

# IV Scientific-Technological Symposium



**CATALYTIC  
HYDROPROCESSING  
IN OIL REFINING**

**APRIL 26 - 30  
2021 / GREECE**



*Boreskov Institute of Catalysis (Novosibirsk, Russia)  
Chemical Process and Energy Resources Institute – CPERI (Thessaloniki, Greece)  
PJSC Gazprom Neft (St. Petersburg, Russia)*

**IV Scientific-Technological Symposium  
CATALYTIC HYDROPROCESSING IN OIL REFINING  
(STS HydroCat)**

*Thessaloniki, Greece, April 26 – 30, 2021*

**Preliminary Scientific Program**

### Preliminary Timetable

April 26, Monday		April 27, Tuesday		April 28, Wednesday		April 29, Thursday		April 30, Friday
09:00 – 10:30	<b>REGISTRATION Coffee</b>	09:00 – 09:45	<b>PL-2 Schwiieger</b>	09:00 – 09:45	<b>PL-3 Lemonidou</b>	09:00 – 09:45	<b>PL-4 Rana</b>	09:00 – 19:00 <b>Post-Tour</b>
		09:45 – 10:15	<b>KL-2 Ribeiro</b>	09:45 – 10:15	<b>KL-3 Thybaut</b>	09:45 – 10:15	<b>KL-4 Danilevich</b>	
		10:15 – 10:30	OP-19 Pimerzin	10:15 – 10:30	OP-30 Potapenko	10:15 – 10:30	OP-39 Ivashkina	
10:30 – 10:45	<b>OPENING</b>	<b>10:30 – 11:00</b>	<b>Coffee</b>	<b>10:30 – 11:00</b>	<b>Coffee</b>	<b>10:30 – 11:00</b>	<b>Coffee</b>	
10:45 – 11:30	<b>PL-1 Busca</b>	11:00 – 13:00	ROUND TABLE	11:00 – 11:15	OP-31 Stepacheva	11:00 – 11:15	OP-40 Malbakhova	
11:30 – 12:00	<b>KL-1 Bezergianni</b>			11:15 – 11:30	OP-32 Stepanova	11:15 – 11:30	OP-41 Snytnikov	
12:00 – 12:15	OP-1 Nadeina			11:30 – 11:45	OP-33 Belinskaya	11:30 – 11:45	OP-42 Dimitriadis	
12:15 – 12:30	OP-2 Escobar			11:45 – 12:00	OP-34 Chandak	11:45 – 12:00	OP-43 Vlasova	
12:30 – 12:45	OP-3 Shkurenok			12:00 – 12:15	OP-35 Nazarova	12:00 – 12:15	OP-44 Belskaya	
12:45 – 13:00	OP-4 Glotov			12:15 – 12:30	OP-36 Pernalete	12:15 – 12:30	OP-45 Margellou	
<b>13:00 – 14:00</b>	<b>Lunch</b>			12:30 – 12:45	OP-37 Krivtcova	12:30 – 12:45	OP-46 Matveeva	
14:00 – 14:15	OP-5 Glisic			<b>13:00 – 14:00</b>	<b>Lunch</b>	12:45 – 13:00	OP-38 Zagoruiko	
14:15 – 14:30	OP-6 Yashnik	14:00 – 14:15	OP-20 Karakoulia	<b>13:00 – 14:00</b>	<b>Lunch</b>	<b>13:00 – 13:15</b>	<b>CLOSING</b>	
14:30 – 14:45	OP-7 Diaz de Leon	14:15 – 14:30	OP-21 Bogomolova	15:00 – 18:00	Excursion to CPERI	<b>13:15 – 14:15</b>	<b>Lunch</b>	
14:45 – 15:00	OP-8 Vatutina	14:30 – 14:45	OP-22 Kokliukhin			15:00 – 18:00	Excursion to Winery	
15:00 – 15:15	OP-9 Devers	14:45 – 15:00	OP-23 Sazama					
15:15 – 15:30	OP-10 Kazakov	15:00 – 15:15	OP-24 Tregubenko					
15:30 – 15:45	OP-11 Simakova	15:15 – 15:30	OP-25 Pacheco-Jimenez					
15:45 – 16:00	OP-12 Golubev	15:30 – 15:45	OP-26 Belopukhov					
<b>16:00 – 16:30</b>	<b>Coffee</b>	15:45 – 16:00	OP-27 Ntagkonikou					
16:30 – 16:45	OP-13 Vela Diaz	16:00 – 16:15	OP-28 Cherednichenko					
16:45 – 17:00	OP-14 Danilova	16:15 – 16:30	OP-29 Naranov					
17:00 – 17:15	OP-15 Alvarez-Majmutov	16:30 – 18:00	POSTER SESSION & <b>Coffee</b>					
17:15 – 17:30	OP-16 Shamanaev							
17:30 – 17:45	OP-17 Ai							
17:45 – 18:00	OP-18 Saiko	18:00 – 20:00	City-Tour around Thessaloniki					
18:00 – 18:05	<b>Group Photo</b>							
<b>19:00 – 22:00</b>	<b>Welcome reception</b>			<b>19:00 – 22:00</b>	<b>Banquet</b>			

PL – Plenary lecture; KL – Keynote lecture; OP – Oral presentation

## April 26, Monday

**09.00 – 10.30 Registration**  
**Coffee**

**10.30 – Opening Ceremony**

### Plenary Lecture

**10.45 PL-1**

**Prof. Guido Busca**

**CATALYTIC MATERIALS BASED ON SILICA AND ALUMINA**

*The University of Genova, Italy*

### Keynote Lecture

**11.30 KL-1**

**Dr. Stella Bezergianni**

**CATALYTIC HYDROPROCESSING: AN EFFECTIVE MODE FOR DIRECT FUELS DECARBONIZATION**

*Centre for Research & Technology Hellas / CERTH*

*Chemical Process & Energy Resources Institute / CPERI, Greece*

### Oral Presentations

**12.00 OP-1**

**Nadeina K.A.**<sup>1</sup>, Danilevich V.V.<sup>1</sup>, Kazakov M.O.<sup>1</sup>, Romanova T.S.<sup>1</sup>, Gabrienko A.A.<sup>1</sup>, Pakharukova V.A.<sup>1</sup>, Danilova I.G.<sup>1</sup>, Nikolaeva O.A.<sup>1</sup>, Gerasimov E.Yu.<sup>1</sup>, Kondrashev D.O.<sup>2</sup>, Kleimenov A.V.<sup>2</sup>, Klimov O.V.<sup>1</sup>, Noskov A.S.<sup>1</sup>

**INFLUENCE OF Si DOPING TO HYDROTREATING CATALYSTS OF FCC FEED PRETREATMENT**

<sup>1</sup>*Boreskov Institute of Catalysis, Novosibirsk, Russia*

<sup>2</sup>*PJSC Gazprom neft, Saint Petersburg, Russia*

**12.15 OP-2**

**Escobar J.**<sup>1</sup>, Gutiérrez A.<sup>1</sup>, Ramírez J.<sup>2</sup>, Cuevas R.<sup>2</sup>, Ángeles C.<sup>1</sup>, Barrera M.C.<sup>3</sup>

