

# IV Scientific-Technological Symposium



**CATALYTIC  
HYDROPROCESSING  
IN OIL REFINING**

**APRIL 26 - 30  
2021 / GREECE**

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

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

### **Symposium Organizers**

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

## **LIST OF ACCEPTED PRESENTATIONS**

## Plenary Lectures

### PL-1

**Prof. Guido Busca**

**CATALYTIC MATERIALS BASED ON SILICA AND ALUMINA**

*The University of Genova, Italy*

### PL-2

**Prof. Wilhelm Schwieger**

**HIERARCHICAL ZEOLITES IN PROCESSING OF HYDROCARBONS**

*Friedrich–Alexander University Erlangen–Nürnberg, Germany*

### PL-3

### PL-4

**Prof. Angeliki Lemonidou**

**INTENSIFICATION OF STEAM REFORMING FOR HYDROGEN PRODUCTION**

*Aristotle University of Thessaloniki, Greece*

### PL-5

**Dr. Mohan S. Rana**

**RECENT ADVANCES IN RESIDUE HYDROPROCESSING**

*Kuwait Institute for Scientific Research, Safat, Kuwait*

## Keynote Lectures

### 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*

### KL-2

**Prof. Maria Filipa Ribeiro**

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

*Instituto Superior Técnico, Lisbon, Portugal*

### KL-3

**Prof. Joris Thybaut**

**SIMULATING COMPLEX MIXTURES CONVERSION FROM FIRST PRINCIPLES**

*Ghent University, Ghent, Belgium*

### 09.45

### KL-4

**Dr. Vladimir Danilevich**

**ALUMINUM OXIDES AS SUPPORTS FOR HYDROTREATING CATALYSTS**

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

## Oral Presentations

### 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 нефт, Saint Petersburg, Russia*

### 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*

### 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 нефт, Saint Petersburg, Russia*

### 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*

### 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*

### 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*

#### OP-7

**Srouf H.**<sup>1</sup>, Astafan A.<sup>1</sup>, Devers E.<sup>2</sup>, Toufaily J.<sup>3</sup>, Hamieh T.<sup>3</sup>, Pinard L.<sup>1</sup>, Batiot-Dupeyrat C.<sup>1</sup>

#### **REGENERATION OF AN AGED HYDROTREATING CATALYST VIA NON-THERMAL PLASMA PROCESS**

<sup>1</sup>Université de Poitiers, Poitiers, France

<sup>2</sup>IFP Energies nouvelles, Solaize, France

<sup>3</sup>Université Libanaise, Beirut, Liban

#### 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*

#### 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

#### 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 нефт, St Petersburg, Russia

#### OP-11

#### 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/AI 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

#### 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*

#### 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>, Paukshitis 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>*Borekov 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*

#### 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*

#### 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**

*Borekov Institute of Catalysis, Novosibirsk, Russia*

#### 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*

#### 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**

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

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

#### 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*

## 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

## 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

## 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>Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 – UCCS – Unité de Catalyse et Chimie du Solide, F-59000 Lille, France

<sup>3</sup>Univ. Lille, CNRS, INRA, Centrale Lille, ENSCL, Univ. Artois, FR 2638 - IMEC - Institut Michel-Eugène Chevreul, F-59000 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

## 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

## 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

## 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-Alatrisme 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

**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 нефт, Saint Petersburg, Russia

**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

**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

**OP-29**

**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 нефт, Saint Petersburg, Russia

**OP-30**

**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

**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

**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**

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<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*

### 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*

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### 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*

### 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*

### 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*

### OP-38

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

#### **MODELING OF MOTOR GASOLINE COMPONENTS COMPLEX PRODUCTION**

*National research Tomsk Polytechnic University, Tomsk, Russia*

### OP-39

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

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

*Boreskov Institute of Catalysis, Novosibirsk, Russia*

### 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*



#### 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>, Sobyandin V.A.<sup>1,2</sup>

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

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

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

#### 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*

#### 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**

*Borekov Institute of Catalysis, Novosibirsk, Russia*

#### OP-44

**Belskaya O.**

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

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

#### 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**

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

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