Boreskov Institute of Catalysis SB RAS
N.D. Zelinsky Institute of Organic Chemistry RAS
A.V. Topchiev Institute of Petrochemical Synthesis RAS
Lomonosov Moscow State University
Novosibirsk State University

5th International School-Conference on Catalysis for Young Scientists "Catalyst Design: From Molecular to Industrial Level"

May 20-23, 2018

Moscow, Russia

Scientific Program

Novosibirsk-2018

School-Conference Organizers

- Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
- N.D. Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
- A.V. Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia
- Lomonosov Moscow State University, Moscow, Russia
- Novosibirsk State University, Novosibirsk, Russia
- Russian Mendeleev Chemical Society, Novosibirsk Department
- Siberian Branch of Russian Academy of Science

Financial Support

Russian Foundation for Basic Research

The Federal Agency for Scientific Organizations

HONORARY CONFERENCE PARTNERS

SPECS Surface Nano Analysis GmbH

Reolgrade Service Ltd.

Limited liability company "UNICAT"

CONFERENCE PARTNER

FIZLABPRIBOR LLC

INFORMATION PARTNERS

Journal
"Kinetics and Catalysis"

Journal
"Petroleum Chemistry"

Journal
"Catalysis in Industry"

Scientific Committee

Prof. Valentine P. ANANIKOV	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Prof. Valerii I. BUKHTIYAROV	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Prof. Mikhail P. EGOROV	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Prof. Graham HUTCHINGS	Cardiff Catalysis Institute, Cardiff University, Cardiff, United Kingdom
Prof. Salambek N. KHADZHIEV	Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia
Prof. Ivan V. KOZHEVNIKOV	University of Liverpool, Liverpool, United Kingdom
Dr. Axel KNOP-GERICKE	Fritz Haber Institute of the Max Planck Society, Berlin, Germany
Prof. Ekaterina S. LOKTEVA	Lomonosov Moscow State University, Moscow, Russia
Prof. Valerii V. LUNIN	Lomonosov Moscow State University, Moscow, Russia
Prof. Oleg N. MARTYANOV	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Prof. Anton L. MAXIMOV	Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia
Prof. Claude MIRODATOS	Institute of Researchers on Catalysis and Environment in Lyon, Lion, France
Prof. Konstantin M. NEYMAN	ICREA & University of Barcelona, Barcelona, Spain
Prof. Valentin N. PARMON	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Prof. Alexander Yu. STAKHEEV	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

Organizing Committee

Prof. Oleg N. Martyanov	Co-chair, Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Prof. Alexander Yu. Stakheev	Co-chair, Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Dr. Mariya V. Alekseeva	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Marina V. Bukhtiyarova	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Olesya O. Zaikina	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Andrey A. Smirnov	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Dr. Ivan A. Yaremenko	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
Dr. Olga V. Turova	Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

Secretariat:

Marina S. Suvorova	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Svetlana S. Logunova	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
Marina A. Klyusa	Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

Scientific Program

The scientific program of the School-Conference includes invited plenary lectures (30 min), specified oral presentations (20 min), oral presentations (15 min) and poster presentations.

The main topics are:

- Catalysts preparation
- Characterization and in situ studies of catalysts
- Mechanism and kinetics of catalytic reactions
- Catalysis for environmental protection
- Catalysis for fine organic synthesis, natural gas and oil processing, petroleum chemistry
- Catalysis for energy efficient processes, photocatalysis and electrocatalysis

CONFERENCE LANGUAGE

The official language of the School-Conference is English.

PRESENTATION

Multi-media (LCD) projector will be available for speakers. Organizers recommend authors to prepare computer presentations in *.ppt or *.pptx format (Microsoft Power Point from the package MS Office).
The recommended poster size A1 (594x841 mm), vertical orientation.

CONFERENCE PUBLICATIONS

Book of Abstracts of plenary lectures, oral and poster presentations on a USB key will be available at the registration desk. The electronic edition of the Book of Abstracts will be given an International Standard Book Number (ISBN) and State Registration Number.
Selected School-Conference papers will be published in the special issues of **Kinetics and Catalysis** and **Petroleum Chemistry**.
Procedure for submitting articles will be available on the School-Conference site.

VENUE

The School-Conference will be held at Zelinsky Institute of Organic Chemistry RAS (Leninsky Prospect, 47, Moscow, Russia).
Free shuttle buses from the hotels "Salut" and "Astrus" to Zelinsky Institute of Organic Chemistry will be provided for the participants who will stay in these hotels.

May 20: at 13.30 from "Salut" and "Astrus",
20.00 and 21.00 from Zelinsky Institute of Organic Chemistry RAS to the hotels

May 21: at 08.00 from "Salut" and "Astrus",
18.30 from Zelinsky Institute of Organic Chemistry RAS to the hotels

May 22: at 08.30 from "Salut" and "Astrus"

May 23: at 08.00 from "Salut" and "Astrus"

REGISTRATION

Registration will take place at Zelinsky Institute of Organic Chemistry RAS (Leninsky Prospect, 47, Moscow, Russia) on May 20 from 12.00 to 15.00. Registration will be opened during whole School-Conference.

MEALS

For Russian participants lunches (May 21, 22) will be arranged in the canteen of Institute of Metallurgy and Materials Science (Moscow, Leninsky Prospect, 49).
For Foreing participants lunches (May 21, 22) will be arranged in the canteen of Institute of Organic Chemistry (Moscow, Leninsky Prospect, 47).
Morning and afternoon coffee breaks will be provided.

SCIENTIFIC AND SOCIAL EVENTS

Institutes Excursions on May 22 at 14.30

- N.D. Zelinsky Institute of Organic Chemistry RAS
- A.V. Topchiev Institute of Petrochemical Synthesis RAS
- Lomonosov Moscow State University

Scientific quiz on May 23 at 11.00
Quiz is a popular game all over the world and cheerful pastime with your friends. The scientific quiz allows you to test your knowledge in such a close subject as science. And you can learn something new!

Welcome reception
Participants and accompanying persons are invited to the Welcome reception on May 20 at 18.00 (Zelinsky Institute of Organic Chemistry RAS, Leninsky Prospect, 47, Moscow, Russia).
Free for participants, 1500 Rub. for accompanying persons.

Excursion "Evening Moscow" on May 21 at 21.00
Excursion will start from hotels “Salut” and “Astrus”.
Free for participants, 1000 Rub. for accompanying persons.

Excursion "Arkhangelskoe" on May 23, 13.30 - 20.00
1200 Rub. for all.
Excursion will start from Zelinsky Institute of Organic Chemistry RAS after closing ceremony. Lunch will be provided for tour participants.

BANK AND EXCHANGE

Cash exchange is available in the banks. Mastercard and Visa cards are generally accepted in hotels and shops. Please note that personal checks are not accepted.

WEATHER
The climate of Moscow in May is good. The weather in Moscow in May is wet (with 95mm of rainfall over 13 days).

The high seasonal norm is 21°C. The seasonal minimum is 12°C. Thus, the mean temperature average in May in Moscow is 16°C. The organizing committee advises participants to bring umbrellas and warm suits.

