



Catalyst Design
From Molecular to Industrial Level

16-19 May 2021

Novosibirsk, Russia

6th International School-Conference on Catalysis for Young Scientists

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«Catalyst Design: From Molecular to Industrial Level»

Novosibirsk, Russia
May 16 - 19, 2021

LIST OF ACCEPTED PRESENTATIONS

PLENARY LECTURES

PL-1

Dr. David Kubička

BIOMASS VALORIZATION RELYING ON ALDOL CONDENSATION AND DEOXYGENATION
Technopark Kralupy, University of Chemistry and Technology, Prague, Czech Republic

PL-2

Professor Dr. Ir. Emiel J.M. Hensen

Eindhoven University of Technology, The Netherlands

PL-3

Dr. Noelia Barrabés

ATOMICALLY DESIGNED NANOCATALYSTS BY METAL CLUSTERS
Technische Universität, Wien, Austria

PL-4

Professor Anton L. Maximov

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



PL-5**Professor Valentine P. Ananikov**

COCKTAIL-TYPE CATALYTIC SYSTEMS FOR FINE CHEMICALS SYNTHESIS AND SUSTAINABLE DEVELOPMENT

*Zelinsky Institute of Organic Chemistry, Moscow, Russia***PL-6****Ass. Prof. Cristoph Rameshan**

CORRELATING STRUCTURE AND REACTIVITY ON ENERGY MATERIALS BY IN SITU SPECTROSCOPY

*Technische Universität, Wien, Austria***PL-7****Professor Anatoly Frenkel***Stony Brook University, New York, USA***PL-8****Dr. Janis Timoshenko**

PROBING KINETICS OF CATALYST TRANSFORMATIONS USING SYNCHROTRON-BASED OPERANDO TECHNIQUES AND MACHINE LEARNING

*Fritz-Haber-Institut der MPG, Berlin, Germany***PL-9****Professor Pascal Fongarland**

FISCHER-TROPSH SYNTHESIS: AN OLD REACTION FOR NEW PERSPECTIVES

*Laboratoire de Génie des Procédés Catalytiques (LGPC) - Université Claude Bernard Lyon 1, Lyon, France***PL-10****Professor Denis V. Kozlov**

CATALYSIS FOR ENERGY CONVERSION

*Boriskov Institute of Catalysis, Novosibirsk, Russia***PL-11****Dr. Juan Velasco Vélez^{1,2}**

IN SITU/OPERANDO CHARACTERIZATION OF ELECTROCATALYTIC MATERIALS BY BULK AND SURFACE SENSITIVE X-RAY SPECTROSCOPIES

*1 - Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany**2 - Fritz-Haber-Institute of the Max-Planck-Society, Berlin, Germany***MASTER CLASS****Dr. Anna Nartova**Nartova A.V.^{1,2}, Matveev A.V.^{1,2}, Mashukov M.Yu.², Okunev A.G.^{1,2}

AI IMAGING DATA ANALYSIS IN MATERIAL SCIENCE: MICROSCOPY AND BEHIND

*1 - Boriskov Institute of Catalysis, Novosibirsk, Russia**2 - Novosibirsk State University, Novosibirsk, Russia*

ORAL PRESENTATIONS

Topic 1 - Preparation of catalysts and adsorbents

OP-I-1

Boev S.S., Rubtsova M.I., Smirnova E.M., Glotov A.P.

Design of an affordable and efficient SAPO-34 catalyst based on natural halloysite nanotubes

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

OP-I-2

Danilenko M.V.

Synthesis parameters effect on the kinetics of platinum nanoparticles formation and Pt/C catalyst structure

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

OP-I-3

Fomenko I.S., Gushchin A.L.

Oxidovanadium complexes with diimine ligands: synthesis and catalytic studies

Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk, Russia

OP-I-4

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

Effect of synthesis methods on the structure and properties of Pd-Zn/Sibunit catalysts for acetylene hydrogenation

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

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

OP-I-5

Kadtsyna A.S.^{1,2}, Mishakov I.V.^{1,2}, Bauman Y.I.¹, Netskina O.V.^{1,2}, Kibis L.S.^{1,2}, Serkova A.N.¹, Vedyagin A.A.¹

Target synthesis of N-doped carbon nanofibers on self-organizing nickel-containing catalysts

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

OP-I-6

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

The influence of dopant, modifier and template nature on the catalytic efficiency of ceria in CO oxidation

Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

OP-I-7

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

Comparison of methods for surface modification of hyper-crosslinked polystyrene for the synthesis of bifunctional catalyst

Tver State Technical University, Tver, Russia

OP-I-8

Shahzad A.¹, Kovtunova L.M.^{1,2}, Nartova A.V.^{1,2}

Influence of the preparation conditions on formation of active component particles of Pt/Sibunit catalyst

1 - Novosibirsk State University, Novosibirsk, Russia

2 - Boreskov Institute of Catalysis, Novosibirsk, Russia



OP-I-9

Shamanaeva I.A.¹, Yu Zh.^{2,3}, Utemov A.V.⁴, Wu W.³, Sladkovskiy D.A.⁴, Parkhomchuk E.V.^{1,2}

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

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – Heilongjiang University, Harbin, China

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

OP-I-10

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

Phase transformations occurring during mechanochemical synthesis of the MgAl-layered double hydroxides

Center of New Chemical Technologies BIC, Omsk, Russia

OP-I-11

Topchiyan P.A., Vasilchenko D.B.

Application of iridium(III) aquanitrocomplexes for the preparation of supported Ir-Ni catalysts for selective decomposition of N₂H₄·H₂O

Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

OP-I-12

Veselov G.B.^{1,2}, Karnaukhov T.M.^{1,2}, Vedyagin A.A.¹

The effect of pH during the sol-gel synthesis of NiO-MgO systems on their textural and redox properties

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

OP-I-13

Zubkov A.V., Vyshegorodtseva E.V., Bugrova T.A., Mamontov G.V.

