

Boreskov Institute of Catalysis of the Siberian Branch of Russian Academy of Sciences,
Novosibirsk, Russia

Russian Scientific and Cultural Center in Vienna, Russia

Federal Agency «Rossotrudnichestvo, Russia

Ministry of Education and Science of the Russian Federation

European Federation on Chemical Engineering

Scientific Council on Theoretical Fundamentals of Chemical Technology RAS

Scientific Council on Catalysis RAS



EFCE CONFERENCE
Event 691

**XIX International Conference
on Chemical Reactors
CHEMREACTOR-19**

Vienna, Austria
September 5 – 9, 2010

SCIENTIFIC PROGRAM

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Conference co-organizer, executive representative of the Organizing Committee: ILIKO TRAVEL company	

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SCIENTIFIC PROGRAM
XIX International Conference on Chemical Reactors
CHEMREACTOR-19

September 6

Monday

HALL 1

Morning Session

8.45 Opening

PLENARY LECTURES

Chairperson – Professor Alexander Noskov, Russia

9.00

PL-1

Yu. Matros

HOW TO DESIGN OPTIMAL CATALYTIC REACTOR?

Matros Technologies, Inc., USA

A Professor Mikhail Slin'ko Honorary Lecture

10.00

PL-2

Schouten J.C., de Croon M., Rebrov E., van der Schaaf J., Nijhuis X.

MULTIFUNCTIONAL DEVICES FOR INTENSIFIED CHEMICALS PROCESSING: FROM MICROREACTORS TO SPINNING DISKS

Eindhoven University of Technology, The Netherlands

11.00-11.20

Coffee-break

KEY-NOTE PRESENTATIONS

Chairperson – Professor Sergey Alekseenko, Russia

11.20

KN-1

Sinev M.¹, Tulenin Y.P.¹, Fattakhova Z.T.¹, Lomonosov V.I.², Gordienko Y.A.²

OXIDATIVE COUPLING OF METHANE. THIRTY YEARS OF STUDIES: FROM PHENOMENOLOGICAL TO NON-CONTRADICTIONARY KINETIC DESCRIPTION

¹*Semenov Institute of Chemical Physics RAS (Moscow), Russia*

²*ZAO "SCHAG" Company (Moscow), Russia*

11.50

KN-2

Bunimovich G., Matros Y.S.

REVERSED-FLOW REACTORS: POTENTIAL AND REALIZED

Matros Technologies, Inc. (St. Louis), USA

12.20-14.00

Lunch

Afternoon Session
ORAL PRESENTATIONS
SECTION I

Advances in Chemical Reactors Fundamentals
Chemical Reactions Kinetics
Fundamentals of Chemical Reactors Simulation
Heat & Mass Transfer in Chemical Reactors
Hydrodynamics and CFD Studies in Chemical Reactors

Chairperson – Professor Oleg Temkin, Russia

14.00

OP-I-1

Grenman H., Murzin D.Y., Salmi T.

REACTION KINETICS AND REACTION ENHANCEMENT FOR SOLID-LIQUID REACTIONS

Åbo Akademi University (Turku/Åbo), Finland

14.20

OP-I-3

Pécar D., Gorsek A.

COMPARISON OF CHEMICAL AND ENZYMATIC CATALYSIS: KINETIC STUDIES IN BENCH-TOP PACKER BED REACTOR

University of Maribor, Faculty of Chemistry and Chemical Engineering (Maribor), Slovenia

14.40

OP-I-5

Elokhin V.¹, Kalgin K.², Kovalyov E.¹, Matveev A.¹, Gorodetskii V.¹

SPECIFICITY OF THE OSCILLATIONS PERFORMANCE OVER THE FLEXIBLE SURFACES OF THE METAL NANOPARTICLES: MONTE-CARLO APPROACH

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Institute of Computational Mathematics and Mathematical Geophysics of SB RAS (Novosibirsk), Russia*

15.00

OP-I-6

Sheintuch M., German E., Nekhamkina O.

TRENDS IN BISTABILITY DOMAINS OF CO OXIDATION ON TRANSITION METALS CALCULATED FROM FIRST PRINCIPLES

Institute of Technology, Technion (Haifa), Israel

15.20

OP-I-8

Sadykov V.A.^{1,2}, Sazonova N.², Gubanova E.², Pokrovskaya S.A.^{1,2}, Chumakova N.^{1,2}, Bobin A.^{1,3}, Schuurman Y.³, C. Mirodatos³

TRANSIENT KINETIC STUDIES OF DRY REFORMING OF METHANE OVER Pt/PrCeZrO CATALYST

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

³*Institut de Recherches sur la Catalyse et l'Environnement de Lyon (Villeurbanne), France*

15.40

OP-I-9

Lopez-Isunza F.

A REDOX KINETICS FOR THE PARTIAL OXIDATION OF O-XYLENE ON V₂O₅/TiO₂ CATALYSTS

Universidad Autónoma Metropolitana-Iztapalapa (Iztapalapa), Mexico

16.00-16.20

Coffee-break

Chairperson – Professor Farid Aiouache, UK

16.20

Presentation of Autoclave Engineers company

Barclay D.¹, Thomas I.², Nogin Yu.²

NEWLY DEVELOPED AUTOCLAVE ENGINEERS EQUIPMENT FOR CATALYTIC RESEARCH

¹*Autoclave Engineers Division of Snap-Tite Inc. (Erie), USA*

²*ROSTBIOCHEM/LAAX Ltd. (Novosibirsk), Russia*

16.40

OP-1-10

Rebrov E., Schouten J.

SINGLE PHASE FLUID FLOW DISTRIBUTION AND HEAT TRANSFER IN MICROSTRUCTURED REACTORS

Eindhoven University of Technology (Eindhoven), The Netherlands

17.00

OP-I-12

Mier D.¹, Aguayo A.T.¹, Gamero M.¹, Bilbao J.¹, Gayubo A.²

KINETIC MODELLING OF THE JOINT TRANSFORMATION OF N-BUTANE AND METHANOL

¹*Universidad del País Vasco (Bilbao), Spain*

²*University of the Basque Country (San Sebastian), Spain*

17.20

OP-I-13

Volkova G.G., Budneva A.A., Paukshtis E.A., Petrov R.V., Reshetnikov S.

n-HEXANE SKELETAL ISOMERIZATION OVER BYFUNCTIONAL CATALYSTS: EXPERIMENT AND KINETIC MODELING

Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

17.40

OP-I-29

Woehl P.¹, Lavric E.D.¹, Kuandykov L.L.², Chivilikhin M.²

MODELING OF RESIDENCE TIME DISTRIBUTION IN CORNING® ADVANCED-FLOW™ REACTOR

¹*Corning Inc. (Corning, Avon), France*

²*Corning SNG (St. Petersburg), Russia*

18.00

OP-I-30

Jaso S.M., Arellano - Garcia H., Wozny G.

