

IV Scientific-Technological Symposium



**CATALYTIC
HYDROPROCESSING
IN OIL REFINING**

Apr 27 - May 1, 2020 / Greece



Preliminary Scientific Program

IV Scientific-Technological Symposium CATALYTIC HYDROPROCESSING IN OIL REFINING (STS HydroCat-2020)

Thessaloniki, Greece, April 27 – May 1, 2020

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)*

Symposium Proceedings

CATALYSIS TODAY Journal (Elsevier)

Preliminary Timetable

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

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

April 27, Monday

09.00 – 10.00 Registration

10.00 – Opening Ceremony

Plenary Lecture

10.15

PL-1

Prof. Guido Busca

CATALYTIC MATERIALS BASED ON SILICA AND ALUMINA

The University of Genova, Italy

Keynote Lectures

11.00

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

11.30

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 Presentations

12.00

OP-1

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

INFLUENCE OF Si DOPING TO HYDROTREATING CATALYSTS OF FCC FEED PRETREATMENT

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*PJSC Gazprom neft, Saint Petersburg, Russia*

12.15

OP-2

Escobar J.¹, Gutiérrez A.¹, Ramírez J.², Cuevas R.², Ángeles C.¹, Barrera M.C.³

THIOPHENE HDS ON La-MODIFIED CoMo/AL₂O₃ SULFIDED CATALYSTS. EFFECT OF RARE-EARTH CONTENT

¹*Instituto Mexicano del Petróleo, México City, México*

²*UNICAT, México City, México*

³*F.C.Q.-CIRES, Univ. Veracruzana, Coatzacoalcos, México*

12.30

OP-3

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

NEW DIRECTION IN THE HYDROPROCESSING OF GASOLINE FRACTIONS: INTEGRATION OF C₅-C₆ AND C₇-PARAFFIN HYDROCARBONS ISOMERIZATION PROCESSES

¹Center of New Chemical Technologies BIC, Omsk, Russia

²PJSC Gazprom нефт, Saint Petersburg, Russia

12.45

OP-4

Glotov A.¹, Stavitskaya A.¹, Smirnova E.¹, Gushchin P.¹, Vinokurov V.¹, Lvov Y.^{1,2}

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

¹Gubkin University, Moscow, Russia

²Institute for Micromanufacturing, Louisiana Tech University, Ruston, USA

13.00 – 14.00 Lunch

Oral Presentations

14.00

OP-5

Glišić S.B.¹, Prokić-Vidojević D.², Orlović A.M.¹

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

¹University of Belgrade, Belgrade, Serbia

²Military Technical Institute (VTI), Belgrade, Serbia

14.15

OP-6

Yashnik S.A.¹, Ismailov E.G.², Ismagilov Z.R.¹

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

¹Boreskov Institute of Catalysis, Novosibirsk, Russia

²Institute of Petrochemical Processes of ANAS, Baku, Azerbaijan

14.30

OP-7

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

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

¹Université de Poitiers, Poitiers, France

²IFP Energies nouvelles, Solaize, France

³Université Libanaise, Beirut, Liban

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.¹, Lesage C.^{1,2}, Legens C.¹, Briois V.²

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

¹*IFP Energies nouvelles, Solaize, France*

²*Synchrotron SOLEIL L'orme des Merisiers, Gif-sur-Yvette Cedex, France*

15.15

OP-10

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

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

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*PJSC Gazprom нефт, St Petersburg, Russia*

15.30

OP-11

Romero M.A., Prieto C.