**THIOPHENE HDS ON La-MODIFIED CoMo/AL<sub>2</sub>O<sub>3</sub> SULFIDED CATALYSTS. EFFECT OF RARE-EARTH CONTENT**

<sup>1</sup>*Instituto Mexicano del Petróleo, México City, México*

<sup>2</sup>*UNICAT, México City, México*

<sup>3</sup>*F.C.Q.-CIRES, Univ. Veracruzana, Coatzacoalcos, México*

**12.30 OP-3**

**Shkurenok V.A.**<sup>1</sup>, Yablokova S.S.<sup>1</sup>, Smolikov M.D.<sup>1</sup>, Kir'yanov D.I.<sup>1</sup>, Belyi A.S.<sup>1</sup>, Kondrashev D.O.<sup>2</sup>, Kleimenov A.V.<sup>2</sup>

**NEW DIRECTION IN THE HYDROPROCESSING OF GASOLINE FRACTIONS: INTEGRATION OF C<sub>5</sub>-C<sub>6</sub> AND C<sub>7</sub>-PARAFFIN HYDROCARBONS ISOMERIZATION PROCESSES**

<sup>1</sup>*Center of New Chemical Technologies BIC, Omsk, Russia*

<sup>2</sup>*PJSC Gazprom neft, Saint Petersburg, Russia*

**12.45 OP-4**

**Glotov A.**<sup>1</sup>, Stavitskaya A.<sup>1</sup>, Smirnova E.<sup>1</sup>, Gushchin P.<sup>1</sup>, Vinokurov V.<sup>1</sup>, Lvov Y.<sup>1,2</sup>

**MESOPOROUS ALUMINOSILICATES BASED ON NATURAL CLAY NANOTUBES FOR HYDROPROCESSING: SYNTHESIS, PROPERTIES, APPLICATION**

<sup>1</sup>*Gubkin University, Moscow, Russia*

<sup>2</sup>*Institute for Micromanufacturing, Louisiana Tech University, Ruston, USA*

**13.00 – 14.00 Lunch**

**Oral Presentations**

**14.00 OP-5**

**Glišić S.B.**<sup>1</sup>, Prokić-Vidojević D.<sup>2</sup>, Orlović A.M.<sup>1</sup>

**INFLUENCE OF THE TRANSITION METAL AND CATALYST DRYING PROCEDURE ON THE CATALYTIC PERFORMANCE OF Re/Pd, Co/Mo AND COMMERCIAL CATALYSTS SUPPORTED ON HEXAGONAL MESOPOROUS SILICAS DOPED WITH Ti-IONS DURING THE HDS OF DIBENZOTHIOPHENE AND 4,6-DIMETHYLDIBENZOTHIOPHENE**

<sup>1</sup>University of Belgrade, Belgrade, Serbia

<sup>2</sup>Military Technical Institute (VTI), Belgrade, Serbia

**14.15 OP-6**

**Yashnik S.A.**<sup>1</sup>, Ismailov E.G.<sup>2</sup>, Ismagilov Z.R.<sup>1</sup>

**EFFECT OF BENTONITE ADDITION ON PROPERTIES OF NANOSTRUCTURED PtPd-ZEOLITE HYDRODESULFURIZATION CATALYST**

<sup>1</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

<sup>2</sup>Institute of Petrochemical Processes of ANAS, Baku, Azerbaijan

**14.30 OP-7**

Quintana-Gamboa S., Richards-Figueroa Z., Torres-Otañez G., S. Fuentes-Moyado,

**Díaz de León J.N.**

**NiMoS NANOCUBES FOR HYDRODESULFURIZATION OF LIGHT HYDROCARBONS**

Universidad Nacional Autónoma de México, Nanoscience and Nanotechnology Center, Ensenada B.C., México

**14.45 OP-8**

**Vatutina Yu.V.**, Kazakov M.O., Nadeina K.A., Budukva S.V., Gerasimov E.Yu., Klimov O.V., Noskov A.S.

**IS IT POSSIBLE TO REACTIVATE HYDROTREATING CATALYST POISONED BY Si?**

Boreskov Institute of Catalysis, Novosibirsk, Russia

**15.00 OP-9**

**Devers E.**<sup>1</sup>, Lesage C.<sup>1,2</sup>, Legens C.<sup>1</sup>, Briois V.<sup>2</sup>

**NEW METHODOLOGY COUPLING RAMAN AND XAS FOR THE SPECIATION OF ADDITIVATED Mo-BASED HDS CATALYSTS AND CHARACTERIZATION BY QUICK-XAS OPERANDO OF THEIR LIQUID SULFIDATION**

<sup>1</sup>IFP Energies nouvelles, Solaize, France

<sup>2</sup>Synchrotron SOLEIL L'orme des Merisiers, Gif-sur-Yvette Cedex, France

**15.15 OP-10**

**Kazakov M.O.**<sup>1</sup>, Revyakin M.E.<sup>1</sup>, Nadeina K.A.<sup>1</sup>, Vatutina Yu.V.<sup>1</sup>, Kondrashev D.O.<sup>2</sup>, Golovachev V.A.<sup>2</sup>, Kleimenov A.V.<sup>2</sup>, Vedernikov O.S.<sup>2</sup>, Klimov O.V.<sup>1</sup>, Noskov A.S.<sup>1</sup>

**TUNING METAL-ACID PROPERTIES OF ZEOLITE HYDROCRACKING CATALYSTS BY SUPPORTING NiMo WITH IMPREGNATION SOLUTIONS OF DIFFERENT COMPOSITION**

<sup>1</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

<sup>2</sup>PJSC Gazprom neft, St Petersburg, Russia

**15.30 OP-11**

**Simakova I.**<sup>1,2</sup>, Prokhod'ko S.<sup>1</sup>, Niphadkar P.<sup>2</sup>, Bokade V.<sup>2</sup>, Murzin D.Y.<sup>3</sup>

**BIODERIVED ANTIKNOCK ADDITIVES: SYNTHESIS OF GAMMA-VALEROLACTONE BY LIQUID-PHASE LEVULINIC ACID HYDROGENATION OVER VIII GROUP METALS**

<sup>1</sup>*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*

<sup>2</sup>*CSIR - National Chemical Laboratory, Pune, India*

<sup>3</sup>*Abo Akademy University, Turku, Finland*

**15.45 OP-12**

**Golubev I.S.**<sup>1,2</sup>, Dik P.P.<sup>1</sup>, Kazakov M.O.<sup>1</sup>, Pereyma V.Yu.<sup>1</sup>, Klimov O.V.<sup>1</sup>, Kondrashev D.O.<sup>3</sup>, Golovachev V.A.<sup>3</sup>, Vedernikov O.S.<sup>3</sup>, Kleimenov A.V.<sup>3</sup>, Noskov A.S.<sup>1</sup>