May 20, Sunday

12.00 Registration
1th floor of Zelinsky Institute of Organic Chemistry RAS (Leninsky Prospect, 47, Moscow, Russia).

AFTERNOON SESSION

Conference hall, 3rd floor

15.00 Opening ceremony

Chairperson:Prof. Oleg N. Martyanov,
Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

Plenary lectures

15.30 PL-1
Presenting author: Prof. Vladimir Gevorgyan
Development of Novel C–H Functionalization Methodologies
University of Illinois at Chicago, Chicago, USA

16.00 PL-2
Presenting author: Prof. Dr. Marc Koper
Multiple Proton-Coupled Electron Transfer for Electrochemical Generation of Fuels
Leiden Institute of Chemistry, Leiden University, Leiden, The Netherlands

16.30 PL-3
Presenting author: Prof. Valerii Bukhtiyarov
Stakheev A.Yu.[1], Bukhtiyarov V.I.[2]
Metal particle size effects: an interference of activation and adsorption factors
1 – Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia
2 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

17.00 PL-4
Presenting author: Prof. Vladimir Likholobov
Design of Active Sites as the Tool for Improvement of Industrial Catalysts: Pt/Aluminum Oxides Compositions
Institute of Hydrocarbons Processing SB RAS, Omsk, Russia

17.30 Photo

18.00- 21.00 *Welcome reception*
Zelinsky Institute of Organic Chemistry RAS

May 21, Monday

MORNING SESSION

Conference hall, 3rd floor

Chairperson: Prof. Dr. Marc Koper,
Leiden Institute of Chemistry, Leiden University,
Leiden, The Netherlands

Plenary lectures

09.00 PL-5
Presenting author: Prof. Dr. Beatriz Roldan Cuenya
Operando Nanocatalysis
Department of Interface Science, Fritz-Haber Institute of the Max Planck Society, Berlin, Germany

09.30 PL-6
Presenting author: Dr. Detre Teschner[1,2]
Mechanism and Kinetics on the Example of the Heterogeneous Catalytic Deacon Reaction
1 – Fritz-Haber-Institut der MPG, Berlin, Germany
2 – Max Planck Institute for Chemical Energy Conversion, Mülheim, Germany

10.00 PL-7

Presenting author: Prof. H.J. (Erik) Heeres

Heeres A.[1], Schenk N.J.[1] , Muizebelt I.[1], Songbo H.[2], Heeres H.J.[2]

Bio-Based Aromatics from Biomass

1 – BioBTX, Groningen, The Netherlands

2 – Chemical Engineering department, University of Groningen, Groningen, The Netherlands

10.30 *Coffee break*

MORNING SESSION

Library hall, 2nd floor

Chairperson: Prof. Vladimir Likholobov
Institute of Hydrocarbons Processing SB RAS, Omsk, Russia

Oral presentations

Section 1: Catalysts preparation

11.00 OPS-1
Presenting author: Prof. David Simakov
Thermocatalytic Conversion of CO_2 into Renewable Synthetic Fuels: Catalysis and Reactor Design
Department of Chemical Engineering, University of Waterloo, Waterloo ON, Canada

11.20 OP-I-1
Presenting author: Niklas Rosendal Bennedsen
Bennedsen N.R., Kramer S., Mielby J., Kegnæs S.
Heterogeneous Base Metal Catalyst for Hydrosilylation of Ketones
Technical University of Denmark, Department of Chemistry, 2800 Kgs. Lyngby, Denmark

11.35 OP-I-2
Presenting author: Mariia Markova
Markova M.E.[1], Stepacheva A.A.[2], Gavrilenko A.V.[2], Sulman M.G.[2], Sidorov A.I.[2], Sulman E.M.[2]
Development of Novel Catalysts Synthesized by Hydrothermal Method
1 – Tver State University, Tver, Russia
2 – Tver State Technical University, Tver, Russia

11.50 OP-I-3

Presenting author: Irina Tiuliukova

Tiuliukova I.A.[1,2], Rudina N.A.[1], Parkhomchuk E.V.[1,2]

Effect of the Synthesis Medium on Morphology and Texture of SAPO-11 Crystals

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

12.05 OP-I-4

Presenting author: Ekaterina Gorokhova

Gorokhova E.O.[1], Kulchakovskaya E.V.[1], Asalieva E.Yu.[1], Sineva L.V.[1,2], Mordkovich V.Z.[1,2]

Peptization Parameters as an Instrument for Controlling Properties of Fischer–Tropsch Catalysts

1 – Technological Institute for Superhard and Novel Carbon Materials, Troitsk, Moscow, Russia

2 – INFRA Technology LLC, Moscow, Russia

12.20 OP-I-5

Presenting author: Dr. Liudmila Stepanova

Stepanova L.N., Belskaya O.B., Vasilevich A.V., Likholobov V.A.

Catalysts based on the Mg, Ni and Li-Containing Layered Double Hydroxides for Furfural Hydrogenation

Institute of Hydrocarbons Processing SB RAS, Omsk, Russia

12.35 OP-I-6

Presenting author: Dr. Marina Bukhtiyarova

Bukhtiyarova M.V., Nuzhdin A.L., Kardash T.Yu., Romanenko A.V.

N-Methylation of Amines over the Catalysts Based on Cu-Layered Double Hydroxides

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

12.50 OP-I-7

Presenting author: Konstantin Valeev

Valeev K.R.[1], Tikhov S.F.[1], Minyukova T.P.[1], Cherepanova S.V.[1], Salanov A.N.[1], Kaichev V.V.[1,2], Saraev A.S.[1,2], Andreev A.A.[1,2], Lapina O.B.[1], Sadykov V.A.[1,2]

Novel CuAl and CuFeAl Ceramometal Catalysts for WGS Reaction

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 –Novosibirsk State University, Novosibirsk, Russia

13.05 *Lunch*

AFTERNOON SESSION

Library hall, 2nd floor

Chairperson: Dr. Detre Teschner
Fritz-Haber-Institut der MPG, Berlin, Germany

Oral presentations

Section 1: Catalysts preparation

14.30 OP-I-8

Presenting author: Kevin Ploner

Ploner K.[1], Götsch T.[1], Kogler G.[1], Thalinger R.[1], Bernardi J.[2], Zhao Q.[1,3], Zhuo C.[1,4], Klötzer B.[1], Penner S.[1]

Investigation of Ag- and Co_3O_4-Impregnated Strontium Titanium Ferrite in Methanol Steam Reforming

1 – Institute of Physical Chemistry, Universität Innsbruck, Innsbruck, Austria

2 – University Service Centre for Transmission Electron Microscopy, TU Vienna, Vienna, Austria

3 – Tianjin Key Laboratory of Composite and Functional Materials, School of Materials Science and Engineering, Tianjin University, Tianjin, China

4 – Erich Schmid Institute of Materials Science, Austrian Academy of Sciences, Leoben, Austria

14.45 OP-I-9

Presenting author: Oleksandr Shtyka

Shtyka O., Mierczynski P., Maniecki T.

Pretreatments of Carbon Nanotubes: Effects on Their Physicochemical Properties and Catalytic Performances in the Oxidative Steam Reforming of Methanol

Lodz University of Technology, Institute of General and Ecological Chemistry Lodz, Poland

15.00 OP-I-10

Presenting author: Dr. Tatyana Kardash

Kardash T.Yu., Ishchenko E.V., Svintsitskiy D.A., Saraev A.A., Ishchenko A.V., Bondareva V.M.

Deactivation and Methods to Improve of the Active Phase Stability in VMoNbTe Oxide Catalysts for Ethane Oxidative Dehydrogenation

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

15.15 OP-I-11

Presenting author: Valentina Tregubenko

Tregubenko V.Yu.[1,2], Veretelnikov K.V.[2], Kalashnikov I.M.[1,2], Belyi A.S.[1,2]

Trimetallic Naphtha Reforming Catalysts. Properties of the Metal Function and Influence of the Order of Addition of the Metal Precursors on Pt–Sn–Zr/γ-Al_2O_3–Cl

1 – Institute of Hydrocarbons Processing, Omsk, Russia

2 – Omsk State Technical University, Russia

15.30 OP-I-12

Presenting author: Daria Khabarova

Khabarova D.S., Tupikova E.N.

Hydrothermal Synthesis of Platinum and Chrome Oxidation Catalysts on Metallic Support

Samara National Research University, Samara, Russia

Section 4: Catalysis for environmental protection

15.45 OP-IV-1

Presenting author: Roman Dralyuk

Parkhomchuk E.V.[1,2], García-Aguilar J.[3], Sashkina K.A.[1,2], Berenguer-Murcia A.[3], Cazorla-Amorós D.[3], Dralyuk R.I.[1,2], Ayupov A.B.[1,2], Danilova I.[1]

Ferrosilicate-Based Heterogeneous Fenton Catalysts: Influence of Crystallinity, Porosity, and Iron Speciation

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – Instituto Universitario de Materiales de Alicante y Departamento de Química Inorgánica, Universidad de Alicante, Alicante, Spain

16.00 OP- IV-2

Presenting author: Maria Grabchenko

Grabchenko M.V.[1], Mamontov G.V.[1], Zaikovskii V.I.[2], La Parola V.[3], Liotta L.F.[3], Vodyankina O.V.[1]

Ag/CeO_2 as Promising Catalysts for Total Oxidation of Harmful Compounds

1 – Tomsk State University, Tomsk, Russia
2 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
3 – Istituto per lo Studio dei Materiali Nanostrutturati (ISMN)-CNR, Palermo, Italy

16.15 OP- IV-3

Presenting author: Dr. Maria Alekseeva

Alekseeva M.V.[1,2], Smirnov A.A.[1,2], Khromova S.A.[1], Gulyaeva Yu.K.[1], Yakovlev V.A.[1,2]

Crucial Role of Catalyst Stability in Hydrotreatment of Biomass Pyrolysis Oils

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

16.30 OP-IV-4

Presenting author: Igor Kaplin

Kaplin I.Yu., Shishova V.V., Lokteva E.S., Golubina E.V., Strokova N.E., Maslakov K.I.

