Boreskov Institute of Catalysis
N.D. Zelinsky Institute of Organic Chemistry RAS
Lomonosov Moscow State University
Siberian Branch of the Russian Academy of Sciences
NTI Center of Excellence «Hydrogen as a basis of low carbon economy»

XII International Conference
«Mechanisms of Catalytic Reactions»
MCR-XII

June 17 - 21, 2024
Vladimir, Russia

Scientific Program

Novosibirsk-2024

CONFERENCE ORGANIZERS

Boreskov Institute of Catalysis SB RAS,
Novosibirsk, Russia

N.D. Zelinsky Institute of Organic Chemistry RAS,
Moscow, Russia

Lomonosov Moscow State University,
Moscow, Russia

Siberian Branch of the Russian Academy of
Sciences, Novosibirsk, Russia

NTI Center of Excellence "Hydrogen as a basis of low carbon economy", Novosibirsk, Russia

UNDER THE AUSPICES OF

National Catalytic Society of Russia,
Moscow, Russia

SCIENTIFIC COMMITTEE

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Boreskov Institute of Catalysis SB RAS, Novosibirsk

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Institute of Chemistry and Chemical Technology SB RAS, Krasnoyarsk

Olga VODYANKINA,
Tomsk State University, Tomsk

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Marina SUVOROVA,
Boreskov Institute of Catalysis SB RAS, Novosibirsk

Svetlana LOGUNOVA,
Boreskov Institute of Catalysis SB RAS, Novosibirsk

SCIENTIFIC PROGRAM

The Scientific Program includes plenary lectures (40 min), keynote lectures (30 min), oral (20 min) and poster presentations.

The **Young Scientists Section** includes oral (10 min) presentations by undergraduates, graduate students and young scientists.

The main topics are:

- **I.** Study of catalysts and catalytic reactions at the atomic-molecular level
- **II.** Kinetics of catalytic reactions
- **III.** Advanced methods for study the mechanism of catalytic reactions
- **IV.** Theoretical methods in catalysis

The working languages of the conference are Russian and English.

SOCIAL PROGRAM

Group Photo
June 17, Monday, 17.50 – 18.00
AMAKS Golden Ring hotel

Welcome reception
June 17, Monday, 19.00 – 22.00
AMAKS Golden Ring hotel

Sightseeing tour of Vladimir
June 18, Tuesday, 16.40 – 19.00
Meeting point - AMAKS Golden Ring hotel

Banquet
June 19, Wednesday, 19.00 - 22.00

Post-Tour to Suzdal
June 21, Frirday, 09.00 – 19.00
Meeting point - AMAKS Golden Ring hotel

Scientific Program

June 17, Monday

Place: CONFERENCE HALL "RAZGULYAEVO"
AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

PLENARY SESSION

11.00-14.00 Registration

14.00-14.20 OPENING CEREMONY

Chair:

PLENARY LECTURES

14.20-15.00 PL-1
Reporter: Professor Valentin Ananikov
Single-Atom and Nano-Scale Catalytic Systems Studied with Artificial Intelligence
N.D. Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

15.00-15.40 PL-2
Reporter: Professor Sergey Kozlov
Increasing Activity of Heterogeneous Catalysts by Metal-Oxide Interactions
National University of Singapore, Singapore

KENYOTE LECTURE

15.40-16.10 KL-1
Reporter: Dr. Anton Gabrienko
Gabrienko A.A., Lashchinskaya Z.N., Stepanov A.G
Mechanisms of C_2–C_4 Alkene Transformation on Zeolites Modified with Metal Cations
Boreskov Institute of Catalysis, Novosibirsk, Russia

16.10-16.40 Coffee

Chair:

PLENARY LECTURE

16.40-17.20 PL-3

Reporter: Professor Yan Zubavichus

Synchrotron Radiation Techniques for the Atomic-Level Studies of Catalysts: New Capabilities to be Empowered by SKIF

SRF SKIF, Boreskov Institute of Catalysis SB RAS, Novosibirsk

KENYOTE LECTURE

17.20-17.50 KL-2

Reporter: Professor Alexander Guda

Multispectral Diagnostics of Catalytic Reactions in Microfluidic Systems

Southern Federal University, Rostov-na-Don

17.50-18.00 **GROUP PHOTO**

AMAKS Golden Ring hotel

19.00-22.00 **Welcome reception**

AMAKS Golden Ring hotel

June 18, Tuesday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

PLENARY SESSION

Chair:

PLENARY LECTURE

09.00-09.40 PL-4

Reporter: Professor Igor Koptyug

Heterogeneous Hydrogenations of Alkynes and Alkenes – From Mechanisms to Operando Spectroscopy of Model Reactors

International Tomography Center, SB RAS, Novosibirsk, Russia

KENYOTE LECTURES

09.40-10.10 KL-3

Reporter: Professor Boris Andryushechkin

Coadsorption Phases of Oxygen and Chlorine on Silver Surfaces and their Role in the Ethylene Epoxidation Reaction

Prokhorov General Physics Institute RAS, Moscow

10.10-10.40 KL-4

Reporter: Dr. Dmitriy Potemkin

"Metal – Oxygen Vacancy" Interfaces as Active Sites Of M/Ce1-Xzrxo2 (M=Ni, Ru, Rh, Pt) Catalysts

Boreskov Institute of Catalysis SB RAS, Novosibirsk

10.40-11.10 Coffee

June 18, Tuesday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

MORNING SESSION

Chair:

ORAL PRESENTATIONS

11.10-11.30 OP-I-1

Reporter: Stakheev Alexander

Stakheev A.Y., Bokarev D.A., Kanaev S.A., Baeva G.N., Bragina G.O.

Abatement of VOCs over Non-Noble Metal Catalysts at Near-Ambient Conditions by Ozon-Catalytic Oxidation (OZCO)

Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

11.30-11.50 OP-I-2

Reporter: Taran Oxana

Tarabanko N.V.[1], Golubkov V.A.[1], Tarabanko V.E.[1], Taran O.P.[1,2]

Mechanism of Catalysis by Solid Acids in an Aqueous Medium.

Cellulose Hydrolysis at the Molecular Level

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

2 – Boreskov Institute of Catalysis, Novosibirsk, Russia

11.50-12.10 OP-I-3

Reporter: Vodyankina Olga

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

Insight Into the Mechanism of Hydrogen Evolution Reaction Over Dark TiO_2 – Based Photocatalysts

Tomsk State University, Tomsk, Russia

12.10-12.30 OP-I-4

Reporter: Lokteva Ekaterina

Lokteva E.S., Golubina E.V., Maslakov K.I., Pesotskiy M.D., Kharlanov A.N., Kaplin I.Yu.

PdFe Catalysts for Diclofenac Hydrodechlorination in Water:

Mild Reduction, Mild Reaction

Laboratory of Catalysis and Gas Electrochemistry, Chemistry Department, Lomonosov Moscow State University, 119991 Moscow, Russia

12.30-12.50 OP-I-5

Reporter: Vovk Evgeny

Zhou X., Liu Y., Wang D., Li S., Vovk E.I., Yang Y.