**NiW/Y-ASA-Al<sub>2</sub>O<sub>3</sub> CATALYSTS FOR SECOND STAGE HYDROCRACKING: INFLUENCE OF Si/Al RATIO IN ZEOLITE**

<sup>1</sup>*Boreskov Institute of Catalysis, Novosibirsk, Russia*

<sup>2</sup>*Novosibirsk State University, Novosibirsk, Russia*

<sup>3</sup>*PJSC «Gazprom нефт», Saint Petersburg, Russia*

**16.00 – 16.30 – Coffee**

**Oral Presentations**

**16.30 OP-13**

**Vela Diaz F.**, Trueba D., Palos R., Arandes J.M., Gutiérrez A.

**FUELS OBTAINED FROM HYDROCRACKING OF DIFFERENTS BLENDS OF VGO AND POLYOLEFINIC WASTES**

*University of the Basque Country, Bilbao, Spain*

**16.45 OP-14**

**Danilova I.G.**<sup>1</sup>, Dik P.P.<sup>1</sup>, Gabrienko A.A.<sup>1</sup>, Sorokina T.P.<sup>2</sup>, Paukshtis E.A.<sup>1</sup>, Kazakov M.O.<sup>1</sup>, Doronin V.P.<sup>2</sup>, Kondrashev D.O.<sup>3</sup>, Golovachev V.A.<sup>3</sup>, Kleimenov A.V.<sup>3</sup>, Vedernikov O.S.<sup>3</sup>, Klimov O.V.<sup>1</sup>, Noskov A.S.<sup>1</sup>

**THE INFLUENCE OF FRAMEWORK AND EXTRAFRAMEWORK ALUMINIUM SPECIES IN FAUJASITE ZEOLITES ON VGO HYDROCRACKING OVER NiMo/USY CATALYSTS**

<sup>1</sup>*Boreskov Institute of Catalysis, Novosibirsk, Russia*

<sup>2</sup>*Center for New Chemical Technologies BIC, Omsk, Russia*

<sup>3</sup>*PJSC Gazprom нефт, Saint Petersburg, Russia*

**17.00 OP-15**

**Alvarez-Majmutov A.**, Sandeep Badoga, Tingyong Xing, Jinwen Chen

**PRODUCING LOW CARBON FUELS BY Co-HYDROCRACKING HTL BIOCRUDE WITH VACUUM GAS OIL**

*Natural Resources Canada, CanmetENERGY Devon, Canada*

**17.15 OP-16**

**Shamanaev I.**, Suvorova A., Gerasimov E., Pakharukova V., Bukhtiyarova G.

**COMPARATIVE STUDY OF Ni-PHOSPHIDE CATALYSTS SUPPORTED ON GRANULATED AL<sub>2</sub>O<sub>3</sub> IN HYDROTREATING OF STRAIGHT RUN GAS OIL**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

**17.30 OP-17**

**Ai X.**<sup>1</sup>, Chi X.<sup>1</sup>, Wang D.<sup>1</sup>, Tian Z.<sup>1</sup>, Shi Q.<sup>2</sup>, Wang J.<sup>2</sup>

**DETERMINATION OF VARIOUS CHEMICAL STRUCTURES IN BASE OIL USING MULTIDIMENSIONAL NMR SPECTROSCOPY**

<sup>1</sup>Dalian National Laboratory for Clean Energy, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China

<sup>2</sup>School of Biological Engineering, Dalian Polytechnic University, Dalian, China

**17.45 OP-18**

**Saiko A.V.**<sup>1</sup>, Potapenko O.V.<sup>2</sup>, Nadeina K.A.<sup>1</sup>, Porotikova O.V.<sup>2</sup>, Sorokina T.P.<sup>2</sup>, Doronin V.P.<sup>2</sup>, Kazakov M.O.<sup>1</sup>, Klimov O.V.<sup>1</sup>, Kondrashev D.O.<sup>3</sup>, Kleimenov A.V.<sup>3</sup>, Noskov A.S.<sup>1</sup>

**INFLUENCE OF NITROGEN CONTAINING COMPOUNDS OF DIFFERENT NATURE IN HYDROTREATED VGO ON PRODUCT COMPOSITION OF FCC PROCESS FOR LIGHT OLEFINS PRODUCTION**

<sup>1</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

<sup>2</sup>Center of New Chemical Technologies BIC, Omsk, Russia

<sup>3</sup>PJSC Gazprom neft, Saint Petersburg, Russia

**18.00 – Group Photo**

**19.00 – Welcome reception**

## April 27, Tuesday

### Plenary Lecture

09.00 PL-2

Prof. Wilhelm Schwieger

#### HIERARCHICAL ZEOLITES IN PROCESSING OF HYDROCARBONS

*Friedrich–Alexander University Erlangen–Nürnberg, Germany*

### Keynote Lecture

09.45 KL-2

Prof. Maria Filipa Ribeiro

#### FROM POWDER Pt CATALYSTS TO SHAPED NiMo CATALYSTS: A TALE ABOUT HYDROCRACKING COMPLEXITY

*Instituto Superior Técnico, Lisbon, Portugal*

### Oral Presentation

10.15 OP-19

Pimerzin Al.A.<sup>1,2</sup>, Glotov A.P.<sup>2</sup>, Savinov A.A.<sup>1</sup>

#### LINEAR ALKANES HYDROISOMERIZATION OVER COMOS CATALYSTS SUPPORTED ON MODIFIED ALUMINOSILICATES

<sup>1</sup>*Samara State Technical University, Samara, Russia*

<sup>2</sup>*Gubkin Russian State University of Oil and Gas, Moscow, Russia*

10.30 – 11.00 *Coffee*

11.00 – 13.00

Round table

#### Major technological challenges and development trends of hydroprocesses catalysts for oil refineries. Strategy until 2030

- ❖ New hydrotreating catalysts with increased desulfurization and denitrogenation activity, including those based on fundamentally new components with an improved structure of active sites (various types of Co (Ni) MoS phases);
- ❖ Development of new highly effective hydrocracking catalysts, zeolite components for them (hierarchical zeolites, micro-mesoporous materials, nanocrystallized zeolites, etc.) and economically feasible technologies for their production;
- ❖ Increasing the efficiency of the protective layers to improve the operation of hydrotreating and hydrocracking catalysts using feedstock with constantly deteriorating quality (increase of sulfur content, high content of secondary fractions and coke-forming components, etc.);
- ❖ The application of new methods of deep analysis of the structure and properties of hydroprocessing catalysts, including those applicable in industrial practice;
- ❖ The application of new approaches to mathematical modeling in order to improve the accuracy of calculating the predicted parameters of hydroprocessing catalysts operation;
- ❖ Possible breakthrough and "breakdown" hydroprocessing technologies.

13.00 – 14.00 - *Lunch*

## Oral Presentations

### 14.00 OP-20

**Karakoulia S.A.**<sup>1</sup>, Heracleous E.<sup>1,2</sup>, Lappas A.A.<sup>1</sup>

#### **Ni AND Pt CATALYSTS SUPPORTED ON SILICOALUMINOPHOSPHATES FOR n-HEXADECANE HYDROISOMERIZATION**

<sup>1</sup>Chemical Process & Energy Resources Institute/Centre for Research and Technology Hellas (CPERI/CERTH), Thessaloniki, Greece

<sup>2</sup>School of Science & Technology, International Hellenic University (IHU), Thessaloniki, Greece

### 14.15 OP-21

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

#### **CHARACTERIZATION AND HYDROISOMERIZATION PERFORMANCE OF Mg-PROMOTED Pt/ZSM-23/Al<sub>2</sub>O<sub>3</sub> CATALYSTS**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

### 14.30 OP-22

**Kokliukhin A.**<sup>1,2,5</sup>, Nikulshina M.<sup>1,2</sup>, Mozhaev A.<sup>1,3,4</sup>, Lancelot C.<sup>2</sup>, Blanchard P.<sup>2</sup>, Marinova M.<sup>3</sup>, Mentré O.<sup>2</sup>, Lamonier C.<sup>2</sup>, Nikulshin P.<sup>1,4,5</sup>