Design of Pt-Ga Catalysts Supported on Hierarchical Silica Materials for Propane Dehydrogenation

Tomsk State University, Tomsk, Russia

OP-I-14

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

Effect of the preparation method and the chemical composition of Co-containing catalysts based on layered hydroxides on their properties in the furfural hydrogenation

Center of New Chemical Technologies BIC, Omsk, Russia

Topic 2 - Characterization and in situ studies of the catalysts

OP-II-1

Bukhtiyarov A.V.¹, Prosvirin I.P.¹, Panafidin M.A.¹, Fedorov A.Yu.¹, Klyushin A.Yu.², Knop-Gericke A.², Zubavichus Y.V.¹, Bukhtiyarov V.I.¹

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

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

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



OP-II-2

Dmitrachkov A. M.¹, Kvon R.I.¹, Nartova A.V.^{1,2}

New model supports and catalysts based on thin $N_xAl_yO_z$ films

1 - Borekov Institute of Catalysis, Novosibirsk, Russia

2- Novosibirsk State University, Novosibirsk, Russia

OP-II-3

Larichev Yu.V.^{1,2}

Developing of new SAXS technique for metal supported catalysts study

1 - Borekov Institute of Catalysis, Novosibirsk, Russia

2 - Novosibirsk State University, Novosibirsk, Russia

OP-II-4

Larionov K.P.^{1,2}, Evtushok V.Yu.^{1,2}

Evaluating number of basic centers in Zr-MOFs by liquid-phase adsorption of isobutyric acid

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

OP-II-5

Millán E., Mota N., Navarro R.M.

Effect of hybridization method on bifunctional catalysts for direct synthesis of dimethyl ether based on Cu-ZnO(Al) and supported heteropolyacids

Institute of Catalysis and Petrochemistry (ICP), CSIC, Madrid, Spain

OP-II-6

Bykov A.V.¹, Nikoshvili L.Zh.¹, Doluda V.Yu.¹, Sulman M.G.¹, Kiwi-Minsker L.^{2,3}

Investigation of the Limits of Applicability of Hyper-Cross-Linked Aromatic Polymers in Heterogeneous Catalysis

1 – Tver State Technical University, Tver, Russia

2 – Tver State University, Tver, Russia

3 – Ecole Polytechnique Fédérale de Lausanne, Switzerland

OP-II-7

Ondar E.E., Burykina J.V., Ananikov V.P.

The investigation of “cocktail”-type origin of platinum species catalyzing hydrosilylation reaction

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

OP-II-8

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

O₂-induced Segregation as an Efficient Tool for Fine-tuning the Intermetallic Pd-In/HOPG Surface Structure

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

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

3 – N.D. Zelinsky Institute of Organic Chemistry, Moscow, Russia



OP-II-9

Pokochueva E.V.^{1,2}, Burueva D.B.^{1,2}, Svyatova A.^{1,2}, Kovtunov K.V.^{1,2}, Meersmann T.³, Pavlovskaya G.³, Koptyug I.V.^{1,2}

Parahydrogen and ¹²⁹Xe for *in situ* studies of heterogeneous catalytic reactions

1 – International Tomography Center SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

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

OP-II-10

Prima D.O., Kulikovskaya N.S., Burykina Ju.V., Ananikov V.P.

Palladium supported on *N*-heterocyclic carbene in dynamic catalysis

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

OP-II-11

Saraev A.A., Kremneva A.M, Vinokurov Z.S., Bulavchenko O.A., Yashnik S.A

Operando Study of mono- and bimetallic PdPt catalysts for methane oxidation by XAS and XRD

Boreskov Institute of Catalysis, Novosibirsk, Russia

OP-II-12

Svyatova A.^{1,2}, Kononenko E.S.^{1,2}, Kovtunov K.V.^{1,2}, Fedorov A.³, Koptyug I.V.^{1,2}

Investigation of heterogeneous gas phase hydrogenation using spatially resolved NMR spectroscopy and parahydrogen

1 – International Tomography Center SB RAS, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – Department of Mechanical and Process Engineering, ETH Zürich, Switzerland

OP-II-13

Yurpalov V.L.¹, Drozdov V.A.¹, Nepomnyashchii A.A.¹, Buluchevskiy E.A.¹, Lavrenov A.V.¹

The application of aromatic probe molecules EPR spectroscopy for studying the acidic properties of the catalysts for vegetable oil hydrodeoxygenation based on anion-modified alumina

Center of New Chemical Technologies BIC, Omsk, Russia

Topic 3 - Mechanism and kinetics of catalytic reactions

OP-III-1

Andreeva J.A., Pichugina D.A., Nikitina N.A.

Quantum chemical simulation of methanol oxidation on vanadium oxide

Lomonosov Moscow State University, Moscow, Russia

OP-III-2

Pichugina D.A., Nikitina N.A., Bandurist P.S.

CO oxidation on copper-doped gold thiolate clusters supported on CeO₂: DFT study

Lomonosov Moscow State University, Moscow, Russia

OP-III-3

Demina V.G.^{1,2}, Selivanova A.V.¹, Saraev A.A.^{1,2}, Kaichev V.V.^{1,2}

Propylene oxidation on Ag single crystal: In situ study by Polarization Modulation Infrared Reflection Absorption Spectroscopy

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia



OP-III-4

Efimov A.V., Popov A.G.

Oligomerization of propylene over TON, FER and MFI zeolites

Lomonosov Moscow State University, Moscow, Russia

OP-III-5

Gabrienko A.A.^{1,2}, Lashchinskaya Z.N.^{1,2}, Arzumanov S.S.^{1,2}, Freude D.³, Haase J.³, Stepanov A.G.^{1,2}

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

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

2 – *Novosibirsk State University, Novosibirsk, Russia*

3 – *Universität Leipzig, Leipzig, Germany*

OP-III-6

Kolganov A.A.¹, Gabrienko A.A.^{1,2}, Stepanov A.G.^{1,2}, Pidko E.A.³

DFT prediction of the ¹³C NMR chemical shifts of the adsorbed zeolite species: a methodological study

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

2 – *Novosibirsk State University, Novosibirsk, Russia*

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

OP-III-7

Lashchinskaya Z.N.^{1,2}, Gabrienko A.A.^{1,2}, Arzumanov S.S.^{1,2}, Freude D.³, Haase J.³, Stepanov A.G.^{1,2}

Aromatization of n-butene on Zn/H-BEA zeolite: ¹³C MAS NMR study of the reaction mechanism and the role of Zn²⁺ and ZnO species

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

2 – *Novosibirsk State University, Russia*

3 – *Leipzig University, Leipzig, Germany*

OP-III-8

Livshits G.D., Ignatov S.K.

Theoretical design of self-assembling monolayers on the platinum surface for stereoselective adsorption and catalysis

Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia

OP-III-9

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

In situ DRIFTS study of the reactivity of hydrides in the gas-phase hydrogenation of acetic acid on a Pt-ReO_x/TiO₂ catalyst

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

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

OP-III-10

Skripov N.I., Sterenchuk T.P., Milenkaya E.A., Belykh L.B., Schmidt F.K.

Inverse Dependence of Turnover Frequency on Palladium Precursor Concentration in hydrogenation of unsaturated compounds

Irkutsk State University, Irkutsk, Russia



Topic 4 - Catalysis for renewable sources

OP-IV-1

Dokuchits E.V., Ishchenko A.V., Larina T.V., Minyukova T.P.

