EFCE CONFERENCE
Event 691

XIX International Conference on Chemical Reactors
CHEMREACTOR-19

Vienna, Austria
September 5 – 9, 2010

SCIENTIFIC PROGRAM
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tr>
<td>Valentin N. Parmon, <strong>Chairman</strong></td>
<td>Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia</td>
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<tr>
<td>Alexander S. Noskov, <strong>Vice-Chairman</strong></td>
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<td>Dmitry Yu. Murzin, <strong>Vice-Chairman</strong></td>
<td>Åbo Akademi University, Turku, Finland</td>
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<td>David Agar</td>
<td>University of Dortmund, Germany</td>
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<td>Sergey Alekseenko</td>
<td>Institute of Thermophysics SB RAS, Novosibirsk, Russia</td>
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<td>Alex Bell</td>
<td>University of California, Berkeley, CA, USA</td>
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<td>Valentin A. Borodulya</td>
<td>A.V. Luikov Heat and Mass Transfer Institute NAS of Belarus, Minsk, Belarus</td>
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<td>Jeffery Bricker</td>
<td>UOP LLC, USA</td>
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<td>Raghunath Chaudhari</td>
<td>National Chemical Laboratory, Pune, India</td>
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<td>Ben A. Christolini</td>
<td>UOP LLC, USA</td>
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<td>Academy of Sciences of the Czech Republic, Prague, Czech Republic</td>
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<td>Mike P. Duduković</td>
<td>Washington University, St. Louis, USA</td>
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<td>Gerhardt Eigenberger</td>
<td>Stuttgart University, Germany</td>
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<td>Technical University of Milan, Italy</td>
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<td>Gilbert Froment</td>
<td>Texas A &amp; M University, USA</td>
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<td>Jiří Haníka</td>
<td>Institute of Chemical Process Fundamentals, Prague, Czech Republic</td>
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<td>Erik Heeres</td>
<td>Rijks Universiteit Groningen, The Netherlands</td>
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<tr>
<td>Nikolay N. Kulov</td>
<td>Kurnakov Institute of General and Inorganic Chemistry RAS, Moscow, Russia</td>
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<tr>
<td>Guy Marin</td>
<td>Ghent University, Belgium</td>
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<td>Wolter Prins</td>
<td>Ghent University, Belgium</td>
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<td>Valerii Schvets</td>
<td>Mendeleev University of Chemical Technology of Russia, Moscow, Russia</td>
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<td>Constantinos G. Vayenas</td>
<td>University of Patras, Greece</td>
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<tr>
<td>Andrey Zagoruiko</td>
<td>Boreskov Institute of Catalysis SB RAS, Novosibirsk, Russia</td>
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LOCAL SCIENTIFIC COMMITTEE

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<tr>
<td>Andrey N. Zagoruiko,</td>
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ORGANIZING COMMITTEE

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<tr>
<td>Alexander S. Noskov,</td>
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<td>Nikolay N. Kulov</td>
<td>Kurnakov Institute of General and Inorganic Chemistry RAS, The Scientific Council on Theoretical Foundations of Chemical Technology RAS, Moscow, Russia</td>
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<td>Oleg Yu. Ksenofontov</td>
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Conference co-organizer, executive representative of the Organizing Committee:

ILIKO TRAVEL company

The conference is held under the auspices of the Russian Federation Ministry of Industry and Trade
The organizers express their gratitude to

Ministry of Education and Science of the Russian Federation, Moscow, Russia

for the financial support
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-CONTRADICTORY KINETIC DESCRIPTION
¹Semenov Institute of Chemical Physics RAS (Moscow), Russia
²ZAO “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
Pecar 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
1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2Institute 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
1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2Novosibirsk State University (Novosibirsk), Russia
3Institut de Recherches sur la Catalyse et l’Environnement de Lyon (Villeurbanne), France

15.40
OP-I-9
Lopez-Isnunza 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
¹Autoclave Engineers Division of Snap-Tite Inc. (Erie), USA
²ROSTBIOCHEM/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
¹Universidad del Pais Vasco (Bilbao), Spain
²University of the Basque Country (San Sebastian), Spain

17.20
OP-I-13
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
¹Corning Inc. (Corning, Avon), France
²SNG (St. Petersburg), Russia