OXIDATIVE COUPLING OF METHANE IN THE FLUIDIZED BED REACTOR: INFLUENCE OF HYDRODYNAMICS AND KINETICS ON THE PRODUCT DISTRIBUTION

Dynamik und Betrieb Technischer Anlagen, Berlin Institute of Technology (Berlin), Germany

Round table Autoclave Engineers

Exhibition opening

HALL 2

Afternoon Session

SECTION II

Chemical Reaction Engineering and Reactors Design – Novel Approaches, Modeling, Scale-Up, Optimization:

New Designs of Chemical Reactors (Membrane Reactors, Microreactors,
Structured Reactors, etc)

Novel Approaches in Chemical Reaction Processes Engineering (Unsteady-state and
Transient Processes, Reverse-flow Operation, Sorption-Enhanced Reaction Processes,
Multifunctional Reactors, Reaction-Separation Processes, etc)

Chairperson – Professor Elisabeth Bordes-Richard, France

14.00

OP-II-1

Chen K., Martirosyan K.S., Luss D.

TEMPERATURE RISE DURING REGENERATION OF DIESEL PARTICULATE FILTERS

University of Houston (Houston), USA

14.20

OP-II-2

Thotla S.¹, Freund H.¹, Sundmacher K.^{1,2}

ENTRAINER BASED REACTIVE DIVIDED WALL COLUMNS

¹*Max Planck Institute for Dynamics of Complex Technical Systems (Magdeburg), Germany*

²*Process Systems Engineering, Otto-von-Guericke University (Magdeburg), Germany*

14.40

OP-II-3

**Kucherov A.V.¹, Finashina E.D.¹, Orekhova N.V.², Ermilova M.M.², Kustov L.M.¹,
Tereshchenko G.F.^{2†}**

PECULIARITIES OF ETHANE OXIDATIVE DEHYDROGENATION IN MEMBRANE
CATALYTIC REACTOR WITH SEPARATED FLOWS OF O₂ AND ETHANE

¹*N.D. Zelinsky Institute of Organic Chemistry RAS (Moscow), Russia*

²*A.V. Topchiev Institute of Petrochemical Synthesis RAS (Moscow), Russia*

15.00

OP-II-26

**Popova M.M.^{1,2} (Zyryanova), Snytnikov P.V.^{1,2}, Amosov Y.I.^{1,2}, Kuzmin V.A.²,
Shigarov A.B.^{1,2}, Kirillov V.A.^{1,2}, Sobyenin V.A.^{1,2}**

DESIGN, SCALE-OUT AND OPERATION OF MILLI-CHANNEL REACTOR WITH
STRUCTURED Ni/CeO₂ CATALYST FOR PREFERENTIAL CO METHANATION

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

15.20

OP-II-5

Gorri D., Ortiz A., Fallanza M., Ortiz I.

SEPARATION OF GASEOUS OLEFIN/PARAFFIN MIXTURES BY REACTIVE
ABSORPTION IN A MEMBRANE CONTACTOR

University of Cantabria, Department of Chemical Engineering (Santander), Spain

15.40

OP-II-6

Snytnikov P.^{1,2}, **Potemkin D.**^{1,2}, **Rebrov E.**³, **Hessel V.**^{3,4}, **Schouten J.**³, **Sobyanin V.**^{1,2}
MICROCHANNEL REACTOR WITH A Cu/CeO_{2-x} CATALYTIC COATING FOR PREFERENTIAL CO OXIDATION. OPERATION, MODELING, AND SCALE-OUT

¹*Boreskov Institute of Catalysis (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

³*Eindhoven University of Technology (Eindhoven), The Netherlands*

⁴*Institut für Mikrotechnik Mainz GmbH (Mainz), Germany*

16.00-16.20

Coffee-break

Chairperson – Professor Moshe Sheintuch, Israel

16.20

OP-II-7

Castillo-Araiza C.O., Lopez-Isunza F.

THE ROLE OF CATALYST ACTIVITY ON THE TRANSIENT AND STEADY STATE MODELING OF AN INDUSTRIAL PACKED BED CATALYTIC REACTOR WITH LOW d_t/d_p : O-XYLENE PARTIAL OXIDATION ON A V/Ti CATALYST

Universidad Autónoma Metropolitana-Iztapalapa (Iztapalapa), Mexico

16.40

OP-II-8

Ovchinnikova E.V.¹, **Vernikovskaya N.V.**^{1,2}, **Andrushkevich T.V.**¹, **Chumachenko V.A.**¹
MATHEMATICAL MODELING OF β -PICOLINE OXIDATION TO NICOTINIC ACID IN MULTITUBULAR REACTOR: EFFECT OF THE RESIDUAL GAS RECYCLE

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

17.00

OP-II-9

Guillen D.P.¹, **Grimmett T.**¹, **M. Gribik A.M.**¹, **Antal S.P.**²

MULTIPHASE SIMULATION OF A SLURRY BUBBLE COLUMN REACTOR

¹*Idaho National Laboratory (Idaho Falls, Idaho), USA*

²*Interphase Dynamics (Glenville, NY), USA*

17.20

OP-II-10

Nikacević N.¹, **Huesman A.**¹, **Van den Hof P.**¹, **Stankiewicz A.**²

NEW OPTIMIZATION-BASED APPROACH TO CHEMICAL REACTOR SYNTHESIS – TOWARDS THE FULL INTEGRATION OF REACTOR DESIGN, OPERATION AND CONTROL

¹*Delft Center for Systems and Control, Delft University of Technology (Delft), The Netherlands*

²*Process & Energy Department, Delft University of Technology (Delft), The Netherlands*

17.40

OP-II-11

Gubanova E.L.¹, **van Veen A.C.**², **Sadykov V.A.**^{1,3}, **Mirodatos C.**⁴, **Mezentseva N.V.**¹
CATALYTIC DESIGN OF A SINGLE CHANNEL MONOLITH FOR THE PARTIAL OXIDATION OF METHANE TO SYNTHESIS GAS

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Ruhr-University Bochum, Lehrstuhl für Technische Chemie (Bochum), Germany*

³*Novosibirsk State University (Novosibirsk), Russia*

⁴*Institut de Recherche sur la Catalyse et l'environnement de Lyon (Villeurbanne), France*

