monomers of Unsaturated Acids**

*Department of Chemistry, Southern Federal University, Rostov-on-Don,
Russia*

PP-I-107

Reporter: Dr. Ivan Zhidkov

Zhidkov I.S.^{1,2}, Rasmetyeva A.V.¹, Ozerova V.V.³, Sarychev M.N.¹,
Troshin P.A.³, Kurmaev E.Z.^{1,2}

**The Effect of A-Cation Substitution on the Stability of Hybrid
Perovskites under Powerful Electron Fluxes**

1 – Ural Federal University, Yekaterinburg, Russia

2 – Institute of Metal Physics UB RAS, Yekaterinburg, Russia

3 – FRC PCP and MC RAS, Chernogolovka, Russia

PP-I-108 Online

Reporter: Nikita Zhirov

Zhirov N.¹, Akimov A.S.^{1,2}, Zhuravkov S.P.³

**Synthesis and Properties of Bicomponent Complex Systems Based on
Organic Acid and Polyoxometalate Compound**

1 – Institute of Petroleum Chemistry, Tomsk, Russia

2 – Tomsk State University, Tomsk, Russia

3 – Tomsk Polytechnic University, Tomsk, Russia

PP-I-109 Online

Reporter: Dr. Aleksey Zhuzhgov

Kruglyakov V.Yu., Zhuzhgov A.V., Protsenko R.S., Isupova L.A.

**The Structural-Mechanical Properties of the Molding Pastes and the
Granular Magnesium Aluminates Depending on the Preparation
Conditions**

Boreskov Institute of Catalysis, Novosibirsk, Russia

Section II. Biomaterials and Bionanocomposites

PP-II-01

FLASH-Presentation, Section II

Reporter: Elena Abyzova

Abyzova E.G., Dogadina E.M., Petrov I.S., Bolbasov E.N., Vorobev A.O.,
Plotnikov E.V., Sheremet E.S., Rodriguez R.D.

**Laser Processing for Biodegradable Composites Based on Reduced
Graphene Oxide and Polymer**

Tomsk Polytechnic University, Tomsk, Russia

PP-II-02 Online

FLASH-Presentation, Section II

Reporter: Dr. Galina Aleksandrova

Aleksandrova G.P.¹, Sapozhnikov A.N.²

Design and Structural Self-Organization of Water-Soluble Nanobiocomposites of Ferrite and Bismuth Oxide with a Polysaccharide Matrix

1 – Irkutsk Institute of Chemistry, Irkutsk, Russia

2 – Irkutsk Institute of Geochemistry, Irkutsk, Russia

PP-II-03 Online

FLASH-Presentation, Section II

Reporter: Soojeong Choi

Soojeong Choi, Seo Eun Oh, Ildoo Chung

Synthesis and Characterization of L-lysine Polyurethane (LPU) Nanoparticles for Drug Delivery System

Department of Polymer Science and Engineering, Pusan National University, Busan, Korea

PP-II-04 Online

FLASH-Presentation, Section II

Reporter: Soojeong Choi

Soojeong Choi, Seo Eun Oh, Ildoo Chung

Synthesis and Characterization of L-Threonine Polyurethane (LTHU) Nanoparticles for Drug Delivery System

Department of Polymer Science and Engineering, Pusan National University, Busan, Korea

PP-II-05 Online

FLASH-Presentation, Section II

Reporter: Daria Gerasimova

Gerasimova D.S., Moskalyuk O.A.

Comparison of Mechanical Properties of Modern Polymer Composites Used for Bone Tissue Regeneration

Laboratory of Polymer and Composite Materials «SmartTextiles», IRC–X-ray Coherent Optics, Immanuel Kant Baltic Federal University, Kaliningrad, Russia

PP-II-06

FLASH-Presentation, Section II

Reporter: Dr. Olga Golovanova

Golovanova O.A.

