

Borshkov Institute of Catalysis  
Center of New Chemical Technologies BIC  
Russian Mendeleev Chemical Society, Novosibirsk Department

6<sup>th</sup> International School-Conference on Catalysis for Young Scientists



# Catalyst Design

From Molecular to Industrial Level

Novosibirsk, Russia

May 16-19, 2021

**SCIENTIFIC PROGRAM**

Novosibirsk - 2021

Boreskov Institute of Catalysis  
Center of New Chemical Technologies BIC  
Russian Mendeleev Chemical Society, Novosibirsk Department

**6<sup>th</sup> International School-Conference on Catalysis  
for Young Scientists  
Catalyst Design: From Molecular to Industrial Level**

May 16-19, 2021  
Novosibirsk, Russia

# **Scientific Program**

Novosibirsk-2021

## Organised by

Boreskov Institute of Catalysis  
Center of New Chemical Technologies BIC  
Russian Mendeleev Chemical Society, Novosibirsk Department



**BORESKOV INSTITUTE  
OF CATALYSIS**



**CENTER OF NEW  
CHEMICAL TECHNOLOGIES  
BORESKOV INSTITUTE OF CATALYSIS**



## Conference Sponsors

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Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

**Prof. Sergei V. Sysolyatin**

Institute for Problems of Chemical and Energetic Technologies, Biysk, Russia

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Borekov Institute of Catalysis, Novosibirsk, Russia

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Borekov Institute of Catalysis, Novosibirsk, Russia

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Center of New Chemical Technologies BIC, Omsk, Russia

**Secretary**

**Svetlana S. Logunova**

Borekov Institute of Catalysis, Novosibirsk, Russia

The scientific program of the School-Conference will include invited plenary lectures (45 min), oral (15 min) and poster presentations.

**The main topics are:**

**Section 1** - Preparation of catalysts and adsorbents

**Section 2** - Characterization and *in situ* studies of the catalysts

**Section 3** - Mechanism and kinetics of catalytic reactions

**Section 4** - Catalysis for renewable sources

**Section 5** - Catalysis for fine organic synthesis, natural gas and petroleum chemistry

**Section 6** - Catalysis for environmental protection, photocatalysis, electrocatalysis

# Scientific Program

May 16, Sunday

*Novosibirsk Local time UTC +7*

**Place: GRAND HALL, 3<sup>rd</sup> floor**  
**Afternoon session**

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**11.00-13.30**    **Registration**  
Boreskov Institute of Catalysis, hall 1<sup>st</sup> floor

**13.30-13.45**    **Opening ceremony**

*Chairperson: Prof. Martyanov Oleg,*  
*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## PLENARY LECTURES

**13.45-14.30**    **PL-1**  
**Online**        Dr. David Kubička  
**Biomass Valorization Relying on Aldol  
Condensation and Deoxygenation**  
*Technopark Kralupy, University of Chemistry and  
Technology, Prague, Czech Republic*

**14.30-15.15**    **PL-2**  
**Online**        Professor Dr. Ir. Emiel J.M. Hensen  
**Heterogeneous Catalysis for Sustainable Chemical  
Conversion: On Metal Nanoparticles, Clusters,  
and Single Atoms at Interfaces**  
*Eindhoven University of Technology,  
The Netherlands*

**15.15-15.45**    **Coffee**

**15.45-16.30**    **PL-3**  
**Online**        Dr. Noelia Barrabés  
**Creating Atomically Designed Catalysts by Gold  
Nanoclusters**  
*Technical University, Vienna, Austria*

## SPONSOR PRESENTATIONS

- 16.30-16.45**    **SP-1**  
Online    Liana Socaciu-Siebert, Paul Dietrich and Andreas  
Thissen  
**NAP-XPS Instrumentation and Applications: New  
Developments**  
*SPECS Surface Nano Analysis GmbH, Berlin,  
Germany*
- 16.45-17.00**    **SP-2**  
Zhukov Yuri  
**X-ray Photoelectron Spectroscopy: surface  
analysis**  
*PREVAC sp. z o.o., Poland*
- 17.00-17.05**    **Group Photo**
- 17.05-19.00**    **Walking tour around Akademgorodok**
- 19.00-21.00**    **Welcome reception**  
**Banquet hall «Teplitsa» , Nikolaeva street 12/2**



**May 17, Monday**

*Novosibirsk Local time UTC +7*

**Place: GRAND HALL, 3<sup>rd</sup> floor**  
**Morning session**

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*Chairperson: Prof. Aleksey Vedyagin,  
Boreskov Institute of Catalysis, Novosibirsk, Russia*

## **PLENARY LECTURE**

**09.00-09.45 PL-4**

Professor Maximov Anton

**Dispersed Catalysts for Refining, Natural Gas  
Chemistry and Renewables**

*A.V. Topchiev Institute of Petrochemical Synthesis,  
Moscow, Russia*

## **ORAL PRESENTATIONS**

**09.50-10.05 OP-V-1**

**Presenting autor:** Shmakov Mikhail

Shmakov M.M.<sup>1</sup>, Prikhod'ko S.A.<sup>1</sup>, Peshkov R.Yu.<sup>2</sup>

**Influence of the Lewis Acidity of Functionalized  
Aryldifluoroboranes on Their Catalytic Activity**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

- 10.05-10.20 OP-V-2**  
**Presenting autor:** Stolbov Dmitrii  
Stolbov D.N.<sup>1,2</sup>, Chernyak S.A.<sup>1</sup>, Kustov A.L.<sup>1</sup>,  
Usol'tseva N.V.<sup>2</sup>, Savilov S.V.<sup>1</sup>.  
**New Chromium-Carbon Catalytic Systems for  
Oxidative Propane Dehydrogenation in Presence  
of CO<sub>2</sub>**  
*1 – Lomonosov Moscow State University, Moscow,  
Russia*  
*2 – Ivanovo State University, Ivanovo, Russia*
- 10.20-10.35 OP-V-3**  
**Presenting autor:** Bogomolova Tatiana  
Bogomolova T.S., Smirnova M.Yu., Klimov O.V.,  
Noskov A.S.  
**Nickel Phosphide Catalysts for Diesel Fuel  
Hydroisomerization Processes**  
*Boreskov Institute of Catalysis, Novosibirsk, Russia*
- 10.35-11.05 Coffee**
- 11.05-13.00 Excursion to Boreskov Institute of Catalysis  
Grang hall, 3<sup>rd</sup> floor**
- 13.00-14.30 Lunch**

Place: GRAND HALL, 3<sup>rd</sup> floor  
Afternoon session

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Chairperson: Prof. Maximov Anton

*A.V. Topchiev Institute of Petrochemical Synthesis, Moscow, Russia*

## PLENARY LECTURES

- 14.30-15.15**    **PL-5**  
**Online**        Professor Ananikov Valentine  
**Cocktail-Type Catalytic Systems for Fine  
Chemicals Synthesis and Sustainable  
Development**  
*Zelinsky Institute of Organic Chemistry, Moscow,  
Russia*
- 15.15-16.00**    **PL-6**  
**Online**        Ass. Prof. Rameshan Cristoph  
**Correlating Structure and Reactivity on Energy  
Materials by In Situ Spectroscopy**  
*Technical University, Vienna, Austria*
- 16.00-16.30**    **Coffee**

Chairperson: Dr. Prikhodko Sergey

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## ORAL PRESENTATIONS

16.30-16.45

Online

**OP-V-4**

**Presenting autor:** Gusev Andrey

Gusev A.A.<sup>1,2</sup>, Psarras A.C.<sup>1</sup>, Triantafyllidis K.S.<sup>2</sup>,  
Lappas A.A.<sup>1</sup>

**Acid Sites Formation on P Doped ZSM-5 Zeolite  
Catalysts for Catalytic Cracking**

*1 – Centre for Research and Technology Hellas  
(CERTH), Chemical Processes and Energy Resources  
Institute (CPERI), Thessaloniki, Greece*

*2 – Aristotle University of Thessaloniki (AUTH),  
Department of Chemistry, Thessaloniki, Greece*

16.45-17.00

Online

**OP-V-5**

**Presenting autor:** Dr. Grebennikova Olga

Grebennikova O.V., Sulman A.M., Matveeva V.G.

**The Use of Oxidoreductase Class Enzymes in the  
Synthesis of Vitamins**

*Tver State Technical University, Tver, Russia*

17.00-17.15

Online

**OP-V-6**

**Presenting autor:** SmoliŃo-Utrata Małgorzata

SmoliŃo-Utrata M., Samson K., Gackowski M.,  
Mordarski G., Śliwa M., PodobiŃski J., Datka J.,  
Rutkowska-Źbik D.

**Vanadium-Loaded Faujasites as Catalysts for the  
Oxidative Dehydrogenation of Propane**

*Jerzy Haber Institute of Catalysis and Surface  
Chemistry, Polish Academy of Sciences, Krakow,  
Poland*

17.15-17.30

Online

**OP-V-7**

**Presenting autor:** Timofeev Kirill

Nikitin A.V.<sup>1,2</sup>, Timofeev K.A.<sup>2</sup>, Ozersky A.V.<sup>1</sup>,  
Zimin Y.S.<sup>1</sup>

**Catalytic Methanol Synthesis from Syngas of  
Matrix Methane Conversion**

*1 – Institute of Problems of Chemical Physics of  
RAS, Chernogolovka, Russia*

*2 – Semenov Institute of Chemical Physics of RAS,  
Moscow, Russia*

17.30-17.45

Online

**OP-V-8**

**Presenting autor:** Sulman Aleksandrina

Sulman A.M.<sup>1</sup>, Matveeva V.G.<sup>1,2</sup>,  
Grebennikova O.V.<sup>1</sup>, Molchanov V.P.<sup>1</sup>,  
Lakina N.V.<sup>1</sup>, Doluda V.Y.<sup>1</sup>

**Catalytic Performance of Glucose Oxidase  
Immobilized on Magnetic Zirconia**

*1 - Department of Biotechnology and Chemistry,  
Tver State Technical University, Tver, Russia*

*2 - Tver State University, Tver, Russia*

**May 17, Monday**

*Novosibirsk Local time UTC +7*

**Place: STUDENT HALL, 2<sup>nd</sup> floor**  
**Morning session**

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*Chairperson: Dr. Parkhomchuk Ekaterina,*

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## **ORAL PRESENTATIONS**

**09.50-10.05 OP-I-1**

**Presenting autor:** Fomenko Iakov

Fomenko I.S., Gushchin A.L.