#### **EFFECT OF Mo/W RATIO ON THE CATALYTIC PROPERTIES OF ALUMINA SUPPORTED HYDROTREATING CATALYSTS PREPARED FROM MIXED SiMo<sub>n</sub>W<sub>12-n</sub> KEGGIN TYPE HETEROPOLYACIDS**

<sup>1</sup>Samara State Technical University, Samara, Russia

<sup>2</sup>University of Lille, Unité de Catalyse et Chimie du Solide, Lille, France

<sup>3</sup>University of Lille, Institut Michel-Eugène Chevreul, Lille, France

<sup>4</sup>All-Russia Research Institute of Oil Refining, Moscow, Russia

<sup>5</sup>Gubkin Russian State University of Oil and Gas, Moscow, Russia

### 14.45 OP-23

**Sazama P.**<sup>1</sup>, Kaucký D.<sup>1</sup>, Morávková J.<sup>1</sup>, Pilar R.<sup>1</sup>, Bortnovsky O.<sup>2</sup>

#### **HIGHLY EFFICIENT HYDROISOMERIZATION OVER ZEOLITES WITH MUTUAL CLOSE VICINITY AND HIGH ACCESSIBILITY OF STRONGLY ACIDIC CENTERS**

<sup>1</sup>J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic

<sup>2</sup>Euro Support Manufacturing Czechia, Litvínov, Czech Republic

### 15.00 OP-24

**Tregubenko V.Yu.**<sup>1</sup>, Vinichenko N.V.<sup>1</sup>, Vagapova M.N.<sup>2</sup>, Veretelnikov K.V.<sup>3</sup>, Belyi A.S.<sup>1,2</sup>

#### **NEW NAPHTHA-REFORMING Pt/Al<sub>2</sub>O<sub>3</sub> CATALYSTS WITH Mo OR In**

<sup>1</sup>Center of New Chemical Technologies BIC, Omsk, Russia

<sup>2</sup>Omsk State Technical University, Omsk, Russia

<sup>3</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

### 15.15 OP-25

**Pacheco-Jiménez H.O.**<sup>1,2</sup>, Santes V.<sup>1</sup>, Sotelo-Boyás R.<sup>2</sup>, Santolalla-Vargas C.E.<sup>1</sup>, Gonzalez-Alatraste J.E.<sup>1</sup>

#### **HYBRID DIESEL PRODUCTION VIA CATALYTIC CO-HYDROPROCESSING OF BLENDS GASOIL-WASTE COOKING OIL**

<sup>1</sup>Departamento de Biociencias e Ingeniería, Centro Interdisciplinario de Investigaciones y Estudios sobre Medio Ambiente y Desarrollo (CIEMAD), Instituto Politécnico Nacional, Mexico City, Mexico

<sup>2</sup>Departamento de Ingeniería Química Petrolera, Escuela Superior de Ingeniería Química e Industrias Extractivas (ESIQIE), Instituto Politécnico Nacional, Zacatenco, Mexico City, Mexico



**15.30 OP-26**

**Belopukhov E.A.**<sup>1</sup>, Smolikov M.D.<sup>1</sup>, Kir'yanov D.I.<sup>1</sup>, Shkurenok V.A.<sup>1</sup>, Belyi A.S.<sup>1</sup>, Kondrashev D.O.<sup>2</sup>, Kleimenov A.V.<sup>2</sup>

**REFORMING CATALYST FOR PRODUCING OF A LOW AROMATICS GASOLINE COMPONENT**

<sup>1</sup>Center of New Chemical Technologies BIC, Omsk, Russia

<sup>2</sup>PJSC Gazprom neft, Saint Petersburg, Russia

**15.45 OP-27**

**Ntagkonikou V.**<sup>1,2</sup>, Bezergianni S.<sup>1</sup>, Karonis D.<sup>2</sup>

**AN ALTERNATIVE APPROACH FOR LCO UPGRADING**

<sup>1</sup>Chemical Process and Energy sources Institute-CPERI, Centre of Research and Technology Hellas-CERTH, Thessaloniki, Greece

<sup>2</sup>National Technical University of Athens, Zografou Campus, Athens, Greece

**16.00 OP-28**

**Cherednichenko A.G.**, Markova E.B., Akhmedova L.S., Kovtun S.O., Serov Ju.M.

**INVESTIGATION OF CATALYTIC CRACKING PROCESSES OF PROPANE AND POLYPROPYLENE USING GADOLINIUM MOLYBDATES AND TUNGSTATES  $Gd_2(MO_4)_3$  (M=Mo, W)**

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

**16.15 OP-29**

**Naranov E.R.**, Sadovnikov A.A., Maximov A.L.

**A STEPWISE FABRICATION OF MORDENITE FRAMEWORK INVERTED (MFI) NANOSHEETS IN ACCELERATED MODE**

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

**16.30 – 18.00**

***Coffe &  
POSTER SESSION***

***18.00 – City-Tour around Thessaloniki***

## April 28, Wednesday

### Plenary Lecture

09.00 PL-3

Prof. Angeliki Lemonidou

**INTENSIFICATION OF STEAM REFORMING FOR HYDROGEN PRODUCTION**

*Aristotle University of Thessaloniki, Greece*

### Keynote Lecture

09.45 KL-3

Prof. Joris Thybaut

**SIMULATING COMPLEX MIXTURES CONVERSION FROM FIRST PRINCIPLES**

*Ghent University, Ghent, Belgium*

### Oral Presentation

10.15 OP-30

**Potapenko O.V.**<sup>1</sup>, Doronin V.P.<sup>1</sup>, Sorokina T.P.<sup>1</sup>, Iurtaeva A.S.<sup>1</sup>, Plekhova K.S.<sup>1</sup>, Lipin P.V.<sup>1</sup>, Dmitriev K.I.<sup>1</sup>, Porotikova O.V.<sup>1</sup>, Kondrashev D.O.<sup>2</sup>, Kleimenov A.V.<sup>2</sup>

**NEW ACHIEVEMENTS OF THE CRACKING CATALYSTS DEVELOPMENT FOR PETROCHEMICAL DIRECTION OF PJSC «GAZPROMNEFT»**

<sup>1</sup>*Center of New Chemical Technologies BIC, Omsk, Russia*

<sup>2</sup>*PJSC Gazprom neft, Saint Petersburg, Russia*

10.30 – 11.00 - Coffee

### Oral Presentations

11.00 OP-31

**Stepacheva A.A.**<sup>1</sup>, Markova M.E.<sup>1,2</sup>, Gavrilenko A.V.<sup>1</sup>, Lugovoy Yu.V.<sup>1</sup>, Sulman M.G.<sup>1</sup>, Matveeva V.G.<sup>1,2</sup>, Sulman E.M.<sup>1</sup>

**HIGHLY DISPERSED CATALYSTS FOR OIL HYDROPROCESSING IN SUPERCRITICAL CONDITIONS**

<sup>1</sup>*Tver State Technical University, Tver, Russia*

<sup>2</sup>*Tver State University, Tver, Russia*

11.15 OP-32

**Stepanova L.**<sup>1,2</sup>, Belskaya O.<sup>1,3</sup>, Trenikhin M.<sup>1</sup>, Leont'eva N.<sup>1</sup>, Gulyaeva T.<sup>1</sup>, Likholobov V.<sup>4</sup>