18.00

OP-II-12

Tagawa T.¹, Yoshida Y.¹, Yamada H.¹, Inomata M.²

**EVALUATION OF IT-SOFC REACTOR FOR METHANE PARTIAL OXIDATION WITH
TEMPERATURE PROGRAMMING METHOD**

¹*Department of Chemical Engineering, Nagoya University (Nagoya), Japan*

²*AJGC corporation, Japan*

Round table Autoclave Engineers

Exhibition opening

HALL 1

Morning Session

PLENARY LECTURES

Chairperson – Professor Dmitry Murzin, Finland

9.00

PL-3

V. Yakovlev

DESIGN OF CATALYTIC PROCESSES FOR BIOFUELS PRODUCTION

Boreskov Institute of Catalysis SB RAS, Russia

10.00

PL-4

V. Likholobov

HIGH TEMPERATURE PROCESSES OF NANOSTRUCTURAL CARBON MATERIALS PRODUCTION

Omsk Scientific Center, Russia

11.00-11.20

Coffee-break

KEY-NOTE PRESENTATIONS

Chairperson – Dr. Hugh Stitt, UK

11.20

KN-3

Alekseenko S.V.¹, Paschenko S.E.², Salomatov V.V.²

THE MECHANISM OF NANOCUSTER COMBUSTION OF NON-STANDARD FUEL AND APPROPRIATE FURNACE UNIT

¹*Kutateladze Institute of Thermophysics SB RAS (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

11.50

KN-4

Avgouropoulos G.¹, Ioannides T.¹, Kallitsis J.K.^{1,2,3}, Neophytides S.^{1,3}

DEVELOPMENT OF AN INTERNAL REFORMING METHANOL FUEL CELL: CONCEPT, CHALLENGES AND OPPORTUNITIES

¹*Foundation for Research and Technology-Hellas (FORTH), Institute of Chemical Engineering & High Temperature Chemical Processes (ICE-HT) (Patras), Greece*

²*University of Patras (Patras), Greece*

³*Advent Technologies SA (Patras), Greece*

12.20-14.00

Lunch

Afternoon Session

SECTION I

Advances in Chemical Reactors Fundamentals

Chemical Reactions Kinetics

Fundamentals of Chemical Reactors Simulation

Heat & Mass Transfer in Chemical Reactors

Hydrodynamics and CFD Studies in Chemical Reactors

Chairperson – Professor Mikhail Sinev, Russia

14.00

OP-I-14

Temkin O.N., Katsman E.A., Bruk L.G., Zakharova D.S.

THE EXPERIENCE OF KINETIC MODEL DESIGN FOR CYCLOHEXENE CATALYTIC OXIDATION BY p-QUINONES IN THE CATIONIC PALLADIUM (II) COMPLEXES SOLUTIONS. A NEW WAY TO CYCLOHEXANONE

Moscow State Academy of Fine Chemical Technology (Moscow), Russia

14.20

OP-I-15

Bruk L.G., Bukina E.Y., Demidova S.V., Trunilina K.V., Kirichek I.D., Oshanina I.V., Temkin O.N., Shvarts A.L.

MECHANISM OF COUPLED CO OXIDATION AND CYCLOHEXENE HYDROCARBOXYLATION IN THE SYSTEM PdBr₂-CuBr₂-H₂O-TETRAHYDROFURAN

Moscow State Academy of Fine Chemical Technology (Moscow), Russia

14.40

OP-I-16

Antal S.P.¹, Jordi R.², Combes G.³

DEVELOPMENT OF A CFD BASED PROCESS SIMULATION CAPABILITY FOR A FISCHER-TROPSCH REACTOR

¹*Interphase Dynamics (Ballston Lake), USA*

²*Sasol Technology Research and Development (Sasolburg), South Africa*

³*Johnson Matthey PLC (Middlesbrough), UK*

15.00

OP-I-17

Sulman E.M.¹, Chernyavsky V.², Ivanov A.², Sulman M.¹, Matveeva V.¹, Kharitonov A.²

KINETICS PARTICULARITIES OF PHENOL HYDROGENATION OVER Pd IMPREGNATED HYPERCROSSLINKED POLYSTYRENE

¹*Tver Technical University (Tver), Russia*

²*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

15.20

OP-I-18

Simakova I.¹, Solkina Y.S.^{1,2}, Moroz B.^{1,2}, Simakova O.^{1,3}, Reshetnikov S.¹, Simakov A.⁴, Murzin D.Y.³, Parmon V.N.^{1,2}

DEVELOPMENT OF SELECTIVE CAMPHENE SYNTHESIS FROM α -PINENE OVER GOLD ON γ -ALUMINA OXIDE

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

³*Åbo Akademi University (Turku/Åbo), Finland*

⁴*Centro de Nanociencias y Nanotecnología UNAM (Ensenada), Mexico*

15.40

OP-1-18

Jordi R.G.

CFD INVESTIGATION OF MIXING AND SHEAR IN LAB AND PILOT SCALE STIRRED TANK REACTORS DURING HOTWASH

Sasol Technology Research and Development (Sasolburg), South Africa

16.00-16.20

Coffee-break

Chairperson – Dr. Evgeny Rebrov, The Netherlands

16.20

Bricker J.

UOP – A HONEYWELL COMPANY. PRESENTATION

UOP – A Honeywell Company (Chicago), USA

16.40

OP-I-22

Voennov L.I., Zolotarskii I.

PRESSURE DROP IN BEDS OF RASCHIG RINGS AND MULTIHOLE PARTICLES

Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

17.00

OP-I-23

Abiev R.

TRANSITION AND SURFACE ENERGY EFFECTS ON PRESSURE DROP OF TAYLOR FLOW OF GAS-LIQUID MIXTURES IN MICRO CHANNELS

St. Petersburg State Institute of Technology (Technical University) (St. Petersburg), Russia

17.20

OP-I-24

Aiouache F., Nic An tSaoir M., McMaster M., Luis Abreu Fernandes D.,

Sa J., Hardacre C.

THREE-DIMENSIONAL WATER VAPOUR TRANSPORT THROUGH POROUS PACKING OF SILICA GEL USING DIFFUSE NEAR-INFRARED TOMOGRAPHY

Queen's University Belfast (Belfast), UK

17.40

OP-I-25

Boshenyatov B.V., Semyanistij A.V.

COMPARISON OF BUBBLE COALESCENCE MODELS WITH DATA FROM DIRECT COMPUTER SIMULATION AND EXPERIMENT

Institute of Applied Mechanics RAS (Moscow), Russia

18.00

OP-I-26

Klenov O.P., Noskov A.S.

SOLID DISPERSION IN A SLURRY REACTOR WITH MULTIPLE IMPELLERS

Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

HALL 2

Afternoon Session

SECTION II

Chemical Reaction Engineering and Reactors Design – Novel Approaches, Modeling, Scale-Up, Optimization:

New Designs of Chemical Reactors (Membrane Reactors, Microreactors, Structured Reactors, etc)

Novel Approaches in Chemical Reaction Processes Engineering (Unsteady-state and Transient Processes, Reverse-flow Operation, Sorption-Enhanced Reaction Processes, Multifunctional Reactors, Reaction-Separation Processes, etc)

Chairperson –Professor Zinfer Ismagilov, Russia

14.00

OP-II-13

Biasi P.¹, Menegazzo F.², Pinna F.², Eranen K.¹, Canu P.³, Salmi T.¹

HYDROGEN PEROXIDE DIRECT SYNTHESIS IN A TRICKLE BED REACTOR: THE ISSUE OF SELECTIVITY

¹*Åbo Akademi University (Turku/Åbo), Finland*

²*Chemistry Department, University of Venice (Venice), Italy*

³*Department of Chemical Engineering Principles and Practice "I. Sorgato", University of Padova (Padova), Italy*

14.20

OP-II-15

Agirre I., Barrio V.L., Güemez M.B., Cambra J., Arias P.L.