The Role of Amino Acids in the Formation of Modifications of Calcium Carbonate Obtained from Bile Solution

Department of Inorganic Chemistry of Dostoevsky Omsk State University, Omsk, Russia

PP-II-07 Online

FLASH-Presentation, Section II

Reporter: Chaeyoung Jeon

Chaeyoung Jeon, Ildoo Chung

Fabrication and Properties of 3D Printable Dental Composite Containing Catechol Polymer

Department of Polymer Science and Engineering, Pusan National University, Busan, Korea

PP-II-08 Online

FLASH-Presentation, Section II

Reporter: Chaeyoung Jeon

Chaeyoung Jeon, Sujin Kim, Ildoo Chung

Fabrication and Properties of PEKK-Based Hybrid 3D Printable Dental Composite Resin

Department of Polymer Science and Engineering, Pusan National University, Busan, Korea

PP-II-09 Online

FLASH-Presentation, Section II

Reporter: Dr. Inna Klimenko

Klimenko I.V.¹, Astakhova T.Yu.¹, Timokhina E.N.¹, Lobanov A.V.^{1,2}

Aluminum Phthalocyanine Chloride Aggregation in Aqueous and Aqueous-Organic Media

1 – Emanuel Institute of Biochemical Physics of Russian Academy of Sciences, Moscow, Russia

2 – Moscow Pedagogical State University, Moscow, Russia

PP-II-10

Reporter: Lyubov Nevolina

Nevolina L.A., Koroleva O.N.

Structural Features and Crystallization of Na₂O-Cs₂O-B₂O₃-SiO₂ Glasses for Immobilization

South Urals Federal Research Center of Mineralogy and Geoecology of the Urals Branch of the Russian Academy of Sciences, Miass, Russia

PP-II-11 Online

FLASH-Presentation, Section II

Reporter: Dr. Mikhail Novikov

Novikov M.A.

Development of New Approaches to Assessing the Safety of Nanocomposites

FSBSI East-Siberian Institute of Medical and Ecological Research, Angarsk, Russia

PP-II-12 Online

FLASH-Presentation, Section II

Reporter: Dr. Petr Pantyukhov

Pantyukhov P.V.^{1,2}, Shelenkov P.G.¹, Khaidarov B.B.^{2,3}, Popov A.A.^{1,2}

Evaluation of Biocomposites' Defectiveness, the Effect of Defectiveness on Water Absorption

1 – Emanuel Institute of Biochemical Physics RAS, Moscow, Russia

2 – Plekhanov Russian University of Economics, Moscow, Russia

3 – National University of Science and Technology "MISIS", Moscow, Russia

PP-II-13

FLASH-Presentation, Section II

Reporter: Dr. Konstantin Prosolov

Prosolov K.A.¹, Luginin N.A.^{1,2}, Khimich M.A.¹, Lastovka V.V.¹,
Glukhov I.A.¹, Sharkeev Y.P.^{1,2}

Antibacterial Calcium Phosphate Coatings Prepared by RF Magnetron Sputtering from Sintered Powders: Structure and Properties

1 – Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia

2 – National Research Tomsk Polytechnic University, Tomsk, Russia

PP-II-14

Reporter: Daria Shestakova

Shestakova D.O.^{1,2}, Sankova N.N.¹, Parkhomchuk E.V.^{1,2}

Synthesis of Magnetic Polymer Microspheres for Bio-Medical Applications

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-II-15 Online

FLASH-Presentation, Section II

Reporter: Ivetta Varyan

Varyan I.A.^{1,2}, Zinovyev S.V.³, Kolesnikova N.N.^{1,2}, Popov A.A.^{1,2}

Investigation of Changes in the Physicochemical Properties of Multi-Tonnage Packaging Polymer Compositions on the Example of Low Density Polyethylene in the Process of Biodegradation