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

¹*CEPSA RESEARCH CENTER, Madrid, Spain*

15.45

OP-12

Golubev I.S.^{1,2}, Dik P.P.¹, Kazakov M.O.¹, Pereyma V.Yu.¹, Klimov O.V.¹, Kondrashev D.O.³, Golovachev V.A.³, Vedernikov O.S.³, Kleimenov A.V.³, Noskov A.S.¹

NiW/Y-ASA-Al₂O₃ CATALYSTS FOR SECOND STAGE HYDROCRACKING: INFLUENCE OF Si/Al RATIO IN ZEOLITE

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*Novosibirsk State University, Novosibirsk, Russia*

³*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.¹, Dik P.P.¹, Gabrienko A.A.¹, Sorokina T.P.², Paukshtis E.A.¹, Kazakov M.O.¹, Doronin V.P.², Kondrashev D.O.³, Golovachev V.A.³, Kleimenov A.V.³, Vedernikov O.S.³, Klimov O.V.¹, Noskov A.S.¹

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

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*Center for New Chemical Technologies BIC, Omsk, Russia*

³*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 AL₂O₃ IN HYDROTREATING OF STRAIGHT RUN GAS OIL

Boreskov Institute of Catalysis, Novosibirsk, Russia

17.30

OP-17

Xuanjun Ai¹, Xiujuan Chi¹, Donge Wang¹, Zhjian Tian¹, Qi Shi², Jihui Wang²

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

¹*Dalian National Laboratory for Clean Energy, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China*

²*School of Biological Engineering, Dalian Polytechnic University, Dalian, China*

17.45

OP-18

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

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

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*Center of New Chemical Technologies BIC, Omsk, Russia*

³*PJSC Gazprom нефт, Saint Petersburg, Russia*

18.00 – Group Photo

19.00 – Welcome reception

April 28, Tuesday

Plenary Lectures

09.00

PL-2

Prof. Thomas Weber

HYDROTREATING CATALYSTS - ASPECTS OF FUNDAMENTAL UNDERSTANDING AND PRODUCT DEVELOPMENT

Eindhoven University of Technology, The Netherlands

09.45

PL-3

Prof. Wilhelm Schwieger

HIERARCHICAL ZEOLITES IN PROCESSING OF HYDROCARBONS

Friedrich–Alexander University Erlangen–Nürnberg, Germany

10.30 – 11.00 Coffee

11.00 – 13.00

Round table

Major technological challenges and development trends of hydroprocesses catalysts for oil refineries. Strategy for 2020 – 2030

13.00 – 14.00 - Lunch

Oral Presentations

14.00

OP-19

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

LINEAR ALKANES HYDROISOMERIZATION OVER COMOS CATALYSTS SUPPORTED ON MODIFIED ALUMINOSILICATES

¹*Samara State Technical University, Samara, Russia*

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

14.15

OP-20

Karakoulia S.A.¹, Heracleous E.^{1,2}, Lappas A.A.¹

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

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

²*School of Science & Technology, International Hellenic University (IHU), Thessaloniki, Greece*

14.30

OP-21

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

CHARACTERIZATION AND HYDROISOMERIZATION PERFORMANCE OF Mg-PROMOTED Pt/ZSM-23/Al₂O₃ CATALYSTS

Boreskov Institute of Catalysis, Novosibirsk, Russia

14.45

OP-22

Kokliukhin A.^{1,2,5}, Nikulshina M.^{1,2}, Mozhaev A.^{1,3,4}, Lancelot C.², Blanchard P.², Marinova M.³, Mentré O.², Lamonier C.², Nikulshin P.^{1,4,5}

EFFECT OF Mo/W RATIO ON THE CATALYTIC PROPERTIES OF ALUMINA SUPPORTED HYDROTREATING CATALYSTS PREPARED FROM MIXED SiMo_nW_{12-n} KEGGIN TYPE HETEROPOLYACIDS

¹*Samara State Technical University, Samara, Russia*

²*Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 – UCCS – Unité de Catalyse et Chimie du Solide, F-59000 Lille, France*

³*Univ. Lille, CNRS, INRA, Centrale Lille, ENSCL, Univ. Artois, FR 2638 - IMEC - Institut Michel-Eugène Chevreul, F-59000 Lille, France*

⁴*All-Russia Research Institute of Oil Refining, Moscow, Russia*

⁵*Gubkin Russian State University of Oil and Gas, Moscow, Russia*

15.00

OP-23

Sazama P.¹, Kaucký D.¹, Morávková J.¹, Pilar R.¹, Bortnovsky O.²

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

¹*J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic*

²*Euro Support Manufacturing Czechia, Litvínov, Czech Republic*

15.15

OP-24

Tregubenko V.Yu.¹, Vinichenko N.V.¹, Vagapova M.N.², Veretelnikov K.V.³, Belyi A.S.^{1,2}