18.00
OP-I-30
Jaso S.M., Arellano - Garcia H., Wozny G.
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
1Max Planck Institute for Dynamics of Complex Technical Systems (Magdeburg), Germany
2Process 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
1N.D. Zelinsky Institute of Organic Chemistry RAS (Moscow), Russia
2A.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, Sobyanin V.A.1,2
DESIGN, SCALE-OUT AND OPERATION OF MILLI-CHANNEL REACTOR WITH STRUCTURED Ni/CeO2 CATALYST FOR PREFERENTIAL CO METHANATION
1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2Novosibirsk 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
1Boreskov Institute of Catalysis (Novosibirsk), Russia
2Novosibirsk State University (Novosibirsk), Russia
3Eindhoven University of Technology (Eindhoven), The Netherlands
4Institut fur 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_{i}/d_{j}: 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
1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2Novosibirsk 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
1Idaho National Laboratory (Idaho Falls, Idaho), USA
2Interphase 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
1Delft Center for Systems and Control, Delft University of Technology (Delft),
The Netherlands
2Process & 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
1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2Ruhr-University Bochum, Lehrstuhl für Technische Chemie (Bochum), Germany
3Novosibirsk State University (Novosibirsk), Russia
4Institut 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
¹Department of Chemical Engineering, Nagoya University (Nagoya), Japan
²AJGC 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., Paschenko S.E., Salomatov V.V.
THE MECHANISM OF NANOCLUSTER COMBUSTION OF NON-STANDARD FUEL AND APPROPRIATE FURNACE UNIT
1Kutateladze Institute of Thermophysics SB RAS (Novosibirsk), Russia
2Novosibirsk State University (Novosibirsk), Russia

11.50
KN-4
Avgouropoulos G., Ioannides T., Kallitsis J.K., Neophytides S.
DEVELOPMENT OF AN INTERNAL REFORMING METHANOL FUEL CELL: CONCEPT, CHALLENGES AND OPPORTUNITIES
1Foundation for Research and Technology-Hellas (FORTH), Institute of Chemical Engineering & High Temperature Chemical Processes (ICE-HT) (Patras), Greece
2University of Patras (Patras), Greece
3Advent 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
¹Interphase Dynamics (Ballston Lake), USA
²Sasol Technology Research and Development (Sasolburg), South Africa
³Johnson 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
¹Tver Technical University (Tver), Russia
²Boreskov 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.², Murzin D.Y.³, Parmon V.N.¹,²
DEVELOPMENT OF SELECTIVE CAMPHENE SYNTHESIS FROM α-PINENE OVER GOLD ON γ-ALUMINA OXIDE
¹Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
²Novosibirsk State University (Novosibirsk), Russia
³Åbo Akademi University (Turku/Åbo), Finland
⁴Centro de Nanociencias y Nanotecnologia 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 COALESCEENCE 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
Biassi 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
1Åbo Akademi University (Turku/Åbo), Finland
2Chemistry Department, University of Venice (Venice), Italy
3Department 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
1Université des Sciences et Technologies de Lille (Cité Scientifique), France
2Laboratoire de génie des procédés Catalytiques, UMR CNRS (Villeurbanne), France
3IEMN - 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.\textsuperscript{1,2}, Pravdina M.K.\textsuperscript{3}, Yavorsky A.I.\textsuperscript{4}, Yavorsky N.I.\textsuperscript{2,3}, Parmon V.N.\textsuperscript{1,2}  
INTENSIFICATION OF CHEMICAL PROCESSES BY USING OF VORTEX BUBBLING LAYERS  
\textsuperscript{1}Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia  
\textsuperscript{2}Novosibirsk State University (Novosibirsk), Russia  
\textsuperscript{3}Institute of Thermophysics of SB RAS (Novosibirsk), Russia  
\textsuperscript{4}Novosibirsk State Technical University (Novosibirsk), Russia  

16.40  
OP-II-22  
Shelepova E.V.\textsuperscript{1}, Vedyagin A.A.\textsuperscript{1,2}, Noskov A.S.\textsuperscript{1,2}  
MATHEMATICAL MODELLING OF THE PROPANE DEHYDROGENATION IN THE CATALYTIC MEMBRANE REACTOR  
\textsuperscript{1}Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia  
\textsuperscript{2}Novosibirsk State University (Novosibirsk), Russia  

17.00  
OP-II-24  
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.\textsuperscript{1}, Cardoso S.\textsuperscript{2}, Rodrigues A.\textsuperscript{1}  
MULTISCALE ANALYSIS OF A COATED-WALL MICROCHANNEL REACTOR  
\textsuperscript{1}University of Porto (Porto), Portugal  
\textsuperscript{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
REACTOR WITH SELECTIVE MICROWAVE HEATING OF CHEMICAL REAGENTS AND ITS APPLICATION FOR CATALYTIC PYROLYSIS OF HEAVY HYDROCARBONS