1 – Plekhanov Russian University of Economics, Moscow, Russia

2 – Emanuel Institute of Biochemical Physics RAS, Moscow, Russia

3 – Lomonosov Moscow State University, Moscow, Russia

PP-II-16 Online

FLASH-Presentation, Section II

Reporter: Ivetta Varyan

Tyubaeva P.M.^{1,2}, Varyan I.A.^{1,2}, Olkhov A.A.^{1,2}, Popov A.A.^{1,2}

Fibrous Biomedical Materials Based on Polyoxybutyrate with Additives

1 – Plekhanov Russian University of Economics, Moscow, Russia

2 – Emanuel Institute of Biochemical Physics RAS, Moscow, Russia

PP-II-17

FLASH-Presentation, Section II

Reporter: Professor Long Yu

Zerun Zhan¹, Huifang Xie², Litao Ma², Long Yu^{1,2}

Development of Starch/Cellulose Nano-Fibre Composites

1 – Centre for Polymers from Renewable Resources, SFSE, SCUT, Guangzhou, China

2 – Institute of Chemistry, Henan Academy of Sciences, Zhengzhou, China

PP-II-18 Online

FLASH-Presentation, Section II

Reporter: Daria Zvonareva

Zaporotskova I.V., Zvonareva D.A., Chesheva M.F.

Study of the Possibility of Creating a Drug Coating for Biliary Stents Based on the Copolymer "Polylactic Acid-Polycaprolactone" Modified with Carbon Nanotubes and Doxorubicin

Volgograd State University, Volgograd, Russia

PP-II-19 Online

Reporter: Dr. Lubov Rachkovskaya

Rachkovskaya L.N.¹, Volodin A.M.², Rachkovsky E.E.¹,

Kruglyakov V.Yu.², Yastrebova E.S.³, Smagin A.A.², Nimaev V.V.¹

New Carbon Mineral Sorbents for Medicine

1 – Research Institute of Clinical and Experimental Lymphology, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia

2 – Boreskov Institute of Catalysis, Novosibirsk, Russia

3 – Voevodsky Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia

PP-II-20

FLASH-Presentation, Section II

Reporter: Anna Motorzhina

Motorzhina A.V., Shilov N.R., Davkina A.V., Anikin A.A., Murzin D.V., Levada K.V., Sobolev K.V.

Synthesis and characterization of Ti₃C₂T_x MXenes for Photothermal therapy

Immanuel Kant Baltic Federal University, Kaliningrad, Russia

Section III. Applications

PP-III-01

FLASH-Presentation, Section III

Reporter: Roman Alekseev

Alekseev R.O., Savinkov V.I., Sigaev V.N.

High Lanthanum Oxide Content Glasses for Optical Applications

Mendeleev University of Chemical Technology, Moscow, Russia

PP-III-02 Online

FLASH-Presentation, Section III

Reporter: Dr. Alexey Bykov

Bykov A.V., Demidenko G.N., Nikoshvili L.Zh., Pinyukova A.O.

Metal Cluster and Nanoparticle Mobility in Aromatic Polymer Network of Styrene-Divinylbenzene

Tver State Technical University, Tver, Russia

PP-III-03 Online

Reporter: Dr. Nadim Davletkildiev

Davletkildiev N.A.¹, Lobov I.A.¹, Mosur E.Yu.¹, Fayazov R.A.²

Synthesis and Characterization of Polyaniline Doped with Copper Ions as Sensor Material for Non-Enzymatic Determination of Carbohydrates in Liquids

1 – Omsk Scientific Center SB RAS, Omsk, Russia

2 – Dostoevsky Omsk State University, Omsk, Russia

PP-III-04

FLASH-Presentation, Section III

Reporter: Dr. Vasily Evtushok

Evtushok V.Yu., Larionov K.P., Lopatkin V.A., Stonkus O.A., Kholdeeva O.A.

The Role of Basic Sites in H₂O₂-Based Oxidations over UiO-66

Borekov Institute of Catalysis, Novosibirsk, Russia

PP-III-05 Online

Reporter: Dr. Yuliya Glyaznetsova

Glyaznetsova Yu.S., Zueva I.N., Chalaya O.N., Lifshits S.H.