MO_x-$Ce_{0,8}Zr_{0,2}O_2$ (M = Cu or Mn) Prepared by Template Methods for CO or Soot Oxidation

Lomonosov Moscow State University, Chemistry Department, Russia

16.45 OP-IV-5

Presenting author: Svetlana Selishcheva

Selishcheva S.A.[1,2], Smirnov A.A.[1,2], Yakovlev V.A.[1,2]

Study of Modified Cu-Containing Catalysts in the Hydrogenation of Furfural

1 – Novosibirsk State University, Novosibirsk, Russia

2 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

17.00 *Coffee break*

17.30-18.30 *Poster session*

21.00 *Excursion "Evening Moscow"*

Excursion will start from hotels "Salut" and "Astrus".

MORNING SESSION

Conference hall, 3rd floor

Chairperson: Prof. H.J. (Erik) Heeres
University of Groningen, Groningen, The Netherlands

Oral presentations

Section 5: Catalysis for fine organic synthesis, natural gas and oil processing, petroleum chemistry

11.00 OPS-2
Presenting author: Prof. Ivan Kozhevnikov
Alharbi W., Kozhevnikova E.F., Kozhevnikov I.V.
Dehydration of Light Alcohols over Heteropoly Acid Catalysts in the Gas Phase
Department of Chemistry, University of Liverpool, Liverpool, UK

11.20 OP-V-1
Presenting author: Tatiana Otroshchenko
Otroshchenko T.P., Kondratenko V.A., Rodemerck U., Linke D., Kondratenko E.V.
Zirconia-Based Materials as Alternative-Type Catalysts for Non-Oxidative Dehydrogenation of Light Alkanes: Factors Influencing Catalyst Performance
Leibniz-Institut für Katalyse e.V., Rostock, Germany

11.35 OP-V-2
Presenting author: Maria Artemova
Artemova M.I., Glotov A.P., Chudakov Y.A., Stavitskaya A.V., Ivanov E.V., Vinokurov V.A.
Metal Catalysts Supported on Halloysite Nanotubes for Partial Oxidation of Aromatic Compounds
Gubkin Russian State University of Oil and Gas, Moscow, Russia

11.50 OP-V-3

Presenting author: Ekaterina Artiukha

Nuzhdin A.L., Artiukha E.A., Bukhtiyarova G.A., Bukhtiyarov V.I.

One-Pot Synthesis of Secondary Aromatic Amines over Supported Copper Catalysts in a Flow Reactor

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

12.05 OP-V-4

Presenting author: Nadezhda Nemygina

Nemygina N.A.[1,2], Nikoshvili L.Zh.[1], Sulman E.M.[1]

Hypercrosslinked Polystyrene as a Support for Ligandless Catalysts of Suzuki Cross-Coupling: Means of Optimization of Catalyst Properties

1 – Tver State Technical University, Tver, Russia

2 – Tver State University, Tver, Russia

12.20 OP-V-5

Presenting author: Dr. Sergei Chernyak

Chernyak S.A., Suslova E.V., Ivanov A.S., Maslakov K.I., Egorov A.V., Savilov S.V., Lunin V.V.

Structure Features and Evolution of Cobalt Catalyst Supported on Carbon Nanotubes in Fischer-Tropsch Synthesis

Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

12.35 OP-V-6

Presenting author: Ekaterina Kulchakovskaya

Asalieva E.Yu.[1], Kulchakovskaya E.V.[1], Sineva L.V.[1,2], Mordkovich V.Z.[1,2]

The Effect of Zeolite Addition into Skeleton Cobalt-Based Fischer–Tropsch Catalyst

1 – Technological Institute for Superhard and Novel Carbon Materials, Troitsk, Moscow, Russia

2 –INFRA Technology LLC, Moscow, Russia

12.50 OP-V-7
Presenting author: Sergey Ten
Ten S., Torbina V.V., Vodyankina O.V.
Metal Nanoparticles Immobilized in MOF UiO-66 for Selective Oxidation of Propylene Glycol
National Research Tomsk State University, Tomsk, Russia

13.05 *Lunch*

AFTERNOON SESSION

Conference hall, 3rd floor

Chairperson: Prof. Ivan Kozhevnikov
University of Liverpool, Liverpool, UK

Oral presentations

Section 5: Catalysis for fine organic synthesis, natural gas and oil processing, petroleum chemistry

14.30 OP-V-8
Presenting author: Prof. Mikhail Nechaev
Nechaev M.S.[1,2], Asachenko A.F.[1,2], Topchiy M.A.[1,2], Gribanov P.S.[1,2]
Expanded Ring N-Heterocyclic Carbene Transition Metal Complexes. Synthesis, Structure, Applications in Catalysis
1 – M.V. Lomonosov Moscow State University, Moscow, Russia
2 – A.V. Topchiev Institute of Petrochemical Synthesis, Moscow, Russia

14.45 OP-V-9
Presenting author: Maria Kotova
Kotova M., Vyskočilová E., Červený L.
Hydrogenation of Butyl Sorbate Using Ruthenium Catalyst
Department of Organic Technology, University of Chemistry and Technology Prague, Prague, Czech Republic

15.00 OP-V-10

Presenting author: Alexey Philippov

Philippov A.A.[1,2], Chibiryaev A.M.[1,2], Martyanov O.N.[1,2]

Determining of Activation Energy and Reaction Order of Hydrogen Transfer Reactions of Menthone Catalyzed by Skeletal Nickel

1 – Boreskov Institute of Catalysis, SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

15.15 OP-V-11

Presenting author: Mikhail Shmakov

Shmakov M.M., Prikhod'ko S.A., Adonin N.Y.

Study of the Aromatic Substituent Structure Influence on Catalytic Activity of Fluorinated Organic Compounds of Boron

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

15.30 OP-V-12

Presenting author: Robbert van Putten

van Putten R.[1], Filonenko G.A.[1], Pidko E.A.[1,2]

Homogeneous Manganese Catalysts for the Efficient Hydrogenation of Esters

1 – Delft University of Technology, Delft, The Netherlands

2 – ITMO University, Saint Petersburg, Russia

15.45 OP-V-13

Presenting author: Ivan Golubev

Golubev I.S.[1], Kazakov M.O.[1], Dik P.P.[1], Pereyma V.Yu.[1], Klimov O.V.[1], Doronin V.P.[2], Sorokina T.P.[2], Noskov A.S.[1]

Effect of Zeolite Content on Activity and Selectivity NiW/Y-ASA-Al_2O_3 Hydrocracking Catalysts to Diesel Fraction

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Institute of Hydrocarbons Processing SB RAS, Omsk, Russia

16.00 OP- V-14

Presenting author: Dr. Roman Kukushkin

Kukushkin R.G.[1,2], Yeletsky P.M.[1], Zaikina O.O.[1,2], Sosnin G.A.[1,2], Yakovlev V.A.[1,2]

Study of Slurry-Phase Catalytic Steam Cracking of Heavy Oil in Presence of Dispersed Catalysts Formed *In Situ*

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

16.15 OP- V-15

Presenting author: Andrey Brayko

Brayko A.S.[1], Kuzin N.A.[2], Kireenkov V.V.[1], Shigarov A.B.[1], Kirillov V.A.[1]

Partial Oxidation of Methane to Synthesis Gas over Structured Catalyst Based on Porous Nickel: The Influence of NiO-MgO Loading on Hot-Spot Temperature

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – UNICAT Ltd, Novosibirsk, Russia

Section 6: Catalysis for energy efficient processes, photocatalysis and electrocatalysis

16.30 OP-VI-1

Presenting author: Anna Kurenkova

Kurenkova A.Yu.[1], Kozlova E.A.[1,2], Cherepanova S.V.[1,2]

Photocatalytic Hydrogen Evolution on $Cd_{0.3}Zn_{0.7}S$: the Effect of Hydrothermal Treatment

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

16.45 OP-VI-2

Presenting author: Anastasiya Sharova

Sharova A.Yu.[1], Salomatina E.V.[1], Chesnokov S.A.[2], Smirnov L.A.[1]

4-Nitrophenol Photocatalytic Decomposition Using of Organic-Inorganic Copolymers of Poly(Titanium Oxide) Doped by Ag and Au Nanoparticles

1 – N. I. Lobachevsky State University of Nizhny Novgorod, Nizhniy Novgorod, Russia

2 – Institute of Metalorganic Chemistry RAS, Nizhniy Novgorod, Russia

17.00 *Coffee break*

17.30-18.30 *Poster session*

21.00 *Excursion "Evening Moscow"*

Excursion will start from hotels "Salut" and "Astrus".