Syngas conversion over perovskite-like $\text{La}_y\text{Ca}_{1-y}\text{Co}_x\text{Ti}_{1-x}\text{O}_3$ /KIT-6 catalysts

Boreskov Institute of Catalysis, Novosibirsk, Russia

OP-IV-2

Brovko R.V., Mushinsky L.S., Matveeva V.G., Sulman M.G., Sidorov A.I., Doluda V.Yu.

Ethanol to hydrocarbons transformation over modified and unmodified zeolite H-ZSM-5

1 – Tver State Technical University, Department of biotechnology chemistry and standardization, Tver, Russia

OP-IV-3

Gorbunova A.¹, Zinovyev A.L.¹, Kolobova E.N.¹, Pakrieva E.G.¹, Carabineiro S.A.C.², Pestryakov A.N.¹

New biodegradable copolymers based on betulin, organic acids and their derivatives

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

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

OP-IV-4

Montaña M.^{1,2}, Mendez L.J.¹, Ocsachoque Marco A.¹, Lick I.D.¹, Casella M.L.¹

Acetalization of furfural catalyzed by zeolites catalysts to obtain biofuels additives

1 – Centro de Investigación y Desarrollo en Ciencias Aplicadas “Dr. Jorge J. Ronco” (CINDECA) CONICET-UNLP-CIC, La Plata, Argentina

2 – Facultad de Ingeniería. Universidad Nacional de La Plata, La Plata, Argentina

OP-IV-5

Stepacheva A.A.¹, Monzharenko M.A.¹, Dmitrieva A.A.², Schipanskaya E.O.², Markova M.E.¹, Matveeva V.G.¹, Sulman M.G.¹

Schungite based catalysts for the deoxygenation of vegetable oil and bio-oil

1 – Tver State Technical University, Tver, Russia

2 – Tver State University, Tver, Russia

OP-IV-6

Salnikova K.E.², Matveeva V.G.^{1,2}, Larichev Yu.V.^{3,4}, Bykov A.V.¹, Demidenko G.N.¹, Sidorov A.I.¹, Sulman M.G.^{1,2}

Selective hydrogenation of furfural: catalytic performance by Pd-Cu alloy nanoparticles in porous polymer

1 – Tver state technical University, Tver, Russia

2 - Tver State University, Tver, Russia

3 - Boreskov Institute of Catalysis, Novosibirsk, Russia

4 - Novosibirsk State University, Novosibirsk, Russia

OP-IV-7

Sukhorukov D.A.¹, Alekseeva M.V.¹, Zaikina O.O.¹, Bulavchenko O.A.¹, Kikhtyanin O.², Kubička D.², Yakovlev V.A.¹

Study of Mo-Ni-based catalysts in the hydrotreatment of sewage sludge-derived pyrolysis oils

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

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



OP-IV-8

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

Catalytic oxidation of 5-hydroxymethylfurfural over Au_{1-x}Ag_x and Pd_{1-x}Ag_x catalysts

Tomsk State University, Tomsk, Russia

OP-IV-9

Zabelkin S.^{1,2}, Bikbulatova G.^{1,2}, Grachev A.^{1,2}, Bashkirov V.^{1,2}, Makarov A.^{1,2}, Valeeva A.^{1,2}, Sabirzyanova A.^{1,2}

Plant of fast pyrolysis of lignocellulosic waste

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

2 - *LLC "EnergoLesProm", Kazan, Russia*

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

OP-V-1

Afonnikova S. D.^{1,2}, Mishakov I.V.^{1,2}, Bauman Yu.I.¹, Serkova A.N.¹, Vedyagin A.A.¹

Research of the process of carbon erosion of nickel alloys in an ethylene atmosphere to produce carbon nanofibers

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

2 - *Novosibirsk state University, Novosibirsk, Russia*

OP-V-2

Bogomolova T.S., Smirnova M.Yu., Klimov O.V., Noskov A.S.

Nickel Phosphide Catalysts for Diesel Fuel Hydroisomerization Processes

Boreskov Institute of Catalysis, Novosibirsk, Russia

OP-V-3

Gorbunova A.S., Sobolev V.I.

Partial oxidation of ethane to ethylene and acetic acid over MoVTenbO_x catalyst

Boreskov Institute of Catalysis, Novosibirsk, Russia

OP-V-4

Grabchenko M.V.¹, Dorofeeva N.V.¹, Larichev Yu.V.², La Parola V.³, Liotta L.F.³, Vodyankina O.V.¹

Synthesis and study of nickel catalysts based on ordered SBA-15 modified with CeO₂-MnO_x binary oxides in the DRM process

1- *Tomsk State University, Tomsk, Russia*

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

3 - *Istituto per lo Studio dei Materiali Nanostrutturati (ISMN)-CNR, Palermo, Italy*

OP-V-5

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

The use of oxidoreductase class enzymes in the synthesis of vitamins

Tver State Technical University, Tver, Russia

OP-V-6

Gusev A.A.^{1,2}, Psarras A.C.¹, Triantafyllidis K.S.², Lappas A.A.¹

Acid sites formation on P doped ZSM-5 zeolite catalysts for catalytic cracking

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

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



OP-V-7

Lukoyanov I.A.¹, Gerasimov E.Yu¹, Panchenko V.N.¹, Shefer K.I.¹, Timofeeva M.N.¹, Jhung S.H.²

Zn- and Co-zeolite imidazolate frameworks as effective catalysts for the cycloaddition of CO₂ to propylene oxide

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

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

OP-V-8

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

Influence of the Si/Al ratio in Pt-containing catalysts based on Al-MCM-41 and natural halloysite nanotubes on xylene and ethylbenzene isomerization activity

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

OP-V-9

Shmakov M.M.¹, Prikhod'ko S.A.¹, Peshkov R.Yu.²

Influence of the Lewis acidity of functionalized aryldifluoroboranes on their catalytic activity

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

OP-V-10

Smoliło-Utrata M., Samson K., Gackowski M., Mordarski G., Śliwa M., Podobiński J., Datka J., Rutkowska-Żbik D.

Vanadium-loaded faujasites as catalysts for the oxidative dehydrogenation of propane

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

OP-V-11

Stolbov D.N.^{1,2}, Chernyak S.A.¹, Kustov A.L.¹, Usol'tseva N.V.², Savilov S.V.¹.