Monitoring the Remediation of Oil-Contaminated Permafrost Soils on the Territory of the Tank Farm

Institute of Oil and Gas Problems, Siberian Branch of the RAS, Yakutsk, Russia

PP-III-06 Online

Reporter: Young-Kuk Hong

Young-Kuk Hong, Seung-Hyeok Kim, Sang-Young Lee

Flexible Mn-Rich Cathode for High Energy Density Lithium Metal Batteries

Yonsei University, Seoul, Republic of Korea

PP-III-07 Online

FLASH-Presentation, Section III

Reporter: Dr. Levan Ichkitidze

Ichkitidze L.P.^{1,2}, Filippova O.V.², Galechian G.Yu.²,

Gerasimenko A.Yu.^{1,2}, Telyshev D.V.^{1,2}, Selishchev S.V.¹

Remote Detection of Magnetic Nanoparticles in a Biological Medium

1 – Institute of Biomedical Systems, National Research University of Electronic Technology, Zelenograd, Moscow, Russia

2 – Institute for Regenerative Medicine, Sechenov First Moscow State Medical University (Sechenov University), Moscow, Russia

PP-III-08 Online

Reporter: Dr. Levan Ichkitidze

Ichkitidze L.P.^{1,2}, Lysenko A.Yu.², Savelev M.S.^{1,2}, Selishchev S.V.²

Thin-Film Flat Superconducting Magnetic Field Concentrator

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2 – Institute for Regenerative Medicine, Sechenov First Moscow State Medical University (Sechenov University), Moscow, Russia

PP-III-09

FLASH-Presentation, Section III

Reporter: Dr. Alexander Khudozhitkov

Khudozhitkov A.E.^{1,2}, Kolokolov D.I.^{1,2}, Sheshkovas A.Z.^{1,2},

Veselovskaya J.V.¹

Impact of CO₂ Absorption on Mobility of [EMIm][Gly] Confined in Silica Gel

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-III-10 Online

FLASH-Presentation, Section III

Reporter: Dr. Lidiya Kibis

Kibis L.S.¹, Zadesenets A.V.², Korobova A.N.¹, Kardash T.Yu.¹, Slavinskaya E.M.¹, Stonkus O.A.¹, Korenev S.V.², Podyacheva O.Yu.¹, Boronin A.I.¹

Pd-Ce-O_x/MWCNTs and Pt-Ce-O_x/MWCNTs Composite Materials for Low-temperature Oxidation of CO and CH₄

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

PP-III-11 Online

Reporter: Dr. Lidiya Kibis

Kibis L.S.¹, Svintsitskiy D.A.¹, Ovsyuk I.Yu.^{1,2}, Romanenko A.V.¹, Kardash T.Yu.¹, Stonkus O.A.¹, Slavinskaya E.M.¹, Boronin A.I.¹

Tuning the Activity and Selectivity of Pt/TiO₂ Ammonia Slip Catalysts by Surface Modification

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Russia

PP-III-12 Online

Reporter: Dr. Hong-I Kim

Kim H.-I., Lee S.-Y.

Eutectic Electrolytes for Low-Temperature Aqueous Lithium-Ion Batteries

Yonsei University, Seoul, Republic of Korea

PP-III-13 Online

Reporter: Dr. Jung-Hui Kim

Jung-Hui Kim¹, Ju-Myung Kim², Sang-Young Lee¹

Redox-Homogeneous, Gel Electrolyte-Embedded High-Mass-Loading Cathodes for High-Energy Lithium Metal Batteries

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2 – Energy and Environment Directorate, Pacific Northwest National Laboratory, Richland, WA, United State of America

PP-III-14 Online

FLASH-Presentation, Section III

Reporter: Sang-Woo Kim

Sang-Woo Kim¹, Kwon-Hyung Lee¹, Yong-Hyeok Lee³, Won-Jae Youe²,
Jae-Gyoung Gwon², Sang-Young Lee³

**Transparent and Multi-Foldable Nanocellulose Paper
Microsupercapacitors**

*1 – Department of Energy Engineering, School of Energy and Chemical
Engineering, Ulsan National Institute of Science and Technology
(UNIST), Ulsan, Republic of Korea*

*2 – Department of Forest Products, National Institute of Forest Science,
Seoul, Republic of Korea*

*3 – Department of Chemical and Biomolecular Engineering, Yonsei
University, Seoul, Republic of Korea*

PP-III-15 Online

Reporter: Dr. Seung-Hyeok Kim

Kim S.H., Kim N.Y., Lee S.Y.

