

II Symposium

**"MODERN
PROBLEMS
OF
NANOCATALYSIS"
NANOCAT 2017**

September 24-29, 2017



SCHEDULE



Kyiv 2017

SCHEDULE

24 September 2017 (Sunday)			26 September 2017 (Tuesday)		
Arrival day			Chairpersons: <i>S. Kuchmiy (Ukraine), A. Pich (Germany)</i>		
25 September 2017 (Monday)			9:30	O-5	V. Zazhigalov
9:00	Registration		10:00	O-6	L. Kulikov
9:30	Opening of the Symposium Opening speech: <i>V. Koshechko</i>		10:30	S-4	Y. Khalavka
			10:45	S-5	S. Fomanyuk
Chairpersons: <i>Yu. Pyatnitsky (Ukraine), W. Suprun (Germany)</i>			11:00	Coffee Break	
9:45	O-1	P. Strizhak	11:30	O-7	A. Zharmagambetova
10:15	O-2	J. Mrowiec-Białoń	12:00	O-8	A. Ivanets
10:45	S-1	I. Opeida	12:30	S-6	Yu. Zaitsev
11:00	Coffee Break		12:45	S-7	Ye. Kalishyn
11:30	O-3	L. Tovazhnianskii	13:00	Lunch	
12:00	O-4	A. Pich	Chairpersons: <i>S. Orlyk (Ukraine), E.H. Ismailov (Azerbaijan)</i>		
12:30	S-2	P. Kyriienko	14:30	O-10	S. Kurta
12:45	S-3	Sh. Tagiyeva	15:00	S-8	N. Andriushyna
13:00	Lunch		15:15	Coffee Break	
14:30-15:30	Poster Session		15:45	O-11	N. Golub
			16:15	S-9	Ye.V. Polunkin
16:00 Welcome party			27 September 2017 (Wednesday)		
			Excursion		
			Reports Conventions:		
			O – Oral report (20 min)		
			S – Short communication (10 min)		
			P – Poster presentation		

28 September 2017 (Thursday)			29 September 2017 (Friday)		
Chairpersons: <i>V.O. Zazhigalov (Ukraine),</i> <i>M. Mashlan (Czech Republic)</i>			Chairpersons: <i>P. Strizhak (Ukraine),</i> <i>A. Zharmagambetova (Kazakhstan)</i>		
9:30	O-12	V. Brei	9:30	O-19	G. Kosmambetova
10:00	O-13	N. Golub	10:00	O-20	E. Butenko
10:30	S-10	N. Popovych	10:30	S-16	G. Fedorenko
10:45	S-11	V. Prozorovich	10:45	S-17	O. Rozovik
11:00	Coffee Break		11:00	Coffee Break	
11:30	O-14	W. Suprun	11:30	O-21	K.D.Dossumow
12:00	O-15	A. Truba	12:00	O-22	O. Dudnyk
12:30	S-12	I. Bychko	12:30	General discussion	
12:45	S-13	M. Kutuzau	13:00	Closing of the Symposium	
13:00	Lunch				
Chairpersons: <i>V. Brei (Ukraine), A. Ivanets (Belarus)</i>					
14:30	O-16	V. Ogenko			
15:00	O-17	E. Ismailov			
15:30	S-14	V. Shvalagin			
15:45	Coffee Break				
16:15	O-18	E. Demianenko			
16:45	S-15	A. Redkina			

SCIENTIFIC PROGRAM

25 September 2017 (Monday)

Opening of the Symposium

9.30-9.45

Opening speech:

V.G. Koshechko

L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine

Morning

Chairpersons:

Yu.I. Pyatnitsky (Ukraine), W. Suprun (Germany)

9.45-10.15

O-1 “True” and “apparent” nanosize effect in the heterogeneous catalysis

P.E. Strizhak

L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine

10.15-10.45

O-2 Monolithic microreactors – effective tool for flow chemistry

A. Ciemięga¹, K. Maresz¹, J.J. Malinowski¹, J. Mrowiec-Białoń^{1,2}

¹Institute of Chemical Engineering, Polish Academy of Sciences

²Department of Chemical Engineering and Process Design, Silesian University of Technology