May 22, Tuesday

MORNING SESSION

Conference hall, 3rd floor

Chairperson: Prof. Dr. Unni Olsbye
University of Oslo, Oslo, Norway

Plenary lectures

09.30 PL-8
Presenting author: Prof. Dr. Evgeny Pidko
Balancing Reductionist and Systems Approaches in Computational Catalysis: Questions of Accuracy and Adequacy
1 – Inorganic Systems Engineering group, Department of Applied Sciences, Delft University of Technology, Delft, The Netherlands
2 – TheoMAT group, Laboratory of Solution Chemistry for Advanced Materials and Technologies, ITMO University, St. Petersburg, Russia

10.00 PL-9
Presenting author: Dr. Mikhail Sinev
Oxygen Activation and Pathways in High Temperature Catalytic Oxidation
Semenov Institute of Chemical Physics RAS, Moscow, Russia

10.30 *Coffee break*

MORNING SESSION

Library hall, 2nd floor

Chairperson: Dr. Mikhail Sinev
Semenov Institute of Chemical Physics RAS, Moscow, Russia

Oral presentations

Section 3: Mechanism and kinetics of catalytic reactions

11.00 OPS-3
Presenting author: Simon Penner
Penner S., Mayr L., Ploner K., Köpfle N., Klötzer B.
Tuning of the Nanostructured Metal-Oxide Phase Boundary for Selectivity Control of Methanol Reactions
Institute for Physical Chemistry, University of Innsbruck, Austria

11.20 OP-III-1
Presenting author: Ágnes Szécsényi
Szécsényi Á.[1,2], Gascon J.[2], Pidko E. A.[3,4]
Computational Study of Fe Containing Porous Catalysts for Selective Methane oxidation
1 – Catalysis Engineering Group, Technical University of Delft, Delft, The Netherlands
2 – Advanced Catalytic Materials, King Abdullah University of Science and Technology, Saudi Arabia
3 – Inorganic Systems Engineering Group, Technical University of Delft, Delft, The Netherlands
4 – Theoretical Chemistry Group, ITMO University, St. Petersburg, Russian Federation

11.35 OP-III-2

Presenting author: Alexandra Zima

Zima A.M.[1,2], Lyakin O.Y.[1,2], Bryliakov K.P.[1,2], Talsi E.P.[1,2]

Arene C-H Bond Oxidation by Iron(V)-Oxo Intermediates Bearing Aminopyridine Ligands

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

11.50 OP-III-3

Presenting author: Pavel Kots

Kots P.A., Yakimov A.V., Ivanova I.I.

On the Mechanism of Aldehydes Condensation over Sn and Zr-BEA zeolites

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

12.05 OP-III-4

Presenting author: Mikhail Polynski

Polynski M.V.[1,2], Ananikov V.P.[2,3], Pidko E.A.[1,4]

The Overlooked Problem in Negishi Coupling

1 – ITMO University, Saint-Petersburg, Russia

2 – Lomonosov Moscow State University, Moscow, Russia

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

4 – Delft University of Technology, Delft, The Netherlands

12.20 OP-III-5

Presenting author: Dr. Anna Kurokhtina

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

Strong Experimental Evidence for Fast Oxidative Addition of Aryl Halides to Pd(0) in Direct C-H Arylation of Indoles

Irkutsk State University, Irkutsk, Russia

12.35 OP-III-6

Presenting author: Dr. Valentin Doluda

Filatova A.E., Mushinsky L.S., Sulman E.M., Doluda V.Yu., Matveeva V.G.

Kinetics of Liquid-Phase Hydrogenation of Nitrobenzene Using Ru-Containing Catalyst

Tver Technical University, Tver, Russia

12.50 OP-III-7

Presenting author: Dr. Dmitry Krasnikov

Krasnikov D.V.[1], Iakovlev V.Ya.[1], Tsapenko A.P.[1], Nasibulin A.G.[1,2]

Aerosol Synthesis of Single-Walled Carbon Nanotubes with Tailored Characteristics

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

2 – Department of Applied Physics, Aalto University, Espoo, Finland

13.05 *Lunch*

14.30-16.30 Institute Excursions

- N.D. Zelinsky Institute of Organic Chemistry RAS
- A.V. Topchiev Institute of Petrochemical Synthesis RAS
- Lomonosov Moscow State University

MORNING SESSION

Conference hall, 3rd floor

Chairperson: Prof. Dr. Beatriz Roldan Cuenya
Fritz-Haber Institute of the Max Planck Society, Berlin, Germany

Oral presentations

Section 2: Characterization and in situ studies of catalysts

11.00 OPS-4
Presenting author: Prof. Sebastien Paul
Paul S., Heyte S., Thuriot-Roukos J., Dumeignil F.
Advanced High-Throughput Technologies for Catalysts Design
Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide, F-59000 Lille, France

11.20 OP-II-1
Presenting author: Norbert Hermann Köpfle
Köpfle N.[1], Lackner P.[2], Schmid M.[2], Götsch T.[1], Grünbacher M.[1], Carbonio E.[3], Hävecker M.[3], Schlicker L.[4], Doran A.[5], Bernardi J.[6], Penner S.[1], Klötzer B.[1]
Revealing the Active Sites of a Pd/Zr Intermetallic Precatalyst in Dry Reforming of Methane by ex- and in-situ Methods
1 – Institute of Physical Chemistry of the Leopold Franzens Universität, Innsbruck, Austria
2 – Institute of Applied Physics of the TU Wien, Wien, Austria
3 – Department of Inorganic Chemistry, Fritz Haber Institute of the Max Plank Society, Berlin, Germany
4 – FG Keramische Werkstoffe, TU Berlin, Berlin, Germany
5 – Advanced Light Source, Berkeley Lab, California, USA
6 – University Service Center for Transmission Electron Microscopy, TU Wien, Wien, Austria

11.35 OP-II-2

Presenting author: Dr. Andrey Bukhtiyarov

Panafidin M.A., Bukhtiyarov A.V., Chetyrin I.A., Prosvirin I.P., Bukhtiyarov V.I.

Model Bimetallic Pd-Me/HOPG (Me=Ag;Cu) Catalysts: Preparation and STM/XPS Study

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

11.50 OP-II-3

Presenting author: Dr. Olga Bulavchenko

Bulavchenko O.A.[1,2], Gerasimov E.Y.[1,2], Vinokurov Z.S.[1,2], Afonasenko T.N.[3], Tsyril'nikov P.G.[3], Saraev A.A.[1,2], Kaichev V.V.[1,2], Tsybulya S.V.[1,2]

In situ XRD and XPS Study of the Reduction Process of Mixed Mn-Zr and Mn-Co Oxide Catalysts of CO Oxidation

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 –Novosibirsk State University, Novosibirsk, Russia

3 –Institute of Hydrocarbon Processing SB RAS, Omsk, Russia

12.05 OP-II-4

Presenting author: Dr. Ekaterina Ponomareva

Ponomareva E.A., Lomonosov V.I., Gordienko Yu.A., Sinev M.Yu.