DEVELOPMENT OF A REACTIVE DISTILLATION PROCESS FOR ACETAL PRODUCTION: EXPERIMENTAL STUDY AND SIMULATION MODEL

Faculty of Engineering of Bilbao (University of the Basque Country) (Bilbao), Spain

14.40

OP-II-16

Datsevich L.

MYTHOLOGY IN MULTIPHASE CATALYSIS: WHY DO THE CONVENTIONAL FIXED-BED TECHNOLOGIES HAVE NO POTENTIAL FOR THE FURTHER PROCESS DEVELOPMENT?

The University of Bayreuth (Bayreuth), Germany

15.00

OP-II-17

Löfberg A.¹, Essakhi A.¹, Swesi Y.², Meille V.², Pitault I.², Paul S.¹, Supiot P.³, Mutel B.³, Le Courtois V.¹, Bordes-Richard E.¹

CATALYTIC COATING OF METALLIC SUBSTRATES AND APPLICATIONS TO INSERTS AND CATALYTIC REACTORS

¹*Universite des Sciences et Technologies de Lille (Cite Scientifique), France*

²*Laboratoire de génie des procédés Catalytiques, UMR CNRS (Villeurbanne), France*

³*IEMN - UMR CNRS (Villeneuve d'Ascq), France*

15.20

OP-II-18

Pokrovskaya S.A.

PERFORMANCE OF SELECTIVE OXIDATION REACTIONS IN FLUIDIZED BED REACTOR: GAS INTERPHASE TRANSFER AND CATALYST UNSTEADY STATE

Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

Novosibirsk State University (Novosibirsk), Russia

15.40

OP-II-20

Haase S., Bauer T., Lange R.

DESIGN OF MONOLITHIC REACTORS FOR CONTINUOUS LIQUID-PHASE HYDROGENATION PROCESSES

Technische Universität Dresden (Dresden), Germany

16.00-16.20

Coffee-break

Chairperson – Professor Jiří Hanika, Czech Republic

16.20

OP-II-21

Kuzmin A.O.^{1,2}, Pravdina M.K.³, Yavorsky A.I.⁴, Yavorsky N.I.^{2,3}, Parmon V.N.^{1,2}

INTENSIFICATION OF CHEMICAL PROCESSES BY USING OF VORTEX BUBBLING LAYERS

¹*Boreshkov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

³*Institute of Thermophysics of SB RAS (Novosibirsk), Russia*

⁴*Novosibirsk State Technical University (Novosibirsk), Russia*

16.40

OP-II-22

Shelepova E.V.¹, Vedyagin A.A.^{1,2}, Noskov A.S.^{1,2}

MATHEMATICAL MODELLING OF THE PROPANE DEHYDROGENATION IN THE CATALYTIC MEMBRANE REACTOR

¹*Boreshkov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Novosibirsk State University (Novosibirsk), Russia*

17.00

OP-II-24

Kırçın R.M., Karakaya M., Avcı A.K., Aksoylu A.E., Önsan Z.I.

MODELING OF A CATALYTIC PLATE REACTOR PRODUCING HYDROGEN FOR FUEL PROCESSOR SYSTEMS

Department of Chemical Engineering Bogazici University (Istanbul), Turkey

17.20

OP-II-25

Lopes J.¹, Cardoso S.², Rodrigues A.¹

MULTISCALE ANALYSIS OF A COATED-WALL MICROCHANNEL REACTOR

¹*University of Porto (Porto), Portugal*

²*Cambridge Institute for Medical Research, University of Cambridge (Cambridge), UK*

17.40

OP-II-4

Zhou X., Qian X., Pan A.

REPEATED OPTIMIZATION OF A FIXED-BED REACTOR FOR ETHYLENE EPOXIDATION

East China University of Science and Technology (Shanghai), China

18.00

OP-II-27

**Udalov E.I.¹, Tanashev Y.Y.¹, Bolotov V.A.¹, Bobrova L.N.¹, Parmon V.N.^{1,4},
Chernousov Y.D.², Chumakov Y.A.³, Knyazeva A.G.³**

REACTOR WITH SELECTIVE MICROWAVE HEATING OF CHEMICAL REAGENTS AND
ITS APPLICATION FOR CATALYTIC PYROLYSIS OF HEAVY HYDROCARBONS

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Institute of Chemical Kinetics and Combustion SB RAS (Novosibirsk), Russia*

³*Institute of Strength Physics and Materials Science of SB RAS (Tomsk), Russia*

⁴*Novosibirsk State University (Novosibirsk), Russia*

HALL 1

Morning Session

PLENARY LECTURES

Chairperson – Professor Dan Luss, USA

9.00

PL-5

H. Stitt¹, Dan Enache¹, S. Pollington¹, M. Winterbottom²

MULTIPHASE CATALYTIC REACTIONS IN REACTORS STRUCTURED AT THE MESO-SCALE

¹*Johnson Matthey plc, UK*

²*University of Birmingham, UK*

10.00

PL-6

L. Giorno

MEMBRANE REACTORS: STATE OF THE ART AND PERSPECTIVES IN BIOTECHNOLOGY AND CHEMICAL PRODUCTION

Institute on Membrane Technology, ITM-CNR, Italy

11.00-11.20

Coffee-break

KEY-NOTE PRESENTATIONS

Chairperson – Professor Yurii Matros, USA

11.20

KN-5

Van Geem K.M.¹, Abhari R.², Pyl S.¹, Reyniers M.¹, Marin G.¹

BIOMASS TO OLEFINS: CRACKING OF RENEWABLE NAPHTHA

¹*Ghent University, Laboratory for Chemical Technology (Ghent), Belgium*

²*Syntroleum® (Tulsa, OK), USA*

11.50

KN-6

González A.¹, Kafarov V.¹, Guzman A.²

REACTOR MODELLING FOR THIRD GENERATION BIOFUELS PRODUCTION

¹*Industrial University of Santander (Bucaramanga), Colombia*

²*Colombian Petroleum Institute ICP-ECOPETROL (Piedecuesta), Colombia*

12.20-14.00

Lunch

Afternoon Session

SECTION III

Chemical Reactors and Technologies for Emerging Applications

Section III-A

Processing of Biomass and Renewable Feedstocks

Chairperson – Dr. Vadim Yakovlev, Russia

14.00

OP-III-A-1

Santacesaria E., Serio M.D., Tesser R., Russo V., Turco R., Tortorelli M.