10.45-11.00

S-1 Catalysis of the liquid phase aerobic radical chain oxidation of cumene by silver nanoparticles

I.A. Opeida, A.R. Kytsya, L.I. Bazylyak, O.I. Pobigun

Department of Physical Chemistry of Fossil Fuels of the L. M. Lytvynenko Institute of Physical-Organic Chemistry and Coal Chemistry, NAS of Ukraine

11.00-11.30

Coffee Break

11.30-12.00

O-3 Mathematical modelling and experimental researches of catalytic processes in ammonia production technology

L.L. Tovazhnyansky¹, O.Y. Loboiko², P.O. Kapustenko¹, V.E. Ved¹,

T.G. Babak¹, I.O. Slabun², E.V. Gubaren³

¹Faculty of Integrated Technologies and Chemical Technical, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

²Faculty of Inorganic Technologies, National Technical University “Kharkiv Polytechnic Institute”, Ukraine

³L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine

12.00-12.30

O-4 Switchable microgel catalysts

A. Pich, D. Kleinschmidt, D. Schmitz, H. Peng

DWI Leibniz Institute for Interactive Materials, Institute of Technical and Macromolecular Chemistry, RWTH Aachen University

12.30-12.45

S-2 Functional design of the Zn-La-Zr-Si oxide catalysts for production of 1,3-butadiene from ethanol

P.I. Kyriienko, O.V. Larina, S.O. Soloviev

L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine

12.45-13.00

S-3 Methanation of carbon dioxide over Fe-Ni(Zr)/alumina catalysts

E.H. Ismailov, Sh.F. Tagiyeva, N.M. Aliyeva

Institute of petrochemical processes, NAS of Azerbaijan

13.00-14.30

Lunch

Evening

14.30-15.30

Poster session

16.00

Welcome party

26 September 2017 (Tuesday)

Morning

Chairpersons:

S.Ya. Kuchmiy (Ukraine), A.Z. Pich (Germany)

- 9.30-10.00 **O-5 Mechanochemistry in nanocatalysts preparation for catalytic processes**
V.O. Zazhigalov¹, K. Wieczorek-Ciurowa², O.V. Sachuk¹
¹Institute for Sorption and Problems of Endoecology, NAS of Ukraine
²Institute of Chemical Technology and Inorganic Chemistry, T.Kostyushko Cracow Technical University
- 10.00-10.30 **O-6 Modern trends for improving the catalytic activity of graphene-like d-transition metal dichalcogenides and their nanocomposites**
L.M. Kulikov
I.M. Frantsevich Institute for Problems in Materials Science, NAS of Ukraine
- 10.30-10.45 **S-4 Synthesis and catalytic properties of the complex gold nanostructures**
Y. Khalavka, Y. Babiuk
Yu. Fedkovych Chernivtsi National University, Ukraine
- 10.45-11.00 **S-5 Electrosynthesis and optical properties of CdSe, CdTe and ZnSe nanoparticles**
S.S. Fomanyuk, V.N. Asaula, G.Ya. Kolbasov, T.A. Mirnaya, I.A., Rusetskyi
V.I. Vernadskii Institute of General and Inorganic Chemistry, NAS of Ukraine
- 11.00-11.30 **Coffee Break**
- 11.30-12.00 **O-7 Nanosized metal-polymer catalysts on inorganic sorbents for hydrogenation and oxidation**
A.K. Zharmagambetova
D.V. Sokolski Institute of Fuel, Catalysis and Electrochemistry, Kazakhstan
- 12.00-12.30 **O-8 Degradation of methylene blue in aqueous solution in presence of Mn- and Cu-substituted nano-MgFe₂O₄.**
A.I. Ivanets¹, M.Yu. Roshchina², V.G. Prozorovich¹, E.G. Petrova², V.V. Pankov²
¹Institute of General and Inorganic Chemistry, NAS of Belarus
²Department of Physical Chemistry, Belarusian State University
- 12.30-12.45 **S-6 Design of the ZrO₂-Y₂O₃ + Pd CO oxidation catalyst deposited on a metal grid, obtained by electron beam evaporation and vacuum deposition technologies (EB PVD)**
B.O. Movchan¹, Yu.P. Zaitsev³, K.Yu. Yakovchuk²
¹E.O. Paton Electric Welding Institute, NAS of Ukraine
²International Centre for Electron Beam Technologies of E.O.Paton Electric Welding Institute, NAS of Ukraine
³Institute for Sorption and Problems of Endoecology, NAS of Ukraine
- 12.45-13.00 **S-7 Nanosize effect of the supported Fe, Pt, and Pd nanoparticles in the hydrogenation processes**
Ye.Yu. Kalishyn
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- 13.00-14.30 **Lunch**