Understanding of Surface Oxygen Species on the Catalysts for Oxidative Coupling of Methane

ShanghaiTech University, Shanghai, China

12.50-13.10 OP-I-6

Reporter: Kaichev Vasily

Litvintseva K.A.[1,2], Chesalov Yu.A.[2], Selivanova A.V.[2], Saraev A.A.[2], Kaichev V.V.[1,2]

Mechanistic Study of Selective Oxidation of Methanol over Monolayer V_2O_5/CeO_2 Catalyst

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

13.10-14.30 Lunch

June 18, Tuesday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

AFTERNOON SESSION

Chair:

ORAL PRESENTATIONS

14.30-14.50 OP-I-7

Reporter: Stepanov Alexander

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

Mechanism of C_3-C_4 Alkane Activation and Transformation on In-Modified Zeolite BEA Studied by ^{1}H and ^{13}C MAS NMR Spectroscopy

Boreskov Institute of Catalysis, Novosibirsk, Russia

14.50-15.10 OP-I-8

Reporter: Soshnikov Igor

Soshnikov I.E.[1], Semikolenova N.V.[1], Bryliakov K.P.[2], Antonov A.A.[1], Talsi E.P.[1]

The Nature and Role of the Monovalent and Divalent Nickel Species in the Ni(II)-α-Diimine Based Ethylene Polymerization Catalyst Systems

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Zelinskii Institute of Organic Chemistry, Moscow, Russia

15.10-15.30 OP-I-9

Reporter: Parfenova Lyudmila

Parfenova L.V., Kovyazin P.V., Tyumkina T.V., Bikmyeeva A.Kh., Islamov D.N., Mukhamadeeva O.V.

Dimerization and Oligomerization of Alkenes under the Action of Metallocenes: New Catalytic Systems and Reaction Mechanisms

Institute of Petrochemistry and Catalysis, Ufa Federal

Research Center,
Russian Academy of Sciences, Ufa, Russia

15.30-15.50 OP-I-10
Reporter: Tyumkina Tatyana
Tyumkina T.V., Islamov D.N., Idrisova S. M., Tulyabaeva L.V.
Radical Mechanism of *trans*-Borylation of α-Olefins with Dichloro(Diizopropylamino)Borane Catalyzed by Cp_2TiCl_2: Combination of DFT Calculations and EPR Measurements
Institute of Petrochemistry and Catalysis, Ufa Federal Research Center,
Russian Academy of Sciences, Ufa, Russia

15.50-16.10 OP-I-11
Reporter: Lashchinskaya Zoya
Lashchinskaya Z.N., Gabrienko A.A., Kolokolov D.I., Stepanov A.G.
Alkene π-Complexes with Metal Cations in Zeolites: Spectroscopic Characteristics, Thermodynamic Stability, and Bonding Mechanism
Boreskov Institute of Catalysis, Novosibirsk, Russia

16.10-16.40 Coffee

16.40-19.00 Sightseeing tour of Vladimir
Meeting point - AMAKS Golden Ring hotel

June 18, Tuesday

Place: CONFERENCE HALL "Belyi"
AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

MORNING SESSION

Chair:

ORAL PRESENTATIONS

11.10-11.30 OP-IV-1
Reporter: Pichugina Daria
Pichugina D.A., Bandurist P.S.
Catalytic Properties of Protected Copper Sulfide Cluster in CO oxidation: Active site and Spin Effect
Lomonosov Moscow State University, Department of Chemistry, Moscow, Russia

11.30-11.50 OP-IV-2
Reporter: Snytnikov Valerii
Snytnikov V.N., Lashina E.A., Shubin A.A., Zilberberg I.L.
Kinetic Mechanism of Non-Oxidative Conversion of CH_4 over Fe/SiO_2
Boreskov Institute of Catalysis, Novosibirsk, Russia

11.50-12.10 OP-IV-3
Reporter: Egiazaryan Karen
Egiazaryan K.T., Shamsiev R.S., Dontsenko N.A., Flid V.R.
DFT Modeling of the Mechanisms of Catalytic Allylation of Norbornadiene in the Presence of Palladium Complexes
MIREA – Russian Technological University, M.V. Lomonosov Institute of Fine Chemical Technologies, Moscow, Russia

12.10-12.30 OP-IV-4

Reporter: Blinova Anastasiia
Blinova A.R., Kulakova A.M., Grigorenko B.L.
Modeling the Enzymatic Reaction in N-Acetylglutamate Synthase: Role of GNAT-Conserved Structural Elements in Catalysis and Protein Stabilization
Lomonosov Moscow State University, Moscow, Russia

12.30-12.50 OP-IV-5
Reporter: Usmanova Arina
Usmanova A.A.[1], Koledina K.F.[1,2]
Computer Analysis of the Kinetics of the Catalytic Synthesis of Methyl Tert-Butyl Ether
1 – Institute of Petrochemistry and Catalysis of Russian Academy of Sciences, Ufa, Russia
2 – Ufa State Petroleum Technological University, Russia

12.50-13.10 OP-IV-6
Reporter: Gubaydullin Irek
Gubaydullin I.M.[1,2], Yazovtseva O.S.[3]
Supercomputer Simulation of Coke Sedimentation Burning from a Cylindrical Grain of a Hydrotreating Catalyst
1 – Ufa State Petroleum Technical University, Ufa, Russia
2 – Institute of Petrochemistry and Catalysis of RAS, Ufa, Russia
3 – Steklov Mathematical Institute of Russian Academy of Sciences, Moscow, Russia

13.10-14.30 Lunch

June 18, Tuesday

Place: CONFERENCE HALL "Belyi"
AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

AFTERNOON SESSION

Chair:

ORAL PRESENTATIONS

14.30-14.50 OP-II-1
Reporter: Matsko Mikhail
Matsko M.A., Echevskaya L.G., Barabanov A.A., Zakharov V.A.
Kinetic Peculiarities of Ethylene, Propylene and Hexene-1 Polymerization over the Stereospecific Supported Titanium-Magnesium Catalysts According to the Data on the Molecular Weight Distribution of Polymers Produced
Boreskov Institute of Catalysis, Novosibirsk, Russia

14.50-15.10 OP-II-2
Reporter: Karpova Tatiana
Karpova T.R., Lavrenov A.V., Moiseenko M.A., Potapenko O.V., Koveza V.A.
The Process Mechanism View to Design Catalysts. Conversion of Ethylene to Propylene over NiO-MoO_3/Al_2O_3 Catalyst
Center of New Chemical Technologies BIC, Boreskov Institute of Catalysis,
Siberian Branch, Russian Academy of Sciences, Omsk, Russia

15.10-15.30 OP-II-3
Reporter: Mitchenko Sergey
Mitchenko S.A., Nikitenko D.V., Krasnyakova T.V.
Applying Isotope-Labeled Reagents to Gain Insight

into the Mechanisms of Acetylene Catalytic Hydrochlorination
L.M. Litvinenko Institute of Physical Organic Chemistry and Coal Chemistry, Donetsk, Russia

15.30-15.50 OP-II-4
Reporter: Mamedova Malahat
Mamedova M.T., Abasov S.I., Iskenderova A.A., Isaeva Y.S., Nasirova F.M., Chelebova K.S.
Mechanism of Isomerization-Disproportionation Conversion of Straight-Run Gasoline on a Composite Catalyst
Institute of Petrochemical Processes named after Y.H. Mamedaliyev of the Ministry of Science and Education of the Republic of Azerbaijan, Baku, Azerbaijan

15.50-16.10 OP-II-5
Reporter: Afineevskii Andrei
Afineevskii A.V., Prozorov D.A., Osadchaya T.Y.
Hydrogen Adsorption as a Limiting Stage for Hydrogenation of Unsaturated Hydrocarbons
ISUCT, Ivanovo, Russia