1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2Institute of Chemical Kinetics and Combustion SB RAS (Novosibirsk), Russia
3Institute of Strength Physics and Materials Science of SB RAS (Tomsk), Russia
4Novosibirsk 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
¹Johnson Matthey plc, UK
²University 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 OLEFIN: CRACKING OF RENEWABLE NAPHTHA
¹Ghent University, Laboratory for Chemical Technology (Ghent), Belgium
²Syntroleum® (Tulsa, OK), USA

11.50
KN-6
González A.¹, Kafarov V.¹, Guzman A.²
REACTOR MODELLING FOR THIRD GENERATION BIOFUELS PRODUCTION
¹Industrial University of Santander (Bucaramanga), Colombia
²Colombian 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
OP-III-A-6
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
LACTIC ACID BASED ON BIOROURCES AS AN INTERMEDIATE FOR A SERIES OF THE MAIN CHEMICALS PRODUCTION
1Nordbiochem Ltd. (Põlva), Estonia
2D. Mendeleyev University of Chemical Technology of Russia (Moscow), Russia
3Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

RECOVERY OF ACETIC ACID FROM PYROLYSIS OIL BY REACTIVE EXTRACTION
1University of Groningen, Department of Chemical Engineering (Groningen), The Netherlands
2BTG Biomass technology Group BV (Enschede), The Netherlands
3vTI-Institute of Wood Technology and Wood Biology (Leuschnerst), Germany

INVESTIGATION OF HYDROGEN PRODUCTION BY BIOMASS PARTIAL OXIDATION
1Institute of Chemical Process Fundamentals, Czech Academy of Sciences (Prague), Czech Republic
2VUANCH, a.s. (Labem), Czech Republic
3Institute of Chemical Technology (Prague), Czech Republic

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
1Italian Institute of Technology (Torino), Italy
2Asja Ambiente Italia (Torino), Italy
3Politecnico di Torino (Torino), Italy

15.00
OP-III-B-4
Kolesnikov A.1, Mutshena M.1,2
MODELING AND SIMULATION OF HYDROGEN REACTOR
1Tshwane University of Technology (Pretoria), South Africa
2PBMR (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
1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2St. 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.\(^2\)†

\(\text{H}_2\) 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
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
¹Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
²Central 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
¹Lomonosov Moscow State Academy of Fine Chemical Technology (Moscow), Russia
²A.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 MICOREACTOR
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 CATALITIC 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
¹Åbo Akademi University (Turku/Åbo), Finland
²Department 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

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 Vl.N.², Snytnikov V.N.²
COMPUTER SIMULATION OF ENDOTHERMIC PROCESSES IN FLOWING REACTORS USING RADIATION ENERGY
¹Institute of Computational Mathematics and Mathematical Geophysics of SB RAS (Novosibirsk), Russia
²Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

THE INVESTIGATION OF REACTIONS AROMATIC ISOCYANATES WITH OPEN-CHAIN ANALOGUES OF CROWN ETHERS
Kazan State Technological University (Kazan), Russia
THE MECHANISM OF SELF-OSCILLATIONS GENERATION IN CSTR. CONSECUTIVE REACTION
Institute of Problems of Chemical Physics RAS (Chernogolovka), Russia

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

DEVELOPMENT OF NEW GENERATION OF CATALYSTS ON FIBER GLASS WOVEN SUPPORT FOR RAW STYRENE PURIFICATION FROM PHENYL-ACETYLENE IMPURITIES BY SELECTIVE HYDROGENATION METHOD
1Institute of Problems of Chemical Physics RAS (Chernogolovka), Russia
2Salavatnefteorgsintez Public Corporation, Salavat, Russia

PP-I-20. Escamilla E.M., Torres M., Ojeda E.
OPTIMIZATION OF THE ENGINEERING PARAMETERS FOR THE PRODUCTION OF ZEAXANTHIN IN A FLUIDIZED BED REACTOR
1Instituto Tecnológico de Celaya (Celaya), Mexico
2Universidad Autónoma de Querétaro (Manzanillo Colima), Mexico