**Oxidovanadium Complexes with Diimine Ligands:  
Synthesis and Catalytic Studies**

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

**10.05-10.20 OP-I-2**

**Presenting autor:** Dr. Stepanova Liudmila

Stepanova L.N., Kobzar E.O., Leont'eva N.N.,

Belskaya O.B.

**Phase Transformations Occurring During  
Mechanochemical Synthesis of the MgAl-Layered  
Double Hydroxides**

*Center of New Chemical Technologies BIC, Omsk,  
Russia*

**10.20-10.35 OP-I-3**

**Presenting autor:** Shahzad Anjum

Shahzad A.<sup>1</sup>, Kovtunova L.M.<sup>1,2</sup>, Nartova A.V.<sup>1,2</sup>

**Influence of the Preparation Conditions on Formation of Active Component Particles of Pt/Sibunit Catalyst**

*1 - Novosibirsk State University, Novosibirsk, Russia*

*2 - Boreskov Institute of Catalysis, Novosibirsk, Russia*

**10.35-11.05 Coffee**

**11.05-13.00 Excursion to Boreskov Institute of Catalysis**

**13.00-14.30 Lunch**

**Place: STUDENT HALL, 2<sup>nd</sup> floor  
Afternoon session**

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*Chairperson: Ass. Prof. Rameshan Cristoph,*

*Technical University, Vienna, Austria*

## **ORAL PRESENTATIONS**

**16.30-16.45 OP-I-4**

**Online**

**Presenting autor:** Markova Mariia

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

**Comparison of Methods for Surface Modification of Hyper-Crosslinked Polystyrene for the Synthesis of Bifunctional Catalyst**

*Tver State Technical University, Tver, Russia*

- 16.45-17.00**    **OP-I-5**  
**Presenting autor:** Topchiyan Polina  
Topchiyan P.A., Vasilchenko D.B.  
**Application of Iridium(III) Aquanitrocomplexes for the Preparation of Supported Ir-Ni Catalysts for Selective Decomposition of  $\text{N}_2\text{H}_4 \cdot \text{H}_2\text{O}$**   
*Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia*
- 17.00-17.15**    **OP-I-6**  
**Presenting autor:** Boev Sevastyan  
Boev S.S., Rubtsova M.I., Smirnova E.M., Glotov A.P.  
**Design of an Affordable and Efficient SAPO-34 Catalyst Based on Natural Halloysite Nanotubes**  
*Gubkin Russian State University of Oil and Gas, Moscow, Russia*
- 17.15-17.30**    **OP-I-7**  
**Online**    **Presenting autor:** Zubkov Alexander  
Zubkov A.V., Vyshegorodtseva E.V., Bugrova T.A., Mamontov G.V.  
**Design of Pt-Ga Catalysts Supported on Hierarchical Silica Materials for Propane Dehydrogenation**  
*Tomsk State University, Tomsk, Russia*



**17.30-17.45 OP-I-8**

**Presenting autor:** Kaplin Igor

Kaplin I.Yu., Tikhonov A.V., Lokteva E.S.,  
Bataeva S.V., Shishova V.V., Golubina E.V.,  
Maslakov K.I.

**The Influence of Dopant, Modifier and Template  
Nature on the Catalytic Efficiency of Ceria in CO  
Oxidation**

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

**May 18, Tuesday**

*Novosibirsk Local time UTC +7*

**Place: GRAND HALL, 3<sup>rd</sup> floor  
Morning session**

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*Chairperson: Dr. Simonov Mikhail,*

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## **PLENARY LECTURE**

**09.00-09.45 PL-7**

**Online**

*Professor Frenkel Anatoly*

**Dynamic Structure of Active Sites in Ceria – Supported Pt Catalysts for the Water Gas Shift Reaction**

*Stony Brook University, New York, USA*

## **ORAL PRESENTATIONS**

**09.50-10.05 OP-V-9**

**Presenting autor:** Gorbunova Anna

*Gorbunova A.S., Sobolev V.I.*

**Partial Oxidation of Ethane to Ethylene and Acetic Acid over MoVTeNbOx Catalyst**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

**10.05-10.20 OP-V-10**

**Presenting autor:** Rubtsova Maria

*Rubtsova M.I., Demikhova N.R., Glotov A.P.,*

*Vinokurov V.A.*

**Influence of the Si/Al Ratio in Pt-Containing Catalysts Based on Al-MCM-41 and Natural Halloysite Nanotubes on Xylene and Ethylbenzene Isomerization Activity**

*Gubkin Russian State University of Oil and Gas, Moscow, Russia*

**10.20-10.35**

**Online**

**OP-V-11**

**Presenting autor:** Lukoyanov Ivan

Lukoyanov I.A.<sup>1</sup>, Gerasimov E.Yu<sup>1</sup>,

Panchenko V.N.<sup>1</sup>, Shefer K.I.<sup>1</sup>, Timofeeva M.N.<sup>1</sup>,

Jhung S.H.<sup>2</sup>

**Zn- and Co-Zeolite Imidazolate Frameworks as Effective Catalysts for the Cycloaddition of CO<sub>2</sub> to Propylene Oxide**

*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*

*2 - Department of Chemistry and Green-Nano Materials Research Center, Kyungpook National University, Daegu, Republic of Korea*

**10.35-11.05**

**Coffee**

**&**

**11.05-12.00**

**POSTER SESSION**

**Hall 3<sup>rd</sup> floor**

Place: GRAND HALL, 3<sup>rd</sup> floor

Morning session

Chairperson: Dr. Potemkin Dmitry,

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## ORAL PRESENTATIONS

12.00-12.15 OP-IV-1

**Presenting autor:** Gorbunova Alina

Gorbunova A.A.<sup>1</sup>, Zinovyev A.L.<sup>1</sup>, Kolobova E.N.<sup>1</sup>,

Pakrieva E.G.<sup>1</sup>, Carabineiro S.A.C.<sup>2</sup>,

Pestryakov A.N.<sup>1</sup>

**New Biodegradable Copolymers Based on  
Betulin, Organic Acids and Their Derivatives**

*1 – Research School of Chemistry & Applied  
Biomedical Sciences, National Research Tomsk  
Polytechnic University, Tomsk, Russia*

*2 - LAQV-REQUIMTE, Universidade NOVA de Lisboa  
- FCT, Caparica, Portugal*

12.15-12.30 OP-IV-2

**Presenting autor:** Sukhorukov Dmitry

Sukhorukov D.A.<sup>1</sup>, Alekseeva M.V.<sup>1</sup>, Zaikina O.O.<sup>1</sup>,

Bulavchenko O.A.<sup>1</sup>, Kikhtyanin O.<sup>2</sup>, Kubička D.<sup>2</sup>,

Yakovlev V.A.<sup>1</sup>

**Study of Mo-Ni-Based Catalysts in the  
Hydrotreatment of Sewage Sludge-Derived  
Pyrolysis Oils**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – University of Chemistry and Technology  
Prague, Prague, Czech Republic*

- 12.30-12.45**    **OP-IV-3**  
**Online**        **Presenting autor:** Timofeev Konstantin  
Timofeev K.L., Kharlamova T.S., Svetlichnyi V.A.,  
Vodyankina O.V.  
**Catalytic Oxidation of 5-Hydroxymethylfurfural  
over  $Au_{1-x}Ag_x$  and  $Pd_{1-x}Ag_x$  Catalysts**  
*Tomsk State University, Tomsk, Russia*
- 12.45-13.00**    **OP-IV-4**  
**Online**        **Presenting autor:** Dokuchits Eugene  
Dokuchits E.V., Ishchenko A.V., Larina T.V.,  
Minyukova T.P.  
**Syngas Conversion over  
Perovskite-Like  $La_yCa_{1-y}Co_xTi_{1-x}O_3$ /KIT-6 Catalysts**  
*Boreskov Institute of Catalysis, Novosibirsk, Russia*
- 13.00-14.30**    **Lunch**

Place: GRAND HALL, 3<sup>rd</sup> floor  
Afternoon session

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Chairperson: Dr. Kubička David,

*Technopark Kralupy, University of Chemistry and Technology, Prague,  
Czech Republic*

## PLENARY LECTURES

14.30-15.15

PL-8

Online

Dr. Timoshenko Janis

Timoshenko J., Cuenya B.R.

**Probing Kinetics of Electrocatalyst**

**Transformations Using Synchrotron-Based**

**Operando Techniques and Machine Learning**

*Department of Interface Science, Fritz-Haber*

*Institute of the Max-Planck Society, 14195 Berlin,  
Germany*

15.15-16.00

PL-9

Online

Professor Fongarland Pascal

**Fischer-Tropsh Synthesis: an Old Reaction for  
New Perspectives**

*Laboratoire de Génie des Procédés Catalytiques*

*(LGPC) - Université Claude Bernard Lyon 1, Lyon,  
France*

16.00-16.30

Coffee

Chairperson: Dr. Timoshenko Janis,

Fritz-Haber-Institut der MPG, Berlin, Germany

## ORAL PRESENTATIONS

- 16.30-16.45**    **OP-IV-5**  
**Online**        **Presenting autor:** Prof. Doluda Valentin  
Brovko R.V., Mushinsky L.S., Matveeva V.G,  
Sulman M.G., Sidorov A.I., Doluda V.Yu.  
**Ethanol to Hydrocarbons Transformation over  
Modified and Unmodified Zeolite H-ZSM-5**  
*1 – Tver State Technical University, Department of  
biotechnology chemistry and standardization,  
Tver, Russia*
- 16.45-17.00**    **OP-IV-6**  
**Online**        **Presenting autor:** Monzharenko Margarita  
Stepacheva A.A.<sup>1</sup>, Monzharenko M.A.<sup>1</sup>,  
Dmitrieva A.A.<sup>2</sup>, Schipanskaya E.O.<sup>2</sup>,  
Markova M.E.<sup>1</sup>, Matveeva V.G.<sup>1</sup>, Sulman M.G.<sup>1</sup>  
**Schungite Based Catalysts for the Deoxygenation  
of Vegetable Oil and Bio-Oil**  
*1 – Tver State Technical University, Tver, Russia  
2 – Tver State University, Tver, Russia*
- 17.00-17.15**    **OP-IV-7**  
**Online**        **Presenting autor:** Dr. Zabelkin Sergey  
Zabelkin S.<sup>1,2</sup>, Bikbulatova G.<sup>1,2</sup>, Grachev A.<sup>1,2</sup>,  
Bashkirov V.<sup>1,2</sup>, Makarov A.<sup>1,2</sup>, Valeeva A.<sup>1,2</sup>,  
Sabirzyanova A.<sup>1,2</sup>  
**Plant of Fast Pyrolysis of Lignocellulosic Waste**  
*1 –Kazan National Research Technological  
University, Kazan, Russia  
2 - LLC "EnergoLesProm", Kazan, Russia*