16.10-16.40 **Coffee**

16.40-19.00 **Sightseeing tour of Vladimir**
Meeting point - AMAKS Golden Ring hotel

June 19, Wednesday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

PLENARY SESSION

Chair:

PLENARY LECTURE

09.00-09.40 PL-5

Reporter: Professor Alexander Schmidt

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

New Opportunities for Mechanistic Investigations in Catalysis Using Routine Kinetic Data

Irkutsk State University, Irkutsk, Russia

KENYOTE LECTURES

09.40-10.10 KL-5

Reporter: Professor Ekaterina Kozlova

Study Of The Mechanism Of Photocatalytic CO_2 Reduction Over Semiconductor Photocatalysts

Boreskov Institute of Catalysis SB RAS, Novosibirsk

10.10-10.40 KL-6

Reporter: Professor Dmitry Yakhvarov

Mechanism Of Catalytic Transformation Of White Phosphorus Tetrahedron In The Coordination Sphere Of Transition Metal Complexes

Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center of RAS,
Alexander Butlerov Institute of Chemistry, Kazan Federal University, Kazan

10.40-11.10 Coffee

June 19, Wednesday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

MORNING SESSION

Chair:

ORAL PRESENTATIONS

11.10-11.30 OP-I-12

Reporter: Bukhtiyarov Andrey

Bukhtiyarov A.V.[1], Panafidin M.A.[1], Prosvirin I.P.[2], Mashkovsky I.S.[3], Markov P.V.[3], Rassolov A.V.[3], Smirnova N.S.[3], Baeva G.N.[3], Rameshan C.[4], Rameshan R.[4], Zubavichus Y.V.[1], Bukhtiyarov V.I.[2], Stakheev A.Yu.[3]

Boosting the Activity of PdAg Bimetallic Catalysts towards the Selective Acetylene Hydrogenation by Means of CO-Induced Segregation: a Combined NAP XPS and Mass-Spectrometry Study

1 – SRF «SKIF» Boreskov Institute of Catalysis, Kol'tsovo, Russia
2 – Boreskov Institute of Catalysis, Novosibirsk, Russia
3 – N. D. Zelinsky Institute of Organic Chemistry, Moscow, Russia
4 – Montanuniversität, Leoben, Austria

11.30-11.50 OP-I-13

Reporter: Kibis Lidiya

Kibis L.S.[1], Ovsyuk I.Yu.[1,2], Svintsitskiy D.A.[1], Romanenko A.V.[1], Kardash T.Yu.[1], Stonkus O.A.[1], Boronin A.I.[1]

Adjusting Pt/TiO_2 Activity in Low-Temperature Ammonia Oxidation

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia

11.50-12.10 OP-I-14

Reporter: Gorbunov Dmitry

Gorbunov D.N.[1], Nenasheva M.V.[1], Guda A.A.[2]

In situ XAS Investigation of the Rh/NR_3 Catalytic Systems Active in the Reductive Hydroformylation

1 – Lomonosov Moscow State University, Moscow, Russia

2 – The Smart Materials Research Institute, Rostov-on-Don, Russia

12.10-12.30 OP-I-15

Reporter: Rostovshchikova Tatiana

Rostovshchikova T.N.[1], Shilina M.I.[1], Ivanin I.A.[1], Udalova O.V.[2], Eurov D.A.[3], Kurdyukov D.A.[3]

Co and Ce Oxides Embedded into Nanosilicas as Catalysts for the CO-PROX: SiO_2 Morphology and Activity Relationship

1 – Lomonosov Moscow State University, Moscow, Russia

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

3 – Ioffe Institute, RAS, Saint Petersburg, Russia

12.30-12.50 OP-I-16

Reporter: Gridnev Ilya

Gridnev I.D.

Birds of a Feather – Asymmetric Organocatalysis Meets Asymmetric Transition Metal Catalysis

N. D. Zelinsky Institute of Organic Chemistry

12.50-13.10 OP-I-17

Reporter: Arapova Olga

Arapova O.V., Naranov E.R., Sadovnikov A.A., Bondarenko G.N., Maximov A.L.

Method of High Temperature IR Diffuse Reflectance Spectroscopy In Situ in Studying the Mechanism of Catalytic Reactions

Topchuev Institute of Petrochemical Synthesis, Moscow, Russia

13.10-14.30 Lunch

June 19, Wednesday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

AFTERNOON SESSION

Chair:

ORAL PRESENTATIONS

14.30-14.50 OP-I-18

Reporter: Chernyshev Victor

Chernyshev V.M.[1], Ananikov V.P.[2]

Degradation Pathways for Molecular Pd/NHC Catalysts and Stabilization of Active Centers with Anionic NHC Ligands

1 – Platov South-Russian State Polytechnic University (NPI), Novocherkassk, Russia

2 – Zelinsky Institute of Organic Chemistry, RAS, Moscow, Russia

14.50-15.10 OP-I-19

Reporter: Salin Alexey

Salin A.V.

Stereoelectronic Effect in Phosphonium Enolates and its Application in Phosphine Organocatalysis

A.M. Butlerov Institute of Chemistry, Kazan Federal University, Russia

15.10-15.30 OP-I-20

Reporter: Larionov Vladimir

Larionov V.A., Yashkina L.V., Emelyanov M.A., Maleev V.I., Belokon Y.N.

Chiral NNO-Type Cu(II) and Ni(II) Complexes as Catalysts in Asymmetric Reactions

A.N. Nesmeyanov Institute of Organoelement Compounds of Russian Academy of Sciences (INEOS

RAS), Moscow, Russia

15.30-15.50 OP-I-21
Reporter: Torbina Viktoriia
Torbina V.V., Vodyankina O.V.
The Role of Different Active Sites in Cascade Transformation of Glycerol over Pt-Based Nanoparticles Immobilized in UiO-66
Tomsk State University, Tomsk, Russia

16.10-16.40 **Coffee**

16.10-18.00 **POSTER SESSION**
AMAKS Golden Ring hotel

19.00-22.00 **Banquet**
AMAKS Golden Ring hotel

June 19, Wednesday

Place: CONFERENCE HALL "Belyi"
AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

MORNING SESSION

Chair:

ORAL PRESENTATIONS

11.10-11.30 OP-II-6
Reporter: Boronin Andey
Boronin A.I., Slavinskaya E.M., Stonkus O.A., Stadnichenko A.I., Lashina E.A.
The Active Centers in Pt/CeO_2 Catalysts for CO Oxidation. Experimental Study and Kinetic Simulations
Boreskov Institute of Catalysis, Novosibirsk, Russia

11.30-11.50 OP-II-7
Reporter: Volkova Nina
Volkova N.N.[1], Volkov V.T.[2], Bogdanova L.M.[1], Dzhardimalieva G.I.[1,3]
Control of Polycarbonate Degradation Reactions Using Catalysis and Photocatalysis by Nanoparticles Differing in Chemical Nature, Shape and Size
1 – Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS, Chernogolovka, Russia
2 – Institute of Microelectronics Technology and High Purity Materials RAS, Chernogolovka, Russia
3 – Moscow Aviation Institute (National Research University), Moscow, Russia

11.50-12.10 OP-II-8
Reporter: Timofeev Konstantin

Timofeev K.L., Kharlamova T.S., Svetlichnyi V.A., Salaev M.A., Vodyankina O.V.
Insight into Mechanism of 5-HMF Aerobic Oxidation over PdAu Supported Catalysts under Mild Conditions
National Research Tomsk State University, Tomsk, Rissia