A NEW SIMPLE MICROCHANNEL DEVICE FOR INTENSIFYING BIODIESEL PRODUCTION

University of Naples Federico II (Napoli), Italy

14.20

OP-III-A-3

De Wild P.J., Van der Laan R., Wilberink R.

BUBBLING FLUIDISED BED PYROLYSIS OF LIGNIN FOR VALUE-ADDED PRODUCTS

Energy research Center of the Netherlands (Petten), The Netherlands

14.40

OP-III-A-4

Amutio M., Lopez G., Artetxe M., Elordi G., Olazar M., Bilbao J.

PINEWOOD PYROLYSIS UNDER VACUUM CONDITIONS IN A CONICAL SPOUTED BED REACTOR

University of the Basque Country, Faculty of Science and Technology (Bilbao), Spain

15.00

OP-III-A-5

Elordi G., Olazar M., Artetxe M., Lopez G., Amutio M., Aguado R.

PYROLYSIS OF HDPE IN A CONICAL SPOUTED BED REACTOR

University of the Basque Country, Faculty of Science and Technology (Bilbao), Spain

15.20-15.40

Coffee-break

Chairperson – Dr. Victor Chumachenko, Russia

15.40

Bruggeman E.

HUBER TEMPERATURE CONTROL SYSTEMS FOR THE CHEMICAL REACTORS

Peter Huber, Kältemaschinenbau GmbH (Offenburg), Germany

16.00

OP-III-A-6

Barr G., Sermon P.A., Worsley M., Cheng Y., Tuzun U.

REACTORS FOR THE GREEN TRANSFORMATION OF VEGETABLE OILS INTO FATTY ACID METHYL ESTERS (FAME) VIA BASED-CATALYSED TRANSESTERIFICATION WITH MINIMUM ENERGY INPUT

University of Surrey (Guildford), UK

16.20

OP-III-A-8

Kolbakov V.V.¹, Kozlovskiy R.², Parmon V.³, Shvets V.F.²

LACTIC ACID BASED ON BIOSOURCES AS AN INTERMEDIATE FOR A SERIES OF THE MAIN CHEMICALS PRODUCTION

¹*Nordbiochem Ltd. (Põlva), Estonia*

²*D. Mendeleev University of Chemical Technology of Russia (Moscow), Russia*

³*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

16.40

OP-III-A-9

Rasrendra C.B.¹, Girisuta B.¹, Winkelman J.¹, Leijenhorst E.J.², Venderbosch R.H.², Windt M.³, Meier D.³, Heeres E.¹

RECOVERY OF ACETIC ACID FROM PYROLYSIS OIL BY REACTIVE EXTRACTION

¹*University of Groningen, Department of Chemical Engineering (Groningen), The Netherlands*

²*BTG Biomass technology Group BV (Enschede), The Netherlands*

³*vTI-Institute of Wood Technology and Wood Biology (Leuschnerst), Germany*

17.00

Poster Session

HALL 2

Afternoon Session

SECTION III

Chemical Reactors and Technologies for Emerging Applications

Section III-B

Environmental Protection and Utilization of Wastes

Production of Hydrogen and Green Fuels

Advanced Processing of Natural Gas and Oil

Chairperson – Dr. Steven Antal, USA

14.00

OP-III-B-1

Hanika J.¹, Lederer J.², Tukač V.³, Veselý V.¹

INVESTIGATION OF HYDROGEN PRODUCTION BY BIOMASS PARTIAL OXIDATION

¹*Institute of Chemical Process Fundamentals, Czech Academy of Sciences (Prague), Czech Republic*

²*VUANCH, a.s. (Labem), Czech Republic*

³*Institute of Chemical Technology (Prague), Czech Republic*

14.20

OP-III-B-17

Kagyрманова A., Chumachenko V., Korotkikh V., Kashkin V.N., Noskov A.

CATALYTIC DEHYDRATION OF BIOETHANOL TO ETHYLENE: PILOT-SCALE STUDIES AND PROCESS SIMULATION

Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

14.40

OP-III-B-3

Hernandez S.¹, Mescia D.², Chiappero M.³, Russo N.³, Fino D.³

LANDFILL BIOGAS PURIFICATION FOR H₂ PRODUCTION

¹*Italian Institute of Technology (Torino), Italy*

²*Asja Ambiente Italia (Torino), Italy*

³*Politecnico di Torino (Torino), Italy*

15.00

OP-III-B-4

Kolesnikov A.¹, Mutshena M.^{1,2}

MODELING AND SIMULATION OF HYDROGEN REACTOR

¹*Tshwane University of Technology (Pretoria), South Africa*

²*PBMR (Pretoria), South Africa*

15.20-15.40

Coffee-break

Chairperson – Professor Francesco Frusteri, Italy

15.40

OP-III-B-5

Kolb G., Tiemann D., Hessel V.

PARTIAL DEHYDROGENATION OF KEROSENE AS HYDROGEN SOURCE FOR FUEL CELLS IN MICROSTRUCTURED REACTORS

Institut für Mikrotechnik Mainz GmbH (IMM) (Mainz), Germany

16.00

OP-III-B-6

Li H., Boon J., Dijkstra J., Pieterse J.

TESTING MEMBRANE REACTORS AT SCALE: WGS-EXPERIMENTS WITH THREE Pd MEMBRANE TUBES OF 50 cm LONG

Energy Research Center of the Netherlands (Petten), The Netherlands

16.20

OP-III-B-7

Lysikov A.I.¹, Okunev A.G.¹, Molodtsov D.V.², Maslikov V.I.²

NOVEL APPROACH FOR MUNICIPAL SOLID WASTE BIOGAS REFORMING INTO HYDROGEN FOR FUEL CELL POWERED GENERATORS

¹*Bereskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*St. Petersburg State Polytechnical University (St. Petersburg), Russia*

16.40

OP-III-B-11

Kapustin V.M.

STATE-OF-THE ART REACTOR DESIGN FOR HIGH-CAPACITY OIL-REFINING PROCESS

VNIPINEFT (Moscow), Russia

17.00

Poster Session

HALL 1

Morning Session

KEY-NOTE PRESENTATIONS

Chairperson – Dr. George Avgouropoulos, Greece

9.00

KN-7

Frusteri F.¹, Italiano G.², Parmaliana A.^{2†}

H₂ PRODUCTION BY METHANE DECOMPOSITION OVER Ni AND Co THIN LAYER CATALYSTS: ROLE OF MSI IN DRIVING THE COKE FORMATION MECHANISM

¹*Institute for Advanced Technologies for Energy "Nicola Giordano" (Messina), Italy*

²*Messina University (Messina), Italy*

SECTION III

Chemical Reactors and Technologies for Emerging Applications

Section III-A

Processing of Biomass and Renewable Feedstocks

9.30

OP-III-A-7

Haider M.H., Dummer N., Miedziak P., Taylor S., Willock D., Knight D., Hutchings G.