Evening

Chairpersons:

S. Orlyk (Ukraine), E.H. Ismailov (Azerbaijan)

- 14.30-15.00 **O-10** **Features of the nanocatalysts structure the oxidative chlorination of ethylene**
S.A. Kurta, I.M. Mykytyn, S.V. Fedorchenko, O.M. Khatsevych
Department of Theoretical and Applied Chemistry, Vasyl Stefanyk Precarpathian National University, Ukraine
- 15.00-15.15 **S-8** **Photocatalytic activity of high-crystalline carbone nitride for hydrogen evolution under visible light**
N.S. Andriushyna, G.V. Korzhak, V. V. Shvalagin, S. Ya. Kuchmiy
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- 15.15-15.45 **Coffee Break**
- 15.45-16.15 **O-11** **Synthesis of complex oxide systems of $x\text{Al}_2\text{O}_3 \times y\text{P}_2\text{O}_5$ type, its physicochemical and catalytic properties research in processes of partial oxidation of light hydrocarbons**
N.P. Golub, E.O. Golub, V.I. Gomonay, K.Yu. Szekeresh, I.O. Barenblat, A.A. Kozma
Uzhgorod National University, Ukraine
- 16.15-16.30 **S-9** **Spheroidal multilayer nanoscale carbon clusters - inversion catalysts for liquid motor fuel oxidation**
Ye.V. Polunkin, T.M. Kamenieva, V.S. Pilyavskiy, Ye.V. Sheludko, S.L. Melnykova, Yu.I. Bogomolov, Ya. I. Bereznitskyi
Institute of Bioorganic Chemistry and Petrochemistry, National Academy of Sciences of Ukraine

27 September 2017 (Wednesday)

10.00

Excursion

28 September 2017 (Thursday)

Morning

Chairpersons:

V.O. Zazhigalov (Ukraine), M. Mashlan (Czech Republic)

- 9.30-10.00 **O-12** **Conversion of glycerol into propylene glycol and ethyl lactate over the solid catalysts**
V.V. Brei
Institute for Sorption and Problems of Endoecology, NAS of Ukraine
- 10.00-10.30 **O-13** **Aluminum silicates as effective catalysts to soft conversion of hydrocarbons**
N.P. Golub, E.O. Golub, V.I. Gomonay, K.Yu. Szekeresh, I.O. Barenblat, A.A. Kozma
Uzhgorod National University, Ukraine
- 10.30-10.45 **S-10** **Ag-containing BEA zeolites for selective catalytic reduction of NO with ethanol**
N. Popovych¹, P. Kyriienko¹, S. Soloviev¹, S. Orlyk¹, S. Dzwigaj²
¹ L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
² Laboratoire de Reactivite de Surface, Universite Pierre et Marie Curie, CNRS, France

- 10.45-11.00 **S-11** **Effect of adsorption of Cu²⁺ and Mn²⁺ ions on catalytic properties of MgFe₂O₄**
A.I. Ivanets¹, M.Yu. Roshchina¹, V.G. Prozorovich¹, E.G. Petrova², V.V. Pankov²
¹Institute of General and Inorganic Chemistry, NAS of Belarus
²Department of Physical Chemistry, Belarusian State University