**THE EFFECT OF THE SUPPORT PRECURSOR ON THE PROPERTIES OF BIMETALLIC CATALYSTS Pt-Au/MgAlO<sub>x</sub> IN THE PROPANE DEHYDROGENATION**

<sup>1</sup>*Center of New Chemical Technologies BIC, Omsk, Russia*

<sup>2</sup>*Dostoevsky Omsk State University, Omsk, Russia*

<sup>3</sup>*Omsk State Technical University, Omsk, Russia*

<sup>4</sup>*Boreskov Institute of Catalysis, Novosibirsk, Russia*

11.30 OP-33

**Belinskaya N.S.**, Ivanchina E.D., Ivashkina E.N., Vymyatnin E.K., Mauzhigunova E.N.

**DEVELOPMENT OF THE APPROACH TO MODELLING OF THE DESTRUCTIVE CATALYTIC HYDROPROCESSES OF ATMOSPHERIC AND VACUUM DISTILLATES CONVERSION**

*National Research Tomsk Polytechnic University, Tomsk, Russia*

**11.45 OP-34**

**Chandak N.R.**

**MAXIMIZING THE USE OF REGENERATED GAS OIL HYDROTREATING CATALYST KERO & NAPHTHA HYDROTREATING**

*Abu Dhabi National Oil Company (ADNOC Refining), Abu Dhabi, United Arab Emirates*

**12.00 OP-35**

**Nazarova G.**<sup>1</sup>, Ivashkina E.<sup>1</sup>, Ivanchina E.<sup>1</sup>, Burumbaeva G.<sup>2</sup>, Kaliev T.<sup>2,3</sup>, Seitenova G.<sup>3</sup>

**KINETIC PATTERNS OF VACUUM DISTILLATE CATALYTIC CRACKING ON DIFFERENT CATALYST**

<sup>1</sup>Tomsk Polytechnic University, Tomsk, Russia

<sup>2</sup>LLP Pavlodar Petrochemical Plant, Pavlodar, Kazakhstan

<sup>3</sup>S. Toraighyrov Pavlodar State University, Pavlodar, Kazakhstan

**12.15 OP-36**

**Pernalet C.G.**, Ibáñez J., Van Geem K.M., Thybaut J.W.

**FROM BULK PROPERTIES TO SINGLE EVENT MICROKINETICS FOR VGO HYDROCRACKING**

Ghent University, Ghent, Belgium

**12.30 OP-37**

**Krivtcova N.**, Ivanchina E.D., Kotcova E.

**MATHEMATICAL MODELING OF THE HYDROTREATING PROCESS USING BI-FUNCTIONAL CATALYSTS**

National Research Tomsk Polytechnic University, Tomsk, Russia

**12.30 OP-38**

**Zagoruiko A.**, Mikenin P., Lopatin S.

**DECOMPOSITION OF HYDROGEN SULFIDE INTO ELEMENTS IN THE CYCLIC CHEMISORPTION-CATALYTIC REGIME**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

**13.00 – 14.00 - Lunch**

**15.00 – 18.00**  
**Excursion to CPERI**

**19.00 – Banquet**

## April 29, Thursday

### Plenary Lecture

09.00 PL-4

Dr. Mohan S. Rana

#### RECENT ADVANCES IN RESIDUE HYDROPROCESSING

*Kuwait Institute for Scientific Research, Safat, Kuwait*

### Keynote Lecture

09.45 KL-4

Dr. Vladimir Danilevich

#### ALUMINUM OXIDES AS SUPPORTS FOR HYDROTREATING CATALYSTS

*Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia*

### Oral Presentation

10.15 OP-39

Ivanchina E., Chuzlov V., Ivashkina E., Nazarova G., Tyumentsev A.

#### MODELING OF MOTOR GASOLINE COMPONENTS COMPLEX PRODUCTION

*National research Tomsk Polytechnic University, Tomsk, Russia*

10.30 – 11.00 – Coffee

### Oral Presentations

11.00 OP-40

Malbakhova I.A.<sup>1</sup>, Titkov A.I.<sup>1</sup>, Matvienko A.A.<sup>1</sup>, Popov M.P.<sup>1,2</sup>, Nemudry A.P.<sup>1</sup>

#### THE DEVELOPMENT OF NICKEL MEMBRANES FOR HYDROGEN PURIFICATION

<sup>1</sup>*Institute of Solid State Chemistry and Mechanochemistry, SB RAS, Novosibirsk, Russia*

<sup>2</sup>*Novosibirsk State University, Novosibirsk, Russia*

11.15 OP-41

Snytnikov P.V.<sup>1,2</sup>, Rogozhnikov V.N.<sup>1,2</sup>, Badmaev S.D.<sup>1,2</sup>, Potemkin D.I.<sup>1,2</sup>, Shilov V.A.<sup>1,2</sup>, Ruban N.V.<sup>1,2</sup>, Gorlova A.M.<sup>1,2</sup>, Pechenkin A.A.<sup>1,2</sup>, Zazhigalov S.V.<sup>1</sup>, Belyaev V.D.<sup>1,2</sup>, Zagoruiko A.N.<sup>1,2</sup>, Sobyenin V.A.<sup>1,2</sup>

#### STRUCTURED CATALYSTS FOR HYDROCARBONS AND OXYGENATES MIXTURES CONVERSION TO HYDROGEN-RICH GAS

<sup>1</sup>*Boreskov Institute of Catalysis, Novosibirsk, Russia*

<sup>2</sup>*Novosibirsk State University, Novosibirsk, Russia*

11.30 OP-42

Dimitriadis A.<sup>1</sup>, Bezergianni S.<sup>1</sup>, Meletidis G.<sup>1</sup>, Kokkalis A.<sup>2</sup>, Doufas L.<sup>2</sup>

#### ANIMAL FATS: A PROSPEROUS FEED FOR 2<sup>ND</sup> GEN BIOFUELS PRODUCTION

<sup>1</sup>*Centre for Research & Technology Hellas (CERTH), Chemical Process & Energy Resources Institute (CPERI), Thessaloniki, Greece*

<sup>2</sup>*Green Innovative Company (GRINCO), Larisa, Greece*

**11.45 OP-43**

Vlasova E., Porsin A., Aleksandrov P., Bukhtiyarova G.

**CO-PROCESSING OF RAPESEED OIL – STRAIGHT RUN GAS OIL MIXTURE: PECULIARITIES OF ULSD PRODUCTION WITH IMPROVED COLD FLOW PROPERTIES**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

**12.00 OP-44**

Belskaya O.

**NEW CATALYSTS BASED ON LAYERED DOUBLE HYDROXIDES FOR THE FURFURAL HYDROGENATION**

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

**12.15 OP-45**

Margellou A.<sup>1</sup>, Rekos K.<sup>1</sup>, Fotopoulos A.<sup>1</sup>, Triantafyllidis K.<sup>1,2</sup>

**CATALYTIC HYDROGENOLYSIS OF LIGNIN TOWARDS THE PRODUCTION OF PHENOLIC BIO-OILS**

<sup>1</sup>*Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece*

<sup>2</sup>*Chemical Process and Energy Resources Institute, Centre for Research and Technology Hellas, Thessaloniki, Greece*

**12.30 OP-46**

Manaenkov O.V., Kislitsa O.V., Ratkevich E.A., Matveeva V.G., Sulman M.G., Sulman E.M.