NEW NAPHTHA-REFORMING Pt/Al₂O₃ CATALYSTS WITH Mo OR In

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

²*Omsk State Technical University, Omsk, Russia*

³*Boreskov Institute of Catalysis, Novosibirsk, Russia*

15.30

OP-25

Pacheco-Jiménez H.O.^{1,2}, Santes V.¹, Sotelo-Boyás R.², Santolalla-Vargas C.E.¹, Gonzalez-Alatrisme J.E.¹
HYBRID DIESEL PRODUCTION VIA CATALYTIC CO-HYDROPROCESSING OF BLENDS GASOIL-WASTE COOKING OIL

¹*Departamento de Biociencias e Ingeniería, Centro Interdisciplinario de Investigaciones y Estudios sobre Medio Ambiente y Desarrollo (CIEMAD), Instituto Politecnico Nacional, Mexico City, Mexico*

²*Departamento de Ingeniería Química Petrolera, Escuela Superior de Ingeniería Química e Industrias Extractivas (ESIQIE), Instituto Politecnico Nacional, Zacatenco, Mexico City, Mexico*

15.45

OP-26

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

REFORMING CATALYST FOR PRODUCING OF A LOW AROMATICS GASOLINE COMPONENT

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

²*PJSC Gazprom нефт, Saint Petersburg, Russia*

16.00

OP-27

Ntagkonikou V.^{1,2}, Bezergianni S.¹, Karonis D.²

AN ALTERNATIVE APPROACH FOR LCO UPGRADING

¹*Chemical Process and Energy sources Institute-CPERI, Centre of Research and Technology Hellas-CERTH, Thessaloniki, Greece*

²*National Technical University of Athens, Zografou Campus, Athens, Greece*

16.15

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

16.30 – 18.00

Coffe &
POSTER SESSION

18.00 – City-Tour around Thessaloniki

April 29, Wednesday

Plenary Lecture

09.00

PL-4

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-29

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

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

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

²*PJSC Gazprom нефт, Saint Petersburg, Russia*

10.30 – 11.00 - Coffee

Oral Presentations

11.00

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

11.15

OP-31

Stepacheva A.A.¹, Markova M.E.^{1,2}, Gavrilenko A.V.¹, Lugovoy Yu.V.¹, Sulman M.G.¹, Matveeva V.G.^{1,2}, Sulman E.M.¹

HIGHLY DISPERSED CATALYSTS FOR OIL HYDROPROCESSING IN SUPERCRITICAL CONDITIONS

¹*Tver State Technical University, Tver, Russia*

²*Tver State University, Tver, Russia*

11.30

OP-32

Stepanova L.^{1,2}, Belskaya O.^{1,3}, Trenikhin M.¹, Leont'eva N.¹, Gulyaeva T.¹, Likholobov V.⁴

THE EFFECT OF THE SUPPORT PRECURSOR ON THE PROPERTIES OF BIMETALLIC CATALYSTS Pt-Au/MgAlO_x IN THE PROPANE DEHYDROGENATION

¹Center of New Chemical Technologies BIC, Omsk, Russia

²Dostoevsky Omsk State University, Omsk, Russia

³Omsk State Technical University, Omsk, Russia

⁴Boreskov Institute of Catalysis, Novosibirsk, Russia

11.45

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

12.00

OP-34

Sotelo-Boyás R., Javier J.-F.