11.00-11.30

Coffee Break

- 11.30-12.00 **O-14** **Hierarchically structured silver-alumina catalyst for the selective reduction of NO by ethanol**

W. Suprun¹, T. Grzybek², D. Enke¹, R. Gläser¹

¹Institute of Chemical Technology, Universität Leipzig, Germany

²University of Science and Technology, Department of Fuel Energy, Kraków, Poland

- 12.00-12.30 **O-15** **Nanocatalysts containing magnetite and α -iron for low-temperature ozone decomposition**

T.L. Rakitskaya^{1,2}, A.S. Truba^{1,2}, A.A. Ennan²

¹Faculty of Chemistry, Odessa I.I. Mechnikov National University, Ukraine

²Physical-Chemical Institute for Environmental and Human Protection, Ukraine

- 12.30-12.45 **S-12** **Multi-walled carbon nanotubes catalytic properties in hydrogenation and dehydrogenation reactions of organic compounds**

I.B. Bychko

L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine

- 12.45-13.00 **S-13** **Synthesis and magnetic features of nanosized Mn–Zn-ferrites**

M. Kutuzau, D. Kotsikau, V. Pankov

Department of Physical Chemistry, Belarusian State University

13.00-14.30

Lunch

Evening

Chairpersons:

V. Brei (Ukraine), A. Ivanets (Belarus)

- 14.30-15.00 **O-16** **Carbon-containing heterogeneous palladium nanocatalysts and their application for cross-coupling reactions**

V.M. Ogenko¹, L.F. Sharanda²

¹V.I. Vernadskii Institute of General and Inorganic Chemistry, NAS of Ukraine

²A. Chuiko Institute of Surface Chemistry, NAS of Ukraine

- 15.00-15.30 **O-17** **Superpara/ferromagnetic particles in the catalytic systems for di- and oligomerization of olefins. Structure and reactivity**

E.H. Ismailov, Y.A. Abbasov

Institute of petrochemical processes, NAS of Azerbaijan

- 15.30-15.45 **S-14** **Gas-phase photocatalytic oxidation of ethanol and acetaldehyde on mesoporous nanocrystalline TiO₂ microspheres**

V.V. Shvalagin¹, N.I. Ermokhina¹, R.Yu. Barakov¹, Romanovska N.I.¹,

P.A. Manoryk¹, S.Ya. Kuchmiy¹, A.M. Puziy², D.O. Klymchuk³

¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine

²Institute for Sorption and Problems of Endoecology, NAS of Ukraine

³Institute of Botany, NAS of Ukraine

15.45-16.15

Coffee Break

- 16.15-16.45 **O-18** **Influence of nitrogen atoms introduced to the graphite-concrete carbon nanocluster on the O₂ recovery reaction**

E.M. Demianenko, O.S. Karpenko, V.V. Lobanov, N.T. Kartel, A.G. Grebenyuk

A. Chuiko Institute of Surface Chemistry, NAS of Ukraine

- 16.45-17.00 **S-15 Nanostructured zirconium silicates as supports of catalysts for dehydrogenation of light alkanes**
A.V. Redkina, N.V. Kravchenko, N.D. Konovalova, V.V. Strelko
Institute for Sorption and Problems of Endoecology, NAS of Ukraine

29 September 2017 (Friday)

Morning

Chairpersons:

P.E. Strizhak (Ukraine), A.K. Zharmagambetova (Kazakhstan)