New chromium-carbon catalytic systems for oxidative propane dehydrogenation in presence of CO₂

1 – Lomonosov Moscow State University, Moscow, Russia

2 – Ivanovo State University, Ivanovo, Russia

OP-V-12

Sulman A.M.¹, Matveeva V.G.^{1,2}, Grebennikova O.V.¹, Molchanov V.P.¹, Lakina N.V.¹, Doluda V.Y.¹

Catalytic Performance of Glucose Oxidase Immobilized on Magnetic Zirconia

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

2 - Tver State University, Tver, Russia

OP-V-13

Nikitin A.V.^{1,2}, Timofeev K.A.², Ozersky A.V.¹, Zimin Y.S.¹

Catalytic methanol synthesis from syngas of matrix methane conversion

1 – ICHP RAS, Chernogolovka, Russia

2 – ICP RAS, Moscow, Russia

OP-V-14

Veretelnikov K.V., Tregubenko V.Yu., Belyi A.S.

Effect of Indium doping of the Pt-Sn/Al₂O₃ catalysts in n-heptane reforming

Center of New Chemical Technologies BIC, Omsk, Russia



Topic 6 - Catalysis for environmental protection, photocatalysis, electrocatalysis

OP-VI-1

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

Influence of the evolution of the composition and structure of bimetallic nanoparticles in PtM/C catalysts on their activity and stability

Southern Federal University, Rostov-on-Don, Russia

OP-VI-2

Belik Yu.A., Dubinina O.V., Vodyankina O.V.

Bismuth silicate composite materials prepared via gel process: Phases formation, electrochemistry and photocatalytic performance

Tomsk State University, Tomsk, Russia

OP-VI-3

Gorlova A.M.^{1,2}, Potemkin D.I.^{1,2,3}, Simonov P.A.^{1,2}, Snytnikov P.V.¹, Sobyanin V.A.¹

Noble metal catalysts for low-temperature water gas shift reaction

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

2 – *Novosibirsk State University, Novosibirsk, Russia*

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

OP-VI-4

Kurenkova A.Yu.¹, Kozlova E.A.^{1,2}

Hydrogen evolution from biomass constituent solutions under visible light irradiation

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

2 – *Novosibirsk State University, Novosibirsk, Russia*

OP-VI-5

Migliore C.¹, Consentino L.¹, Pantaleo G.¹, Galli N.¹, Zhang W.^{1,2}, Liotta L.F.¹

MO_x (M = Mn, Ce) doped WO₃-TiO₂ catalysts for NO SCR by NH₃

1 – *Institute for the Study of Nanostructured Materials (ISMN)-CNR, via Ugo La Malfa, Palermo, Italy*

2 – *College of Chemical Engineering, Qinghai University, Xining, China*

OP-VI-6

Markovskaya D.V.^{1,2}, Zhurenok A.V.¹, Kozlova E.A.^{1,2}

Transition from effective photocatalysts to photoelectrodes: influence of semiconductor composition, co-catalyst nature and amount

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

2 – *Novosibirsk State University, Novosibirsk, Russia*

OP-VI-7

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

Influence of the parameters modified by the driving mode on deNO_x activity of NSR-SCR hybrid system

Departamento de Ingeniería Química, Facultad de Ciencias, Campus de Teatinos, Universidad de Málaga, Málaga, Spain



OP-VI-8

Potylitsyna A.R.^{1,2}, Bauman Yu.I.², Mishakov I.V.^{1,2}, Tarasenko M.S.³, Serkova A.N.¹, Plyusnin P.E.^{2,3}, Shubin Yu.V.^{2,3}, Vedyagin A.A.¹

EFFECT OF Mo ON CATALYTIC ACTIVITY OF Ni_{1-x}Mo_x SYSTEM IN THE DECOMPOSITION OF TRICHLOROETHYLENE

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

OP-VI-9

Vorms E.A.^{1,2}, Oshchepkov A.G.¹

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

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

POSTER PRESENTATIONS

Topic 1 - Preparation of catalysts and adsorbents

PP-I-1

Benu V.A.¹, Nazarkina Y.V.², Rusakov V.A.¹, Dronov A.A.¹

Influence of the hydrodynamic growth conditions on the nanoporous anodic WO_x morphology and its photocatalytic properties

1 - National Research University of Electronic Technology "MIET", Moscow, Russia

2 - Establishment of the Russian Academy of Sciences, Institute of Nanotechnology Microelectronics INME of RAS, Moscow, Russia

PP-I-2

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

Effect of CeO₂ reductive pretreatment on the formation of bimetallic particles in Ag-doped Pt/CeO₂ catalysts for 4-nitrophenol reduction

Tomsk State University, Tomsk, Russia

PP-I-3

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

Synthesis and investigation of a Pt-containing micro-mesoporous catalyst for xylene isomerization

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

PP-I-4

Dorosheva I.B.^{1,2,3}, Sushnikova A.A.³, Valeeva A.A.^{1,2}, Rempel A.A.^{1,3}

Titanium dioxide nanotubes modification in hot hydrogen steam

1 – Ural Federal University, Yekaterinburg, Russia

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

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



PP-I-5

Fedorova V.E.¹, Simonov M.N.^{1,2}, Bospalko Yu.N.¹, Valeev K.R.¹, Smal E.A.¹, Sadykov V.A.^{1,2}

Kinetic regularities of methane dry reforming reaction over bimetallic catalysts based on ceria-zirconia prepared by supercritical synthesis

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-6

Golovin S.N., Yapryntsev M.N.

Hydrothermal synthesis of samarium-containing layered double hydroxide

Belgorod State National Research University, Belgorod, Russia

PP-I-7

Ivanova N.A.¹, Shapir B.L.¹, Spasov D.D.^{1,2}, Tishkin V.V.¹, Mensharapov R.M.¹, Alekseeva O.K.¹, Fateev V.N.¹

Synthesis of Pt²⁰/SnO₂^x/C – electrocatalysts by magnetron sputtering of tin in an oxygen environment

1 – NRC “Kurchatov Institute” Moscow, Russia

2 – National Research University “MPEI” Moscow, Russia

PP-I-8

Kudinova E.S.¹, Boeva O.A.¹, Zhavoronkova K.N.¹

THE STUDY OF THE CATALYTIC PROPERTIES OF COPPER AND GOLD NANOPARTICLES IN THE REACTION OF DEUTERIUM-HYDROGEN EXCHANGE

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

PP-I-9

Luzina E.V.^{1,2}, Shamanaeva I.A.², Parkhomchuk E.V.^{1,2}

Synthesis of core – shell zeolite composites

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-10

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

Synthesis of bridging NHC complexes of palladium and assessment of their catalytic activity in the Buchwald-Hartwig reaction

Zelinsky Institute of Organic Chemistry, RAS, Moscow, Russia

PP-I-11

Chudin O.S.¹, Nedelina T.S.¹, Patrusheva A.A.^{1,2}, Burmakina G.V.¹, Rubaylo A.I.^{1,2}, Verpekin V.V.¹