- 17.15-17.30**    **OP-IV-8**  
**Online**        **Presenting autor:** Salnikova Kseniya  
Salnikova K.E.<sup>2</sup>, Matveeva V.G.<sup>1,2</sup>, Larichev Yu.V.<sup>3,4</sup>,  
Bykov A.V.<sup>1</sup>, Demidenko G.N.<sup>1</sup>, Sidorov A.I.<sup>1</sup>,  
Sulman M.G.<sup>1,2</sup>  
**Selective Hydrogenation of Furfural: Catalytic  
Performance by Pd-Cu Alloy Nanoparticles in  
Porous Polymer**  
*1 – Tver state technical University, Tver, Russia*  
*2 - Tver State University, Tver, Russia*  
*3 - Borekov Institute of Catalysis, Novosibirsk,  
Russia*  
*4 - Novosibirsk State University, Novosibirsk,  
Russia*
- 17.30-17.45**    **OP-IV-9**  
**Online**        **Presenting autor:** Dr. Montaña Maia  
Montaña M.<sup>1,2</sup>, Mendez L.J.<sup>1</sup>,  
Ocsachoque Marco A.<sup>1</sup>, Lick I.D.<sup>1</sup>, Casella M.L.<sup>1</sup>  
**Acetalization of Furfural Catalyzed by Zeolites  
Catalysts to Obtain Biofuels Additives**  
*1 – Centro de Investigación y Desarrollo en  
Ciencias Aplicadas “Dr. Jorge J. Ronco” (CINDECA)  
CONICET-UNLP-CIC, La Plata, Argentina*  
*2 – Facultad de Ingeniería. Universidad Nacional  
de La Plata, La Plata, Argentina*
- 18.00-19.30**    **Scientific Quiz**  
**Grand hall, 3<sup>rd</sup> floor**



**May 18, Tuesday**

*Novosibirsk Local time UTC +7*

**Place: STUDENT HALL, 2<sup>nd</sup> floor**  
**Morning session**

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*Chairperson: Dr. Stepanova Liudmila,*

*Center of New Chemical Technologies BIC, Omsk, Russia*

## **ORAL PRESENTATIONS**

**09.50-10.05 OP-I-9**

**Presenting autor:** Shamanaeva Irina

Shamanaeva I.A.<sup>1</sup>, Yu Zh.<sup>2,3</sup>, Utemov A.V.<sup>4</sup>, Wu W.<sup>3</sup>,  
Sladkovskiy D.A.<sup>4</sup>, Parkhomchuk E.V.<sup>1,2</sup>

**Role of Texture and Acidity of SAPO-34 in  
Methanol to Olefins Conversion**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

*3 – Heilongjiang University, Harbin, China*

*4 – Saint Petersburg State Technological Institute  
(Technical University), Saint Petersburg, Russia*

**10.05-10.20 OP-I-10**

**Presenting autor:** Danilenko Maria

**Synthesis Parameters Effect on the Kinetics of  
Platinum Nanoparticles Formation and Pt/C  
Catalyst Structure**

*Chemistry Faculty, Southern Federal University,  
Rostov-on-Don, Russia*

**10.20-10.35 OP-I-11**

**Presenting autor:** Glyzdova Daria

Glyzdova D.V.<sup>1</sup>, Afonassenko T.N.<sup>1</sup>, Khramov E.V.<sup>2</sup>,  
Trenikhin M.V.<sup>1</sup>, Shlyapin D.A.<sup>1</sup>

**Effect of Synthesis Methods on the Structure and  
Properties of Pd-Zn/Sibunit Catalysts for  
Acetylene Hydrogenation**

*1 – Center of New Chemical Technologies BIC,  
Omsk, Russia*

*2 – National Research Center "Kurchatov  
Institute", Moscow, Russia*

**10.35-11.05**

**Coffee &**

**11.05-12.00**

**POSTER SESSION**

**Hall 3<sup>rd</sup> floor**

**Place: STUDENT HALL, 2<sup>nd</sup> floor**

**Morning session**

*Chairperson: Prof. Kozlova Ekaterina,*

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## **ORAL PRESENTATIONS**

**12.00-12.15 OP-VI-1**

**Presenting autor:** Vorms Evgenia

Vorms E.A.<sup>1,2</sup>, Oshchepkov A.G.<sup>1</sup>

**The Influence of Composition of Electrodeposited  
NiCu Catalysts on their Activity in the  
Borohydride Oxidation Reaction**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

12.15-12.30

**OP-VI-2**

**Presenting autor:** Belenov Sergey

Belenov S.V., Menshchikov V.S., Nevelskaya A.K.,  
Alekseenko A.A., Moguchikh E.A., Pavlets A.S.,  
Avakyan L.A.

**Influence of the Evolution of the Composition and  
Structure of Bimetallic Nanoparticles in PtM/C  
Catalysts on Their Activity and Stability**

*Southern Federal University, Rostov-on-Don, Russia*

12.30-12.45

**OP-VI-3**

**Presenting autor:** Potylitsyna Arina

Potylitsyna A.R.<sup>1,2</sup>, Bauman Yu.I.<sup>2</sup>,  
Mishakov I.V.<sup>1,2</sup>, Tarasenko M.S.<sup>3</sup>, Serkova A.N.<sup>1</sup>,  
Plyusnin P.E.<sup>2,3</sup>, Shubin Yu.V.<sup>2,3</sup>, Vedyagin A.A.<sup>1</sup>

**Effect of Mo on Catalytic Activity of Ni<sub>1-x</sub>Mo<sub>x</sub>  
System in the Decomposition of  
Trichloroethylene**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

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

**12.45-13.00 OP-VI-4**

**Presenting autor:** Gorlova Anna

Gorlova A.M.<sup>1,2</sup>, Potemkin D.I.<sup>1,2,3</sup>, Simonov P.A.<sup>1,2</sup>,  
Snytnikov P.V.<sup>1</sup>, Sobyenin V.A.<sup>1</sup>

**Noble Metal Catalysts for Low-Temperature  
Water Gas Shift Reaction**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

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

**13.00-14.30 Lunch**

**Place: STUDENT HALL, 2<sup>nd</sup> floor  
Afternoon session**

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*Chairperson: Dr. Oshchepkov Alexandr,*

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## **ORAL PRESENTATIONS**

**16.30-16.45 OP-VI-5**

**Online**

**Presenting autor:** Molina-Ramirez Sergio

Molina-Ramírez S., Cortés-Reyes M., Herrera C.,  
Larrubia M.A., Alemany L.J.

**Influence of the Parameters Modified by the  
Driving Mode on DeNOxing Activity of NSR-SCR  
Hybrid System**

*Department of Chemical Engineering, Faculty of  
Sciences, Campus de Teatinos, University of  
Malaga, Malaga, Spain*

- 16.45-17.00**    **OP-VI-6**  
**Online**        **Presenting autor:** Kurenkova Anna  
Kurenkova A.Yu.<sup>1</sup>, Kozlova E.A.<sup>1,2</sup>  
**Hydrogen Evolution from Biomass Constituent Solutions Under Visible Light Irradiation**  
*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*  
*2 – Novosibirsk State University, Novosibirsk, Russia*
- 17.00-17.15**    **OP-VI-7**  
**Online**        **Presenting autor:** Prof. Liotta Leonarda  
Migliore C.<sup>1</sup>, Consentino L.<sup>1</sup>, Pantaleo G<sup>1</sup>., Gallì N<sup>1</sup>.,  
Zhang W.<sup>1,2</sup>, Liotta L.F.<sup>1</sup>  
**MO<sub>x</sub> (M = Mn, Ce) Doped WO<sub>3</sub>-TiO<sub>2</sub> Catalysts for NO SCR by NH<sub>3</sub>**  
*1 – Institute for the Study of Nanostructured Materials (ISMN)-CNR, via Ugo La Malfa, Palermo, Italy*  
*2 – College of Chemical Engineering, Qinghai University, Xining, China*
- 17.15-17.30**    **OP-VI-8**  
**Online**        **Presenting autor:** Dr. Markovskaya Dina  
Markovskaya D.V.<sup>1,2</sup>, Zhurenok A.V.<sup>1</sup>,  
Kozlova E.A.<sup>1,2</sup>  
**Transition from Effective Photocatalysts to Photoelectrodes: Influence of Semiconductor Composition, co-Catalyst Nature and Amount**  
*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*  
*2 – Novosibirsk State University, Novosibirsk, Russia*

- 17.30-17.45**    **OP-VI-9**  
**Presenting autor:** Belik Yulia  
Belik Yu.A., Dubinina O.V., Vodyankina O.V.  
**Bismuth Silicate Composite Materials Prepared  
via Gel Process: Phases Formation,  
Electrochemistry and Photocatalytic Performance**  
*Tomsk State University, Tomsk, Russia*
- 18.00-19.30**    **Scientific Quiz**  
**Grand hall, 3<sup>rd</sup> floor**

**May 19, Wednesday**

*Novosibirsk Local time UTC +7*

**Place: GRAND HALL, 3<sup>rd</sup> floor**

**Morning session**

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*Chairperson: Dr. Kazakov Maxim,*