- 9.30-10.00 **O-19 Influence of nanosize factor on activity and selectivity of the catalysts for CO and methane oxidative conversion**
G.R. Kosmambetova
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- 10.00-10.30 **O-20 Pillared layered double hydroxides – catalysts for petrochemical processes**
E. Butenko, A. Kapustin
Priazovskiy State Technical University
- 10.30-10.45 **S-16 Influence of CH₄ oxidation process on the sensitivity to methane of Pt-, Pd-containing adsorption semiconductor sensors**
G.V. Fedorenko, L.P. Oleksenko, N.P. Maksymovych, G.I. Skolyar, O.P. Ripko
Taras Shevchenko National University of Kyiv, Ukraine
- 10.45-11.00 **S-17 Size dependence of photoelectrochemical properties of silver-indium-sulfide quantum dots**
O.P. Rozovik, A.E. Raevskaya, A.V. Kozyt'skiy, O.L. Stroyuk, N. Gaponik
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- 11.00-11.30 *Coffee Break*
- 11.30-12.00 **O-21 Catalytic method of obtaining the environmentally friendly energy carrier - hydrogen from natural gas methane and renewable raw material - bioethanol**
K. Dossumov¹, D.Kh. Churina¹, G.Y. Yergaziyeva², S.Zh. Tayrabekova¹
¹al-Farabi Kazakh National University, Centre of Physical and Chemical Methods of Investigation and Analysis, Almaty, Kazakhstan;
²The Institute of Combustion Problems, Almaty, Kazakhstan;
- 12.00-12.30 **O-22 The use of catalysts for carbonization and gasification of solid organic wastes**
O.M. Dudnyk
Coal Energy Technology Institute, NAS of Ukraine
- 12.30-13.00 *General discussion*
- 13.00 **Closing of the Symposium**

POSTER PRESENTATIONS

25 September 2017 (Monday)

- P-1 Reduced graphite oxide as the methanol dehydration catalyst**
A.A. Abakumov, I.B. Bychko, P.E. Strizhak
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-2 Chalcogenides of d-metals as perspective materials for catalysis**
S.A. Baranets¹, G.R. Kosmambetova², L.B. Kharkova¹, O.G. Yanko¹, V.V. Subotin¹, P.E. Strizhak²
¹V. Vernadsky Institute of General and Inorganic Chemistry, NAS of Ukraine
²L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-3 Catalytic activity of hierarchical BEA and MOR zeolites in reduction of N₂O and NO**
T.M. Boichuk, K.M. Konyshcheva, O.V. Shvets
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-4 Activation of CH₄ with N₂O on nanophase M/Ga/H-ZSM-5 (M-transition metal) catalysts: influence of acidity**
L. Borkó¹, N.V. Vlasenko², A. M. Puziy³, A. Beck¹, P.E. Strizhak²
¹Centre for Energy Research, Budapest, Hungary
²L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
³Institute for Sorption and Problems of Endoecology, NAS of Ukraine
- P-5 Dehydrogenation of alcohols over Cu-catalyst: correlation between activation energy of reaction and chemical shifts δ (R¹⁷OH)**
V.V. Brei, A.M. Mylin
Institute for Sorption and Endoecology Problems, NAS of Ukraine
- P-6 Catalytic activity of palladium nanoparticles deposited on MIL-101 porous coordination polymer in Suzuki cross-coupling**
O.S. Bykova¹, K.S. Gavrilenko^{2,3}, E.Yu. Kalishin¹, I.B. Bychko¹, S.V. Kolotilov¹, P.E. Strizhak¹
¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
²ChemBioCenter, National Taras Shevchenko University of Kyiv, Ukraine
³Enamine Ltd, Ukraine
- P-7 Influence of the size and surface distribution of the magnesia-supported ZnO nanoparticles on their activity in the CO oxidation**
O.Z. Didenko, G.R. Kosmambetova
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-8 Hydrogen production by bioethanol steam reforming over nanosize ferrites with spinel structure**
L.Yu. Dolgikh, Y.I. Pyatnitsky, I.L. Stolyarchuk, I.V. Vasylenko, L.A. Staraya, P.E. Strizhak
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-9 The photocatalytic activity of the hydrolytic synthesized nanodisperse titanium (IV) oxide**
T. Dontsova, A. Kutuzova
Faculty of Chemical Technology, National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute», Ukraine
- P-10 Oxide catalysts for reforming of methane**
K. Dossumov¹, G. Yergaziyeva,² L. Myltykbayeva,² N. Assanov,³ M. Telbayeva,² E. Tulebayev²
¹al-Farabi Kazakh National University, Centre of Physical and Chemical Methods of Investigation and Analysis, Almaty, Kazakhstan;
²The Institute of Combustion Problems, Almaty, Kazakhstan;
³al-Farabi Kazakh National University, Almaty, Kazakhstan.