Flexible Lithium Metal Batteries Based on Polymeric Hosts

Yonsei University, Seoul, Republic of Korea

PP-III-16 Online

Reporter: Won-Yeong Kim

Won-Yeong Kim¹, Hong-I Kim¹, Kyung Min Lee², Stefano Passerini³,
Sang Kyu Kwak², Sang-Young Lee¹

**Demixing the Miscible Liquids: Toward Biphasic Battery Electrolytes
Based on the Kosmotropic Effect**

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University, Seoul, Republic of Korea*

*2 – Department of Energy Engineering, School of Energy and Chemical
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(UNIST), Ulsan, Republic of Korea*

3 – Helmholtz Institute Ulm (HIU), Ulm, Germany

PP-III-17

Reporter: Aleksandra Kokorina

Kokorina A.I.

Analysis of the Product of Processing Tungsten Ore Concentrate by the Electric Arc Discharge Method in Open Air

National Research Tomsk Polytechnic University, Tomsk, Russia

PP-III-18

Reporter: Tatiana Kolesnikova

Kolesnikova T.S., Uflyand I.E.

Application of Silver Metal–Polymer Nanocomposites in the Analysis of Iodide Ions

Southern Federal University, Rostov-on-Don, Russia

PP-III-19

Reporter: Dr. Anna Matveyeva

Matveyeva A.N., Omarov Sh.O.

Ni/CeO₂ Catalysts Synthesized by Solution Combustion Method for Steam and Aqueous-Phase Reforming of Glycerol

Ioffe Institute, St. Petersburg, Russia

PP-III-20

FLASH-Presentation, Section III

Reporter: Dr. Aleksandra Kravtsova

Skripkin S.G.^{1,2}, Starinskiy S.V.¹, Tsoy M.A.¹, Vasiliev M.M.²,

Kravtsova A.Y.^{1,2}

The Specifics of the Hydrodynamic Cavitation Development with the Changed of the Structural Surface of the Bodies

1 – Kutateladze Institute of Thermophysics, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-III-21

FLASH-Presentation, Section III

Reporter: Zoya Lashchinskaya

Lashchinskaya Z.N., Gabrienko A.A., Stepanov A.G.

Silver-Modified ZSM-5 Zeolite for Propene Aromatization: ¹³C MAS NMR and FTIR Study of Alkene Transformation Mechanism

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-III-22 Online

Reporter: Hyunseok Moon

H. Moon, S. -Y. Lee

Nitrile Electrolyte Strategy for 4.9 V-Class Lithium-Metal Batteries Operating in Flame

Department of Chemical and Biomolecular Engineering, Yonsei University, Seoul, Republic of Korea

PP-III-23 Online

FLASH-Presentation, Section III

Reporter: Marat Nazyrov

Nazyrov M.I., Yarkaeva Y.A.