Na_2WO_4-Mn_xO_y/SiO_2 Mixed Oxide Catalyst: Insight into the Nature of the Reactive Oxygen

Semenov Institute of Chemical Physics RAS, Moscow, Russia

12.20 OP-II-5

Presenting author: Dr. Andrey Saraev

Saraev A.A.[1,2], Tsapina A.M.[1], Fedorov A.V.[1], Trigub A.L.[3], Bulavchenko O.A.[1,2], Vinokurov Z.S.[1], Zubavichus Ya.V.[3], Kaichev V.V.[1,2]

***In situ* XAS and XRD Study of CuFeAl-Composite Catalysts of CO Oxidation**

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – National Research Centre Kurchatov Institute, Moscow, Russia

12.35 OP-II-6

Presenting author: Elizaveta Derevyannikova

Derevyannikova E.A.[1,2], Kardash T.Yu.[1,2], Stadnichenko A.I.[1,2], lavinskaya E.M.[1,2], Stonkus O.A.[1,2], Boronin A.I.[1,2]

The Local Structure Pt-Doped CeO_2 Catalysts Studied by PDF and EXAFS Methods

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

12.50 OP-II-7

Presenting author: Samira Abbas Suleymanova

Suleymanova S.A., Tagieva Sh.F., Kerimova U.A., Ismailov E.H.

In Situ EMR and Dynamic Light Scattering Studies of Liquid Phase Hydroxylation of Phenol to Dihydroxybenzenes in the Presence of FeO_x/Siral Catalysts

Institute of Petrochemical Processes of ANAS, Baku, Azerbaijan

13.05 *Lunch*

14.30-16.30 Institute Excursions

- N.D. Zelinsky Institute of Organic Chemistry RAS
- A.V. Topchiev Institute of Petrochemical Synthesis RAS
- Lomonosov Moscow State University

May 23, Wednesday

MORNING SESSION

Conference hall, 3rd floor

Chairperson: Prof. Alexander Stakheev
Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

Plenary lectures

09.00 PL-10
Presenting author: Prof. Claude Mirodatos
Farrusseng D., Guilhaume N., Meunier F., Schuurman Y., Mirodatos C.
From Catalytic Reaction Mechanism to Catalyst Design: A Valuable but Complex Pathway
Research Institute on Catalysis and Environment- IRCELYON-CNRS-Lyon University, Villeurbanne, France

09.30 PL-11
Presenting author: Prof. Eduard Karahanov
Molecular Recognition and Supramolecular Catalysis: from Homogeneous Systems to Nanostructured Hybrid Materials
Department of Chemistry, M. V. Lomonosov Moscow State University, Moscow, Russia

10.00 PL-12
Presenting author: Prof. Dr. Unni Olsbye
Understanding the Selectivity of the Methanol to Hydrocarbons Process at the Molecular Level
Department of Chemistry, University of Oslo, Oslo, Norway

10.30 *Coffee break*

11.00 Scientific quiz

Quiz is a popular game all over the world and cheerful pastime with your friends. The scientific quiz allows you to test your knowledge in such a close subject as science. And you can learn something new!

12.45 Closing ceremony

13.30-20.30 Excursion to "Arkhangelskoe"

POSTER PRESENTATIONS

Section 1: Catalysts preparation

PP-I-1

Abusuek D.A., Protsenko I.I., Nikoshvili L.Zh., Matveeva V.G., Sulman M.G., Sulman E.M.

Ruthenium (IV) Oxide Nanoparticles Formed in Hypercrosslinked Polystyrene as Catalysts of Levulinic Acid Hydrogenation

Tver State Technical University, Tver, Russia

PP-I-2

Anikushin B.M., Kanbetova A.M., Glotov A.P., Chudakov Ya.A., Ivanov E.V., Gushchin P.A.

Concentration of Halloysite Nanotubes from Halloysite-Containing Clay of the Chelyabinsk Region and Their Use as a Carrier for Catalysts

Gubkin Russian State University of Oil and Gas (National Research University), Moscow, Russia

PP-I-3

Bereskina P.A., Mashkovtsev M.A., Guryanova A.A., Osolihina A.Y.

The Influence of pH Hydroxide Synthesis on Surface Characteristics of Alumina Obtained by Thermal Decomposition

Ural Federal University, Ekaterinburg, Russia

PP-I-4

Chuklina S.G.[1], Akhmedova L.S.[1], Maslenkova S.A.[1], Pylinina A.I.[1], Podzorova L.I.[2], Ilyicheva A.A.[2]

Influence of Various Thermal Treatments on Cu-Containing Catalysts Based on Zr-Al Oxides in Ethanol Conversion Reaction

1 – RUDN University, Moscow, Russia
2 – Baikov Institute of Metallurgy and Material Science RAS, Russia

PP-I-5

Du C.[1,2], Toktarev A.V.[3] Kodenev E.G.[3], Echevskii G.V.[3]

Study of Physico-Chemical Properties of Zeolite-Like SAPO-11 Materials and Their Catalytic Performance in Hydroisomerization Reaction

1 – Novosibirsk State University, Novosibirsk, Russia
2 – Sino-Russian Institute, Heilongjiang University, Harbin, China
3 – Boreskov Institute of Catalysis, SB RAS, Novosibirsk, Russia

PP-I-6

Agliullin M.R.[1,2], Khayryllina Z.R.[2], Badretdinova A.A.[2], Faizullin A.V.[1], Akhmetov A.F.[2] , Kutepov B.I.[1,2]

Selective Crystallization of Silicoaluminophosphate SAPO-11

1 – Institute of Petrochemistry and Catalysis RAS, Ufa, Russia
2 – Ufa State Petroleum Technological University, Ufa, Russia

PP-I-7

Makarov D.A., Vorotyntsev A.V., Petukhov A.N.

Synthesis and Functionalization of Merrifield Polymer Divinylbenzene-Chloromethylstyrene Resins for Catalytic Silane Production

Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Nanotechnology and Biotechnology Department, Laboratory of Membrane and Catalytic Processes, Nizhny Novgorod, Russia

PP-I-8

Makarov D.A., Vorotyntsev A.V., Petukhov A.N.

Synthesis, Properties and Mechanism of the Ion Exchange Resins Based on 2-Methyl-5-Vinylpyridine and Divinylbenzene in the Catalytic Disproportionation of Trichlorosilane

Nizhny Novgorod State Technical University n.a. R.E. Alekseev, Nanotechnology and Biotechnology Department, Laboratory of Membrane and Catalytic Processes, Nizhny Novgorod, Russia

PP-I-09

Maslenkova S.A.[1], Chuklina S.G.[1], Pylinina A.I.[1], Akhmedova L.S.[1], Podzorova L.I.[2], Ilyicheva A.A.[2]

Modification Methods for Activation of Al-Zr-Ce Mixed Oxides Catalysts Dopped with Cu for H_2 Production

1 – Peoples` Friendship University of Russia, Moscow, Russia
2 – Baikov Institute of Metallurgy and Material Science RAS, Moscow, Russia

PP-I-10

Merk A.A., Evdokimov M., Magaev O.V., Mamontov G.V.