- P-11 Preparation of visible light carbon-modified photocatalyst by high-energy milling technique**
P. Dulian¹, V.O. Zazhigalov²
¹Faculty of Chemical Engineering and Technology, Cracow University of Technology, Poland
²Institute for Sorption and Problems of Endoecology, NAS of Ukraine
- P-12 IR spectroscopic analysis of complex oxide catalyst systems of $x\text{Al}_2\text{O}_3 \times y\text{P}_2\text{O}_5$ type**
N.P. Golub, E.O. Golub, V.I. Gomonay, K.Yu. Szekeresh, I.O. Barenblat, A.A. Kozma
 Uzhgorod National University, Ukraine
- P-13 Nanoscale catalytic layers on stainless steel foil in hydrogen production from bioethanol**
V. Honcharov¹, V. Zazhigalov², A. Kowal³, P.Colombi⁴
¹Institute of Chemical Technology, V. Dahl East Ukrainian National University, Ukraine
²Institute for Sorption and Problems of Endoecology, NAS of Ukraine
³Central Laboratory of Batteries and Cells, Institute of Non-Ferrous Metals, Poland
⁴Laboratory of Structural Chemistry, University of Brescia, Italy
- P-14 Size-effect of acetylene hydrogenation over Pt nanoparticles supported on $\gamma\text{-Al}_2\text{O}_3$**
Z.V. Kaidanovych, Ye.Yu. Kalishyn, P.E. Strizhak
 L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-15 Modification effect of zirconia based Ni-nanocomposites on their catalytic performance in the hydrocarbons oxidative reforming processes**
M.R. Kantserova¹, V.I. Chedryk¹, S.M. Orlyk¹, O.D. Vasiliev²
¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
²Institute for Problems in Materials Science, NAS of Ukraine
- P-16 Steam-oxygen reforming of methanol on $\text{CuO-ZnO-MgO/Al}_2\text{O}_3$ /cordierite catalysts**
A.Yu. Kapran
 L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-17 Restoration of the nanoporous structure of the catalyst RPK-1 in reaction conditions of ultrasound and acoustic field applications**
V.V. Kazakov¹, G.I. Gryn², A.V. Suvorin¹, A.Ya. Loboiko²
¹Faculty of Engineering, Volodymyr Dahl East Ukrainian National University, Ukraine
²Faculty of Technology of Inorganic Substances, NTU "KhPI", Ukraine
- P-18 Mechano- and sonocatalytic degradation of organic pollutants in aqueous medium**
S. Khalameida¹, V. Sydorchuk¹, J. Skubiszewska-Zięba², V. Starchevskyy³
¹Institute for Sorption and Problems of Endoecology, NAS of Ukraine
²Faculty of Chemistry, Maria Curie-Skłodowska University, Poland
³Institute of Chemistry and Chemical Technology, L'viv National Polytechnic University, Ukraine
- P-19 Sensitizing of TiO_2 by a polymethine dye in the photocatalytic reduction of methylene blue**
I.M. Kobasa, I.V. Kondratyeva
 Yu. Fedkovich Chernivtsi National University, Institute of Biology, Chemistry and Bioresources, Ukraine
- P-20 DFT study of platinum binary nanoclusters in the environment of low temperature fuel cells**
S.A. Korniy, V.I. Pokhmurskii, V.I. Kopylets, N.R. Chervinska
 Karpenko Physico-Mechanical Institute, NAS of Ukraine
- P-21 Catalytic activity of hierarchical ZrAl-BEA zeolites in the synthesis of 4-methoxybenzyl sec-butyl ether from 4-methoxybenzaldehyde**
M.M. Kurmach¹, N.O. Popovych¹, P.I. Kyriienko¹, P.S. Yaremov¹, A.E. Baranchikov², O.V. Shvets¹
¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
²Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Sciences
- P-22 Design of the BEA zeolite catalyst for production of 1,3-butadiene from ethanol**
O.V. Larina¹, P.I. Kyriienko¹, S.O. Soloviev¹, S.M. Orlyk¹, S. Dzwigaj²
¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
²Sorbonne Universités, Laboratoire de Réactivité de Surface, France