12.10-12.30 OP-II-9
Reporter: Isupova Lyubov
Isupova L.A., Ivanova Yu.A., Gerasimov E.Yu.
Influence of the Composition of $LaFe_{1-x}Co_xO_3$ Perovskites on the Activity in the Decomposition Reaction of Nitrous Oxide
Boreskov Institute of Catalysis, Novosibirsk, Russia

12.30-12.50 OP-II-10
Reporter: Kharlamova Tamara
Timofeev K.L., Morilov D.P., Kharlamova T.S.
1-xPdxCu@UiO-66-NH_2 and 1-xPdxCu@UiO-67(bipy) Catalysts for Selective 5-Hydroxymethylfurfural Reduction
Tomsk State University, Tomsk, Russia

12.50-13.10 OP-II-11
Reporter: Badmaev Sukhe
Badmaev S.D., Pechenkin A.A., Belyaev V.D., Snytnikov P.V., Sobyanin V.A.
Catalytic Reforming of Dimethoxymethane to Hydrogen-Rich Gas
Boreskov Institute of Catalysis, Novosibirsk, Russia

13.10-14.30 Lunch

June 19, Wednesday

Place: CONFERENCE HALL "Belyi"
AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

AFTERNOON SESSION

Chair:

ORAL PRESENTATIONS

14.30-14.50 OP-II-12
Reporter: Manaenkov Oleg
Manaenkov O.V., Kislitsa O.V., Matveeva V.G.
Kinetics of Catalytic Oxidation of Cellobiose to Gluconic and Glucaric Acids
Tver State Technical University, Tver, Russia

14.50-15.10 OP-II-13
Reporter: Kuznetsov Boris
Kuznetsov B.N., Garyntseva N.V., Sudakova I.G.
Kinetic Investigation and Optimization of an Environmentally Safe Process of Peroxide Delignification of Wood in the Presence of Dissolved Catalysts
Institute of Chemistry and Chemical Technology SB RAS, FRC KSC SB RAS, Krasnoyarsk, Russia

15.10-15.30 OP-II-14
Reporter: Shamanaev Ivan
Shamanaev I.V., Gerasimov E.Yu., Pakharukova V.P., Bukhtiyarova G.A.
Comparison of Triglycerides, Methyl, and Ethyl Esters HDO over Ni-Phosphide Catalysts
Boreskov Institute of Catalysis, Novosibirsk, Russia

15.30-15.50 OP-II-15
Reporter: Zorina Anna

Zorina A.A., Kaplin I.Yu., Chernavskii P.A., Maslakov K.I., Lokteva E.S.

The Effect of Nickel Content and Preparation Method on the Catalytic Properties of Ni/CeO_2-SnO_2 Systems in Dry Reforming of Methane

Laboratory of Catalysis and Gas Electrochemistry, Lomonosov Moscow State University, 119991 Moscow, Russia

15.50-16.10 OP-II-16

Reporter: Krasnikov Dmitry

Krasnikov D.V.[1], Grebenko A.K.[1], Gorshunov B.P.[2] Nasibulin A.G.[1]

Revealing the Mechanisms for Nucleation and Growth of Graphene via the Boudouard Reaction

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

2 – Moscow Institute of Physics and Technology, Dolgoprudny, Russia

16.10-16.40 Coffee

16.10-18.00 POSTER SESSION

AMAKS Golden Ring hotel

19.00-22.00 Banquet

Young Scientists Section

June 19, Wednesday

Place: CONFERENCE HALL "Vladimir"
AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

MORNING SESSION

Chair:

ORAL PRESENTATIONS

11.10-11.20 OPs-1
Reporter: Fedorov Alexey
Fedorov A.Yu.[1], Bukhtiyarov A.V.[1], Panafidin M.A.[1], Prosvirin I.P.[2], Zubavichus Y.V.[1], Bukhtiyarov V.I.[2]
Thermally and Adsorption-Induced Surface Structure and Morphology Evolution in Bimetallic HOPG-Supported Nanoparticles as Probed Using XPS and STM
1 – Synchrotron Radiation Facility SKIF, Boreskov Institute of Catalysis, Kol'tsovo, Russia
2 – Boreskov Institute of Catalysis, Novosibirsk, Russia

11.20-11.30 OPs-2
Reporter: Votkina Daria
Votkina D.E.[1], Guselnikova O.A.[1], Marque S.R.A.[2], Postnikov P.S.[1]
Alkoxyamines as a Convenient Probe for Unveiling the Role of Chemical Structure in Plasmon Catalysis
1 – Tomsk Polytechnic University, Tomsk, Russia
2 – Aix-Marseille University, Marseille, France

11.30-11.40 OPs-3
Reporter: Arzyaeva Nina
Arzyaeva N.V., Akopyan A.V.
Bronsted Acidic Catalysts Based on the Porous

Aromatic Framework
for Effective Oxidative Denitrogenation
Chemistry Department, Lomonosov Moscow State University, 119234 Moscow, Russia

11.40-11.50 OPs-4
Reporter: Sherstyuk Varvara
Sherstyuk V.A.[1,2], Ottenbacher R.V.[1], Bryliakov K.P.[3]
Diverting Mn Catalyzed Epoxidations towards *syn*-1,2-Acyloxylations
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

11.50-12.00 OPs-5
Reporter: Burmistrova Daria
Burmistrova D.A., Smolyaninov I.V., Berberova N.T.
Organocatalysts in the Electrochemical Oxidation of H_2S and RSH
Astrakhan State Technical University, Astrakhan, Russia

12.00-12.10 OPs-6
Reporter: Urlukov Artem
Urlukov A.S.[1,2], Uskov S.I.[1], Potemkin D.I.[1], Agzamova M.R.[3], Gubaidullin I.M.[3]
Multi-Level Information Method for Developing Kinetic Models of Low-Temperature Steam Reforming of Light Alkanes
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – Institute of Petrochemistry and Catalysis of the Russian Academy of Sciences, Ufa, Russia

12.10-12.20 OPs-7
Reporter: Bandurist Pavel
Bandurist P.S., Pichugina D.A.

C-H Bond Breaking in Methane on Protected and Unprotected Ni-Cu-S and Ni-Cu-O Nanoclusters: Doping and Ligand Effects
Lomonosov Moscow State University, Department of Chemistry, Russia, Moscow

12.20-12.30 OPs-8
Reporter: Lubov Dmitry
Lubov D.P.[1,2], Bryliakov K.P.[3]
Selective C(sp^3)–H Hydroxylation/Alkoxylation in the Presence of Palladium Aminopyridine Complexes
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – Zelinsky Institute of Organic Chemistry, RAS, Moscow, Russia

12.30-12.40 OPs-9
Reporter: Tarasenko Michail
Gubin S.A., Makarov A.S., Skudin V.V., Tarasenko M.A.
Extractor Mode on Membrane Catalysts
D. I. Mendeleev Russian University of Chemical Technology, Moscow, Russia

12.40-12.50 OPs-10
Reporter: Gorodnova Anastasia
Gorodnova A.V., Kaplin I.Yu., Lokteva E.S., Golubina E.V.
The Effect of Cerium Content and Method of CeO_2 Addition on the Catalytic Properties of Cr_2O_3-ZrO_2-SiO_2 Systems in Non-Oxidative Propane Dehydrogenation
Laboratory of Catalysis and Gas Electrochemistry, Lomonosov Moscow State University, 119991 Moscow, Russia