Control of Active Cr-Sites on the Surface of Chromia–Alumina Catalysts for Dehydrogenation of Isobutane to Isobutylene by Addition of Cu Modifier

Tomsk State University, Tomsk, Russia

PP-I-11
Nestroynaya O.V., Gerasimchuk V.N., Yapryntsev M.N.
Synthesis of Tetrametallic Layered Double Hydroxides
Belgorod National Research University, Belgorod, Russia

PP-I-12
Nikulshina M.S.[1], Mozhaev A.V.[1], Sheldaisov-Mescheryakov A.A.[1], Minaev P.P.[1], Nikulshin P.A.[1,2]
Mono- and Bimetallic Mo(W)S_2 /Al_2O_3 and Mo(W)S_2/SBA-15 Hydrotreating Catalysts Based on $SiMo_{12}$- and SiW_{12}- Heteropolyacids
1 – Samara State Technical University, Samara, Russia
2 – All-Russia Research Institute of Oil Refining, Moscow, Russia

PP-I-13
Chernyak A.S., Paslova M.S., Ivanov A.S., Egorova T.B., Maslakov K.I., Chernavskii P.A., Savilov S.V., Lunin V.V.
Carbon-Encapsulated Cobalt Particles Fixed in a Rigid CNT Framework: Synthesis by Spark Plasma Sintering and Catalytic Properties in CO Hydrogenation
Lomonosov Moscow State University, Department of Chemistry, Moscow, Russia

PP-I-14
Qi W.[1,2], Toktarev A.V.[3], Kodenev E.G.[3], Echevskii G.V.[3]
Influence of Si Source Origin on Physico-Chemical Properties of SAPO-31 Catalysts and Their Performance in Hydroisomerization of n-Decane
1 – Novosibirsk State University, 630090 Novosibirsk, Russia
2 – Sino-Russian Institute, Heilongjiang University, Harbin, China
3 – Boreskov Institute of Catalysis, SB RAS, 630090 Novosibirsk, Russia

PP-I-15
Ratkevich E.A.[1], Manaenkov O.V.[1], Matveeva V.G.[1], Kislitza O.V.[1], Sulman E.M.[1], Bronstein L.M.[2]
The Cellulose Hydrogenolysis to Low Alcohols Catalyzed by Ru-Containing Magnetically Recoverable Catalysts
1 – Tver State Technical University, Department of Biotechnology and Chemistry, Tver, Russia
2 – Indiana University, Department of Chemistry, Bloomington, USA

PP-I-16

Sulman A.M.[1], Matveeva V.G.[1,2], Grebennikova O.V.[1], Lakina N.V.[1], Doluda V.Y.[1]

Selective Oxidation of 2,3,6-Trimethylphenol in the Presence of Magnetically Separated Catalysts

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

PP-I-17

Timofeev K.L., Kharlamova T.S., Vodyankina O.V.

Structural and Catalytic Characteristics of V_2O_5-MoO_3/Al_2O_3 Catalysts for Oxidative Dehydrogenation of Propane

Tomsk State University, Tomsk, Russia

PP-I-18

Vlasova E.N.[1,2], Pakharukova V.P.[1], Bukhtiyarova G.A.[1,2], Deliy I.V[1,2], Aleksandrov P.V.[1,2], Porsin A.A.[1], Gerasimov E.Yu.[1,2], Bukhtiyarov V.I.[1,2]

Effect of Preparation Method on the Morphology of MoS_2 Phase and Catalytic Performance of MoS_2/Al_2O_3 Catalysts in HDO of Rapeseed Oil

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
2 – Novosibirsk National Research University, Novosibirsk, Russia

Section 2: Characterization and in situ studies of catalysts

PP-II-1

Vinokurov Z.S.[1,2], Saraev A.A.[1,2], Bespalov Y.R.[1,2], Kaichev V.V.[1,2], Shmakov A.N. [1,2,3]

In situ XRD Study of Metal and Oxide Catalyst for Oxidation of Hydrocarbons

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – Budker Institute of Nuclear Physics, Novosibirsk, Russia

PP-II-2

Chlebda D.K.[1], Chrzan M.A.[1], Jodłowski P.J.[2], Jędrzejczyk R.J.[3], Łojewska J.[1]

Molecular Structures of Supported Oxide Catalysts Investigated by Raman Spectroscopy

1 – Faculty of Chemistry, Jagiellonian University, Kraków, Poland
2 – Faculty of Chemical Engineering and Technology, Cracow University of Technology, Kraków, Poland
3 – Malopolska Centre of Biotechnology, Jagiellonian University, Kraków, Poland

PP-II-3

Chrzan M.A.[1], Chlebda D.K.[1], Salamon E.[1], Jodłowski P.J.[2], Łojewska J.[1]

Investigation on Active Centres of Cerium-Based Structured Catalysts by *in situ* FTIR Spectroscopy

1 – Faculty of Chemistry, Jagiellonian University, Krakow, Poland
2 – Faculty of Chemical Engineering and Technology, Cracow University of Technology, Krakow, Poland

PP-II-4

Kochurova N.M., Salanov A.N.

Catalytic Etching of Polycrystalline Platinum Foil during NH_3 Oxidation

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

PP-II-5

Salanov A.N., Kochurova N.M.

Catalytic Etching of Platinum Gauzes Used in NH_3 Oxidation

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

PP-II-6

Suprun E.A., Salanov A.N., Kochurova N.M.

Catalytic Etching of Palladium Used in CO Oxidation

Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

PP-II-7

Mashkovsky I.S., Markov P.V., Bragina G.O., Smirnova N.S., Baeva G.N., Stakheev A.Yu.

PdIn/Al_2O_3 Catalyst for Selective Akyne Hydrogenation: Formation of Intermetallic Nanoparticles with Pd Single-Atom Structure

Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

PP-II-8

Putin A.Yu., Katsman E.A., Bruk L.G.

The Complexation in the $PdBr_2$-LiBr-CH_3CN-H_2O Catalyst System, Used in the Synthesis of Succinic Anhydride

Moscow Technological University, Moscow, Russia

PP-II-9

Selivanova A.V.[1], Tsapina A.M.[1], Shulutkova A.E.[2], Saraev A.A.[1,2], Kaichev V.V.[1,2], Bukhtiyarov V.I.[1,2]

Methanol Adsorption on Pt(111): *In Situ* Study by Polarization Modulation Infrared Reflection Absorption Spectroscopy

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-II-10

Smirnova N.S., Markov P.V., Baeva G.N., Mashkovsky I.S., Stakheev A.Yu.

Control of the Surface Structure of Bimetallic Pd-Ag Catalysts by the Adsorbate-Induced Segregation

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

PP-II-11

Smoliło.M., Samson K., Podobiński J., Ruggiero M., Rojek W., Rutkowska-Żbik D.

Synthesis and Physicochemical Characterization of Vanadium-Containing Faujasite for Oxidative Dehydrogenation (ODH) of Light Alkanes

Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences, Cracow, Poland

PP-II-17

Svintsitskiy D.A.[1,2], Kardash T.Yu.[1,2], Slavinskaya E.M.[1,2], Derevyannikova E.A.[1,2], Boronin A.I.[1,2]

Silver-Containing Mixed Oxides as Catalysts for CO and C_2H_4 Oxidation

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-II-20

Selivanova A. V.[1], Saraev A.A.[1,2], Kaichev V.V.[1,2]

XPS study of Oxidative Dehydrogenation of Propane over V_2O_5/TiO_2 Catalysts

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

Section 3: Mechanism and kinetics of catalytic reactions

PP-III-1

Badyrova N.M., Nindakova L.O.

Transfer Hydrogenation Reactions in the Presence of a Chiral bis-Imine Rhodium (I) Complexes. Modelling and Experimental Study

Irkutsk National Research Technical University (IRNITU), Irkutsk, Russia

PP-III-2

Gordeev E.G., Ananikov V.P.

DFT Study of Pd Catalyzed Carbon-Carbon, Carbon-Heteroatom and Heteroatom-Heteroatom Bonds Formation

Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

PP-III-3

Khramenkova E.V.[1], Szécsényi À.[2], Pidko E.A.[1,2]

The Role of Confinement on the Reactivity of Fe-ZSM-5 Zeolite in the Selective Methane Oxidation

1 – TheoMAT group, ITMO University, Saint Petersburg, Russia
2 – ISE group, Delft University of Technology, Delft, The Netherlands

PP-III-4

Kolganov A.A.[1,2], Gabrienko A.A.[1,2]

Reactivity of Methane Activation Intermediates Formed on Cu-ZSM-5, Contained Different Copper Sites

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
2 – Department of Natural Sciences, Novosibirsk State University, Novosibirsk, Russia

PP-III-5

Konishcheva M.V.[1,2], Potemkin D.I.[1,2], Snytnikov P.V.[1,2], Sobyanin V.A.[1]

Selective CO Methanation in the Hydrogen-Rich Gas over the Halogen (F, Cl, Br) Promoted Ni/CeO_2 Catalysts

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

PP-III-6

Kulagina M.A.[1], Hibbitts D.D.[2]

Theoretical Study and Modelling of Solvent Effect in Pd Catalysed C=C Double Bond Hydrogenation of Carboxylic Acids

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
2 – University of Florida, Gainesville, USA

PP-III-7

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

The Simulating of Oxygen Interaction with Thiolate-Protected Gold Clusters by DFT