**MAGNETICALLY RECOVERABLE CATALYST BASED ON HYPERCROSSLINKED POLYSTERENE FOR CELLULOSE HYDROCONVERSION INTO GLYCOLS**

*Tver Technical University, Tver, Russia*

**12.45 OP-47**

M.A. Romero, C.Prieto

**INDUSTRIAL HYDROCRACKING UNITS: NEW R&D CHALLENGES AND OPPORTUNITIES AS A WAY FORWARD TO IMPROVE REFINERY MARGINS**

*Cepsa Research Center, Madrid, Spain*

**13.00 – Closing Ceremony**

**13.15 – 14.15 – Lunch**

**15.00 – 18.00 – Excursion to Winery**

**April 30, Friday**

**09.00 – 19.00 Post-Tour to Edessa and Loutra Pozar**

## POSTER PRESENTATIONS

### PP-1

AlHumaidan F.S., **Rana M.S.**, Bouresli R., Raajasekaran N.

#### **GUARD BED CATALYST: ROLE OF TEXTURAL PROPERTIES AND THEIR CHARACTERIZATION**

*Petroleum Research Center, Kuwait Institute for Scientific Research, Safat, Kuwait*

### PP-2

**Altynov A.**, Bogdanov I., Temirbolat A., Kirgina M.

#### **INVESTIGATION OF THE INFLUENCE OF STABLE GAS CONDENSATE ZEOFORMING PROCESS TECHNOLOGICAL PARAMETERS ON THE OBTAINED PRODUCTS CHARACTERISTICS**

*National Research Tomsk Polytechnic University, Tomsk, Russia*

### PP-3

**Baygildin I.G.**, Vutolkina A.V., Maksimov A.L., Karakhanov E.A.

#### **HYDRODESULFURIZATION OF SULFUR-CONTAINING AROMATIC COMPOUNDS VIA WGSR OVER DISPERSED Ni–Mo SULFIDE CATALYSTS**

<sup>1</sup>*Lomonosov Moscow State University, Chemistry Department, Moscow, Russia*

<sup>2</sup>*Topchiev Institute of Petrochemical Synthesis, Russian Academy of Sciences, Moscow, Russia*

### PP-4

**Belinskaya N.S.**, Ivashkina E.N., Afanasyeva D.A., Krivtsova N.I., Vymyatnin E.K., Arkenova S.B., Kaliev T.A.

#### **DEVELOPMENT OF THE FORMALIZED SCHEME OF CHEMICAL CONVERSIONS IN THE PROCESS OF VACUUM GAS OIL HYDROTREATING FOR THE PROCESS MODELLING**

<sup>1</sup>*National Research Tomsk Polytechnic University, Tomsk, Russia*

<sup>2</sup>*S. Toraighyrov Pavlodar State University, Pavlodar, Kazakhstan*

### PP-5

Ivanchina E., Ivashkina E., Lutsenko A., Nazarova G., Vymyatnin E., **Belinskaya N.S.**

#### **HYDROCARBONS CONVERSION REGULARITIES OF DIESEL FRACTION WITH ATMOSPHERIC GAS OIL DURING HYDRODEPARAFFINIZATION**

*Tomsk Polytechnic University, Tomsk, Russia*

### PP-6

**Belozertseva N.E.**, Bogdanov I.A., Balzhanova A.T., Kirgina M.V.

#### **INVESTIGATION OF THE SYNTHESIS PARAMETERS INFLUENCE ON THE PRODUCT YIELD AND CHARACTERISTICS OF THE PRODUCED BIODIESEL FUELS**

*National Research Tomsk Polytechnic University, Tomsk, Russia*

### PP-7

**Bogdanov I.A.**, Altynov A.A., Belozertseva N.E., Kirgina M.V.

#### **IMPROVEMENT OF STRAIGHT-RUN DIESEL FUEL LOW-TEMPERATURE PROPERTIES ON THE ZEOLITE CATALYST**

*National Research Tomsk Polytechnic University, Tomsk, Russia*

#### PP-8

Boronoev M.P., Maximov A.L., Karakhanov E.A.

#### VACUUM GAS OIL HYDROTREATMENT USING NiMo(W)S AND Ni<sub>2</sub>P CATALYSTS SUPPORTED ON MESOPOROUS POLYMERIC NANOSPHERES

<sup>1</sup>Moscow State University, Chemistry Department, Moscow, Russia

<sup>2</sup>A. V. Topchiev Institute of Petrochemical Synthesis, Moscow, Russia

#### PP-9

Demikhova N., Artemova M., Glotov A., Tsaplin D., Ivanov E., Vinokurov V.

#### MICRO-MESOPOROUS Pt-CONTAINING CATALYSTS FOR XYLENES HYDROISOMERIZATION

<sup>1</sup>Gubkin Russian State University of Oil and Gas, Moscow, Russia

<sup>2</sup>Lomonosov Moscow State University, Chemistry Department, Moscow, Russia

#### PP-10

Dolganov I.M., Dolganova I.O., Solopova A.A., Pasyukova M.A., Bunaev A.A. Ivanchina E.D., Ivashkina E.N.

#### INFLUENCE OF FLOW RATE OF LINEAR ALKYL BENZENE IN FILM SULFONATION REACTOR ON CONCENTRATION OF TARGET PRODUCT AND TETRALINES AND SULFONES CONCENTRATION

National Research Tomsk Polytechnic University, Tomsk, Russia

#### PP-11

Enikeeva L.V., Faskhutdinov A.G., Arefyev I.A., Enikeev M.R., Gubaydullin I.M.

#### SIMULATION THE CATALYTIC PROCESS OF ISOMERIZATION REACTION OF PENTANE-HEXANE FRACTION TO MAXIMIZE THE OCTANE NUMBER OF REACTION PRODUCTS

<sup>1</sup>Novosibirsk State University, Novosibirsk, Russia

<sup>2</sup>Ufa State Petroleum Technological University, Ufa, Russia

<sup>3</sup>Institute of Petrochemistry and Catalysis of RAS, Ufa, Russia

#### PP-12

Enikeeva L.V., Potemkin D.I., Uskov S.I., Snytnikov P.V., Enikeev M.R., Gubaydullin I.M.

#### GRAVITY SEARCH ALGORITHM FOR DETERMINING THE OPTIMAL KINETIC PARAMETERS OF LOW-TEMPERATURE STEAM CONVERSION OF C<sub>2</sub> + HYDROCARBONS

<sup>1</sup>Novosibirsk State University, Novosibirsk, Russia

<sup>2</sup>Ufa State Petroleum Technological University, Ufa, Russia

<sup>3</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

<sup>4</sup>Novosibirsk State Technical University, Novosibirsk, Russia

<sup>5</sup>Institute of Petrochemistry and Catalysis of RAS, Ufa, Russia

#### PP-13

Díaz de León J.N.<sup>1</sup>, Huerta-Mata C.<sup>1,2</sup>, Kumar Chowdari R.<sup>1</sup>, Infantes-Molina A.<sup>3</sup>, Zepeda T.<sup>1</sup>, Alonso-Núñez G.<sup>1</sup>, Fuentes-Moyado S.<sup>1</sup>, Huirache-Acuña R.<sup>2</sup>

#### Two steps synthesis of bulk NiW catalysts for 3-methyl thiophene desulfurization

<sup>1</sup>Universidad Nacional Autónoma de México, Nanoscience and Nanotechnology Center, Ens., B.C., México

<sup>2</sup>Facultad de Ingeniería Química, Universidad Michoacana de San Nicolás de Hidalgo, Mexico

<sup>3</sup>Universidad de Malaga, Departamento de Química Inorgánica, Cristalografía y mineralogía Malaga, Spain

**PP-14**

Glazov N.A., Zagoruiko A.N., Dik P.P.