- P-23 Effect of the support on structure and growth mechanism of carbon nanotubes and nitrogen doped carbon nanotubes**
N.V. Lemesh, P.E. Strizhak
 L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-24 Features of oxidation catalysts based on H₂PtCl₆ and aluminum oxide**
A.T. Massenova, A.S. Sass, I.Zh. Sabitova, N.R. Kenzin, K.S. Rakhmetova, E.T. Kanatbayev, L.V. Komashko, A. Baiken
 D.V. Sokolski Institute of Fuel, Catalysis and Electrochemistry, Kazakhstan
- P-25 Kinetic of carbon dioxide methanation onto Ni-Fe catalysts**
R. Meshkinifar, A. Bieda, A. Dyachenko, S. Gaidai, O. Ishchenko
 Taras Shevchenko National University of Kyiv, Ukraine
- P-26 Electrocatalytic reduction of organic halides on electrochemically formed silver nanofoam**
A.M. Mishura¹, A.S. Lytvynenko¹, K.S. Gavrilenko^{2,3}, A.E. Baranchikov⁴, M.A. Kiskin⁴, S.V. Kolotilov¹
¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
²ChemBioCenter, National Taras Shevchenko University of Kyiv, Ukraine
³Enamine Ltd, Ukraine
⁴Kurnakov Institute of General and Inorganic Chemistry, Russian Academy of Sciences
- P-27 Application of hydrothermal method for synthesis of aldol condensation catalysts**
R.V. Nebesnyi¹, V.V. Sydoruk², Z.G. Pikh¹, I.I. Shpyrka¹, S.V. Khalameida², V.V. Ivasiv¹, Yu.V. Nebesna³
¹Technology of Organic Products Department, Lviv Polytechnic National University, Ukraine
²Institute for Sorption and Problems of Endoecology, NASciences of Ukraine
³Market Central Laboratory, Nestle Ukraine LLC, Ukraine
- P-28 Study of catalytic properties of nanomaterial based on Pt/SnO₂ to create hydrogen sensors**
L.P. Oleksenko, I.P. Matushko, N.P. Maksymovych, H.O. Arinarkhova
 Faculty of Chemistry, Taras Shevchenko National University of Kyiv, Ukraine
- P-29 The coaction of metallic Co, Mn microparticles and n-hydroxyphthalimide in the liquid-phase oxidation of cumene**
I.A. Opeida¹, R.E. Gladyshevskii², Yu.M. Grynda¹, G.F. Rayenko⁴, V.L. Starchevskyy³, O.V. Kushch¹, M.O. Kompanets⁴
¹Department of Physical Chemistry of Fossil Fuels of the L.M. Litvinenko Institute of Physical-Organic Chemistry and Coal Chemistry, NAS of Ukraine
²Ivan Franko National University of Lviv, Ukraine
³Lviv Polytechnic National University, Ukraine
⁴L.M. Litvinenko Institute of Physical-Organic Chemistry and Coal Chemistry, NAS of Ukraine
- P-30 Ni-containing pentasil in linear hexane isomerization**
L.K. Patrylak, M.M. Krylova, Yu.G. Voloshyna
 Institute of Bioorganic Chemistry and Petrochemistry, NAS of Ukraine
- P-31 Synthesis and structure of complex-oxide compounds of cerium and zirconium**
T.V. Pavlenko, O.P. Ivanenko, A.O. Omelchuk
 V.I. Vernadskii Institute of General and Inorganic Chemistry, NAS of Ukraine
- P-32 Catalytic activity of cobalt and copper coordination polymers in epoxides ring opening reaction and condensation of aromatic aldehydes with nitromethane**
R.A. Polunin¹, S.A. Sotnik¹, K.S. Gavrilenko^{2,3}, A.S. Lytvynenko¹, S.V. Kolotilov¹
¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
²ChemBioCenter, National Taras Shevchenko University of Kyiv, Ukraine
³Enamine Ltd, Ukraine