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## **PLENARY LECTURE**

**09.00-09.45 PL-10**

**Presenting autor:** Prof. Kozlov Denis

Veselovskaya J.V.<sup>1,2</sup>, Gribov E.N.<sup>1,2</sup>, Lebedeva

M.V.<sup>1,2</sup>, LyuLyukin M.N.<sup>1,2,3</sup>, Oshchepkov A.G.<sup>1</sup>,

Selishchev D.S.<sup>1,2</sup>, Kozlov D.V.<sup>1,2</sup>

**Catalysis for energy conversion**

*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*

*2 – Novosibirsk State University, Novosibirsk, Russia*

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

## **ORAL PRESENTATIONS**

**09.50-10.05 OP-V-12**

**Presenting autor:** Afonnikova Sofya

Afonnikova S. D.<sup>1,2</sup>, Mishakov I.V.<sup>1,2</sup>,

Bauman Yu.I.<sup>1</sup>, Serkova A.N.<sup>1</sup>, Vedyagin A.A.<sup>1</sup>

**Research of the Process of Carbon Erosion of Nickel Alloys in an Ethylene Atmosphere to Produce Carbon Nanofibers**

*1 - Boreskov Institute of Catalysis, Novosibirsk, Russia*

*2 - Novosibirsk state University, Novosibirsk, Russia*

- 10.05-10.20**    **OP-V-13**  
**Online**        **Presenting autor:** Veretelnikov Kirill  
Veretelnikov K.V., Tregubenko V.Yu., Belyi A.S.  
**Effect of Indium Doping of the Pt-Sn/Al<sub>2</sub>O<sub>3</sub>**  
**Catalysts in n-Heptane Reforming**  
*Center of New Chemical Technologies BIC, Omsk,*  
*Russia*
- 10.20-10.35**    **OP-V-14**  
**Online**        **Presenting autor:** Dr. Grabchenko Maria  
Grabchenko M.V.<sup>1</sup>, Dorofeeva N.V.<sup>1</sup>,  
Larichev Yu.V.<sup>2</sup>, La Parola V.<sup>3</sup>, Liotta L.F.<sup>3</sup>,  
Vodyankina O.V.<sup>1</sup>  
**Synthesis and Study of Nickel Catalysts Based on**  
**Ordered SBA-15 Modified with CeO<sub>2</sub>-MnO<sub>x</sub> Binary**  
**Oxides in the DRM Process**  
*1- Tomsk State University, Tomsk, Russia*  
*2 - Borekov Institute of Catalysis, Novosibirsk,*  
*Russia*  
*3 - Institute for the Study of Nanostructured*  
*Materials (ISMN) -CNR, Palermo, Italy*
- 10.35-11.05**    **Coffee**



Place: GRAND HALL, 3<sup>rd</sup> floor

Morning session

Chairperson: Dr. Kolokolov Daniil

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## ORAL PRESENTATIONS

11.05-11.20 OP-III-1

**Presenting autor:** Dr. Gabrienko Anton  
Gabrienko A.A.<sup>1,2</sup>, Lashchinskaya Z.N.<sup>1,2</sup>,  
Arzumanov S.S.<sup>1,2</sup>, Freude D.<sup>3</sup> Haase J.<sup>3</sup>,  
Stepanov A.G.<sup>1,2</sup>

**Methane Joint Conversion with Higher Alkanes  
on Zn-Modified BEA Zeolite: Kinetic and NMR  
evidences for the Reaction Occurrence in  
Nonoxidative Conditions**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

*3 – Universität Leipzig, Leipzig, Germany*

11.20-11.35 OP-III-2

Online

**Presenting autor:** Milenkaya Elena  
Skripov N.I., Sterenchuk T.P., Milenkaya E.A.,  
Belykh L.B., Schmidt F.K.

**Inverse Dependence of Turnover Frequency on  
Palladium Precursor Concentration in  
Hydrogenation of Unsaturated Compounds**

*Irkutsk State University, Irkutsk, Russia*

**11.35-11.50 OP-III-3**

**Presenting autor:** Livshits Grigory

Livshits G.D., Ignatov S.K.

**Theoretical Design of Self-Assembling  
Monolayers on the Platinum Surface for  
Stereoselective Adsorption and Catalysis**

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

**11.50-12.05 OP-III-4**

**Presenting autor:** Kolganov Alexander

Kolganov A.A.<sup>1</sup>, Gabrienko A.A.<sup>1,2</sup>, Stepanov A.G.<sup>1,2</sup>,  
Pidko E.A.<sup>3</sup>

**DFT Prediction of the <sup>13</sup>C NMR Chemical Shifts of  
the Adsorbed Zeolite Species: a Methodological  
Study**

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

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

*3 – Delft University of Technology, Delft, The  
Netherlands*

12.05-12.20

**OP-III-5**

**Presenting autor:** Demina Victoria

Demina V.G.<sup>1,2</sup>, Selivanova A.V.<sup>1</sup>, Saraev A.A.<sup>1,2</sup>,  
Kaichev V.V.<sup>1,2</sup>

**Propylene Oxidation on Ag Single Crystal: In Situ  
Study by Polarization Modulation Infrared  
Reflection Absorption Spectroscopy**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

12.20-12.35

**OP-III-6**

**Presenting autor:** Makolkin Nikita

Makolkin N.V.<sup>1</sup>, Kim H.U.<sup>2</sup>, Paukshtis E.A.<sup>1</sup>, Jae J.<sup>2</sup>,  
Bal'zhinimaev B.S.<sup>1</sup>

**In Situ DRIFTS Study of the Reactivity of  
Hydrides in the Gas-Phase Hydrogenation of  
Acetic Acid on a Pt-ReOx/TiO<sub>2</sub> Catalyst**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – School of Chemical and Biomolecular  
Engineering, Pusan National University, Republic  
of Korea*

**12.35-12.50 OP-III-7**

**Presenting autor:** Lashchinskaya Zoya  
Lashchinskaya Z.N.<sup>1,2</sup>, Gabrienko A.A.<sup>1,2</sup>,  
Arzumanov S.S.<sup>1,2</sup>, Freude D.<sup>3</sup>, Haase J.<sup>3</sup>,  
Stepanov A.G.<sup>1,2</sup>

**Aromatization of n-Butene on Zn/H-BEA Zeolite:  
<sup>13</sup>C MAS NMR Study of the Reaction Mechanism  
and the Role of Zn<sup>2+</sup> and ZnO Species**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

*3 – Leipzig University, Leipzig, Germany*

**13.05-14.30 Lunch**

Place: GRAND HALL, 3<sup>rd</sup> floor  
Afternoon session

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Chairperson: Prof. Kozlov Denis,

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## PLENARY LECTURE

14.30-15.15

Online

PL-11

Dr. Velasco Vélez Juan

***In Situ/Operando Characterization of  
Electrocatalytic Materials by Bulk and Surface  
Sensitive X-Ray Spectroscopies***

*Max Planck Institute for Chemical Energy  
Conversion, Mülheim an der Ruhr, Germany  
Fritz-Haber-Institute of the Max-Planck-Society,  
Berlin, Germany*

## MASTER CLASS

15.15-16.00

**Presenting autor:** Dr. Nartova Anna

Nartova A.V.<sup>1,2</sup>, Matveev A.V.<sup>1,2</sup>, Mashukov M.Yu.<sup>2</sup>,  
Okunev A.G.<sup>1,2</sup>

**AI Imaging Data Analysis in Material Science:  
Microscopy and Behind**

*1 - Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 - Novosibirsk State University, Novosibirsk,  
Russia*

16.00-16.30

Coffee

Place: GRAND HALL, 3<sup>rd</sup> floor  
Afternoon session

Chairperson: Dr. Gabrienko Anton,

*Borekov Institute of Catalysis, Novosibirsk, Russia*

## ORAL PRESENTATIONS

- 16.30-16.45**    **OP-III-8**  
Online    **Presenting autor:** Bandurist Pavel  
Pichugina D.A., Nikitina N.A., Bandurist P.S.  
**CO Oxidation on Copper-Doped Gold Thiolate Clusters Supported on CeO<sub>2</sub>: DFT Study**  
*Lomonosov Moscow State University, Moscow, Russia*
- 16.45-17.00**    **OP-III-9**  
Online    **Presenting autor:** Efimov Andrei  
Efimov A.V., Popov A.G.  
**Oligomerization of Propylene over TON, FER and MFI Zeolites**  
*Lomonosov Moscow State University, Moscow, Russia*
- 17.00-17.15**    **OP-III-10**  
Online    **Presenting autor:** Andreeva Julia  
Andreeva J.A., Pichugina D.A., Nikitina N.A.  
**Quantum Chemical Simulation of Methanol Oxidation on Vanadium Oxide**  
*Lomonosov Moscow State University, Moscow, Russia*

**17.15-17.30 OP-I-14**

**Presenting autor:** Veselov Grigory

Veselov G.B.<sup>1,2</sup>, Karnaukhov T.M.<sup>1,2</sup>, Vedyagin A.A.<sup>1</sup>

**The Effect of pH During the Sol-Gel Synthesis of NiO-MgO Systems on Their Textural and Redox Properties**

*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*

*2 – Novosibirsk State University, Novosibirsk, Russia*

**17.30-18.00 CLOSING**

**May 19, Wednesday**

*Novosibirsk Local time UTC +7*

**Place: STUDENT HALL, 2<sup>nd</sup> floor**  
**Morning session**

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*Chairperson: Dr. Yashnik Svetlana,*

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## **ORAL PRESENTATIONS**

**09.50-10.05 OP-I-12**

**Presenting autor:** Kadtsyna Anastasiya

Kadtsyna A.S.<sup>1,2</sup>, Mishakov I.V.<sup>1,2</sup>, Bauman Y.I.<sup>1</sup>,  
Netskina O.V.<sup>1,2</sup>, Kibis L.S.<sup>1,2</sup>, Serkova A.N.<sup>1</sup>,  
Vedyagin A.A.<sup>1</sup>

**Target Synthesis of N-Doped Carbon Nanofibers  
on Self-Organizing Nickel-Containing Catalysts**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Novosibirsk State University, Novosibirsk,  
Russia*

**10.05-10.20 OP-I-13**

**Presenting autor:** Kobzar Elena

Kobzar E.O., Stepanova L.N., Vasilevich A.V.,  
Belskaya O.B.