Enantioselective Voltammetric Sensor System Based on Mesoporous Carbon Black Carbopack X and Cyclopentadiene Derivatives for Determination of Clopidogrel Enantiomers

Ufa University of Science and Technology, Ufa, Russia

PP-III-24

FLASH-Presentation, Section III

Reporter: Dr. Guliya Nizameeva

Nizameeva G.R.^{1,2}, Lebedeva E.M.¹, Gainullin R.R.¹, Nizameev I.R.^{1,3}, Kadirov M.K.¹, Sinyashin O.G.¹

Composite Material Based on Oriented Nickel Oxide Networks in a Polymer Matrix as an Active Element of a Conductometric Greenhouse Gas Sensor

1 – Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center of RAS, Kazan, Russia

2 – Kazan National Research Technological University, Kazan, Russia

3 – Kazan National Research Technical University named after A.N. Tupolev - KAI, Kazan, Russia

PP-III-25

Reporter: Dr. Guliya Nizameeva

Nizameeva G.R.^{1,2}, Nizameev I.R.^{1,2}, Kadirov D.M.², Strel'nik I.D.¹, Kadirov M.K.^{1,2}, Budnikova Yu.H.¹, Karasik A.A.¹, Sinyashin O.G.¹

Cathode Catalysts on Cobalt Coordination Bis-Diphosphine Complexes

1 – Arbuzov Institute of Organic and Physical Chemistry, Kazan, Russia

2 – Kazan National Research Technological University, Kazan, Russia

PP-III-26 Online

Reporter: Kyeong-Seok Oh

Kyeong-Seok Oh¹, Jung-Hui Kim², Se-Hee Kim², Dongrak Oh², Sun-Phil Han², Kwangeun Jung³, Zhuyi Wang⁴, Liyi Shi⁴, Yongxiang Su⁴, Taeun Yim³, Shuai Yuan⁴, Sang-Young Lee¹

Scalable Semi-Solid Batteries Based on Hybrid Polymer-Liquid Electrolytes

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3 – Department of Chemistry, Incheon National University, Incheon, Republic of Korea

4 – Research Centre of Nanoscience & Nanotechnology, Shanghai University, Shanghai, China

PP-III-27

Reporter: Shamil Omarov

Omarov Sh.O.

ZrO₂·nH₂O Prehistory: Regularities of the ZrO₂ Formation and the Influence on the Ni/ZrO₂ Catalyst Performance in Glycerol Steam Reforming

Ioffe Institute, Saint Petersburg, Russia

PP-III-28 Online

FLASH-Presentation, Section III

Reporter: Dr. Sergey Panin

Panin S.V., Stepanov D.Yu., Alexenko V.O., Byakov A.V., Bogdanov A.A.

The Optimization of Ultrasonic Welding of PEEK Plates with CF Fabric Reinforcement by Neural Network Simulation

Institute of Strength Physics and Materials Science SB RAS, Tomsk, Russia

PP-III-29

FLASH-Presentation, Section III

Reporter: Vasilisa Petrova

Kozlov S.S., Petrova V.I., Alexeeva O.V., Nikolskaia A.B., Karyagina O.K., Shevaleevskiy O.I.

Double Perovskite Oxide $\text{La}_2\text{NiMnO}_6$ and $\text{Sm}_2\text{NiMnO}_6$ Thin Films as Promising Materials for Photovoltaics Applications

Emanuel Institute of Biochemical Physics, Moscow, Russia

PP-III-30 Online

Reporter: Dr. Anna Popova

Popova A.N., Fyodorova N.I., Sozinov S.A., Ismagilov Z.R.

Study of the Impact of the Lignite Carbonization Conditions on Mineral Phase Transformations

Federal State Budget Scientific Centre «The Federal Research Center of Coal and Coal-Chemistry of Siberian Branch of the Russian Academy of Sciences», Kemerovo, Russia

PP-III-31 Online

Reporter: Dr. Nikita Ronzhin

Ronzhin N.O.¹, Posokhina E.D.¹, Mogilnaya O.A.¹, Baron A.V.¹, Puzyr A.P.¹, Baron I.J.^{1,2}, Burov A.E.¹, Bondar V.S.¹

Applications of Detonation Nanodiamonds in the Design of Sensor Composites and Biosensors

1 – Institute of Biophysics SB RAS, Krasnoyarsk, Russia

2 – Voino-Yasenetsky State Medical University, Krasnoyarsk, Russia

PP-III-32 Online

Reporter: Dr. Aida Rudakova

Rudakova A.V.¹, Bakiev T.V.¹, Mikheleva A.Yu.¹, Emeline A.V.^{1,2}, Bulanin K.M.^{1,2}

Effect of Nb Doping on the Hydrophilicity of TiO_2 Thin Films

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2 – Department of Physics, Saint Petersburg State University, Saint Petersburg, Russia

PP-III-33 Online

Reporter: Dr. Liana Zagitova

Zagitova L.R., Abramov I.A., Gainanova S.I.