12.50-13.00 OPs-11
Reporter: Zamalyutin Vyacheslav

Zamalyutin V.V., Katsman E.A., Flid V.R.
Kinetics and Mechanism of the Liquid Phase Hydrogenation of Norbornene Family Compounds
RTU MIREA – Russian Technological University (Lomonosov Institute of Fine Chemical Technology), Moscow, Russia

13.00-13.10 OPs-12
Reporter: Koveza Vladislav
Koveza V.A., Yurtaeva A.S., Potapenko O.V.
DFT-Quality Monte-Carlo Simulations of Distribution of Hydrocarbon Pool Species in MFI Frameworks Enabled by Machine Learning Potentials
Center of New Chemical Technologies BIC, Boreskov Institute of Catalysis, Siberian Branch, Russian Academy of Sciences, Omsk, Russia

13.10-14.30 Lunch

June 19, Wednesday

Place: CONFERENCE HALL "Vladimir"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

AFTERNOON SESSION

Chair:

ORAL PRESENTATIONS

14.30-14.40 OPs-13

Reporter: Kharchenko Nadezhda

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 Features of Supported Ru/$Ce_{1-x}Zr_xO_2$ and Mixed Ru-$Ce_{1-x}Zr_xO_2$ Catalysts for Methanation of Carbon Oxides

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

14.40-14.50 OPs-14

Reporter: Metalnikova Vera

Metalnikova V.M., Svintsitskiy D.A., Sokovikov N.A., Cherepanova S.V., Boronin A.I.

Carbon Monoxide Oxidation on the Surface of Silver- and Copper-Containing Mixed Oxides with Layered Structure

Boreskov Institute of Catalysis, Novosibirsk, Russia

14.50-15.00 OPs-15

Reporter: Sedlova Daria

Sedlova D.V.[1,2], Osipova E.S.[1], Gutsul E.I.[1], Belkova N.V.[1], Shubina E.S.[1]

Catalytic (de)Hydrogenation and Hydrosilylation Reactions Involving Bimetallic Complexes (^{tBu}PZCZP)Pd(μ-OC)M(CO)$_2$L

1 – A.N.Nesmeyanov Institute of Organoelement Compounds RAS, Moscow, Russia
2 – Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia

15.00-15.10 OPs-16
Reporter: Egorova Yulia
Egorova Yu.N.[1,2], Potapova N.V.[1], Krugovov D.A.[1], Berezin M.P.[3], Kasaikina O.T.[1]
Catalytic Systems Based on Quaternary Ammonium Compounds for Free Radical Generation
1 – Semenov Federal Center of Chemical Physics, Moscow, Russia
2 – Moscow Institute of Physics and Technology, Dolgoprudny, Russia
3 –Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS, Chernogolovka, Russia

15.10-15.20 OPs-17
Reporter: Semenova Sophya
Semenova S.M., Khaibullin S.V., Fionov Yu.A., Zhukova A.I.
Ni-Cu Bimetallic Supported Catalysts for Hydrogen-Rich Syngas Production from CO_2 Reforming with Ethanol
Peoples` Friendship University of Russia named after Patrice Lumumba, Moscow, Russia

15.20-15.30 OPs-18
Reporter: Radina Aleksandra
Kvashnin A.G., Radina A.D.
The Doping of Higher Tungsten Boride with Transition Metals for Catalytical Application
Skolkovo Institute of Science and Technology, Moscow, Russia

15.30-15.40 OPs-19

Reporter: Odintsov Konstantin

Odintsov K.V., Domratcheva T.M., Grigorenko B.L.

Insights into the Formation of the Flavin-N5-Oxide Reactive Species in Monooxygenase EncM from Molecular Modelling

Lomonosov Moscow State University, Moscow, Russia

15.40-15.50 OPs-20

Reporter: Zasypalov Gleb

Zasypalov G.O., Klimovsky V.A., Abramov E.S., Rubtsova M.I., Glotov A.P.

Hydrodeoxygenation of Guaiacol over Halloysite Nanotubes Decorated with Ru Nanoparticles: Effect of Alumina Acid Etching on Catalytic Behavior and Reaction Pathways

Gubkin Russian State University, Moscow, Russia

15.50-16.00 OPs-21

Reporter: Gorbunova Alina

Gorbunova A., Votkina D.E., Guselnikova O.A., Postnikov P.S.

Model Reactions for Plasmon Catalysis: From p-Nitrothiophenol Azocoupling to Nitroxide Homolysis

National Research Tomsk Polytechnic University, Tomsk, Russia

16.00-16.10 OPs-22

Reporter: Kulikova Vasilisa

Kulikova V.A., Kirkina V.A., Filippov O.A., Belkova N.V., Shubina E.S.

Amine Catalysed Dehydrocoupling of Phenylsilanes and Alcohols in Solvent-Free Environment

A.N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, Moscow, Russia

16.10-16.40 Coffee

16.10-18.00 POSTER SESSION
AMAKS Golden Ring hotel

19.00-22.00 Banquet

June 20, Thursday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

PLENARY SESSION

Chair:

PLENARY LECTURE

09.00-09.40 PL-6

Reporter: Professor Sergey Levchenko

Artificial Intelligence Methods For Catalytic Properties Descriptor Identification And Catalyst Design

Skolkovo Institute of Science and Technology, Moscow

KENYOTE LECTURES

09.40-10.10 KL-7

Reporter: Golubina Elena

Golubina E.V., Kaplin I.Yu., Lokteva E.S.

Design of CrO_x-ZrO_2-SiO_2 Catalysts for Non-Oxidative Propane Dehydrogenation

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

10.10-10.40 KL-8

Reporter: Mashkovsky Igor

Mashkovsky I.S.[1], Markov P.V.[1], Smirnova N.S.[1], Baeva G.N.[1], Vaulina A.E.[2], Melnikov D.P.[1,3], Stakheev A.Yu.[1]

The Paradigm of Single-Atom Alloy Catalysts in the Selective Hydrogenation of Alkynes

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

2 – D. I. Mendeleev Russian University of Chemical Technology, Moscow, Russia

3 – National University of Oil and Gas «Gubkin

University», Moscow, Russia

10.40-11.10 Coffee

June 20, Thursday

Place: CONFERENCE HALL "RAZGULYAEVO"

AMAKS Golden Ring hotel

Vladimir, Tchaikovsky st., 27

MORNING SESSION

Chair:

ORAL PRESENTATIONS

11.10-11.30 OP-I-23

Reporter: Zvereva Irina

Zvereva I.A.[1], Kurnosenko S.A.[1], Minich I.A.[1], Silyukov O.I.[1], Shelyapina M.G.[2]

New Photocatalysts for Hydrogen Generation under Visible Light Based on Layered Perovskite-Like Titanate $H_2La_2Ti_3O_{10}$ Grafted by Aromatic Molecules

1 – Saint Petersburg State University, Institute of Chemistry, Saint Petersburg, Russia

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

11.30-11.50 OP-I-24

Reporter: Panafidin Maxim

Panafidin M.A.[1], Bukhtiyarov A.V.[1], Prosvirin I.P.[2], Chetyrin I.A.[1], Smirnova N.S.[3], Markov P.V.[3], Baeva G.N.[3], Mashkovsky I.S.[3], Bragina G.O.[3], Rameshan C.[4], Gerasimov E. Yu.[2], Zubavichus Y.V.[1], Bukhtiyarov V.I.[2], Stakheev A.Yu.[3]