**CONNECTION BETWEEN STRUCTURE ATTRIBUTES AND ANALYTICAL METHODS USED FOR STOCHASTIC RECONSTRUCTION OF VACUUM GASOIL**

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

**PP-15**

Ziyadullaev O.E., Abdurakhmanova S.S., Samatov S.B., Otamukhamedova G.Q., Tirkasheva S.I., Ikramov A.

**SYNTHESIS OF ACETYLENE ALCOHOLS BY CATALYSTS  $ZrO_2/Ti(O^iPR)_4/PHME$  AND  $Sn(OTf)_2/NET_3/MECN$** 

<sup>1</sup>*Chirchik State Pedagogical Institute, Chirchik, Uzbekistan*

<sup>2</sup>*National University of Uzbekistan, Tashkent, Uzbekistan*

<sup>3</sup>*Tashkent Chemical Technological Institute, Tashkent, Uzbekistan*

**PP-16**

Gubaydullin I.M., Koledina K.F., Zaynullin R.Z., Koledin S.N.

**MATHEMATICAL MODELING OF KINETICS OF GASOLINE CATALYTIC REFORMING**

<sup>1</sup>*Institute of Petrochemistry and Catalysis RAS, Ufa, Russia*

<sup>2</sup>*Ufa State Petroleum Technological University, Ufa, Russia*

**PP-17**

Ignatyeva V.I., Caplin D.E., Maximov A.L., Karakhanov E.A.

**MODIFIED ZEOLITE MESOPOROUS CATALYST SYSTEMS OF TYPE ZSM-12 FOR ONE-STEP CONVERSION OF CYCLOHEXANE TO  $\epsilon$ -CAPROLACTONE**

<sup>1</sup>*Moscow State University, Chemistry Department, Moscow, Russia*

<sup>2</sup>*A.V. Topchiev Institute of Petrochemical Synthesis, Moscow, Russia*

**PP-18**

Isaeva V.I., Chernyshev V.V., Tarasov A.L., Kustov L.M.

**CONVERSION OF CARBON DIOXIDE INTO PROPIONIC ALDEHYDE ON Co (Rh) NANOPARTICLES ENCAPSULATED IN THE METAL-ORGANIC MATRIX MIL-53 (Al)**

<sup>1</sup>*National University of Science and Technology "MISIS", Moscow, Russia*

<sup>2</sup>*N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia*

<sup>3</sup>*Chemistry Department, M.V. Lomonosov Moscow State University, Moscow, Russia*

**PP-19**

Kazakova M.A., Vatutina Y.V., Kazakov M.O., Klimov O.V., Noskov A.S.

**NOVEL COMPOSITE SUPPORT FOR CoMoS HYDROTREATING CATALYST BASED ON MWCNTs GROWN ON  $\gamma$ - $Al_2O_3$  BY CVD**

<sup>1</sup>*Boreskov Institute of Catalysis, Novosibirsk, Russia*

<sup>2</sup>*Novosibirsk State University, Novosibirsk, Russia*

**PP-20**

Koledina K.F., Gubaydullin I.M., Koledin S.N.

**MULTI-CRITERIAL OPTIMIZATION OF A HETEROGENEOUS CATALYTIC REACTION**

<sup>1</sup>*Institute of Petrochemistry and Catalysis RAS, Ufa, Russia*

<sup>2</sup>*Ufa State Petroleum Technological University, Ufa, Russia*



**PP-21**

**Kondrasheva N.K.**, Konoplin R.R., Kondrashev D.O., Parfenova L.V., Shaidulina A.A.

**PUT INTO INDUSTRIAL PRODUCTION DIFFICULTIES OF NOVEL EFFECTIVE HYDRODESULFURIZATION-CATALYSTS IN RUSSIAN FEDERATION**

*Saint-Petersburg Mining University, Saint Petersburg, Russia*

**PP-22**

**Kovalev I.V.**, Popov M.P., Bychkov S.F., Malbakhova I.A., Nemudry A.P.

**CATALYTIC CONVERSION OF HYDROCARBONS USING OXYGEN-SELECTIVE MICROTUBULAR MEMBRANES FOR HYDROGEN PRODUCTION**

<sup>1</sup>*Institute of Solid State Chemistry and Mechanochemistry, SB RAS, Novosibirsk, Russia*

<sup>2</sup>*Novosibirsk State Technical University, Novosibirsk, Russia*

<sup>3</sup>*Novosibirsk State University, Novosibirsk, Russia*

**PP-23**

Krivosos O.I., Terekhova E.N., **Belskaya O.B.**

**CATALYTIC HYDROPROCESSING OF ORGANIC MATTER OF SAPROPELS IN VALUABLE CHEMICAL PRODUCTS**

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

**PP-24**

**Krivtsova N.I.**, Kotkova E.P.

**JOINT HYDROTREATING OF DIESEL FRACTION WITH GASOLINE**

*National Research Tomsk Polytechnic University, Tomsk, Russia*

**PP-25**

**Najafova M.A.**, Salmanova C.G.

**INITIATED PHOTOCATALYTIC PROCESSES OF HYDROTREATMENT OF HEAVY OIL RESIDUES**

*Institute of Petrochemical Processes named after Yu.G. Mamedaliyev ANAS, Baku, Azerbaijan*

**PP-26**

**Nazarova G.Yu.**, Ivanchina E.D., Chernyakova E.S., Pchelintseva I.V., Poluboyartsev D.S.

**OPTIMIZATION OF A SEMIREGENERATIVE CATALYTIC REFORMING OF NAPHTHA WITH THE MATHEMATICAL MODELLING METHOD USING**

<sup>1</sup>*National Research Tomsk Polytechnic University, Tomsk, Russia*

<sup>2</sup>*«GasInformPlast» Well Testing Center, Tomsk, Russia*

<sup>3</sup>*Joint stock company «Tomsk Oil and Gas Research and Design Institute», Tomsk, Russia*

**PP-27**

Nikoshvili L., Grigorev M., Abusuek D., Mikhailov S., **Matveeva V.**, Sulman E.

**MONO- AND BIMETALLIC CATALYSTS BASED ON HYPER-CROSSLINKED POLYSTYRENE FOR HYDROGENATION OF BIOMASS-DERIVED LEVULINIC ACID**

*Tver State Technical University, Tver, Russia*

**PP-28**

Salnikova K.E., Sulman M.G., Mikhailov S.P., Bykov A.V., **Matveeva V.G.**

**FURFURYL ALCOHOL AS ONE OF THE PRODUCTS OF LIGNOCELLULOSIC BIOMASS HYDROTREATMENT**

<sup>1</sup>*Tver State Technical University, Tver, Russia*

<sup>2</sup>*Tver State University, Tver, Russia*

### PP-29

Orlova A.M., Kirgina M.V., Bogdanov I.A.