**Effect of the Preparation Method and the  
Chemical Composition of Co-Containing Catalysts  
Based on Layered Hydroxides on Their Properties  
in the Furfural Hydrogenation**

*Center of New Chemical Technologies BIC, Omsk,  
Russia*



**10.20-10.35 OP-II-1**

**Presenting autor:** Dr. Bukhtiyarov Andrey  
Bukhtiyarov A.V.<sup>1</sup>, Prosvirin I.P.<sup>1</sup>, Panafidin M.A.<sup>1</sup>,  
Fedorov A.Yu.<sup>1</sup>, Klyushin A.Yu<sup>2</sup>, Knop-Gericke A.<sup>2</sup>,  
Zubavichus Y.V.<sup>1</sup>, Bukhtiyarov V.I.<sup>1</sup>

**Near Ambient Pressure XPS and MS Study of CO  
Oxidation over Model Pd-Au/HOPG Catalysts: The  
Effect of Metal Ratio**

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

*2 – Fritz-Haber-Institute der Max Planck Society,  
Berlin, Germany*

**10.35-11.05 Coffee**

**Place: STUDENT HALL, 2<sup>nd</sup> floor**

**Morning session**

*Chairperson: Dr. Bukhtiyarov Andrey,*

*Borekov Institute of Catalysis, Novosibirsk, Russia*

## **ORAL PRESENTATIONS**

**11.05-11.20 OP-II-2**

**Presenting autor:** Dr. Saraev Andrey  
Saraev A.A., Kremneva A.M, Vinokurov Z.S.,  
Bulavchenko O.A., Yashnik S.A

**Operando Study of Mono- and Bimetallic PdPt  
Catalysts for Methane Oxidation by XAS and XRD**

*Borekov Institute of Catalysis, Novosibirsk, Russia*

- 11.20-11.35 OP-II-3**  
**Presenting autor:** Dr. Yurpalov Vyacheslav  
Yurpalov V.L.<sup>1</sup>, Drozdov V.A.<sup>1</sup>,  
Nepomnyashchii A.A.<sup>1</sup>, Buluchevskiy E.A.<sup>1</sup>,  
Lavrenov A.V.<sup>1</sup>  
**The Application of Aromatic Probe Molecules EPR Spectroscopy for Studying the Acidic Properties of the Catalysts for Vegetable Oil Hydrodeoxygenation Based on Anion-Modified Alumina**  
*Center of New Chemical Technologies BIC, Omsk, Russia*
- 11.35-11.50 OP-II-4**  
**Presenting autor:** Larionov Kirill  
Larionov K.P.<sup>1,2</sup>, Evtushok V.Yu.<sup>1,2</sup>  
**Evaluating Number of Basic Centers in Zr-MOFs by Liquid-Phase Adsorbtion of Isobutyric Acid**  
*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*  
*2 – Novosibirsk State University, Novosibirsk, Russia*
- 11.50-12.05 OP-II-5**  
**Presenting autor:** Dr. Prima Darya  
Prima D.O., Kulikovskaya N.S., Burykina Ju.V.,  
Ananikov V.P.  
**Palladium Supported on N-Heterocyclic Carbene in Dynamic Catalysis**  
*Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia*

12.05-12.20 OP-II-6

**Presenting autor:** Pokochueva Ekaterina

Pokochueva E.V.<sup>1,2</sup>, Burueva D.B.<sup>1,2</sup>, Svyatova A.<sup>1,2</sup>,  
Kovtunov K.V.<sup>1,2</sup>, Meersmann T.<sup>3</sup>, Pavlovskaya G.<sup>3</sup>,  
Koptug I.V.<sup>1,2</sup>

**Parahydrogen and  $^{129}\text{Xe}$  for *In Situ* Studies of Heterogeneous Catalytic Reactions**

*1 – International Tomography Center SB RAS, Novosibirsk, Russia*

*2 – Novosibirsk State University, Novosibirsk, Russia*

*3 – Sir Peter Mansfield Imaging Centre, University of Nottingham, Nottingham, UK*

12.20-12.35 OP-II-7

**Presenting autor:** Dr. Larichev Yurii

**Developing of New SAXS Technique for Metal Supported Catalysts Study**

*Borskov Institute of Catalysis, Novosibirsk, Russia*

*Novosibirsk State University, Novosibirsk, Russia*

**12.35-12.50 OP-II-8**

**Presenting autor:** Panafidin Maxim

Panafidin M.A.<sup>1</sup>, Bukhtiyarov A.V.<sup>1</sup>, Prosvirin I.P.<sup>1</sup>,  
Chetyrin I.A.<sup>1</sup>, Klyushin, A.Yu.<sup>2</sup>, Zubavichus Y.V.<sup>1</sup>,  
Stakheev A.Yu.<sup>3</sup>, Bukhtiyarov V.I.<sup>1</sup>

**O<sub>2</sub>-induced Segregation as an Efficient Tool for  
Fine-tuning the Intermetallic Pd-In/HOPG Surface  
Structure**

*1 – Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2 – Fritz Haber Institute of the Max Planck Society,  
Berlin, Germany*

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

**12.50-13.05 OP-II-9**

**Presenting autor:** Dmitrachkov Aleksey

Dmitrachkov A. M.<sup>1</sup>, Kvon R.I.<sup>1</sup>, Nartova A.V.<sup>1,2</sup>

**New Model Supports and Catalysts Based on Thin  
N<sub>x</sub>Al<sub>y</sub>O<sub>z</sub> Films**

*1 - Boreskov Institute of Catalysis, Novosibirsk,  
Russia*

*2- Novosibirsk State University, Novosibirsk, Russia*

**13.05-14.30 Lunch**

Place: STUDENT HALL, 2<sup>nd</sup> floor  
Afternoon session

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Chairperson: Dr. Nartova Anna,  
*Boreskov Institute of Catalysis, Novosibirsk, Russia*

## ORAL PRESENTATIONS

- 16.30-16.45**    **OP-II-10**  
Online    **Presenting autor:** Ondar Evgeniia  
Ondar E.E., Burykina J.V., Ananikov V.P.  
**The Investigation of “Cocktail”-Type Origin of Platinum Species Catalyzing Hydrosilylation Reaction**  
*Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia*
- 16.45-17.00**    **OP-II-11**  
Online    **Presenting autor:** Millán Ordóñez Elena  
Millán E., Mota N., Navarro R.M.  
**Effect of Hybridization Method on Bifunctional Catalysts for Direct Synthesis of Dimethyl Ether Based on Cu-ZnO(Al) and Supported Heteropolyacids**  
*Institute of Catalysis and Petrochemistry (ICP), CSIC, Madrid, Spain*

- 17.00-17.15**    **OP-II-12**  
**Online**        **Presenting autor:** Dr. Nikoshvili Linda  
Bykov A.V.<sup>1</sup>, Nikoshvili L.Zh.<sup>1</sup>, Doluda V.Yu.<sup>1</sup>,  
Sulman M.G.<sup>1</sup>, Kiwi-Minsker L.<sup>2,3</sup>  
**Investigation of the Limits of Applicability of  
Hyper-Cross-Linked Aromatic Polymers in  
Heterogeneous Catalysis**  
*1 – Tver State Technical University, Tver, Russia*  
*2 – Tver State University, Tver, Russia*  
*3 – Ecole Polytechnique Fédérale de Lausanne,  
Switzerland*
- 17.15-17.30**    **OP-II-12**  
**Presenting autor:** Svyatova Alexandra  
Svyatova A.<sup>1,2</sup>, Kononenko E.S.<sup>1,2</sup>, Kovtunov K.V.<sup>1,2</sup>,  
Fedorov A.<sup>3</sup>, Koptuyug I.V.<sup>1,2</sup>  
**Investigation of Heterogeneous Gas Phase  
Hydrogenation Using Spatially Resolved NMR  
Spectroscopy and Parahydrogen**  
*1 – International Tomography Center SB RAS,  
Novosibirsk, Russia*  
*2 – Novosibirsk State University, Novosibirsk,  
Russia*  
*3 – Department of Mechanical and Process  
Engineering, ETH Zürich, Switzerland*
- 17.30-18.00**    **CLOSING**  
**GRAND HALL, 3<sup>rd</sup> floor**

## POSTER PRESENTATIONS

### Section 1 - Preparation of catalysts and adsorbents

#### PP-I-1

Benu V.A.<sup>1</sup>, Nazarkina Y.V.<sup>2</sup>, Rusakov V.A., Dronov A.A.

#### **Influence of the Hydrodynamic Growth Conditions on the Nanoporous Anodic WO<sub>x</sub> Morphology and Its Photocatalytic Properties**

*1 – National Research University of Electronic Technology “MIET”, 124498 Moscow, Russia*

*2 – Establishment of the Russian Academy of Sciences, Institute of Nanotechnology Microelectronics INME of RAS, Leninskiy Prospekt 32A, Moscow, 119991, Russian Federation*

#### PP-I-2

Bugrova T.A., Kharlamova T.S., Svetlichnyi V.A., Salaev M.A., Mamontov G.V.

#### **Effect of CeO<sub>2</sub> Reductive Pretreatment on the Formation of Bimetallic Particles in Ag-Doped Pt/CeO<sub>2</sub> Catalysts for 4-Nitrophenol Reduction**

*Tomsk State University, Tomsk, Russia*

#### PP-I-3

Demikhova N.R., Rubtsova M.I., Glotov A.P.

#### **Synthesis and Investigation of a Pt-Containing Micro-Mesoporous Catalyst for Xylene Isomerization**

*Gubkin Russian State University of Oil and Gas, Moscow, Russia*

#### PP-I-4

Dorosheva I.B.<sup>1,2,3</sup>, Sushnikova A.A.<sup>3</sup>, Valeeva A.A.<sup>1,2</sup>, Rempel A.A.<sup>1,3</sup>

#### **Titanium Dioxide Nanotubes Modification in Hot Hydrogen Steam**

*1 – Ural Federal University, Yekaterinburg, Russia*

*2 – Institute of Solid State Chemistry of the UB RAS, Yekaterinburg, Russia*

*3 – Institute of Metallurgy of the UB RAS, Yekaterinburg, Russia*

**PP-I-5**

Fedorova V.E.<sup>1</sup>, Simonov M.N.<sup>1,2</sup>, Bespalko Yu.N.<sup>1</sup>, Valeev K.R.<sup>1</sup>,  
Smal E.A.<sup>1</sup>, Sadykov V.A.<sup>1,2</sup>

**Kinetic Regularities of Methane Dry Reforming Reaction over  
Bimetallic Catalysts Based on Ceria-Zirconia Prepared by Supercritical  
Synthesis**

*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*

*2 – Novosibirsk State University, Novosibirsk, Russia*

**PP-I-6**

Golovin S.N., Yapryntsev M.N.