DEHYDRATION OF GLYCEROL TO ACROLEIN

Cardiff Catalysis Institute, School of Chemistry, Cardiff University (Cardiff), UK

9.50

OP-III-A-10

Sahin S., Mäki-Arvela P., Eränen K., Salmi T., Murzin D.

LIPASE-CATALYZED REACTION IN A DOWN FLOW CONTINUOUS REACTOR IN ORGANIC SOLVENTS

Åbo Akademi University, (Turku), Finland

10.10

OP-III-A-12

Mäki-Arvela P., Kilpiö T., Salmi T., Murzin D.

SELECTIVE CATALYTIC DEOXYGENATION OF FATTY ACIDS AND THEIR DERIVATIVES; CATALYST DEACTIVATION, REACTOR SELECTION AND MODELLING

Åbo Akademi University (Turku), Finland

10.10

OP-III-A-13

Dominguez M., Cristiano G., Roig M., Lopez E., Llorca J.

ETHANOL STEAM REFORMING OVER COBALT TALC IN A PLATE MICROREACTOR

Technical University of Catalonia (Barcelona), Spain

HALL 2

SECTION III

Chemical Reactors and Technologies for Emerging Applications

Section III-B

Environmental Protection and Utilization of Wastes

Production of Hydrogen and Green Fuels

Advanced Processing of Natural Gas and Oil

Chairperson – Professor Vyacheslav Kafarov, Colombia

9.30

OP-III-B-9

**Ismagilov Z.R.¹, Kerzhentsev M.A.¹, Shikina N.V.¹, Yashnik S.A.¹, Zagoruiko A.N.¹,
Khairulin S.R.¹, Parmon V.N.¹, Zakharov V.M.², Braynin B.I.², Favorski O.N.²**

DEVELOPMENT OF CATALYTIC REACTOR FOR COMBUSTION OF NATURAL GAS
FOR ENVIRONMENTALLY FRIENDLY GAS TURBINE POWER PLANTS

¹*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*

²*Central Institute of Aviation Motors (Moscow), Russia*

9.50

OP-III-B-10

Shahamiri S.A., Wierzba I.

CATALYTIC OXIDATION OF LEAN BIOGAS-AIR

University of Calgary, Schulich School of Engineering (Calgary), Canada

10.10

OP-III-B-8

Makarfi Y.I.¹, Tretyakov V.F.^{1,2}, Frantsuzova N.A.¹, Tretyakov K.V.²

TWO STEP PROCESS OF OBTAINING LOW BENZENE CONTAINING FUELS
FROM ETHANOL

¹*Lomonosov Moscow State Academy of Fine Chemical Technology (Moscow), Russia*

²*A.V. Topchiev Institute of Petrochemical Synthesis RAS (Moscow), Russia*

10.30

OP-III-B-15

Pai Z.P., Simonov A.D.

COMBINED TECHNOLOGY OF UTILIZATION OF SO₂ FROM WASTE GASES
RELEASED BY ANODE PRODUCTION OF ALUMINIUM PLANTS

Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

10.50-11.10

Coffee-break

HALL 1

Chairperson – Professor Vladimir Likholobov, Russia

11.10

OP-III-B-13

Sugano M., Kashiwag O., Iwabuchi Y., Tsuge T., Hirano K.

ADDITIVE EFFECTS OF TYRE RUBBER CONSTITUENTS UPON COAL LIQUEFACTION

Nihon University, College of Science and Technology, Department of Materials and Applied Chemistry (Tokyo), Japan

11.30

OP-III-B-14

Gutierrez A., Castaño P., Azkoiti M., Bilbao J., Arandes J.

MODELING PRODUCT DISTRIBUTION OF PYROLYSIS GASOLINE HYDROPROCESSING ON A Pt-Pd/HZSM-5 CATALYST

University of the Basque Country, Faculty of Science and Technology (Bilbao), Spain

11.50

OP-III-B-12

García-Martínez J.C., Lobo R., Pérez Cisneros E., Ochoa Tapia J.A., De los Reyes J.

HYDRODESULFURIZATION OF 4,6-DIMETHYLDIBENZOTHIOPHENE ON NiMoP/Al₂O₃ CATALYST IN A TRICKLE BED MICROREACTOR

Universidad Autónoma Metropolitana-Iztapalapa (Iztapalapa), Mexico

12.10

OP-III-B-18

Arutyunov V.S., Shmelev V.M., Sinev M.Y., Shapovalova O.V.

SYNGAS AND HYDROGEN PRODUCTION IN A VOLUMETRIC RADIATION BURNER

Semenov Institute of Chemical Physics RAS (Moscow), Russia

12.30

Peters P.

SciFinder "A PART OF THE CHEMICAL SYNTHESIS PROCESS"

CAS and SciFinder Chemical Abstracts Service (CAS), Sales Director, Europe, Middle East and Africa (EMEA)