Rhodium (I) complexes of type Rh(CO)(CN-Ad)(bident): synthesis, reactivity, electrochemistry and catalytic application

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

2 – Siberian Federal University, Krasnoyarsk, Russia



PP-I-12

Nesterova A.A.^{1,2}, Soficheva O.S.¹, Yakhvarov D.G.^{1,2}

N-substituted α -diphenylphosphinoglycines: electrochemical properties and reactivity in the presence of organo-nickel complexes

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

2 – Kazan Federal University, Kazan, Russia

PP-I-13

Roslyakov I.V.^{1,2}, Kolesnik I.V.², Levin E.E.², Kardash T.Yu.³, Solovyov L.A.⁴, Napolskii K.S.²

Porous anodic alumina as a catalyst carrier with hierarchical porosity

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

2 – Lomonosov Moscow State University, Moscow, Russia

3 – Borekov Institute of Catalysis, Novosibirsk, Russia

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

PP-I-14

Samoylenko D.E.¹, Rodygin K.S.¹, Ananikov V.P.^{1,2}

ELECTROCHEMICALLY PROMOTED SYNTHESIS OF TRIAZOLES IN THE PRESENCE OF IONIC LIQUIDS

1 - Saint Petersburg State University, Saint Petersburg, Russia

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

PP-I-15

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

Methods for obtaining cross-linked polymer particles and their prospects for application in pseudo-homogeneous catalysis

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

PP-I-16

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

Bimetallic Pt-Ag/MCM-41 catalysts for 4-nitrophenol reduction to 4-aminophenol

Tomsk State University, Tomsk, Russia

PP-I-17

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

Effect of copper modification and Ce:Si ratio on the catalytic properties of mesoporous ceria-silica catalysts in CO-PROX

Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

PP-I-18

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

Optimization of synthesis conditions of biocatalytic systems on the base of alginate microspheres and glucose oxidase

Tver State Technical University, Tver, Russia

PP-I-19

Timoshkina V.V., Pimerzin A.A.

Synthesis of vanadium-substituted phosphorus-molybdenum Keggin type heteropolyacids - precursors for hydroisomerization catalysts

Samara State Technical University, Samara, Russia



PP-I-20

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

Synthesis and properties of MIL-100(Fe)/diatomite composites

National Research Tomsk State University, Tomsk, Russia

PP-I-21

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

Design of micro-, meso- and macroporous silica particles

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-I-22

Zhirnova E.D.¹, Alekhina I.E.¹, Pavlova I.N.²

A NEW APPROACH TO THE FORMATION OF HIGHLY DISPERSED LSX ZEOLITE

1 – Bashkir State University, Ufa, Russia

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

PP-I-23

Yakovenko R.E.¹, Savost'yanov A.P.¹, Narochniy G.B.¹, Soromotin V.N.¹, Zubkov I.N.¹, Papeta O.P.¹, Mitchenko S.A.^{1,2}

Co-based hybrid catalyst system in Fischer-Tropsch synthesis combined with hydroprocessing

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

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

Topic 2 - Characterization and in situ studies of the catalysts

PP-II-1

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

Features of phase transformations of K-Ce iron oxide systems in the process of dehydrogenation of isoamylenes

Kazan National Research Technological University, Kazan, Russia

PP-II-2

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

Catalytic properties of ZrO₂ support for CrO_x catalyst in the isopentane dehydrogenation reaction

Kazan National Research Technological University, Kazan, Russia

PP-II-3

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

CO oxidation reaction over Pd-Au/Ir film: NAP XPS and MS study

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

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



PP-II-4

Kagilev A.A.^{1,2}, Nesterova A.A.^{1,2}, Kantjukov A.O.^{1,2}, Gafurov Z.N.¹, Sakhapov I.F.¹, Bekmukhamedov G.E.^{1,2}, Islamov D.R.², Zueva E.M.^{1,3}, Soficheva O.S.¹, Yakhvarov D.G.^{1,2}

The N- and P-substituents in α -phosphinoglycine ligands in the question of the selectivity in Ni-catalyzed ethylene oligomerization

1 – Kazan (Volga region) Federal University, Kazan, Russia

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

3 – Kazan National Research Technological University, Kazan, Russia

PP-II-5

Kagilev A.A.^{1,2}, Gafurov Z.N.², Morozov V.I.², Zueva E.M.^{2,3}, Mamedov V.A.², Yakhvarov D.G.^{1,2}

Study of electrochemical properties of bibenzimidazoles and nickel complexes on their basis

1 – Kazan (Volga region) Federal University, Kazan, Russia

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

3 – Kazan National Research Technological University, Kazan, Russia

PP-II-6

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

The comparative study of different type catalyst in the dry reforming of methane

D. Mendeleev University of Chemical Technology, Moscow, Russia

PP-II-7

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

Prediction of the catalytic activity of nickel in hydrogenation reactions using IR spectrometry

Ivanovo State University of Chemistry and Technology, Ivanovo, Russia

PP-II-8

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

Investigation of aluminosilicate halloysite nanotubes as a component of a zeolite-containing catalyst for the conversion of methanol to olefins

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

PP-II-9

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

Investigation of CO-induced segregation on the surface of bimetallic Pd-Ag catalyst by CO-DRIFTS and XPS

1 - N.S. Kurnakov Institute of General and Inorganic Chemistry, Moscow, Russia

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

3 – Boreskov Institute of Catalysis, Novosibirsk, Russia

Topic 3 - Mechanism and kinetics of catalytic reactions

PP-III-1

Kapustin R.V., Grinvald I.I.

IR manifestation of organic fluid formation in the near-surface area at ambient conditions

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



PP-III-2

Petrov I.L.¹, Khatamirad M.², Konrad M.², Karwacki L.³, Almer C.³, Gentzen M.², Boscgali C.⁴, Rosowski F.^{2,3}, Kraehnert R.²

Data Science Tools for Heterogeneous Catalysis: Unravelling exemplarily Trends in Syngas to Ethanol Catalysis

1 - Borekov Institute of Catalysis, Novosibirsk, Russia

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

3 - BASF SE, Ludwigshafen, Germany

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

PP-III-3

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

The nature of active palladium species in the Suzuki-Miyaura reaction with aryl chlorides using “ligandless” catalytic systems

Irkutsk State University, Chemical department, Irkutsk, Russia

PP-III-4

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

The effect of CeO₂ support on the mechanism of CO oxidation on thiolate-protected gold clusters

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

Topic 4 - Catalysis for renewable sources

PP-IV-1

Baygildin I.G.¹, Vutolkina A.V.¹, Maksimov A. L.^{1,2}, Karakhanov E.A.¹

Hydrodeoxygenation of Bio-oil Model Compounds over Unsupported Ni–Mo-Sulfide Catalysts

1 - Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

2 - Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia

PP-IV-2

Filatova A.E.¹, Gubskaya E.M.¹, Doluda V.Yu.¹, Matveeva V.G.^{1,2}, Sulman M.G.¹

Modern catalysts used for the conversion of cellulose to glycols

1 – Tver State Technical University, Tver, Russia

2 – Tver State University, Tver, Russia

PP-IV-3

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

Liquid-phase oxidation of betulin to its oxo-derivatives over silver supported catalysts

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

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

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

PP-IV-4

Kalinina M.A., Kulikov L.A.