A BAYESIAN APPROACH FOR THE DISCRIMINATION OF KINETIC MODELS APPLIED TO THE HYDROCRACKING OF N-HEXADECANE

ESIQIE, Instituto Politécnico Nacional, Petroleum Chemical Engineering Department, Luis Enrique Erro Av., Nueva Industrial Vallejo, Gustavo A. Madero, Mexico City, Mexico

12.15

OP-35

Nazarova G.¹, Ivashkina E.¹, Ivanchina E.¹, Burumbaeva G.², Kaliev T.^{2,3}, Seitenova G.³

KINETIC PATTERNS OF VACUUM DISTILLATE CATALYTIC CRACKING ON DIFFERENT CATALYST

¹Tomsk Polytechnic University, Tomsk, Russia

²LLP Pavlodar Petrochemical Plant, Pavlodar, Kazakhstan

³S. Toraighyrov Pavlodar State University, Pavlodar, Kazakhstan

12.30

OP-36

Pernalte 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

12.45

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

13.00 – 14.00 - Lunch

15.00 – 18.00

Excursion to CPERI

19.00 - Banquet

April 30, Thursday

Plenary Lecture

09.00

PL-5

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-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

10.30 – 11.00 – Coffee

Oral Presentations

11.00

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

11.15

OP-40

Malbakhova I.A.¹, Titkov A.I.¹, Matvienko A.A.¹, Popov M.P.^{1,2}, Nemudry A.P.¹

THE DEVELOPMENT OF NICKEL MEMBRANES FOR HYDROGEN PURIFICATION

¹*Institute of Solid State Chemistry and Mechanochemistry, SB RAS, Novosibirsk, Russia*

²*Novosibirsk State University, Novosibirsk, Russia*

11.30

OP-41

Snytnikov P.V.^{1,2}, Rogozhnikov V.N.^{1,2}, Badmaev S.D.^{1,2}, Potemkin D.I.^{1,2}, Shilov V.A.^{1,2}, Ruban N.V.^{1,2}, Gorlova A.M.^{1,2}, Pechenkin A.A.^{1,2}, Zazhigalov S.V.¹, Belyaev V.D.^{1,2}, Zagoruiko A.N.^{1,2}, Sobyandin V.A.^{1,2}

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

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*Novosibirsk State University, Novosibirsk, Russia*

11.45

OP-42

Dimitriadis A.¹, Bezergianni S.¹, Meletidis G.¹, Kokkalis A.², Doufas L.²

ANIMAL FATS: A PROSPEROUS FEED FOR 2ND GEN BIOFUELS PRODUCTION

¹Centre for Research & Technology Hellas (CERTH), Chemical Process & Energy Resources Institute (CPERI), Thessaloniki, Greece

²Green Innovative Company (GRINCO), Larisa, Greece

12.00

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

12.15

OP-44

Belskaya O.

NEW CATALYSTS BASED ON LAYERED DOUBLE HYDROXIDES FOR THE FURFURAL HYDROGENATION

Center of New Chemical Technologies BIC, Omsk, Russia

12.30

OP-45

Margellou A.,¹ Rekos K.¹, Fotopoulos A.¹, Triantafyllidis K.^{1,2}

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

¹Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece

²Chemical Process and Energy Resources Institute, Centre for Research and Technology Hellas, Thessaloniki, Greece

12.45

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

13.00 – Closing Ceremony

13.15 – 14.15 – Lunch

15.00 – 18.00 – Excursion to Winery

May 1, 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

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

²*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

¹*National Research Tomsk Polytechnic University, Tomsk, Russia*

²*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 Ni₂P CATALYSTS SUPPORTED ON MESOPOROUS POLYMERIC NANOSPHERES

¹*Moscow State University, Chemistry Department, Moscow, Russia*

²*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

¹*Gubkin Russian State University of Oil and Gas, Moscow, Russia*

²*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

¹*Novosibirsk State University, Novosibirsk, Russia*

²*Ufa State Petroleum Technological University, Ufa, Russia*

³*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 C₂ + HYDROCARBONS

¹*Novosibirsk State University, Novosibirsk, Russia*

²*Ufa State Petroleum Technological University, Ufa, Russia*

³*Boreskov Institute of Catalysis, Novosibirsk, Russia*

⁴*Novosibirsk State Technical University, Novosibirsk, Russia*

⁵*Institute of Petrochemistry and Catalysis of RAS, Ufa, Russia*

PP-13

Frantsina E.V., Grinko A.A., Maylin M.V., Berdnikova A.A., Mashnich V.S.