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

PP-III-8

Polynskaya Y.G.[1], Lebedev A.V.[1], Knizhnik A.A.[1,2], Deminsky M.A.[1,2], Sinitsa A.S.[2], Potapkin B.V.[1,2]

Analysis of the Effect of Radiation and Catalysts on Methane Activation

1 – Kintech Lab, Moscow, Russia
2 – NRC «Kurchatov Institute», Moscow, Russia

PP-III-9

Selivanova A. V.[1], Saraev A.A.[1,2], Tsapina A.M.[1], Fedorov A.V.[1], Trigub A.L.[3], Bulavchenko O.A.[1,2], Vinokurov Z.S.[1], Zubavichus Ya.V.[3], Yakovlev V.A.[1,2], Kaichev V.V.[1,2]

Novel CuFeAl-Composite Catalysts for CO Oxidation

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – National Research Centre Kurchatov Institute, Moscow, Russia

PP-III-10

Zhulikov V.V.[1], Krutskikh V.M.[1], Kuzntsov V.V.[2], Khmeleva K.M.[2]

Electrocatalytic Properties of Nickel-Rhenium Alloys Prepared by Electroless Deposition

1 – Institute of Physical Chemistry and Electrochemistry Russian Academy of Science, Moscow, Russia
2 – D.I. Mendeleev University Chemical Technology of Russia, Moscow, Russia

Section 4: Catalysis for environmental protection

PP-IV-1

Abreu N.J.[1,2], Valdés H.[1], Zaror C.A.[2], Azzolina-Jury F.[3], Melendres M.F.[4]

Ethylene Adsorption onto Natural and Metal Oxide Modified Chilean Zeolites: an Operando DRIFTS Approach

1 – Clean Technologies Laboratory, Universidad Católica de la Santísima Concepción, Concepción,Chile
2 – Chemical Engineering Department, Universidad de Concepción, Concepción, Chile
3 – Laboratoire Catalyse & Spectrochimie, Université de Caen, Caen, France
4 – Materials Engineering Department, Universidad de Concepción, Concepción, Chile

PP-IV-2

Dyukova A.A.[1], Miklin N.A.[2], Balmyshev A.V.[3]

The Results of Testing New Materials for Primary N_2O Emission Reduction in Catalytic Ammonia Oxidation Process

1 – Gymnasia 1, Kirovo-Chepetsk, Russia
2 – OJSC Krastsvetmet, Krasnoyarsk, Russia
3 – EcoStream LLC, Moscow, Russia

PP-IV-3

Polynski M.V.[1], Gazimagomedov M.A.[1], Pidko E.A.[1,2]

Hydricity of Fe- and Ru-Tetrahydrides with PNP-, CNC- and NNN-Pincer Ligands

1 – TheoMAT group, International Laboratory of Solution Chemistry for Advance Materials and Technologies, ITMO University, Saint Petersburg, Russia
2 – Inorganic Systems Engineering group, Delft University of Technology, Delft, Netherlands

PP-IV-4

Klokov S.V.[1], Lokteva E.S.[1], Golubina E.V.[1], Minin A.S.[2]

Cobalt-Carbon Nanocomposites for Chlorobenzene Hydrodechlorination

1 – Lomonosov Moscow State University, Moscow, Russia

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

PP-IV-5

MikheevaN.N.[1], Sadlivskaya M.V.[1], Zaikovskii V.I.[2], Mamontov G.V.[1]

Design of Ag-CeO_2/SBA-15 Catalysts for Volatile Organic Compounds Oxidation

1 – Tomsk State University, Tomsk, Russia

2 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia

PP-IV-6

Mytareva A.I.[1], Bokarev D.A.[1], Baeva G.N.[1], Belyankin A.Yu.[1], Zhuckova I.V.[2], Krivoruchenko D.S.[1], Stakheev A.Yu.[1]

Dual-Bed Catalyst for NO_x Abatement

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

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

PP-IV-7

Ciobanu M.[1], Mureseanu M.[2], Petcu. G.[1], Baran A.[1], Somacescu S.[1], Papa F.[1], Parvulescu V.[1]

Synthesis Dependent Ceria-Titania Interaction and Its Effect on the Performance of PtCeTi-SBA-15 Catalysts in Photodegradation of Phenol from Aqueous Solution

1 – Ilie Murgulescu Institute of Physical Chemistry of Romanian Academy, Bucharest, Romania

2 – University of Craiova, Faculty of Science, Department of Chemistry, Craiova, Romania

PP-IV-8

Catalytic Decomposition of N-Acetylated Chitosan with Chitosanase Immobilized on Alumina

Tambasova D.P., Lyubyakina P.N., Lizunova E.E., Kovaleva E.G.

Ural Federal University, Yekaterinburg, Russia

Section 5: Catalysis for fine organic synthesis, natural gas and oil processing, petroleum chemistry

PP-V-1

Bugrova T., Zubkov A., Mamontov G.

Mixed Cr-Zr Oxides as Promising Catalysts for Dehydrogenation of Alkanes

Tomsk State University, Tomsk, Russia

PP-V-2

Burtsev A.A., Chernyak S.A., Ivanov A.S., Maslakov K.I., Egorova T.B., Savilov S.V., Lunin V.V.

Co-Based Fischer-Tropsch Catalysts Supported on Nitrogen-Doped Carbon Nanotubes: Effect of Content, Type, and Localization of Nitrogen Species

Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

PP-V-3

Dadashova N.R., Alimardanov H.M., Jafarova R.A., Musayeva E.S.

Condensation of Ketones and Glycols in the Presence of Polyoxometalates Containing Gd(III), Nd(III)

Institute of Petrochemical Processes of Azerbaijan National Academy of Sciences, Baku, Azerbaijan

PP-V-4

Golubev O.V.[1], Maximov A.L.[1,2], Karakhanov E.A.[1]

Heteroatomic Compounds Removal from Distillates Using Catalysts Based on Meso-Macroporous Structures

1 – Chemical Department of Lomonosov Moscow State University, Moscow, Russia
2 – A.V. Topchiev Institute of Petrochemical Synthesis, RAS (TIPS RAS), Moscow, Russia

PP-V-5

Kirilenko N.Y.[1,2], Krivoshchapov N.V.[1], Gribanov P.S.[1,2], Dzhevakov P.B.[1,2], Chesnokov G.A.[1,2], Sterligov G.K.[2], Philipova A.N.[2], Topchiy M.A.[1,2], Minaeva L.I.[3], Asachenko A.F.[1,2], Nechaev M.S.[1,2]

A New Method For The Synthesis Of Fully Substituted 1,2,3-Triazoles: Comparative Study

1 – Lomonosov Moscow State University, Moscow, Russia
2 – Topchiev Institute of Petrochemical Synthesis, Russian Academy of Sciences, Moscow, Russia
3 – Peoples' Friendship University of Russia (RUDN University), Moscow, Russia

PP-V-6

Kryuchkova T.A.[1], Markova E.B.[1], Zimina V.D.[1], Odintsova M.V.[1], Sheshko T.F.[1], Yafarova L.V.[2], Zvereva I.A.[2]

The Preparation of Light Olefins over Perovskite-Type Systems

1 – Peoples' Friendship University of Russia (RUDN University), Faculty of Science, Physical and Colloidal Chemistry Department, Russia
2 – Saint-Petersburg State University, Saint-Petersburg, Russia

PP-V-7

Levshakov N.S.[1], Glotov A.P.[1], Gushchin P.A.[1], Matevosyan D.V.[2], Vutolkina A.V.[2], Lysenko S.V.[2]

Sulfur Reduction Additives for FCC Catalysts Based On alumosilicates Al-SBA-15 and Al-SBA-16

1 – Gubkin Russian State University of Oil and Gas, Moscow, Russia
2 – Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

PP-V-8

Maksimov V.V., Dorokhov V.S., Permyakov E.A., Kogan V.M.