Hydrodeoxygenation of lignin-derived compounds using Ru catalysts

Moscow State University, Moscow, Russia



PP-IV-5

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

Hybrid AgAu@UiO-66 catalysts for propylene glycol oxidation into lactic acid

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

PP-IV-6

Wang Y.^{1,2}, Nuzhdin A.L.¹, Shamanaev I.V.¹, Bukhtiyarova G.A.¹

Reductive amination of ethyl levulinate to pyrrolidones using Ni₂P catalysts in a flow reactor

1 – Borekov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk Russia

PP-IV-7

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

Hydrogenation of phenol and benzene on nanostructured Ru- and Pt-containing catalysts

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

PP-IV-8

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

High-loaded NiCu sol-gel catalysts for dehydrogenation of liquid organic hydrogen carriers

Borekov Institute of Catalysis, Novosibirsk, Russia

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

PP-V-1

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

Immobilized multifunctional ionic liquids for highly efficient oxidative desulfurization of model fuel

Chemistry Department, Lomonosov Moscow State University, Moscow, Russia

PP-V-2

Bikbaeva V.¹, Nesterenko N.², Valtchev V.¹

Embryonic zeolite carriers decorated with metal oxides and metal sulfides nanoparticles

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

2 – Total Research and Technology Feluy, Feluy, Belgium

PP-V-3

Bushkov N.S.^{1,2}, Zhizhko P.A.², Zarubin D.N.²

Silica-supported tungsten oxide as oxo/imido heterometathesis catalyst

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

2 – A.N. Nesmeyanov Institute of organoelement compounds RAS, Moscow, Russia

PP-V-4

Chistiakov K.A.^{1,2}, Andreikov E.I.¹, Puzyrev I.S.¹, Rusinov G.L.^{1,2}

A MESOPOROUS CARBON-SUPPORTED COPPER-BASED CATALYSTS FOR THE HYDROGENATION OF CO₂ TO FORM METHANOL AND DIMETHYL ETHER

1 – Postovsky Institute of Organic Synthesis, UB RAS, Ekaterinburg, Russia

2 – Ural Federal University, Ekaterinburg, Russia



PP-V-5

Dubovtsev D.A.¹, Enikeeva L.V.², Gubaidullin I.M.³

Determination of the optimal ratio of the initial reagents of the MTBE synthesis process

1 - Institute of petrochemistry and catalysis, Ufa, Russia

2 - Novosibirsk State University, Novosibirsk, Russia

3 - Institute of petrochemistry and catalysis, Ufa, Russia

PP-V-6

Eseva E.A., Akopyan A.V.

Heterogeneous catalysts based on Anderson-type polyoxometales for aerobic oxidation of sulfur-containing compounds

Chemical department, Moscow State University, Moscow, Russia

PP-V-7

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

KINETIC CHARACTERISTICS OF CATALYSTS BASED ON MESOPOROUS SILICAGELS DOPED WITH DISPROSIUM, LANTHANUM AND MODIFIED WITH Ni, IN THE HYDROGENATION REACTIONS OF AROMATIC HYDROCARBONS

Samara University, Samara, Russia

PP-V-8

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

Polymerization of ethylene catalyzed by fluorinated phenoxyimine catalysts

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-V-9

Karmadonova I.E.^{1,2}, Kuznetsova N.I.², Kuznetsova L.I.²

Study of the effect o-phenanthroline on cumene oxidation and composition of products in the presence of an organic catalyst N-hydroxyphthalimide and Fe(III)/o-Phenanthroline promoter

1 – Novosibirsk State University, Novosibirsk, Russia

2 – Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-V-10

Kondratieva V.U.¹, Verevkin S.P.^{1,2}, Martynenko E.A.¹

Hydrogenation of eutectic mixture of biphenyl and diphenylmethane over supported platinum catalysts

1 - Samara State Technical University, Samara, Russia

2 - University of Rostock, Rostock, Germany

PP-V-11

Makeeva D.A., Kulikov L.A.

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

Lomonosov Moscow State University, Moscow, Russia

PP-V-12

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

Synthesis of mannitol from inulin using a magnetic catalyst

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

2 – Indiana University, Department of Chemistry, Bloomington, USA



PP-V-13

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

Surface modified bimetallic catalysts for selective hydrogenation of acetylene

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

PP-V-14

Nenasheva M.V., Gorbunov D.N.

New heterogeneous Rh/tertiary amine catalysts for tandem hydroformylation/hydrogenation of olefins

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

PP-V-15

Pichugov A.V.^{1,2}, Zhizhko P.A.², Zarubin D.N.²

Well-defined silica-supported titanium imido complex as a catalyst for direct imidation of lactones

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

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

PP-V-16

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

Aluminosilicate modified supports for CoMo catalysts for hydroisomerization of n-hexadecane

Samara State Technical University, Samara, Russia

PP-V-17

Vinogradov N.A.¹, Savinov A.A.¹, Glotov A.P.², Pimerzin Al.A.^{1,2}

The effect of mesoporous zeolite additive application in supported sulfide catalysts for 4,6-DMDBT conversion

1 – Samara State Technical University, Samara, Russia

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

PP-V-18

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

Hydrodenitrogenation of heavy oil feedstock on composite catalysts: SAPO-5 and SAPO-11 as a part of conventional hydrotreatment catalysts

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-V-19

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

Aromatization of propane over Zn-aluminosilicates with a hierarchical pore system

Institute of Petroleum Chemistry SB RAS, Tomsk, Russia

PP-V-20

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

Study of catalyst activity and selectivity in oxidative coupling of methane in presence of water

Leibniz-Institute for Catalysis, Rostock, Germany



PP-V-21

Ruban N.V.^{1,3}, Potemkin D.I.^{1,2,3}, Rogozhnikov V.N.^{1,4}, Emelyanov V.A.^{3,5}, Snytnikov P.V.¹

Ru/Ce_{0.75}Zr_{0.25}O_{2-δ}-η-Al₂O₃/FeCrAl structured catalyst for CO₂ methanation and steam reforming of natural gas