**Hydrothermal Synthesis of Samarium-Containing Layered Double  
Hydroxide**

*Belgorod State National Research University, Belgorod, Russia*

**PP-I-7**

Veprikova E.V.<sup>1</sup>, Ionin V.A.<sup>1</sup>, Skripnikov A.M.<sup>1,2</sup>, Kazachenko A.S.<sup>1,2</sup>,  
Taran O.P.<sup>1,2</sup>

**Integrated Extraction-Catalytic Processing of Mechanically Activated  
Pine Bark**

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

*2 – Siberian Federal University, Krasnoyarsk, Russia*

**PP-I-8**

Ivanova N.A.<sup>1</sup>, Shapir B.L.<sup>1</sup>, Spasov D.D.<sup>1,2</sup>, Tishkin V.V.<sup>1</sup>,  
Mensharapov R.M.<sup>1</sup>, Alekseeva O.K.<sup>1</sup>, Fateev V.N.<sup>1</sup>

**Synthesis of Pt<sup>20</sup>/SnO<sub>2</sub><sup>x</sup>/C – Electrocatalysts by Magnetron Sputtering  
of Tin in an Oxygen Environment**

*1 – NRC “Kurchatov Institute” Moscow, Russia*

*2 – National Research University “MPEI” Moscow, Russia*



**PP-I-9**

Luzina E.V.<sup>1,2</sup>, Shamanaeva I.A.<sup>2</sup>, Parkhomchuk E.V.<sup>1,2</sup>

**Synthesis of Core – Shell Zeolite Composites**

1 – *Boreskov Institute of Catalysis, Novosibirsk, Russia*

2 – *Novosibirsk State University, Novosibirsk, Russia*

**PP-I-10**

Madiyeva M.M., Prima D.O, Ananikov V.P.

**Synthesis of Bridging NHC Complexes of Palladium and Assessment of Their Catalytic Activity in the Buchwald-Hartwig Reaction**

*Zelinsky Institute of Organic Chemistry, RAS, Moscow, Russia*

**PP-I-11**

Chudin O.S.<sup>1</sup>, Nedelina T.S.<sup>1</sup>, Patrusheva A.A.<sup>1,2</sup>, Burmakina G.V.<sup>1</sup>,  
Rubaylo A.I.<sup>1,2</sup>, Verpekin V.V.<sup>1</sup>

**Rhodium (I) Complexes of Type Rh(CO)(CN-Ad)(Bident): Synthesis, Reactivity, Electrochemistry and Catalytic Application**

1 – *Institute of Chemistry and Chemical Technology SB RAS, Federal Research Center “Krasnoyarsk Science Center SB RAS”, Krasnoyarsk, Russia*

2 – *Siberian Federal University, Krasnoyarsk, Russia*

**PP-I-12**

Nesterova A.A.<sup>1,2</sup>, Soficheva O.S.<sup>1</sup>, Yakhvarov D.G.<sup>1,2</sup>

**N-Substituted  $\alpha$ -Diphenylphosphinoglycines: Electrochemical Properties and Reactivity in the Presence of Organonickel Complexes**

1 – *Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences, Kazan, Russia*

2 – *Kazan Federal University, Kazan, Russia*

**PP-I-13**

Roslyakov I.V.<sup>1,2</sup>, Kolesnik I.V.<sup>2</sup>, Levin E.E.<sup>2</sup>, Kardash T.Yu.<sup>3</sup>,  
Solovyov L.A.<sup>4</sup>, Napolskii K.S.<sup>2</sup>

**Porous Anodic Alumina as a Catalyst Carrier with Hierarchical Porosity**

*1 – Kurnakov Institute of General and Inorganic Chemistry, Moscow, Russia*

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

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

*4 – Institute of Chemistry and Chemical Technology, Krasnoyarsk, Russia*

**PP-I-14**

Sankova N.N.<sup>1,2</sup>, Parkhomchuk E.V.<sup>1,2</sup>

**Methods for Obtaining Cross-Linked Polymer Particles and Their Prospects for Application in Pseudo-Homogeneous Catalysis**

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

*2 – Novosibirsk State University, Novosibirsk, Russia*

**PP-I-15**

Save'eva A.S., Vyshegorodtseva E.V., Mamontov G.V.

**Bimetallic Pt-Ag/MCM-41 Catalysts for 4-Nitrophenol Reduction to 4-Aminophenol**

*Tomsk State University, Tomsk, Russia*

**PP-I-16**

Tikhonov A.V., Kaplin I.Yu., Lokteva E.S.

**Effect of Copper Modification and Ce:Si Ratio on the Catalytic Properties of Mesoporous Ceria-Silica Catalysts in CO-PROX**

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

**PP-I-17**

Tikhonov B.B., Stadolnikova P.Yu., Sidorov A.I., Sulman M.G.

**Optimization of Synthesis Conditions of Biocatalytic Systems on the Base of Alginate Microspheres and Glucose Oxidase**

*Tver State Technical University, Tver, Russia*

**PP-I-18**

Timoshkina V.V., Pimerzin A.A.

**Synthesis of Vanadium-Substituted Phosphorus-Molybdenum Keggin Type Heteropolyacids - Precursors for Hydroisomerization Catalysts**

*Samara State Technical University, Samara, Russia*

**PP-I-19**

Vyshegorodtseva E.V., Matskan P.A., Mamontov G.V.

**Synthesis and Properties of MIL-100(Fe)/Diatomite Composites**

*National Research Tomsk State University, Tomsk, Russia*

**PP-I-20**

Vyvdenko D.A., Sankova S.N., Parkhomchuk E.V.

**Design of Micro-, Meso- and Macroporous Silica Particles**

*Borekov Institute of Catalysis, Novosibirsk, Russia*

**PP-I-21**

Yakovenko R.E.<sup>1</sup>, Savost'yanov A.P.<sup>1</sup>, Narochnyi G.B.<sup>1</sup>, Soromotin V.N.<sup>1</sup>, Zubkov I.N.<sup>1</sup>, Papeta O.P.<sup>1</sup>, Mitchenko S.A.<sup>1,2</sup>

**Co-Based Hybrid Catalyst System in Fischer-Tropsch Synthesis Combined with Hydroprocessing**

1 – *M.I. Platov South-Russian State Polytechnic University (NPI), Novocherkassk, Russia*

2 – *Institute of Physical Organic & Coal Chemistry, Donetsk*

**PP-I-22**

Zhirnova E.D.<sup>1</sup>, Alekhina I.E.<sup>1</sup>, Pavlova I.N.<sup>2</sup>

**A New Approach to the Formation of Highly Dispersed LSX Zeolite**

1 – *Bashkir State University, Ufa, Russia*

2 – *Institute of Petrochemistry and Catalysis of RAS, Ufa, Russia*

### PP-I-23

Kudinova E.S., Boeva O.A., Zhavoronkova K.N.

#### **The Study of the Catalytic Properties of Copper and Gold Nanoparticles in the Reaction of Deuterium-Hydrogen Exchange**

*D.Mendeleev University of Chemical Technology of Russia, Moscow, Russia*

### PP-I-24

Samoylenko D.E.<sup>1</sup>, Rodygin K.S.<sup>1</sup>, Ananikov V.P.<sup>1,2</sup>

#### **Electrochemically Promoted Synthesis of Triazoles in the Presence of Ionic Liquids**

*1 – Saint Petersburg State University, Saint Petersburg, Russia*

*2 – Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia*

## **Section 2 - Characterization and *in situ* studies of the catalysts**

### PP-II-1

Bochkov M.A., Shinkarev A.A. (jun), Kharlampidi Kh.E.

#### **Features of Phase Transformations of K-Ce Iron Oxide Systems in the Process of Dehydrogenation of Isoamylenes**

*Kazan National Research Technological University, Kazan, Russia*

### PP-II-2

Gorelysheva V.E., Kharlampidi Kh.E., Misbakhova F.F., Bochkov M.A., Shinkarev A.A. (jun)

#### **Catalytic Properties of ZrO<sub>2</sub> Support for CrO<sub>x</sub> Catalyst in the Isopentane Dehydrogenation Reaction**

*Kazan National Research Technological University, Kazan, Russia*

### PP-II-3

Chetyrin I.A.<sup>1</sup>, Fedorov A.Yu.<sup>1</sup>, Bukhtiyarov A.V.<sup>1</sup>, Prosvirin I.P.<sup>1</sup>, Shavorskiy A.<sup>2</sup>, Zubavichus Y.V.<sup>1</sup>, Bukhtiyarov V.I.<sup>1</sup>

#### **CO Oxidation Reaction over Pd-Au/Ir Film: NAP XPS and MS Study**

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – MAX IV Laboratory, Lund University, Lund, Sweden

### PP-II-4

Kagilev A.A.<sup>1,2</sup>, Nesterova A.A.<sup>1,2</sup>, Kantyukov A.O.<sup>1,2</sup>, Gafurov Z.N.<sup>1</sup>, Sakhapov I.F.<sup>1</sup>, Bekmukhamedov G.E.<sup>1,2</sup>, Islamov D.R.<sup>2</sup>, Zueva E.M.<sup>1,3</sup>, Soficheva O.S.<sup>1</sup>, Yakhvarov D.G.<sup>1,2</sup>

#### **The N- and P-Substituents in $\alpha$ -Phosphinoglycine Ligands in the Question of the Selectivity in Ni-Catalyzed Ethylene Oligomerization**

1 – Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences, Kazan, Russia

2 – Kazan Federal University, Kazan, Russia

3 – Kazan National Research Technological University, Kazan, Russia

### PP-II-5

Kagilev A.A.<sup>1,2</sup>, Gafurov Z.N.<sup>1</sup>, Morozov V.I.<sup>1</sup>, Zueva E.M.<sup>1,3</sup>, Zhukova N.A.<sup>1</sup>, Kadyrova M.S.<sup>1</sup>, Mamedov V.A.<sup>1</sup>, Yakhvarov D.G.<sup>1,2</sup>

#### **Study of the Electrochemical Properties of 2,2'-Bibenzimidazoles and Nickel Complexes Based on Them**

1 – Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences, Kazan, Russia

2 – Kazan Federal University, Kazan, Russia

3 – Kazan National Research Technological University, Kazan, Russia

### PP-II-6

Myachina M.A., Gavrilova N.N., Novaeva E.P., Slastilov A.A., Mikhaylov R.K., Nazarov V.V., Skudin V.V.