Deliberate Control of the Structure-Specific Active Sites in PdIn Bimetallic Catalysts Using Adsorbate Induced Segregation Effects

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

2 – Boreskov Institute of Catalysis, Novosibirsk, Russia

3 – Zelinsky Institute of Organic Chemistry, Moscow, Russia

4 – Montanuniversität, Leoben, Austria

11.50-12.10 OP-I-25

Reporter: Nikoshvili Linda

Nikoshvili L.Zh.[1], Lisichkin D.R.[1], Grigorev M.E.[1], Bakhvalova E.S.[1], Bykov A.V.[1], Saraev A.A.[2], Gerasimov E.Yu.[2], Kaichev V.V.[2], Matveeva V.G.[1]

The Application of Aromatic Polymers Including the Sulfonated Ones in Selective Hydrogenation of Levulinic Acid to Gamma-Valerolactone: the Role of Polymer Functionalities

1 – Department of Biotechnology, Chemistry and Standardization, Tver State Technical University, A.Nikitina str. 22, Tver 170026, Russia

2 – Boreskov Institute of Catalysis SB RAS, Lavrentieva ave. 5, Novosibirsk 630090, Russia

12.10-12.30 OP-I-26

Reporter: Borodina Elizaveta

Borodina E.M., Akhmina P.V., Kryuchkova T.A., Sheshko T.F.

The Investigation of the Gd-Fe-Co Complex Oxides Catalysts in Processes Involving Greenhouse Gases

Peoples' Friendship University of Russia (RUDN University), Moscow, Russia

12.30-12.50 OP-I-27

Reporter: Krasnyakova Tatyana

Krasnyakova T.V., Nikitenko D.V., Mitchenko S.A.

C-C Coupling Catalyzed by Platinum Iodo Complexes: a Journey from Electrophilic to Nucleophilic Reactivity

L.M. Litvinenko Institute of Physical Organic Chemistry and Coal Chemistry, Donetsk, Russia

12.50-13.00 short break

13.00-13.15 CLOSING CEREMONY

13.15-14.30 Lunch

June 20, Thursday

Place: CONFERENCE HALL "Belyi"
AMAKS Golden Ring hotel
Vladimir, Tchaikovsky st., 27

MORNING SESSION

Chair:

ORAL PRESENTATIONS

11.10-11.30 OP-III-1
Reporter: Bruk Lev
Ustyugov A. V., Kirichenko O.A., Korypaeva V.V., Efimenko I.D., Saschenko V.S., Bruk L.G.
State of Palladium in the Active Centers of the Catalyst Pd/γ-Al_2O_3 Low Temperature Oxidation of Carbon Monoxide
MIREA – Russian Technological University, Lomonosov Institute of Fine Chemical Technologies, Russia, Moscow

11.30-11.50 OP-III-2
Reporter: Durakov Sergey
Durakov S.A., Magasumov A.A., Egiazaryan K.T., Shamsiev R.S., Flid V.R.
Palladium-Catalyzed Allylation of Substituted Norbornenes and Norbornadienes with Hydrogen Transfer: Key Intermediates and Mechanism
MIREA - Russian technological university, Institute of Fine Chemical Technologies named after M.V. Lomonosov, Moscow, Russia

11.50-12.10 OP-III-3

Reporter: Rozentsvet Victor
Rozentsvet V.A., Ulyanova D.M., Sablina N.A.
Cationic Polymerization of Butadiene with Isomerization of the Initiator Structure
Institute of Ecology of Volga River Basin, Russian Academy of Sciences,
Samara Federal Research Scientific Center, Russian Academy of Sciences, Togliatti, Russia

12.10-12.30 OP-III-4
Reporter: Astakhov Alexander
Astakhov A.V., Khazipov O.V., Chernenko A.Yu., Chernyshev V.M.
Activation Methods of Pd/NHC and Ni/NHC Complexes for Catalysing Carbon-Heteroatom Bond Formation Reactions
Platov South-Russian State Polytechnic University (NPI), Novocherkassk, Russia

12.30-12.50 OP-III-5
Reporter: Popov Mikhail
Popov M.P., Chizhik S.A., Nemudry A.P.
Comprehensive Study of Oxygen Exchange between MIEC Oxide and Oxygen from the Gas Phase
Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia

12.50-13.00 short break, gathering in the Hall "Razgulyaevo"

13.00-13.15 CLOSING CEREMONY

13.15-14.30 Lunch

June 21, Friday

Post-Tour to Suzdal

09.00 – 19.00

Meeting point - AMAKS Golden Ring hotel

POSTER PRESENTATIONS

PP-01

Bakhvalova E.S., Mavrenkova N.A., Barzheev A.D., Bykov A.V., Nikoshvili L.Zh.

Porous Aromatic Polymers – Supports for Pd Nanoparticles: Factors Influencing Catalytic Activity and Stability in Cross-Coupling Reactions

Department of Biotechnology, Chemistry and Standardization, Tver State Technical University, A.Nikitina str. 22, 170026 Tver, Russia

PP-02

Kulchakovskaya E.V.[1], Blinov E.D.[1], Stonkus O.A.[2], Sokovikov N.A.[2], Vodyankina O.V.[1]

Cu-Containing OMS-2-Based Catalysts for low-Temperature CO Oxidation

1 – Tomsk State University, 36, Lenin Ave., 634050 Tomsk, Russian Federation

2 – Boreskov Institute of Catalysis, 630090 Novosibirsk, Russian Federation

PP-03

Sosnina D.V., Altynov A.A., Bogdanov I.A.

Mechanisms of Vegetable Oils Conversion in Catalytic Processing

Tomsk Polytechnic University, Tomsk, Russia

PP-04

Bulgakov A.N., Krasniakova I.O., Guda A.A., Soldatov A.V.

Microfluidic Synthesis of Vinyl Iodide

The Smart Materials Research Institute at Southern Federal University, Rostov-on-Don, Russia

PP-05

Bychkov V.Yu., Tulenin Yu.P., Korchak V.N.

Kinetic Coupling of Stationary Methane Dry Reforming and Self-Oscillatory Methane Oxidation over Ni

Semenov Institute of Chemical Physics, Moscow, Russia

PP-06

Faingol'd E.E., Saratovskikh S.L., Panin A.N., Babkina O.N., Zharkov I.V., Kapasharov A.T., Shilov G.V., Bravaya N.M.

Catalytic Systems Based on Metallocenes and Isobutylaluminum Aryloxides for Synthesis of Ethylene-Propylene Copolymers with Different Composition and Properties

Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS, Chernogolovka, Russia

PP-07

Foroutan S.G., Ivashkina E.N.

Quantum Chemistry Kinetic Analysis for Cracking Reactions of Normal and
Iso Hexane Based on Transition State Energetic Evaluation for Production of n-C_4 and i-C_4 in FCC Process

Chemical Engineering Department, Engineering School of Natural Resources, National Research Tomsk Polytechnic University, Tomsk, Russia

PP-08

Gordienko Yu.A., Sinev M.Yu., Vasyutin P.R.

Interactions of Simple Oxides with Supercritical Isopropanol: Spectrum of Products and Kinetic Regularities

N.N. Semenov Federal Research Center of Chemical Physics RAS, Moscow, Russia

PP-09

PP-10

Gul O.O., Domashkina P.D., Akopyan A.V., Anisimov A.V.

Tungsten Oxide and Al-SBA-15 Based Catalysts for Oxidation of Sulfur Compounds of Petroleum Origin

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

PP-11

Guschin A.A., Lapshova K.A., Gusev G.I., Severgina E.S., Gordina N.E.