THE USE OF CHROMATOGRAPHY-MASS SPECTROMETRY IN THE STUDY OF THE HYDROCARBON COMPOSITION OF DIESEL FUELS

National Research Tomsk Polytechnic University, Tomsk, Russia

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 $Sn(OTf)_2/NET_3/MECN$

¹Chirchik State Pedagogical Institute, Chirchik, Uzbekistan

²National University of Uzbekistan, Tashkent, Uzbekistan

³Tashkent 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

¹Institute of Petrochemistry and Catalysis RAS, Ufa, Russia

²Ufa 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 ϵ -CAPROLACTONE

¹Moscow State University, Chemistry Department, Moscow, Russia

²A.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)

¹National University of Science and Technology "MISIS", Moscow, Russia

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

³Chemistry 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 γ - Al_2O_3 BY CVD

¹Boreskov Institute of Catalysis, Novosibirsk, Russia

²Novosibirsk State University, Novosibirsk, Russia

PP-20

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

MULTI-CRITERIAL OPTIMIZATION OF A HETEROGENEOUS CATALYTIC REACTION

¹Institute of Petrochemistry and Catalysis RAS, Ufa, Russia

²Ufa 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

¹*Institute of Solid State Chemistry and Mechanochemistry, SB RAS, Novosibirsk, Russia*

²*Novosibirsk State Technical University, Novosibirsk, Russia*

³*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

¹*National Research Tomsk Polytechnic University, Tomsk, Russia*

²*«GasInformPlast» Well Testing Center, Tomsk, Russia*

³*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

¹*Tver State Technical University, Tver, Russia*

²*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

¹*Keldysh Institute of Applied Mathematics RAS, Moscow, Russia*

²*Moscow Automobile and Road Construction State Technical University, Moscow, Russia*

³*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

¹*N.D. Zelinsky Institute of Organic Chemistry Russian Academy of Sciences, Moscow, Russia*

²*Novosibirsk Technical State University, Novosibirsk, Russia*

³*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

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*Novosibirsk State University, Russia*

³*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Novosibirsk, Russia*

PP-33

Zazhigalov S.V.^{1,2}, Rogozhnikov V.N.^{1,2}, Snytnikov P.V.^{1,2}, Potemkin D.I.^{1,2}, Simonov P.A.^{1,2}, Shilov V.A.^{1,2}, Ruban N.V.^{1,2}, Kulikov A.V.^{1,2}, Sobyenin V.A.^{1,2}, **Zagoruiko A.N.**^{1,2}

MODELING OF HYDROGEN PRODUCTION BY DIESEL REFORMING AT Rh/Ce_{0.75}Zr_{0.25}O_{2-δ}-η-Al₂O₃/FeCrAl WIRE MESH HONEYCOMB CATALYTIC MODULE

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*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

¹*Boreskov Institute of Catalysis, Novosibirsk, Russia*

²*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

¹*Lomonosov Moscow State University, Department of Chemistry, Moscow, Russia*

²*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

¹*LLC RPC «Olkat», Saint Petersburg, Russia*

²*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

¹*Instituto Politécnico Nacional, Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada Unidad Legaria, Mexico City, Mexico*

²*Instituto Mexicano del Petróleo, Mexico City, Mexico*

PP-42

Vutolkina A.V., Pimerzin Al.A., Glotov A.P.

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

¹Gubkin Russian State University of Oil and Gas, Moscow, Russia

²Lomonosov Moscow State University, Faculty of Chemistry, Moscow, Russia

³Samara State Technical University, Samara, Russia

PP-43

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

STUDY OF ZEOLITE SORBENTS SYNTHESIZED BASED ON LOCAL KAOLIN

¹UzKFITI, Tashkent, Uzbekistan

²National University of Uzbekistan named after M. Ulugbek, Tashkent, Uzbekistan

PP-44

Yunusov M.P., Nasullaev Kh.A., Gulomov Sh.T., Turdieva D.P., Abduraxmanova I.S., Rahimjanov B.B.

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

¹UzKFITI, Tashkent, Uzbekistan

²National University of Uzbekistan named after M. Ulugbek, Tashkent, Uzbekistan

³TChTI, Tashkent, Uzbekistan