#### **The Comparative Study of Different Type Catalyst in the Dry Reforming of Methane**

D.Mendelev University of Chemical Technology, Moscow, Russia

**PP-II-7**

Smirnov D.V., Prozorov D.A., Afineevskiy A.V., Koroleva M.O.

**Prediction of the Catalytic Activity of Nickel in Hydrogenation Reactions Using IR Spectrometry**

*Ivanovo State University of Chemistry and Technology, Ivanovo, Russia*

**PP-II-8**

Smirnova E.M., Zasyopalov G.O., Boev S.S., Glotov A.P., Vinokurov V.A.

**Investigation of Aluminosilicate Halloysite Nanotubes as a Component of a Zeolite-Containing Catalyst for the Conversion of Methanol to Olefins**

*Gubkin Russian State University of Oil and Gas, Moscow, Russia*

**PP-II-9**

Smirnova N.S.<sup>1</sup>, Baeva G.N.<sup>2</sup>, Mashkovsky I.S.<sup>2</sup>, Bukhtiyarov A.V.<sup>3</sup>, Prosvirin I.P.<sup>3</sup>, Zubavichus Y.V.<sup>3</sup>, Bukhtiyarov V.I.<sup>3</sup>, Stakheev A. Yu.<sup>2</sup>

**Investigation of CO-Induced Segregation on the Surface of Bimetallic Pd-Ag Catalyst by CO-DRIFTS and XPS**

1 – *Kurnakov Institute of General and Inorganic Chemistry, Moscow, Russia*

2 – *Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia*

3 – *Boreskov Institute of Catalysis, Novosibirsk, Russia*

## Section 3 - Mechanism and kinetics of catalytic reactions

**PP-III-1**

Kapustin R.V., Grinvald I.I.

**IR Manifestation of Organic Fluid Formation in the Near-Surface Area at Ambient Conditions**

*Nizhny Novgorod State Technical University n.a. R.A. Alekseev, Nizhny Novgorod, Russia*

### **PP-III-2**

Petrov I.L.<sup>1</sup>, Khatamirad M.<sup>2</sup>, Konrad M.<sup>2</sup>, Karwacki L.<sup>3</sup>, Almer C.<sup>3</sup>,  
Gentzen M.<sup>2</sup>, Boscgali C.<sup>4</sup>, Rosowski F.<sup>2,3</sup>, Kraehnert R.<sup>2</sup>

#### **Data Science Tools for Heterogeneous Catalysis: Unravelling Exemplarily Trends in Syngas to Ethanol Catalysis**

1 – *Boreskov Institute of Catalysis, Novosibirsk, Russia*

2 – *BasCat – UniCat BASF Joint Lab, Technische Universität Berlin,  
Berlin, Germany*

3 – *BASF SE, Ludwigshafen, Germany*

4 – *hte – The high throughput experimentation company, Heidelberg,  
Germany*

### **PP-III-3**

Lagoda N.A., Larina E.V., Vidyaeva E.V., Kurokhtina A.A., Schmidt A.F.

#### **The Nature of Active Palladium Species in the Suzuki-Miyaura Reaction with Aryl Chlorides Using “Ligandless” Catalytic Systems**

*Irkutsk State University, Chemical Department, Irkutsk, Russia*

### **PP-III-4**

Nikitina N.A., Pichugina D.A., Kuz'menko N.E.

#### **The Effect of CeO<sub>2</sub> Support on the Mechanism of CO Oxidation on Thiolate-Protected Gold Clusters**

*Department of Chemistry, M.V.Lomonosov Moscow State University,  
Moscow, Russia*

## Section 4 - Catalysis for renewable sources

### PP-IV-1

Baygildin I.G.<sup>1</sup>, Vutolkina A.V.<sup>1</sup>, Maksimov A. L.<sup>1,2</sup>, Karakhanov E.A.<sup>1</sup>

#### **Hydrodeoxygenation of Bio-Oil Model Compounds over Unsupported Ni–Mo-Sulfide Catalysts**

1 – *Lomonosov Moscow State University, Chemistry Department, Moscow, 119991, Russia*

2 – *Topchiev Institute of Petrochemical Synthesis, Russian Academy of Sciences, Moscow, 119991, Russia*

### PP-IV-2

Filatova A.E.<sup>1</sup>, Gubskaya E.M.<sup>1</sup>, Doluda V.Yu.<sup>1</sup>, Matveeva V.G.<sup>1,2</sup>, Sulman M.G.<sup>1</sup>

#### **Modern Catalysts Used for the Conversion of Cellulose to Glycols**

1 – *Tver State Technical University, Tver, Russia*

2 – *Tver State University, Tver, Russia*

### PP-IV-3

Grigoreva A.R.<sup>1</sup>, Kolobova E.N.<sup>1</sup>, Pakrieva E.G.<sup>1</sup>, Mäki-Arvela P.<sup>2</sup>, Carabineiro S.A.C.<sup>3</sup>, Murzin D.Yu.<sup>2</sup>, Pestryakov A.N.<sup>1</sup>

#### **Liquid-Phase Oxidation of Betulin to Its Oxo-Derivatives over Silver Supported Catalysts**

1 – *Research School of Chemistry & Applied Biomedical Sciences, National Research Tomsk Polytechnic University, Tomsk, Russia*

2 – *Johan Gadolin Process Chemistry Centre, Abo Akademi University, Turku, Finland*

3 – *LAQV-REQUIMTE, Universidade NOVA de Lisboa - FCT, Caparica, Portugal*

### PP-IV-4

Kalinina M.A., Kulikov L.A.

#### **Hydrodeoxygenation of Lignin-Derived Compounds Using Ru Catalysts**

*Moscow State University, Moscow, Russia*



**PP-IV-5**

Ten S., Torbina V.V., Svetlichnyi V.A., Vodyankina O.V.

**Hybrid AgAu@UiO-66 Catalysts for Propylene Glycol Oxidation into Lactic Acid**

*Laboratory of Catalytic Research, Tomsk State University, Tomsk, Russia*

**PP-IV-6**

Wang Y.<sup>1,2</sup>, Nuzhdin A.L.<sup>1</sup>, Shamanaev I.V.<sup>1</sup>, Bukhtiyarova G.A.<sup>1</sup>

**Reductive Amination of Ethyl Levulinate to Pyrrolidones Using Ni<sub>2</sub>P Catalysts in a Flow Reactor**

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

*2 – Novosibirsk State University, Novosibirsk Russia*

**PP-IV-7**

Zasypalov G.O., Nedolivko V.V., Glotov, A.P., Gushchin P.A.,

Vinokurov V.A.

**Hydrogenation of Phenol and Benzene on Nanostructured Ru-and Pt-Containing Catalysts**

*Gubkin Russian State University of Oil and Gas, Moscow, Russia*

**PP-IV-8**

Gulyaeva Yu.K., Alekseeva M.V., Bulavchenko O.A., Kremneva A.M.,

Kaichev V.V., Yakovlev V.A.

**High-Loaded NiCu Sol-Gel Catalysts for Dehydrogenation of Liquid Organic Hydrogen Carriers**

*Borekov Institute of Catalysis, Novosibirsk, Russia*

## Section 5 - Catalysis for fine organic synthesis, natural gas and petroleum chemistry

### PP-V-1

Akopyan A.V., Eseva E.A., Polikarpova P.D.

#### **Immobilized Multifunctional Ionic Liquids for Highly Efficient Oxidative Desulfurization of Model Fuel**

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

### PP-V-2

Bikbaeva V.<sup>1</sup>, Nesterenko N.<sup>2</sup>, Valtchev V.<sup>1</sup>

#### **Embryonic Zeolite Carriers Decorated with Metal Oxides and Metal Sulfides Nanoparticles**

*1 – Laboratoire Catalyse et Spectrochimie, Normandie Univ, ENSICAEN, UNICAEN, CNRS, 14000 Caen, France*

*2 – Total Research and Technology Feluy, Zone Industrielle C, 7181 Feluy, Belgium*

### PP-V-3

Bushkov N.S.<sup>1,2</sup>, Zhizhko P.A.<sup>2</sup>, Zarubin D.N.<sup>2</sup>

#### **Silica-Supported Tungsten Oxide as Oxo/Imido Heterometathesis Catalyst**

*1 – Chemical department of M.V. Lomonosov Moscow State University, Moscow, Russia*

*2 – A.N.Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia*

### PP-V-4

Chistiakov K.A.<sup>1,2</sup>, Andreikov E.I.<sup>1</sup>, Puzyrev I.S.<sup>1</sup>, Rusinov G.L.<sup>1,2</sup>

#### **A Mesoporous Carbon-Supported Copper-Based Catalysts for the Hydrogenation of CO<sub>2</sub> to Form Methanol and Dimethyl Ether**

*1 – Postovsky Institute of Organic Synthesis, UB RAS, S.Kovalevskoy st. 20/22, Ekaterinburg, Russia*

*2 – Ural Federal University, Mira st. 19, Ekaterinburg, Russia*

**PP-V-5**

Dubovtsev D.A.<sup>1</sup>, Enikeeva L.V.<sup>2</sup>, Gubaidullin I.M.<sup>1</sup>

**Determination of the Optimal Ratio of the Initial Reagents of the MTBE Synthesis Process**

*1 – Institute of Petrochemistry and Catalysis, Ufa, Russia*

*2 – Novosibirsk State University, Novosibirsk, Russia*

**PP-V-6**

Eseva E.A., Akopyan A.V.

**Heterogeneous Catalysts Based on Anderson-Type Polyoxometales for Aerobic Oxidation of Sulfur-Containing Compounds**

*Chemical Department, Moscow State University, Moscow, Russia*

**PP-V-7**

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

**Kinetic Characteristics of Catalysts Based on Mesoporous Silicagels Doped with Dysprosium, Lanthanum and Modified with Ni, in the Hydrogenation Reactions of Aromatic Hydrocarbons**

*Samara University, Samara, Russia*

**PP-V-8**

Fursov E.A., Shabalin A.Yu., Prikhod'ko S.A., Adonin N.Yu.