Application of Vermiculite-Based Catalysts for Solving Environmental Problems

Ivanovo State University of Chemistry and Technology, Ivanovo, Russia

PP-12

Ivanova O.S.[1,2], Edelman I.S.[1], Svetlitsky E.S.[1], Serdyuk A.A.[2], Toropova E.S.[2]

Adsorption and Catalytic Properties of Nanoparticles Fe_3O_4-Ag in Relation to Various Types of Organic Dyes

1 – Kirensky Institute of Physics, Federal Research Center KSC SB RAS, Krasnouarsk, Russia
2 – Siberian Federal University, Krasnoyarsk, Russia

PP-13

Kaplin I.Yu., Lokteva E.S., Efimenko L.A., Maslakov K.I.

New Approaches to the Synthesis of Complex Oxide Catalysts MO_2-SiO_2 Modified with Copper or Manganese for the Preferential Oxidation of Carbon Monoxide in Excess Hydrogen

Laboratory of Catalysis and Gas Electrochemistry, Lomonosov Moscow State University, 119991 Moscow, Russia

PP-14

Kedalo Y.M.[1,2,3], Knizhnik A.A.[2,3], Potapkin B.V.[2,3]

Applicability of Fridman-Macheret α-Model to Heterogeneous Processes in the Case of Dissociative Adsorption of N_2 on Ru Surface

1 – Moscow Institute of Physics and Technology, Moscow, Russia
2 – Kintech Laboratory, Moscow, Russia
3 – National Research Center "Kurchatov Institute", Moscow, Russia

PP-15

Khazipov O.V., Chernyshev V.M.

Formation of Ni(0)/NHC Active Species from Ni(II) Precatalysts in Alkene Hydroheteroarylation and Cross-Coupling Reactions

Platov South-Russian State Polytechnic University (NPI), Prosveschenya 132, Novocherkassk, 346428, Russia

PP-16

Khramtsov P.V.

Application of Prussian Blue Nanocatalysts as Labels in Immunoassays

Institute of Ecology and Genetics of Microorganisms, Perm, Russia

PP-17

Klimovsky V.A., Zasypalov G.O., Abramov E.S., Glotov A.P.

Catalysts for Hydrodeoxygenation of Bio-Oil Components Based on MFI Zeolite Synthesized from Natural Halloysite Nanotubes

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

PP-18

Korchak V.N.[1], Kuli-zade A.M.[2], Silchenkova O.N.[1], Udalova O.V.[1]

Oxidation of Benzene to Phenol by Nitrous Oxide over Me-ZSM-5 Zeolites with Low Concentration of Active Sites. Single Site Catalysis

1 − Semenov Federal Research Center of Chemical Physics Russian Academy of Sciences, Moscow, Russia

2 − Lomonosov Moscow State University, Moscow, Russia

PP-19

Kotov A.V.[1], Fateev A.V.[1,2], Vodyankina O.V.[1]

Unravelling the Mechanism of Dihydroxyacetone Isomerization into Lactic Acid over Ti^{4+}/Sn^{4+}-Substituted UiO-66

1 – Tomsk State University, Tomsk, Russia

2 – Tomsk State Pedagogical University, Tomsk, Russia

PP-20

Krotkova E.A., Dmitrieva A.P.

Electroreduction of Dichloromethane Using Nanomodified Electrodes

ITMO University, Saint Petersburg, Russia

PP-21

Kurmanova M.D., Golubina E.V., Lokteva E.S.

The Influence of Preparation Method on the Catalytic Activity of Pd/(ZrO_2-Y_2O_3) in Dichlofenac Hydrodechlorination

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

PP-22

Kuznetsova I.I.[1], Kultin D.Yu.[1], Lebedeva O.K.[1], Kustov L.M.[1,2]
Metals Deposited on Graphite in the Electrocatalytic Reaction of Reducing Nitrates to Ammonia
1 – Department of Chemistry, Lomonosov Moscow State University, 119991 Moscow, Russia
2 – N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Leninsky Prospect 47, 119991 Moscow, Russia

PP-23
Lashmanov N.N., Faingol'd E.E., Saratovskikh S.L., Panin A.N., Babkina O.N., Zharkov I.V., Kapasharov A.T., Shilov G.V., Bravaya N.M.
Influence of Reaction Conditions on Catalytic Properties of *rac*-Et(2-MeInd)$_2$ZrMe$_2$/(2,6-^{t}Bu$_2$PhO-)Al^{i}Bu$_2$ in Ethylene-Propylene Copolymerization
Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry of Russian Academy of Sciences, Chernogolovka, Russia

PP-24
Lebedev I.V., Martsinkevich E.M., Bruk L.G.
Study of the Mechanism of Methyl Ethyl Ketone Coupled Condensation-Hydrogenation in the Presence of a Pd/C Catalyst
MIREA Russian Technological University, Moscow, Russia

PP-25
Magomedova A.G., Isaev A.B., Orudzhev F.F.
Catalytic Activity of bi-Phase α/γ-Fe_2O_3 in the Oxidation of Rhod B Dye
Dagestan State University, Makhachkala, Russia

PP-26
Maksimchuk N.V.[1], Marikovskaya S.M.[1], Larionov K.P.[1], Antonov A.A.[1], Yanshole V.V.[2], Evtushok V.Yu.[1], Kholdeeva O.A.[1]
Insights into the Mechanism of H_2O_2-Based Selective Oxidations over Zr-Substituted Keggin Phosphotungstate
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – International Tomography Center, Novosibirsk, Russia

PP-27

Mamedova M.T., Abasov S.I., Imanova A.A., Zarbaliev R.R., Nasibova A.R., Asadov N.S.

Dynamic Scheme of Iomerization-Disproportionation Conversion of a Mixture of Gaseous C_{4-} and Liquid n-C_{6+} Alkanes

Institute of Petrochemical Processes named after Y.H. Mamedaliyev of the Ministry of Science and Education of the Republic of Azerbaijan, Baku, Azerbaijan

PP-28

Melikova I.G., Aykan N.F., Faradjev G.M., Rustamova C.T., Aliyeva N.R., Yunisova F.A., Ismailova T.A.

Study of the Heterocatalytic Oxidation of the Saturated Chlorohydrocarbons C_1–C_4

Institute of Catalysis and Inorganic Chemistry named after acad. M.Nagiyev of Ministry of Science and Education of Republic of Azerbaijan, St. Az-1143, H.Javid Ave. 113, Baku, Azerbaijan

PP-29

Mikhailov V.A.

Short Spacer Bis-Imidazolium Salts for Micellar Catalysis

L.M. Litvinenko Institute of Physical Organic and Coal Chemistry, Donetsk, Russia

PP-30

Morozova O.S.[1], Firsova A.A.[1], Tyulenin Yu.P.[1], Vorobieva G.A.[1], Zhigalina O.M.[2,3], Cherkovskiy E.N.[2], Savilov S.V.[4,5]

Cu-and Fe-Containing Catalysts for CH_4 Purification from C_2H_6

1 − N.N. Semenov Federal Research Center for Chemical Physics RAS, 4, Kosygin st., 119991 Moscow, Russia
2 − NRC «Kurchatov Institute», Leninskiy prospekt, 59, 119333 Moscow, Russia
3 − Bauman Moscow State Technical University, 2nd Baumanskaya st., 105005 Moscow, Russia
4 − Lomonosov Moscow State University, Moscow, Russian Federation
5 − Topchiev Institute of Petrochemical Synthesis, RAS, Moscow, Russia

PP-31

Mustakimova E.A., Baigildin I.G., Vutolkina A.V.