#### INVESTIGATION THE INFLUENCE OF ADDITION THE HEAVY N-PARAFFINS ON THE EFFECTIVENESS OF DEPRESSANT ADDITIVE ACTION

National Research Tomsk Polytechnic University, Tomsk, Russia

### PP-30

Podryga V., Polyakov S., Trapeznikova M., Churbanova N.

#### DEVELOPING OF MULTISCALE APPROACH TO HPC-SIMULATION OF MULTIPHASE FLUID FLOWS

<sup>1</sup>Keldysh Institute of Applied Mathematics RAS, Moscow, Russia

<sup>2</sup>Moscow Automobile and Road Construction State Technical University, Moscow, Russia

<sup>3</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute), Moscow, Russia

### PP-31

Popov M.V., Zagoruiko A.N., Brester A.E., Lopatin S.A.

#### DECOMPOSITION OF LIGHT HYDROCARBON TO HYDROGEN ON A FIBERGLASS CATALYST

<sup>1</sup>N.D. Zelinsky Institute of Organic Chemistry Russian Academy of Sciences, Moscow, Russia

<sup>2</sup>Novosibirsk Technical State University, Novosibirsk, Russia

<sup>3</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

### PP-32

Zazhigalov S., Popov M., Belotserkovskiy V., Nemudry A., Zagoruiko A.

#### MATHEMATICAL MODELING AND EXPERIMENTAL STUDIES OF HYDROGEN COMBUSTION IN MICROTUBULAR SOLID OXIDE FUEL CELLS

<sup>1</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

<sup>2</sup>Novosibirsk State University, Russia

<sup>3</sup>Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia

### PP-33

Zazhigalov S.V.<sup>1,2</sup>, Rogozhnikov V.N.<sup>1,2</sup>, Snytnikov P.V.<sup>1,2</sup>, Potemkin D.I.<sup>1,2</sup>, Simonov P.A.<sup>1,2</sup>, Shilov V.A.<sup>1,2</sup>, Ruban N.V.<sup>1,2</sup>, Kulikov A.V.<sup>1,2</sup>, Sobyenin V.A.<sup>1,2</sup>, **Zagoruiko A.N.**<sup>1,2</sup>

#### MODELING OF HYDROGEN PRODUCTION BY DIESEL REFORMING AT Rh/Ce<sub>0.75</sub>Zr<sub>0.25</sub>O<sub>2-δ</sub>-η-Al<sub>2</sub>O<sub>3</sub>/FeCrAl WIRE MESH HONEYCOMB CATALYTIC MODULE

<sup>1</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

<sup>2</sup>Novosibirsk State University, Novosibirsk, Russia

### PP-34

Potemkin D.I., Uskov S.I., Gorlova A.M., Zagoruiko A.N., Fedorova Z.A., Snytnikov P.V., Kirillov V.A., Sobyenin V.A.

#### HYTHANE PRODUCTION VIA LOW-TEMPERATURE STEAM REFORMING OF NATURAL GAS

<sup>1</sup>Boreskov Institute of Catalysis, Novosibirsk, Russia

<sup>2</sup>Novosibirsk State University, Novosibirsk, Russia

### PP-35

Roldugina E.A., Shayakhmetov N.N., Maximov A.L., Karakhanov E.A.

#### HYDROTREATMENT OF FURFURAL AS BIO-OIL MODEL COMPOUND OVER Ru-CATALYSTS SUPPORTED ON MESOPOROUS MATERIALS

<sup>1</sup>Lomonosov Moscow State University, Department of Chemistry, Moscow, Russia

<sup>2</sup>A.V. Topchiev Institute of Petrochemical Synthesis RAS, Moscow, Russia

**PP-36**

**Salnikov V.A.**, Borutskii P.N., Dorofeeva E.A., Sorokin I.I., Pakhomov N.A.

**DEVELOPMENT OF NiMoP CATALYST FOR HYDROTREATING OF DIESEL FUEL UNDER HIGH PRESSURE**

<sup>1</sup>LLC RPC «Olkat», Saint Petersburg, Russia

<sup>2</sup>Saint-Petersburg State Institute of Technology (SPSIT), Saint Petersburg, Russia

**PP-37**

**Semikin K.V.**, Sladkovskiy D.A., Sladkovskaya E.V., Kuzichkin N.V.

**PROPANOL PRODUCTION FROM PROPYL PROPIONATE**

Saint-Petersburg State Institute of Technology, Saint Petersburg, Russia

**PP-38**

**Sineva L.V.**, Gorokhova E.O., Gryaznov K.O., Mordkovich V.Z.

**ZEOLITES AS A TOOL FOR INTENSIFICATION OF MASS TRANSFER ON THE SURFACE OF A COBALT FISCHER–TROPSCH SYNTHESIS CATALYST**

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

**PP-39**

**Stepacheva A.A.**, Bykov A., Demidenko G., Nikoshvili L., Bakhvalova E., Dobryanskaya A., Matveeva V., Sulman M.

**NOBLE METAL-CONTAINING NANOPARTICLES STABILIZED IN HYPERCROSSLINKED POLYSTYRENE AS EFFECTIVE CATALYSTS OF AROMATIC RING HYDROGENATION**

Tver Technical University, Dep. Biotechnology, chemistry and standardization, Tver, Russia

**PP-40**

**Stepacheva A.A.**, Shimanskaya E., Molchanov V., Sulman A., Sulman E., Sulman M.

**LIGNIN AND MODEL SUBSTANCE CATALYTIC HYDROGENOLYSIS**

Tver State Technical University, Tver, Russia

**PP-41**

**Tirado A.**, Trejo F., Ancheyta J.

**MODELLING OF A BENCH-SCALE FIXED-BED REACTOR FOR CATALYTIC HYDROTREATING OF VEGETABLE OIL**

<sup>1</sup>Instituto Politécnico Nacional, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada Unidad Legaria, Mexico City, Mexico

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**Vutolkina A.V.**, Pimerzin A.I., Glotov A.P.

**MESOPOROUS HALLOYSITE AND HIERARCHICAL MCM-41/HALLOYSITE ALUMINOSILICATES SUPPORTED CoMoS HDS CATALYSTS**

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Yunusov M.P., **Nasullaev Kh.A.**, Djalalova Sh.B., Gulomov Sh.T., Sultanov A.P.

**STUDY OF ZEOLITE SORBENTS SYNTHESIZED BASED ON LOCAL KAOLIN**

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Rahimjanov B.B.

**OPTIMIZATION OF THE SYNTHESIS TECHNOLOGY OF HIGHLY DISPERSED ALUMINUM HYDROXIDE USING VARIOUS REAGENTS**

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Pérez-Cabrera L. <sup>1</sup>, Antúnez-García J. <sup>1</sup>, Díaz de León J.N. <sup>1</sup>, Suresh C. <sup>2</sup>, Zepeda T.A. <sup>1</sup>, **Fuentes-Moyado S.** <sup>1</sup>, Alonso-Núñez G. <sup>1</sup>

**DOUBLE PROMOTION EFFECT ON HDS CoNiMo/Al<sub>2</sub>O<sub>3</sub> CATALYSTS APPLIED IN THE HYDRODESULFURIZATION OF DIBENZOTHIOPHENE**

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**NiMoW CATALYSTS SUPPORTED ON MgO-Al<sub>2</sub>O<sub>3</sub> MIXED OXIDES FOR THE HYDRODESULFURIZATION OF DIBENZOTHIOPHENE**

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