**Polymerization of Ethylene Catalyzed by Fluorinated Phenoxyimine Catalysts**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

**PP-V-9**

Karmadonova I.E.<sup>1,2</sup>, Kuznetsova N.I.<sup>1</sup>, Kuznetsova L.I.<sup>1</sup>

**Study of the Effect o-Phenanthroline on Cumene Oxidation and Composition of Products in the Presence of an Organic Catalyst N-Hydroxyphthalimide and Fe(III)/o-Phenanthroline Promoter**

*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*

*2 – Novosibirsk State University, Novosibirsk, Russia*

**PP-V-10**

Kondratieva V.U.<sup>1</sup>, Verevkin S.P.<sup>1,2</sup>, Martynenko E.A.<sup>1</sup>

**Hydrogenation of Eutectic Mixture of Biphenyl and Diphenylmethane over Supported Platinum Catalysts**

1 – *Samara State Technical University, Samara, Russia*

2 – *University of Rostock, Rostock, Germany*

**PP-V-11**

Makeeva D.A., Kulikov L.A.

**Directed Synthesis of Porous Aromatic Frameworks as Supports for Transition Metal Nanoparticles in Various Hydrogenation Processes**

*Lomonosov Moscow State University, Moscow, Russia*

**PP-V-12**

Ratkevich E.A.<sup>1</sup>, Manaenkov O.V.<sup>1</sup>, Matveeva V.G.<sup>1</sup>, Nikoshvili L.Zh.,  
Kislitza O.V.<sup>1</sup>, Sulman M.G.<sup>1</sup>, Bronstein L.M.<sup>2</sup>

**Synthesis of Mannitol from Inulin Using a Magnetic Catalyst**

1 – *Tver State Technical University, Department of Biotechnology and Chemistry, Tver, Russia*

2 – *Indiana University, Department of Chemistry, Bloomington, IN 47405, USA*

**PP-V-13**

Melnikov D.P., Stytsenko V.D., Glotov A.P., Vinokurov V.A.

**Surface Modified Bimetallic Catalysts for Selective Hydrogenation of Acetylene**

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

**PP-V-14**

Nenasheva M.V., Gorbunov D.N.

**New Heterogeneous Rh/Tertiary Amine Catalysts for Tandem Hydroformylation/Hydrogenation of Olefins**

*Department of Petroleum Chemistry and Organic Catalysis, Faculty of Chemistry, Moscow State University, Moscow, Russia*

**PP-V-15**

Pichugov A.V.<sup>1,2</sup>, Zhizhko P.A.<sup>2</sup>, Zarubin D.N.<sup>2</sup>

**Well-Defined Silica-Supported Titanium Imido Complex as a Catalyst for Direct Imidation of Lactones**

*1 – Higher Chemical College, D. Mendeleev University of Chemical Technology of Russia, Moscow, Russia*

*2 – Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia*

**PP-V-16**

Savinov A.A., Vinogradov N.A., Tochilin N.V., Pimerzin A.I.A.

**Aluminosilicate Modified Supports for CoMo Catalysts for Hydroisomerization of n-Hexadecane**

*Samara State Technical University, Samara, Russia*

**PP-V-17**

Vinogradov N.A.<sup>1</sup>, Savinov A.A.<sup>1</sup>, Glotov A.P.<sup>2</sup>, Pimerzin A.I.A.<sup>1,2</sup>

**The Effect of Mesoporous Zeolite Additive Application in Supported Sulfide Catalysts for 4,6-DMDBT Conversion**

*1 – Samara State Technical University, Samara, Russia*

*2 – Gubkin Russian State University of Oil and Gas, Moscow, Russia*

**PP-V-18**

Vorobyeva E.E., Shamanaeva I.A., Polukhin A.V., Parkhomchuk E.V.

**Hydrodenitrogenation of Heavy Oil Feedstock on Composite Catalysts: SAPO-5 and SAPO-11 as a Part of Conventional Hydrotreatment Catalysts**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

### **PP-V-19**

Vosmerikov A.A., Barbashin Y.E, Vosmerikova L.N.

#### **Aromatization of Propane over Zn-Aluminosilicates with a Hierarchical Pore System**

*Institute of Petroleum Chemistry SB RAS, 4, Akademichesky prosp., Tomsk, 634055, Russia*

### **PP-V-20**

Zanina A., Makhmutov D., Kondratenko E.V.

#### **Study of Catalyst Activity and Selectivity in Oxidative Coupling of Methane in Presence of Water**

*Leibniz-Institute for Catalysis, Rostock, Germany*

### **PP-V-21**

Ruban N.V.<sup>1,3</sup>, Potemkin D.I.<sup>1,2,3</sup>, Rogozhnikov V.N.<sup>1,4</sup>,  
Emelyanov V.A.<sup>3,5</sup>, Snytnikov P.V.<sup>1</sup>

#### **Ru/Ce<sub>0.75</sub>Zr<sub>0.25</sub>O<sub>2-δ</sub>-η-Al<sub>2</sub>O<sub>3</sub>/FeCrAl Structured Catalyst for CO<sub>2</sub> Methanation and Steam Reforming of Natural Gas**

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – UNICAT Ltd, Novosibirsk, Russia

3 – Novosibirsk State University, Novosibirsk, Russia

4 – Gubkin Russian State University of Oil and Gas, Moscow, Russia

5 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

## **Section 6 - Catalysis for environmental protection, photocatalysis, electrocatalysis**

### **PP-VI-1**

Chernykh M.V., Mikheeva N.N., Mamontov G.V.

#### **Designing Ag/CeO<sub>2</sub> Sorbent-Catalysts for Toluene Removal**

*Tomsk State University, Tomsk, Russia*

#### **PP-VI-2**

Lakina N.V.<sup>1</sup>, Doluda V.Yu.<sup>1</sup>, Sulman M.G.<sup>1</sup>, Sidorov A.I.<sup>1,2</sup>,  
Matveeva V.G.<sup>1,2</sup>, Tumanov G.A.<sup>1</sup>

#### **The Study of Surface Morphology of Conductive Biopolymer Matrices**

1 – *Tver State Technical University, Tver, Russia*

2 – *Tver State University, Tver, Russia*

#### **PP-VI-3**

Goncharova D.A., Kharlamova T.S., Svetlichnyi V.A.

#### **CuO NPs Obtained by Laser Ablation for 4-Nitrophenol Hydrogenation and Dye Degradation**

*Tomsk State University, Tomsk, Russia*

#### **PP-VI-4**

Gosteva A.N., Semushina Yu.P.

#### **Cr-Co Catalysts for Benzene Oxidation Based on Double Salt Oxidation Products**

*Tananaev Institute of Chemistry - Subdivision of the Federal Research Centre «Kola Science Centre of the Russian Academy of Sciences» Science Centre of Russian Academy of Sciences, Apatity, Murmansk region, 184209, Russia*

#### **PP-VI-5**

Kobelev A.D.<sup>1,2</sup>, Ananikov V.P.<sup>1,2</sup>

#### **Custom Build 3D-Printed Reactor for Photochemical Synthesis**

1 – *Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Leninsky prospect 47, Moscow, 119991 Russia*

2 – *Lomonosov Moscow State University, Leninskie Gory GSP-1, 1-3, Moscow, 119991 Russia*

#### **PP-VI-6**

Pinigina A.E.<sup>1,2</sup>, Badmaev S.D.<sup>1</sup>

#### **Partial Catalytic Oxidation of Dimethoxymethane to Synthesis Gas over Supported Noble Metal Catalysts**

1 – *Boreskov Institute of Catalysis, Novosibirsk, Russia*

2 – *Novosibirsk State University, Novosibirsk, Russia*

#### **PP-VI-7**

Savchuk T.P., Gavrilin I.M., Dronov A.A., Gavrilov S.A.

#### **Photocatalytic and Photoelectrochemical Properties of Carbon Modified Anodic TiO<sub>2</sub> Nanotube Arrays**

*Institute AMT MIET, Zelenograd, Russia*

#### **PP-VI-8**

Shmelev N.Y.<sup>1,2</sup>, Kuchkaev A.M.<sup>3,4</sup>, Gushchin A.L.<sup>1,2</sup>, Yakhvarov D.G.<sup>3,4</sup>

#### **Hydrolysis of Element (White) Phosphorus in the Presence of Heterometallic Cubane-Type {Mo<sub>3</sub>PdS<sub>4</sub>} Cluster Complexes**

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

2 – *Novosibirsk State University, Novosibirsk, Russia*

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

4 – *Kazan Federal University, Kazan, Russia*

#### **PP-VI-9**

Svintsitskiy D.A., Sokovikov N.A., Fedorova E.A., Slavinskaya E.M., Boronin A.I.

#### **Ternary Mixed Oxide of Silver, Copper and Manganese - Novel Catalytic Material for Oxidation Reactions**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

#### **PP-VI-10**

Taratayko A.V., Mamontov G.V.

#### **Reduced Graphene Oxide Decorated with Ag and CeO<sub>2</sub> Nanoparticles Composite for 4-Nitrophenol Reduction**

*Tomsk State University, Tomsk, Russia*

#### **PP-VI-11**

Zasypkina A.A.<sup>1</sup>, Spasov D.D.<sup>1,2</sup>, Seregina E.A.<sup>1</sup>, Mensharapov R.M.<sup>1</sup>, Ivanova N.A.<sup>1</sup>

#### **Aspects of the Synthesis of Catalytic Layers Based on Structured Carbon Materials by Impregnation**

1 – *NRC "Kurchatov Institute" Moscow, Russia*

2 – *National Research University "MPEI" Moscow, Russia*



**PP-VI-12**

Zhurenok A.V.<sup>1</sup>, Kozlova E.A.<sup>1,2</sup>

**Composites Based on Solid Sulfides Solutions of Cd and Zn and Graphitic Carbon Nitride for the Photocatalytic Hydrogen Evolution under Visible Light Irradiation**

*1 – Boreskov Institute of Catalysis, Novosibirsk, Russia*

*2 – Novosibirsk State University, Novosibirsk, Russia*