Hydroconversion of Aromatic and Organosulfur Compounds over Dispersed Ni-Mo-Sulfide Catalysts under Water Gas Shift Reaction Conditions

Lomonosov Moscow State University, Moscow, Russia

PP-32

Nikitenko N.G.[1], Shestakov A.F.[1,2]

The Structure of the Active Site and the Mechanism of Methane Oxidation in the Presence of the $Au_{25}(SR_{18})$ Cluster

1 – Federal Research Center for Problems of Chemical Physics and Medicinal Chemistry,
Russian Academy of Sciences, Chernogolovka, Russia
2 – Moscow State University, Moscow, Russia

PP-33

Nikitina V.A.

Highly Efficient NiFe-Based Electrocatalysts for Anion Exchange Membrane Electrolyzers

Center for Energy Science and Technology, Skolkovo Institute of Science and Technology, Moscow, Russia

PP-34

PP-35

Osman M.E.[1,2], Repev N.A.[1,3], Kogan V.M.[1]

Prospective in Higher Alcohols Synthesis from Syngas and Ethanol: Effects of Support Nature, Active Phase, and Preparation Method

1 – Zelinsky Institute of Organic Chemistry RAS, Moscow 119991, Russia
2 – Patrice Lumumba Peoples' Friendship University of Russia, Moscow 117198, Russia
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Butman M.F.[1], Ovchinnikov N.L.[1], Vinogradov N.M.[1], Gordina N.E.[1], Selishchev D.S.[2]

Use of Wool Fibers as a Biotemplate in the Hydrothermal Synthesis of Highly Efficient TiO_2 Photocatalyst: Effects of Ti^{3+} Self-Doping and Inheritance of the Secondary Structure of Keratin

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Polynskaya Y.G.[1], Kedalo Y.M.[1,2,3], Matsokin N.A.[1], Knizhnik A.A.[1,3], Sinitsa A.S.[1,3], Potapkin B.V.[1,3]

Theoretical Study of the Mechanism of Catalytic Methane Decomposition on the Carbon Catalyst

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Prozorov D.A., Smirnov E.P., Afineevsky A.V., Smirnov D.V., Nikitin K.A., Salnikova N.V.

Scientific Basis for the Selection of Aluminum Oxide-Based Substrates for Nickel Catalysts with Specified Adsorption Properties

Ivanovo State University of Chemical Technology, Ivanovo, Russia

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Pshenicyn M.B., Boeva O.A., Odintsov A.A., Zhavoronkova K.N.

Application of Prothium Ortho-Para Conversion and Deutero-Hydrogen Exchange Reactions for Determination of the Presence of Magnetic CENTRES on the Surface of Metal Nanoparticles

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

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Rumyantsev R.N., Smirnova A.A., Severgina E.S.

The Effect of the Production Method on the Physico-Chemical and Catalytic Properties of $CuO/ZnO/Al_2O_3$ Catalysts of the Large-Capacity Methanol Synthesis Process

Ivanovo State University of Chemistry and Technology, Ivanovo, Russia

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Shelyapina M.[1], Zvereva I.[1], Kryuchkova T.[2], Sheshko T.[2], Petranovskii V.[3]

Glycerol Valorisation into Chemicals over Zeolite Catalysts

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Shilina M.I.[1], Krotova I.N.[1], Udalova O.V.[2], Korshunova M.A [1], Stolarov I.P.[3],
Rostovshchikova T.N.[1]

Advanced PtCo Catalysts Based on Platinum Acetate Blue for the Preferential CO Oxidation in H_2-Rich Mixture

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Shinkar' E.V., Tishkov A.A.

Mechanism of Electrocatalytic Alkanethiols Transformations into Symmetric Disulfides in Ionic Liquids

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Shishilov O.N.[1], Shamsiev R.S.[1], Akhmadullina N.S.[2], Flid V.R.[1]

Plausible Mechanism of C-H/C-H Oxidative Coupling of Arenes in the Presence of Trinuclear Palladium Nitrosyl Carboxylate Complexes $Pd_3(NO)_2(RCO_2)_4(ArH)_2$

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Smirnov M.Yu.[1], Kalinkin A.V.[1], Sorokin A.M.[1], Simonov P.A.[2], Salanov A.N.[1], Bukhtiyarov V.I.[1]

The Role of Surface Oxygen in Increasing the Stability of a Carbon Support to an Oxidizing Environment for Pd/C and Rh/C Catalysts

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Sukharina G.B., Ermakova A.M., Babayants A.S., Gladchenko-Jevelekis J.N., Bogdanov V.A., Ponosova E.E., Kulaev K.D., Pryadchenko V.V., Avakyan L.A., Bugaev L.A.

XAFS Spectroscopy and DFT Modelling for Investigation of Cu-Zeolites Structure

Southern Federal University, Rostov-on-Don, Russia

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Svidersky S.A., Morozova Y.V., Kuzʹmin A.E., Dementeva O.S., Kulikova M.V.

Features of the Kinetics of the Fischer-Tropsch Reaction on a Nanoscale Catalyst in Different Types of Slurry Reactors

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

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Tkachenko I.S.[1], Tkachenko S.N.[2]

Catalytic Destruction of Ozone in the Gas Systems ATLAS Detector Unit of the Large Hadron Collider. Argon

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Varyan I.A.[1,2], Tyubaeva P.M.[1,2], Popov A.A.[1,2]

Development of Highly Filled Biocompatible Biodegradable Materials with the Addition of Catalysts

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2 – Plekhanov Russian University of Economics, Moscow, Russia

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

Alternative Liquid and Solid-Phase Methods for the Synthesis of 3,6-di-tert-Butylcatechol on Ortho-Orienting Titanium Metal Complexes

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Vorakso I.A., Rastunova I.L., Chebotov A.Yu., Maryanyan D.A., Shimko V.G., Boeva O.A.

Heterogeneous Oxide Catalysts for Isotope Exchange between Carbon Dioxide and Water Vapor

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

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Zakirov K.E., Starozhitskaya A.V., Magomedova M.V.

Kinetic Modeling of Fischer-Tropsch Synthesis of Liquid Hydrocarbons from CO_2

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

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Zhukova A.I., Fionov Yu.A., Khlusova K.S., Chuklina S.G.
Ni based Catalysts for Syngas Production from Ethanol Dry Reforming: Effect of Oxide Support Composition
Peoples' Friendship University of Russia named after Patrice Lumumba, Moscow, Russia

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Zima A.M.[1], Lyakin O.Y.[1], Babushkin D.E.[1], Bryliakov K.P.[2], Talsi E.P.[1]
Effect of Fluorinated Alcohols on the Reactivity and Selectivity of the Oxoiron(V) Intermediates in Aliphatic C-H bonds Oxidation
1 – Boreskov Institute of Catalysis, Novosibirsk, Russia
2 – Zelinsky Insitute of Organic Chemistry, Moscow, Russia

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Ziyadullaev O.E.[1], Salieva M.K.[1], Talipov R.F.[2], Otamukhamedova G.Q.[2], Buriev F.H.[2], Abdurakhmanova S.S.[3]
Synthesis of Acetylene Alcohols in Different Catalytic Systems
1 – Chirchik State Pedagogical University, Tashkent region, Chirchik, Uzbekistan
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