Enantioselective Voltammetric Sensors Based on Functionalized Fullerene for Antibiotics Determination

Ufa University of Science and Technology, Ufa, Russia

PP-III-34 Online

FLASH-Presentation, Section III

Reporter: Myeong-Hwa Ryou

Myeong-Hwa Ryou, Sang-Young Lee

A Microgrid-Patterned Silicon Electrode as an Electroactive Lithium Host

Department of Chemical and Biomolecular Engineering, Yonsei University, Seoul, Republic of Korea

PP-III-35 Online

FLASH-Presentation, Section III

Reporter: Ji Young Seo

Ji Young Seo, Sang-Young Lee

Electrode-Customized Separator Membranes Based on Self-Assembled Chiral Nematic Liquid Crystalline Cellulose Nanocrystals as a Natural Material Strategy for Sustainable Li-Metal Batteries

Department of Chemical and Biomolecular Engineering, Yonsei University, Seoul, Republic of Korea

PP-III-36 Online

FLASH-Presentation, Section III

Reporter: Dr. Timur Serikov

Seliverstova E., Serikov T., Sadykova A., Ibrayev N.

Effect of Ag/TiO₂ Core/Shell Nanostructures on the Photocatalytic Activity of the TiO₂/rGO Nanocomposite Material

Institute of Molecular Nanophotonics, Buketov Karaganda University, Karaganda, Kazakhstan

PP-III-37

FLASH-Presentation, Section III

Reporter: Dr. Artem Shamsutdinov

Shamsutdinov A.S.¹, Valtsifer I.V.¹, Huo Y.²

The Manufacturing of Fire-Extinguishing Powder Materials with Specific Morphology and Hydrophobicity of Ammonium Phosphates Particles

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2 – College of Aerospace and Civil Engineering, Harbin Engineering University, Harbin, China

PP-III-38

Reporter: Dr. Ekaterina Shelepova

Shelepova E.V., Maksimova T.A., Bauman Yu.I., Mishakov I.V., Vedyagin A.A.

Coproduction of Hydrogen and Carbon Nanomaterials by Catalytic Decomposition of Methane-Hydrogen Mixtures: Experimental and Simulation Results

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-III-39 Online

Reporter: Dr. Andrey Shkolin

Shkolin A.V., Men'shchikov I.E., Khozina E.V., Fomkin A.A.

Stress-Effect of Adsorption-Induced Deformation of the Carbon Adsorbent within a Range of Low Adsorption Values

Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Moscow, Russia

PP-III-40 Online

Reporter: Dr. Aleksandr Shmelev

Shmelev A.A., Filimonov N.S., Shafigulin R.V., Bulanova A.V.

Photocatalytic Properties of Titanium Dioxide Doped with La in Dye Oxidation Reactions

Samara University, Samara, Russia

PP-III-41

FLASH-Presentation, Section III

Reporter: Professor Galina Zenkovets

Shutilov A.A., Zenkovets G.A., Bondareva V.M., Sobolev V.I.,
Marchuk A.S., Tsybulya S.V., Ishchenko A.V., Prosvirin I.P., Suprun E.A.