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – UNICAT Ltd, Novosibirsk, Russia

3 – Novosibirsk State University, Novosibirsk, Russia

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

5 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

Topic 6 - Catalysis for environmental protection, photocatalysis, electrocatalysis

PP-VI-1

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

Designing Ag/CeO₂ Sorbent-Catalysts for Toluene Removal

Tomsk State University, Tomsk, Russia

PP-VI-2

Lakina N.V.¹, Doluda V.Yu.¹, Sulman M.G.¹, Sidorov A.I.^{1,2}, Matveeva V.G.^{1,2}, Tumanov G.A.¹

The study of surface morphology of conductive biopolymer matrices

1 - Tver State Technical University, Tver, Russia

2 - Tver State University, Tver, Russia

PP-VI-3

Goncharova D.A.¹, Kharlamova T.S.¹, Svetlichnyi V.A.¹

CuO NPs obtained by laser ablation for 4-nitrophenol hydrogenation and dye degradation

Toms State University, Tomsk, Russia

PP-VI-4

Gosteva A.N., Semushina Yu.P.

Cr-Co catalysts for benzene oxidation based on double salt oxidation products

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

PP-VI-5

Kobelev A.D.^{1,2}, Ananikov V.P.^{1,2}

Custom build 3D-printed reactor for photochemical synthesis

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

2 - Lomonosov Moscow State University, Moscow, Russia

PP-VI-6

Pinigina A.E.^{1,2}, Badmaev S.D.¹

Partial catalytic oxidation of dimethoxymethane to synthesis gas over supported noble metal catalysts

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia



PP-VI-7

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

Photocatalytic and photoelectrochemical properties of carbon modified anodic TiO₂ nanotube arrays

Institute AMT MIET, Zelenograd, Russia

PP-VI-8

Shmelev N.Y.^{1,2}, Kuchkaev A.M.^{3,4}, Gushchin A.L.^{1,2}, Yakhvarov D.G.^{3,4}

Hydrolysis of element (white) phosphorus in the presence of heterometallic cubane-type {Mo₃PdS₄} cluster complexes

1 – Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia

3 - Arbuzov Institute of Organic and Physical Chemistry, Kazan, Russia

4 - Kazan Federal University, Kazan, Russia

PP-VI-9

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

Ternary mixed oxide of silver, copper and manganese - novel catalytic material for oxidation reactions

Boreskov Institute of Catalysis, Novosibirsk, Russia

PP-VI-10

Taratayko A.V., Mamontov G.V.

Reduced Graphene Oxide Decorated with Ag and CeO₂ Nanoparticles Composite for 4-Nitrophenol Reduction

Tomsk State University, Tomsk, Russia

PP-VI-11

Zasyapkina A.A.¹, Spasov D.D.^{1,2}, Seregina E.A.¹, Mensharapov R.M.¹ and Ivanova N.A.¹

Aspects of the synthesis of catalytic layers based on structured carbon materials by impregnation

1 – NRC "Kurchatov Institute" Moscow, Russia

2 – National Research University "MPEI" Moscow, Russia

PP-VI-12

Zhurenok A.V.¹, Kozlova E.A.^{1,2}

Composites based on solid sulfides solutions of Cd and Zn and graphitic carbon nitride for the photocatalytic hydrogen evolution under visible light irradiation

1 – Boreskov Institute of Catalysis, Novosibirsk, Russia

2 – Novosibirsk State University, Novosibirsk, Russia



VIRTUAL PARTICIPATIONS (ABSTRACT PUBLICATION)

Topic 1 - Preparation of catalysts and adsorbents

VP-I-1

Isaev A.V.¹, Bessonov V.V.¹, Popova E.A.^{1,2}, Eremin A.V.³

Potential catalysts for ATRP: copper(I) and copper(II) complexes with the 4-(pyridinyl)-1,2,3-thiadiazole ligand series

1 – Saint Petersburg State Institute of Technology (Technical University), Saint Petersburg, Russia

2 – Higher School of Technology and Energy, Saint Petersburg State University of Industrial Technologies and Design, Saint Petersburg, Russia

3 – Institute of Macromolecular Compounds of Russian Academy of Sciences, Saint Petersburg, Russia

VP-I-2

Titov E.N., Smalchenko D.E.

Synthesis of Fe(II)-LDH and study of its activity in radical oxidation of limonene

Belgorod State National Research University, Belgorod, Russia

VP-I-3

Soficheva O.S.¹, Nesterova A.A.^{1,2}, Kagilev A.A.^{1,2}, Kantyukov A.O.¹, Gafurov Z.N.¹, Bekmukhamedov G.E.², Zueva E.M.³, Yakhvarov D.G.^{1,2}, Sinyashin O.G.¹

Novel catalysts on the base of α -phosphino- α -amino acids: synthesis, properties and catalytic activity in the ethylene oligomerization process

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

2 – Kazan Federal University, Kazan, Russia

3 – Kazan National Research Technological University, Kazan, Russia

VP-I-4

Taghiyeva T.C., Baghiyev V.L.

About ethanol conversion over Mg-Zn-O catalyst

Azerbaijan State oil and industry university, Baku, Azerbaijan

Topic 2 - Characterization and in situ studies of the catalysts

VP-II-1

Afineevskii A.V., Osadchaya T.Yu., Meledin A.Yu., Prozorov D.A.

Prediction of the nickel catalyst activity in hydrogenation reactions via calorimetry

Ivanovo State University of Chemistry and Technology, Ivanovo, Russia

VP-II-2

Artamonov A.A.¹, Talgatov A.T.¹, Panina N.S.¹, Eremin A.V.²

Bi- and polynuclear coordination complexes of d-elements as prospective catalysts of selective oxidation of endogenous thiols

1 – Saint Petersburg State Institute of Technology (Technical University), Saint Petersburg, Russia

2 – Institute of Macromolecular Compounds of Russian Academy of Sciences, Saint Petersburg, Russia



VP-II-3

Khabarova D.S., Tupikova E.N., Platonov I.A.

Research of morphology and phase composition of autoclave thermolysis products of chloropentaammincobalt (III) tetrachloroplatinate (II)

Samara National Research University, Samara, Russia

VP-II-4

Vanchourin V.I.¹, Petrov A.Yu.¹, Karachenko O.I.², Salnikova O.Yu.