12.50

Conference closing

13.00

Lunch

POSTER PRESENTATIONS

SECTION I

- PP-I-1.** **Abiev R., Lavretsov I.V.**
HYDRODYNAMICS OF TAYLOR FLOW OF GAS-LIQUID SYSTEMS IN MICRO CHANNELS: THEORY AND EXPERIMENT
St. Petersburg State Institute of Technology (Technical University) (St. Petersburg), Russia
- PP-I-3.** **Andrianova Z.S., Ivanova A.N., Barelko V.V.**
NONLINEAR PHENOMENA IN CATALYTIC REACTIONS WITH A BRANCH-CHAIN MECHANISM OF FORMATION OF ACTIVE CENTERS
Institute of Problems of Chemical Physics RAS (Chernogolovka), Russia
- PP-I-5.** **Avgouropoulos G., Ioannides T.**
KINETICS OF PROX REACTION OVER CuO-CeO₂ and CuO CATALYSTS
Foundation for Research and Technology-Hellas (FORTH), Institute of Chemical Engineering & High Temperature Chemical Processes (ICE-HT) (Patras), Greece
- PP-I-6.** **Babkin V.S., Bunev V.A.**
PHENOMENA OF SUPERADIABATIC TEMPERATURE IN FLAMES AND SPONTANEOUS IGNITION PROCESSES
Institute of Chemical Kinetics and Combustion of SB RAS (Novosibirsk), Russia
- PP-I-8.** **Biasi P.¹, Hernandez Carucci J.¹, Gemo N.², Eränen K.¹, Canu P.², Salmi T.¹**
DIRECT SYNTHESIS OF HYDROGEN PEROXIDE IN BATCH REACTOR: UNDERSTANDING THE KINETICS AND MECHANISMS
¹*Åbo Akademi University (Turku/Åbo), Finland*
²*Department of Chemical Engineering Principles and Practice "I. Sorgato", University of Padova, Italy*
- PP-I-10.** **Cataldo M., Fino D., Spinelli P.**
ELECTROCHEMICAL OXIDATION OF AQUEOUS SOLUTIONS CONTAINING UREA ON ACTIVE OR NO-ACTIVE ANODES
Politecnico di Torino (Torino), Italy
- PP-I-11.** **Chernykh I.**
CHEMPAK SOFTWARE PACKAGE: OPTIMIZATION OF THE CHEMICAL REACTION KINETICS WITH USING OF COMPUTER SIMULATION
Institute of Computational Mathematics and Mathematical Geophysics of SB RAS (Novosibirsk), Russia
- PP-I-12.** **Chernykh I.¹, Mischenko T.I.², Snytnikov VI.N.², Snytnikov V.N.²**
COMPUTER SIMULATION OF ENDOTHERMIC PROCESSES IN FLOWING REACTORS USING RADIATION ENERGY
¹*Institute of Computational Mathematics and Mathematical Geophysics of SB RAS (Novosibirsk), Russia*
²*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*
- PP-I-14.** **Davletbaeva I., Ahmetshina A., Gumerov A.**
THE INVESTIGATION OF REACTIONS AROMATIC ISOCYANATES WITH OPEN-CHAIN ANALOGUES OF CROWN ETHERS
Kazan State Technological University (Kazan), Russia

- PP-I-15. Deyun E.V., Andrianova Z.S., Kustova L.V., Samoilenko N.G., Korsunskiy B.L.**
 THE MECHANISM OF SELF-OSCILLATIONS GENERATION IN CSTR. CONSECUTIVE REACTION
Institute of Problems of Chemical Physics RAS (Chernogolovka), Russia
- PP-I-17. Dominguez-Ramos A., Aldaco R., Irbien A.**
 PHOTOVOLTAIC SOLAR POWERED ELECTROCHEMICAL OXIDATION (PSEO): KINETICS OF THE REMOVAL OF TOTAL ORGANIC CARBON FROM LIGNOSULPHONATE WASTE-WATER
University of Cantabria, Department of Chemical Engineering (Santander), Spain
- PP-I-18. Dorokhov V.G.¹, Barelko V.V.¹, Bykov L.A.¹, Basimova R.A.², Pavlov M.L.², Askarova A.V.²**
 DEVELOPMENT OF NEW GENERATION OF CATALYSTS ON FIBER GLASS WOVEN SUPPORT FOR RAW STYRENE PURIFICATION FROM PHENYL-ACETYLENE IMPURITIES BY SELECTIVE HYDROGENATION METHOD
¹*Institute of Problems of Chemical Physics RAS (Chernogolovka), Russia*
²*Salavatnefteorgsintez Public Corporation, Salavat, Russia*
- PP-I-20. Escamilla E.M.¹, Torres M.², Ojeda E.¹**
 OPTIMIZATION OF THE ENGINEERING PARAMETERS FOR THE PRODUCTION OF ZEAXANTHIN IN A FLUIDIZED BED REACTOR
¹*Instituto Tecnológico de Celaya (Celaya), Mexico*
²*Universidad Autónoma de Querétaro (Manzanillo Colima), Mexico*
- PP-I-21. Fefelov V.¹, Gorbunov V.¹, Myshlyavtsev A.V.^{1,2}, Myshlyavtseva M.D.¹**
 SIMULATION OF DIRECTIONAL INTERMOLECULAR INTERACTIONS IN ORGANIC MONOLAYERS: TRIMESIC ACID ON SINGLE CRYSTAL (111) SURFACE
¹*Omsk State Technical University (Omsk), Russia*
²*Institute of Hydrocarbon Processing SB RAS (Omsk), Russia*
- PP-I-23. Gorodsky S.N., Temkin O.N., Bruk L.G.**
 SELF-OSCILLATIONS DURING OXIDATIVE CARBONYLATION OF UNSATURATED COMPOUNDS
Moscow State Academy of Fine Chemical Technology (Moscow), Russia
- PP-I-24. Gumerov A., Davletbaeva I., Ahmetshina A., Galjautdinova A.**
 ORGANOCYCLOSILOXANE POLYMERIZATION ACTIVATED BY AROMATIC ISOCYANATES BY A MACROINITIATOR
Kazan State Technological University (Kazan), Russia
- PP-I-25. Hernández Carucci J.R.¹, Roche M.¹, Guo H.², Wärnä J.¹, Eränen K.¹, Leskelä M.², Salmi T.¹, Murzin D.¹**
 SYNTHESIS OF ETHYLENE OXIDE IN A MICROREACTOR: ELUCIDATING THE REACTION MECHANISM THROUGH DETAILED KINETIC MODELLING
¹*Åbo Akademi University, Laboratory of Industrial Chemistry (Turku), Finland*
²*University of Helsinki (Helsinki), Finland*
- PP-I-28. Kiryukhin D.P., Kichigina G.A., Barelko V.V.**
 AUTOWAVE MODES OF CRYOPOLYMERIZATION IN SYSTEM WITH FILLERS: A PROBLEM OF CREATING POLYMER COMPOSITES AT ULTRALOW TEMPERATURES
Institute of Problems of Chemical Physics RAS (Chernogolovka), Russia