Nano-Sized K-Modified Transition Metal Sulphides as Promising Active Phase for Design of Bifunctional Catalysts for Syngas Conversion into Alcohols and Other Oxygenates

N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia

PP-V-9

Mikhailov S.P.[1], DoludaV.Yu.[2], Sulman E.M.[2], Lakina N.V.[2], Matveeva V.G.[1,2], Sulman M.G.[2]

N-Methyl-D-Glucoseamine Synthesis over Ni-Impregnated Hypercrosslinked Polysterene

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

PP-V-10

Vakulin I.V., Talipov R.F., Tukhvatshin V.S., Talipova G.R., Pasko P.A.

The Prediction of Catalytic Activity of Synthetic Zeolites and Carbon Nanotubes in Prins Reaction by Theoretical Modeling of Interaction TS with Cavity

Department of Organic and Bioorganic Chemistry, Bashkir State University, Ufa, Russia

PP-V-11
Polikarpova P.D., Akopyan A.V., Anisimov A.V., Karakhanov E.A.
Model Sulfides Peroxide Oxidation in the Presence of Catalysts Based on Mesoporous Aluminosilicates
Lomonosov Moscow State University, Moscow, Russia

PP-V-12
Redina E.A., Vikanova K.V., Kapustin G.I., Kustov L.M.
A New Heterogeneous Approach for Selective Room-Temperature Transformations of Carbonyl- and Nitro-Compounds in the Presence of H_2
N.D. Zelinsky Institute of Organic Chemistry, Moscow, Russia

PP-V-13
Salnikova K.E.[2], Matveeva V.G.[1,2], Isaev V.S.[1], Mikhailov S.P.[2], Sulman M.G.[1,2], Sulman E.M.[1,2]
Hydrogenation of Furfural over Palladium-Containing Catalysts
1 – Tver State Technical University, Tver, Russia
2 – Tver State University, Tver, Russia

PP-V-14
Sherstobitova A.K., Murzabekova A., Salimova M.R., Bakhytov N.
Using a Band Nickel-Aluminum Catalyst in the Process of Obtaining Hydrogen
Ufa State Petroleum Technological University FSBEI HE, Ufa, Russia

PP-V-15
Shesterkina A.A., Kirichenko O.A., Strekalova A.A., Shuvalova E.V., Kapustin G.I., Kustov L.M.
Nanostructured Heterogeneous Catalysts for the Selective Hydrogenation Reactions Containing no Noble Metals
N.D. Zelinsky Institute of Organic Chemistry, RAS, Moscow, Russia

PP-V-16
Stolbov D.N., Chernyak S.A., Burtsev A.A., Arkhipova E.A., Ivanov A.S., Maslakov K.I., Egorova T.B., Savilov S.V., Lunin V.V.
Heterosubstituted Graphene Nanoflakes – Novel Supports for Co-Based Fischer-Tropsch Catalysts
Lomonosov Moscow State University, Department of Chemistry, Moscow, Russia

PP-V-17

Uskov S.I.[1,2], Potemkin D.I.[1,2], Pechenkin A.A.[1,2]; Snytnikov P.V.[1,2], Belyaev V.D.[1,2], Sobyanin V.A.[1]

Novel Catalysts Prepared by Pechini Technique for Low-Temperature Steam Reforming of Light Hydrocarbons

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

PP-V-18

Vikanova K.V., Redina E.A., Kustov L.M.

Catalytic Selective Carbonyl Compounds Hydrogenation at Ambient Conditions

Zelinsky Institute of Organic Chemistry RAS, Moscow, Russia

PP-V-19

Vinnikova M.A.[1], Maximov A.L.[1,2]

Thermoregulated Synthesis of Nanostructured Nickel Phosphide with a High Catalytic Activity in Hydroprocessing

1 – A.V. Topchiev Institute of Petrochemical Synthesis, RAS, Moscow, Russia
2 – Lomonosov Moscow State University, Moscow, Russia

PP-V-20

Yakovenko R.E., Savost'yanov A.P., Narochniy G.B., Zubkov I.N., Soromotin V.N.

The Conversion of Associated Petroleum Gases in the Synthetic Fuels

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

PP-V-31

Makhmutov D.F., Zanina A.V., Vutolkina A.V.

Hydrogenation of Model Compounds via Water Gas Shift Using Dispersed Unsupported Ni/Mo Sulfide Catalysts

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

PP-V-36

Zanina A.V.[1], Makhmutov D.F.[1], Vutolkina A.V.[1], Glotov A.P.[2]

Ni-Mo Sulfide Catalysts Based on Mesoporous Aluminosilicates in Hydrogenation of Model Compounds via WGSR

1 – Lomonosov Moscow State University, Faculty of Chemistry, Moscow, Russia
2 – Gubkin Russian State University of Oil and Gas, Moscow, Russia

Section 6: Catalysis for energy efficient processes, photocatalysis and electrocatalysis

PP-VI-1

Hakala B.V.[1,2], Liu H.[2], Tóth J.[1], Yang M.[2], Serbin R.[1]

Synthesis of M-TiO_2 (M = Er, Pt, Au, U) Photocatalytic Porous Nanoparticles

1 – Department of Analytical Chemistry, Faculty of Science, Pavol Jozef Šafárik University, Košice, Slovak Republic
2 – Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo, China

PP-VI-2

Ionita Gh., Titescu Gh., Ciortea C., Bucur C., Stefanescu I.

Improved Mixed Catalytic Packing for Hydrogen - Water Isotopic Exchange

National Research Institute for Cryogenics and Isotopic Technologies – ICSI, Rm.Valcea, Romania

PP-VI-3

Lishiner I.I.[1], Vyatkin Yu.L.[2], Malova O.V.[1], Larina O.M.[1]

Methanol Production from Gas of Pyrolitic Processing Organic Waste Materials

1 – Joint Institute for High Temperatures RAS, Moscow, Russia
2 – Mendeleev University of Chemical Technology, Moscow, Russia

PP-VI-4

Mureseanu M.[1], Diaconu T.[2], Ciobanu M.[2], Petcu G.[2], Cioatera N.[1], Ionica M.[3], Parvulescu V.[2]

Cerium Modified Mesoporous Titania with Photocatalytic and Photoelectrochemical Properties

1 – University of Craiova, Faculty of Science, Department of Chemistry, Craiova, Romania
2 – Ilie Murgulescu Institute of Physical Chemistry of Romanian Academy, Bucharest, Romania
3 – S.C.IPA S.A, CIFATT Craiova, Mihai Viteazul 1, Craiova, Romania

PP-VI-5

Shoynkhorova T.B.[1], Snytnikov P.V.[1,2,3], Simonov P.A.[1,3], Potemkin D.I.[1,2], Badmaev S.D.[1]; Rogozhnikov V.N.[1], Belyaev V.D.[1,2,3], Sobyanin V.A.[1]

Noble Metal-Based Catalysts for Steam and Autothermal Reforming of n-Hexadecane and Diesel Fuel to Synthesis Gas

1 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
2 – Novosibirsk State University, Novosibirsk, Russia
3 – UNICAT Ltd, Novosibirsk, Russia

PP-VI-6

Stavitskaya A.V.[1], Kozlova E.A.[2], Kozlov D.V.[2], Pouresmaeil F.[1], Logvinenko D.G.[1], Vinokurov V.A.[1], Lvov Y.M.[1,3]

Halloysite as a Carrier for Metal Sulfides Nanostructures and Its Application in Photocatalysis

1 – Russian Gubkin State University of Oil and Gas, Moscow, Russia
2 – Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia
3 – Louisiana Tech University, Ruston, Louisiana, USA

PP-VI-7

Kozhevnikova N.S.[1], Gorbunova T.I.[2], Pasechnik L.A.[1], Ulyanova E.S.[1], Buldakova L.Yu.[1], Vorokh A.S.[1]

Photocatalytic Activity of Sc-Doped TiO_2 *In Situ* Synthesized by Sol-Gel Method

1 – Insitute of Solid State Chemistry of UrB RAS, Ekaterinburg, Russia
2 – Insitute of Organic Synthesis UrB RAS, Ekaterinburg, Russia

PP-VI-11

Ulyankina A.A., Burlakova S.A., Smirnova N.V.

Design and Photocatalytic Activity of Nano-Zinc Oxide Obtained by Pulse Alternating Current Synthesis

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

PP-VI-12

Boldyreva E.V., Klushin V.A., Smirnova N.V.

Studies on the kinetics of polyethylenfuranoate formation

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