AMMONIA-CARBONATE TECHNOLOGY FOR THE SYNTHESIS OF A COPPER-CONTAINING CATALYST WITH A FIXED ACTIVE COMPONENT

1 - MUCTR after D.I.Mendeleev, Moscow, Russia

2 - Grodno-Azot OJSC, Grodno, Belarus

VP-II-5

Solomakha O.A.¹, Stepanova M.A.¹, Ten D.A.¹, Korzhikova-Vlakh E.G.^{1,2}

Catalytic properties and kinetic parameters of molecularly imprinted macroporous polymer monolithic system containing artificial active sites of chymotrypsin

1 – Institute of Macromolecular Compounds RAS, Saint Petersburg, Russia

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

Topic 3 - Mechanism and kinetics of catalytic reactions

VP-III-1

Arefyev I.A.¹, Agzamova M.R.², Enikeeva L.V.³

Mathematical modeling the H₂SO₄-catalyzed alkylation of isobutane with olefins

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

2 – Ufa State Petroleum Technological University, Ufa, Russia

3 – Novosibirsk State University, Novosibirsk, Russia

VP-III-2

Nindakova L.O., Badyrova N.M.

Kinetic study of acetophenone hydrogenation with hydrogen transfer using bis-imine-rhodium complex

Irkutsk National Research Technical University, Irkutsk, Russia

VP-III-3

Islamov D.N., Tyumkina T.V., Kovyazin P.V., Parfenova L.V.

Quantum-chemical study of the stages of alkene insertion into zirconocene alkylchloride-trimethylaluminum bimetallic complexes L₂ZrMeCl-AlMe₃

Institute of Petrochemistry and Catalysis of RAS, Ufa, Russia

Topic 4 - Catalysis for renewable sources

VP-IV-1

Ezzhelenko D.I.¹, Nikolaev S.A.¹, Chistyakov A.V.², Chistyakova P.A.², Tsodikov M.V.²

An insight into deactivation of Pd/Al₂O₃ catalyst for bioethanol conversion

1 – Lomonosov Moscow State University, Moscow, Russia

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



VP-IV-2

German D.Y.¹, Kolobova E.N.¹, Pakrieva E.G.¹, Carabineiro S.A.C.², Stucchi M.³, Villa A.³, Prati L.³, Pestryakov A.N.¹

Comparison of the catalytic behavior of supported mono- and bimetallic Ag, Au and Pd NPs in HMF oxidation

1 – Tomsk Polytechnic University, Tomsk, Russia

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

3 – Università degli Studi di Milano, Milano, Italy

VP-IV-3

Iliashchenko V.Yu.¹, Dzhabiev T.S.², Dzhabieva Z.M.²

Inorganic binuclear complex of ruthenium with a nitrogen bridge and lithium counterions as a precursor of the water oxidation reaction in artificial photosynthesis

1 – Lomonosov Moscow State University, Faculty of fundamental physical and chemical engineering, Moscow, Russia

2 – Institute of Problems of Chemical Physics of RAS, Chernogolovka, Russia

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

VP-V-1

Goryunova V.D.¹, Nindakova L.O.¹, Strakhov V.O.¹

Influence of the modifier on the activity of the catalytic systems Pd (acac)₂-Mod-H₂ in the reaction of asymmetric hydrogenation of acetophenone

Irkutsk National Research Technical University, Irkutsk, Russia

VP-V-2

D'yakonov V.A., Makarova E.Kh., Ishbulatov I.V., Makarov A.A., Dzhemileva L.U., Dzhemilev U.M.

A new approach to the synthesis of synthetic derivatives of acetogenins - promising anticancer drugs

Institute of Petrochemistry and Catalysis RAS, Ufa, Russia

VP-V-3

Kadikova G.N., D'yakonov V.A., Dzhemileva L.U., Dzhemilev U.M.

Cobalt(I)-catalyzed [6 π +2 π]-cycloaddition of 1-substituted 1,3,5-cycloheptatrienes for the synthesis of bicyclo[4.2.1]nonanes

Institute of Petrochemistry and Catalysis of Russian Academy of Sciences, Ufa, Russia

VP-V-4

D'yakonov V.A., Makarova E.Kh., Dzhemileva L.U., Makarov A.A., Ishbulatov I.V., Dzhemilev U.M.

Reaction of Ti-catalyzed homo-cyclomagnesiation of 1,2-dienes in the synthesis of acetogenin analogs

Institute of Petrochemistry and Catalysis RAS, Ufa, Russia

VP-V-5

Kovyazin P.V., Mukhamadeeva O.V., Bikmeeva A.Kh., Palatov E.R., Parfenova L.V.

Stereoselective One-pot Synthesis of Functionally Substituted Alkene Oligomers, Catalysed by Chiral Zirconocenes

Institute of Petrochemistry and Catalysis RAS, Ufa, Russia



VP-V-6

Rzhevskiy S.A.^{1,2}, Topchiy M.A.^{1,2}, Bogachev V.N.^{1,2}, Nechaev M.S.^{1,2}, Asachenko A.F.^{1,2}

Solvent-Free Palladium-Catalyzed C-O Cross-Coupling Of Aryl Bromides with Phenols

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

2 – M.V. Lomonosov Moscow State University, Moscow, Russia

VP-V-7

Strakhov V.O., Nindakova L.O., Goryunova V.D.

Enantioselective hydrogenation of N-acetyl- α -amidocinnamic acid over palladium nanoparticles

Irkutsk National Research Technical University, Irkutsk, Russia

VP-V-8

Topchiy M.A., Rzhevskiy S.A., Nechaev M.S., Asachenko A.F.

Solvent-free NHC-Pd catalyzed head-to-head telomerization of isoprene with methanol

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

VP-V-9

Egorycheva Y.A., Burdakova E.S.

IONIC LIQUIDS AND THEIR POSSIBLE APPLICATIONS IN DESULPHURIZATION PROCESSES

Komsomolsk-na-Amure State University, Komsomolsk-na-Amure, Russia

Topic 6 - Catalysis for environmental protection, photocatalysis, electrocatalysis

VP-VI-1

Kozlova M.V.^{1,2}, Solovyev M.A.^{1,2}, Butrim S.I.^{1,2}, Alexeeva O.K.², Pushkareva I.V.^{1,2},

Pushkarev A.S.^{1,2}, Fateev V.N.²

Influence of modified graphene supports on the oxygen reduction reaction in PEMFC

1 – Moscow Power Engineering Institute (MPEI), Moscow, Russia

2 – National Research Centre «Kurchatov Institute», Moscow, Russia

VP-VI-2

Mazanov S.V., Aetov A.U., Gumerov F.M.

Supercritical Water Oxidation of Industrial Waste of Propylene Oxide Production Using Heterogeneous Catalysts

Kazan National Research Technological University, Kazan, Russia

VP-VI-3

Shmelev A.A., Shafigulin R.V., Bulanova A.V., Vinogradov K.Yu.

Investigation of the adsorption and photocatalytic properties of mesoporous titanium dioxide doped with dysprosium

Samara University, Samara, Russia



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