**The Highly Active MoVSbNbGdOx/SiO₂ Catalysts for Oxidative
Dehydrogenation of Ethane to Ethylene**

Borekov Institute of Catalysis, Novosibirsk, Russia

PP-III-42

Reporter: Ivan Stebnitskii

Stebnitskii I.A.^{1,2}, Mateyshina Yu.G.^{1,2}

**Influence of the Cation Structure on the Physico-Chemical Properties
of Solid Composite Electrolytes Based on Organic Ammonium Salts
and Nanodiamonds**

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Novosibirsk, Russia*

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PP-III-43 Online

FLASH-Presentation, Section III

Reporter: Dr. Antonina Stepacheva

Stepacheva A.A., Markova M.E., Manaenkov O.V., Sulman M.G.

**Lignin Valorisation in the Presence of SiO₂@Polymer Supported
Catalysts**

Tver State Technical University, Tver, Russia

PP-III-44

FLASH-Presentation, Section III

Reporter: Dr. Sergey Svidersky

Svidersky S.A., Dementeva O.S., Kulikova M.V.

CO₂ Hydrogenation Reaction over Biochar-Based Catalysts

*Topchiev Institute of Petrochemical Synthesis, Russian Academy of
Sciences, Moscow, Russia*

PP-III-45 Online

Reporter: Professor Yuliya Titova

Tantsyrev A.P., Titova Yu.Yu., Ivanov A.V.

Polysaccharide Macromolecules as Transport Matrices of Nano-Size Compositions, Candidates for Diagnostics, Therapy and Theranostics of Cancer Diseases

A. E. Favorsky Irkutsk Institute of Chemistry, Siberian Branch of the Russian Academy of Sciences, Irkutsk, Russia

PP-III-46

Reporter: Dr. Evgeniya Vlasova

Vlasova E.N.¹, Zhao Y.², Aleksandrov P.V.¹, Suprun E.A.¹, Gerasimov E.Y.¹, Pakharukova V.P.¹, Bukhtiyarova G.A.¹

The Preparation of Zeolite Containing MoS₂ Catalysts for Hydrodeoxygenation/Hydroisomerization of Aliphatic Esters

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2 – Novosibirsk National Research University, Novosibirsk, Russia

PP-III-47 Online

Reporter: Dr. Violetta Vol'eva

Vol'eva V.B.¹, Ovsyannikova M.N.¹, Ryzhakova A.V.¹, Zhorin V.A.²

Sodium Chloride as an Active Medium in the Solid Phase Redox Transformations of Organic Substances

1 – N.M. Emanuel Institute of Biochemical Physics of Russian Academy of Sciences, Moscow, Russia

2 – N.N. Semenov Federal Research Center for Chemical Physics Russian Academy of Sciences, Moscow, Russia

PP-III-48

FLASH-Presentation, Section III

Reporter: Dr. Natalia Voronina

Voronina N.S., Nechaev A.I., Strelnikov V.N., Valtsifer V.A.

Study of the Hydrothermal Treatment Process on the Stability of Acrylate Copolymers for the Development of Energy-Saving Drag Reduction Additives

Institute of Technical Chemistry Ural Branch Russian Academy of Sciences, Perm, Russia

PP-III-49

FLASH-Presentation, Section III

Reporter: Dr. Petr Yeletsy

Yeletsy P.M.^{1,2}, Mozyleva M.A.^{1,2}, Kozlov D.V.^{1,2}, Lebedeva M.V.^{1,2}

Pine Nut Shell Derived Activated Carbons for Non-Aqueous Electrolyte Based EDLCs: An Effect of Surface Oxygen Functional Groups

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2 – Novosibirsk State University, Novosibirsk, Russia

PP-III-50 Online

Reporter: Dr. Evgeniya Yudanova

Yudanova E.I., Denisov N.N., Krinichnyi V.I.

Effect of Microadditives on Morphology, Stability and Number of Charge Carriers in a Solar Cell Based on P₃DDT/PC₆₁ BM

Federal Research Center of Problems of Chemical Physics and

Medicinal Chemistry, RAS, Chernogolovka, Moscow region, Russia



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- 2 Banquet hall "Teplitsa", Nikolaeva St. 12/2, 3 floor
- 3 Singing Party, Outdoor Pavilion, Academpark, Nikolaeva St. 12