- P-33 Catalytic activity of Ru nanoparticles deposited on carbon and carbon nitride in the betulin oxidation reaction**
N.D. Shcherban¹, P. Mäki-Arvela², J. Hemming², D.Yu. Murzin²
¹L.V. Pisarzhevskiy Institute of Physical Chemistry, NAS of Ukraine
²Johan Gadolin Process Chemistry Centre, Abo Akademi University, Finland
- P-34 High temperature co-shift conversion catalyst**
O.L. Sincheskul, A.M. Butenko, O.V. Kobziev, V.O. Loboiko
National technical university “Kharkov polytechnic institute”, Ukraine
- P-35 Carbon dioxide conversion of methane on the nanopowders of Ni, Co and their alloy, prepared by a plasma-mechanochemical method**
L.A. Tavadyan, R.R. Grigoryan, S.D. Arsentev, S.G. Aloyan
A.B. Nalbandyan Institute of Chemical Physics, NAS of Armenia
- P-36 Catalytic decomposition of ozone over metal–TiO₂ nanocomposites doped with small amounts of noble metal nanoparticles**
G.Telbiz, S. Soloviev, V. Grebennikov, P. Manorik
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-37 The fractal approach to catalysis by nanoporous materials**
A.I. Tripolskyi
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-38 Processing of propane-butane fraction into aromatic hydrocarbons over the modified zeolite-containing catalysts**
B.T. Tuktin, N.N. Nurgaliyev, A.Zh. Kubasheva, A.S. Tenizbayeva
D.V. Sokolski Institute of Fuel, Catalysis and Electrochemistry, Kazakhstan
- P-39 Nanocatalyst of gas purification from nitrogen oxides**
V.O. Vekshin¹, L.P. Abramova¹, O.V. Kobziev², O.L. Sincheskul², V.O. Loboiko²
¹Kharkov national medical university, Ukraine
²National technical university “Kharkov polytechnic institute”, Ukraine
- P-40 The role of morphology of nano-phase sulfonic resin catalysts in alcohols etherification**
N.V. Vlasenko, Yu.N. Kochkin, T.G. Serebrii, P.E. Strizhak
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-41 Catalytic oxidation of benzoin in the presence of nanoparticles of porous copper(II) benzene-1,3,5-tricarboxylate (HKUST-1)**
D.V. Yurchenko¹, N.V. Peregon¹, K.S. Gavrilenko^{2,3}, A.S. Lytvynenko¹, S.V. Kolotilov¹
¹L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
²ChemBioCenter, National Taras Shevchenko University of Kyiv, Ukraine
³Enamine Ltd, Ukraine
- P-42 Cyclohexane oxidation on supported nickel hexacyanoferrate catalyst**
A.K. Zharmagambetova, A.S. Auyezkhanova, N.Zh. Tumabayev, S.N. Akhmetova
D.V. Sokolski Institute of Fuel, Catalysis and Electrochemistry, Kazakhstan
- P-43 Polysaccharide-stabilized nickel catalysts for hydrogenation**
A.K. Zharmagambetova, A.S. Auyezkhanova, A. Zamanbekova, A. Jumekeyeva
D.V. Sokolski Institute of Fuel, Catalysis and Electrochemistry, Kazakhstan
- P-44 Kinetic modeling of the methanol conversion to olefins on H-ZSM-5/Al₂O₃ catalyst**
A.A. Zhokh, A.I. Tripolskyi, P.E. Strizhak
L.V. Pisarzhevskii Institute of Physical Chemistry, NAS of Ukraine
- P-45 Influence of activation on the formation of nanostructure on chromium iron/zinc catalyst**
Y.I. Zubtsov, A.V. Suvorin
Faculty of Engineering, V. Dahl East Ukrainian National University