- PP-I-29. Kolesnikov A., Moropeng L.**
 NUMERICAL INVESTIGATION OF NANOPARTICLES TRANSFER TO THE WALL OF HIGH-TEMPERATURE REACTOR
Tshwane University of Technology (Pretoria), South Africa
- PP-I-30. Korobitsyna L.L., Ulzii B., Vosmerikov A.V.**
 SPECIAL FEATURES OF METHANOL CONVERSION OVER ZEOLITES WITH A HIGH SILICA MODULUS
Institute of Petroleum Chemistry SB RAS (Tomsk), Russia
- PP-I-32. Luis P., Albo J., Garea A., Irabien A.**
 PROCESS DESIGN OF CO₂ RECOVERY: TECHNICAL, ENVIRONMENTAL AND ECONOMIC EVALUATION
University of Cantabria, Department of Chemical Engineering (Santander), Spain
- PP-I-33. Maniecki T.P., Bawolak K., Mierczynski P., Jozwiak W.K.**
 SYNTHESIS GAS PRODUCTION ON NICKEL SUPPORTED CATALYSTS IN OXIDATIVE CONVERSION OF METHANE
Technical University of Lodz (Lodz), Poland
- PP-I-35. Marín P., Ordóñez S., Díez F.V.**
 REVERSE FLOW REACTOR WITH FOAM CATALYSTS: EXPERIMENTAL STUDY AND PERFORMANCE COMPARISON
University of Oviedo (Oviedo), Spain
- PP-I-38. Mierczynski P., Maniecki T.P., Bawolak K., Jozwiak W.K.**
 THE INFLUENCE OF REACTION MIXTURE ON ACTIVITY AND SELECTIVITY IN METHANOL SYNTHESIS REACTION
Technical University of Lodz (Lodz), Poland
- PP-I-39. Mierczynski P., Maniecki T.P., Rynkowski J., Bawolak K., Jozwiak W.K.**
 METHANOL OXIDATIVE STEAM REFORMING FOR HYDROGEN PRODUCTION OVER Cu – Au / ZnAl₂O₄ CATALYSTS
Technical University of Lodz (Lodz), Poland
- PP-I-40. Mulyashov S.¹, Sirovski F.¹, Grechishkina O.², Kolbakov V.¹**
 PACKED ABSORBER FOR ISOLATION OF L-LACTIDE
¹*Nordbiochem Ltd. (Põlva), Estonia*
²*D.I.Mendeleev University of chemical technology of Russia (Moscow), Russia*
- PP-I-44. Pinaeva L.G., Sadovskaya E.M., Ivanov D.V., Isupova L.A.**
 HIGH TEMPERATURE OXYGEN TRANSPORT IN MIXED OXIDES WITH STRUCTURE OF FLUORITE AND PEROVSKITE. EFFECT OF OXYGEN MOBILITY ON CATALYTIC PROPERTIES IN THE REACTIONS WITH OXYGEN PARTICIPATION
Boriskov Institute of Catalysis SB RAS (Novosibirsk), Russia
- PP-I-45. Plata Chávez V.¹, Kafarov V.¹, Moreno Safra N.²**
 KINETICS OF TRANSESTERIFICATION OF MICROALGAE OIL FOR THIRD GENERATION BIOFUELS PRODUCTION
¹*Universidad Industrial de Santander, Chemical Engineering Department (Bucaramanga), Colombia*
²*Colombian Petroleum Institute - ICP (Piedecuesta), Colombia*

- PP-I-49. Reshetnikov S.I., Izvekova A.A., Volkova G.G.**
EXPERIMENTAL STUDY OF THE HALIDE-FREE CARBOXYLATION OF DIMETHYL ETHER TO METHYL ACETATE ON BIFUNCTIONAL Rh/Cs_{1.5}H_{1.5}PW₁₂O₄₀ CATALYST
Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
- PP-I-50. Reshetnikov S.I., Zirka A.A., Petrov R.V.**
GAS-PHASE HYDROFLUORINATION OF PERCHLOROETHYLENE INTO PENTAFLUOROETHANE: EXPERIMENT AND KINETIC MODELING
Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
- PP-I-51. Salaev M.A., Kokova D.A., Novikov D.V., Krejker A.A., Knyazev A.S., Vodyankina O.V., Kurina L.N., Menshchikova T.V.**
ON THE KINETICS AND REGULARITIES OF ETHYLENE GLYCOL OXIDATION INTO GLYOXAL
Tomsk State University (Tomsk), Russia
- PP-I-52. Sarbak Z.**
DIFFERENTIAL THERMAL ANALYSIS AND THERMAL GRAVIMETRY OF SOOT OXIDATION MeAl₂O₄ (Me=Mn, Fe, Co, Ni, Cd, Mg) SPINEL TYPE CATALYSTS
Adam Mickiewicz University (Poznań), Poland
- PP-I-53. Selishchev D.S.¹, Kozlov D.²**
A TiO₂/ADSORBENT PHOTOCATALYTIC SYSTEM: KINETICS MODELING AND EXPERIMENTS
¹*Novosibirsk State University (Novosibirsk), Russia*
²*Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia*
- PP-I-56. Suslov A.¹, Kudryashov S.², Ryabov A.², Kutenkov V.¹**
A STUDY OF LIGHT ALKANE TRANSFORMATIONS IN REACTIVE NON-THERMAL PLASMAS
¹*High Current Electronics Institute of SB RAS (Tomsk), Russia*
²*Institute of Petroleum Chemistry SB RAS (Tomsk), Russia*
- PP-I-59. Vosmerikova L.N.¹, Vosmerikov A.¹, Litvak E.²**
KINETIC MECHANISMS OF CONVERSION OF NATURAL GAS INTO AROMATIC COMPOUNDS OVER MODIFIED PENTACYL
¹*Institute of Petroleum Chemistry of SB RAS (Tomsk), Russia*
²*Tomsk Polytechnic University (Tomsk), Russia*
- PP-I-61. Zhabbasbyev U.K.¹, Rakhmetova K.B.²**
A NEW METHOD FOR SIMULATING OF REFORMING PROCESS IN INDUSTRIAL REACTORS
¹*Kazakh-British Technical University (Almatu), Kazakhstan*
²*Kazakh National University (Almaty), Kazakhstan*
- PP-I-62. Jing-Ming Liu^{1,2}, Dong-Dong Sun¹, Hui Liu¹, Ying-Bing Nie³, Zhu Z.²**
STUDY ON EXOENZYMATIC KINETICS OF AUTOHERMAL THERMOPHILIC AEROBIC DIGESTION FOR PRE-TREATING KLEBSIELLA PNEUMONIAE
¹*Northeast Dianli University (Jilin), China*
²*Tongji University (Shanghai), China*
³*Jilin Vocational College of Industry and Technology (Jilin), China*

- PP-I-64. Dauletbai A.¹, Myrzaliyeva S.²**
 PROBLEMS OF DIVISION OF ISOTOPES OF LUNGS AND AVERAGE ELEMENTS A METHOD OF A CHEMICAL ISOTOPE INTERCHANGE
¹*National Center on Complex Processing of Mineral Raw Materials of the Republic of Kazakhstan RSE (Almaty), Kazakhstan*
²*Almaty State University (Almaty), Kazakhstan*
- PP-I-65. Carvajal D., Marchisio D., Russo N., Fino D. (former oral)**
 IDENTIFICATION OF RHEOLOGICAL PARAMETERS FOR ENZYMATIC HYDROLYSIS OF LIGNOCELLULOSIC BIOMASSES VIA CFD AND EXPERIMENTS
Politecnico di Torino (Torino), Italy

SECTION II

- PP-II-4. Amrousse R., Farhat K., Batonneau Y., Kappenstein C.**
 HONEYCOMB MONOLITHIC CATALYST REACTORS FOR SPACE PROPULSION APPLICATIONS
University of Poitiers (Poitiers), France
- PP-II-6. Avetisov A.K.**
 MODELING OF VINYL ACETATE SYNTHESIS FROM ACETYLENE AND ACETIC ACID
Karpov Institute of Physical Chemistry (Moscow), Russia
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