PP-I-21. Fefelov V., Gorbunov V., Myshlyavtsev A.V., Myshlyavtseva M.D.
SIMULATION OF DIRECTIONAL INTERMOLECULAR INTERACTIONS IN ORGANIC MONOLAYERS: TRIMESIC ACID ON SINGLE CRYSTAL (111) SURFACE
1Omsk State Technical University (Omsk), Russia
2Institute of Hydrocarbon Processing SB RAS (Omsk), Russia

SELF-OSCILLATIONS DURING OXIDATIVE CARBONYLATION OF UNSATURATED COMPOUNDS
Moscow State Academy of Fine Chemical Technology (Moscow), Russia

ORGANOCYCLOSILOXANE POLYMERIZATION ACTIVATED BY AROMATIC ISOCYANATES BY A MACROINITIATOR
Kazan State Technological University (Kazan), Russia

SYNTHESIS OF ETHYLENE OXIDE IN A MICROREACTOR: ELUCIDATING THE REACTION MECHANISM THROUGH DETAILED KINETIC MODELLING
1Åbo Akademi University, Laboratory of Industrial Chemistry (Turku), Finland
2University of Helsinki (Helsinki), Finland

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.**
SYNTESIS GAS PRODUCTION ON NICKEL SUPPORTED CATALYSTS IN OXIDATIVE CONVERSION OF METHANE
*Technical University of Lodz (Lodz), Poland*

PP-I-35. **Marín P., Ordóñez S., Diez 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*

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*

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
*Boreskov 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*
EXPERIMENTAL STUDY OF THE HALIDE-FREE CARBONYLATION OF  
DIMETHYL ETHER TO METHYL ACETATE ON BIFUNCTIONAL  
Rh/Cs1.5H1.5PW12O40 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

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., Kozlov D.  
A TiO2/ADSORBENT PHOTOCATALYTIC SYSTEM: KINETICS MODELING  
AND EXPERIMENTS  
1Novosibirsk State University (Novosibirsk), Russia  
2Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

PP-I-56. Suslov A., Kudryashov S., Ryabov A., Kutenkov V.  
A STUDY OF LIGHT ALKANE TRANSFORMATIONS IN REACTIVE NON-  
THERMAL PLASMAS  
1High Current Electronics Institute of SB RAS (Tomsk), Russia  
2Institute of Petroleum Chemistry SB RAS (Tomsk), Russia

KINETIC MECHANISMS OF CONVERSION OF NATURAL GAS INTO  
AROMATIC COMPOUNDS OVER MODIFIED PENTACYL  
1Institute of Petroleum Chemistry of SB RAS (Tomsk), Russia  
2Tomsk Polytechnic University (Tomsk), Russia

PP-I-61. Zhapbasbyev U.K., Rakhmetova K.B.  
A NEW METHOD FOR SIMULATING OF REFORMING PROCESS IN  
INDUSTRIAL REACTORS  
1Kazakh-British Technical University (Almatu), Kazakhstan  
2Kazakh National University (Alamaty), Kazakhstan

PP-I-62. Jing-Ming Liu, Dong-Dong Sun, Hui Liu, Ying-Bing Nie, Zhu Z.  
STUDY ON EXOENZYMATIC KINETICS OF AUTOTHERMAL  
THERMOPHILIC AEROBIC DIGESTION FOR PRE-TREATING KLEBSIELLA  
PNEUMONIAE  
1Northeast Dianli University (Jilin), China  
2Tongji University (Shanghai), China  
3Jilin Vocational College of Industry and Technology (Jilin), China
PP-I-64. Dauletbaï A.¹, Myrzaliyeva S.²
PROBLEMS OF DIVISION OF ISOTOPES OF LUNGS AND AVERAGE ELEMENTS A METHOD OF A CHEMICAL ISOTOPE INTERCHANGE
¹National Center on Complex Processing of Mineral Raw Materials of the Republic of Kazakhstan RSE (Almaty), Kazakhstan
²Almaty 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

PP-II-9. Barelko V.V.¹, Bykov L.², Ivanyuk A.G.³, Chepelenko V.N.¹, Shults V.A.⁴, Bogidaev R.Y.⁴
NEW STRUCTURE OF THE PLATINOID CATALYTIC GAUZES FOR AMMONIA CONVERSION REACTORS USED FOR PRODUCTION OF NITRIC ACID AND MINERAL FERTILIZERS
¹Institute of Problems of Chemical Physics RAS (Chernogolovka), Russia
²CHEMPHYST Limited Company (Chernogolovka), Russia
³MZSS (Moscow), Russia
⁴JSC AKRON (Nizhniy Novgorod), Russia

PP-II-10. Basov N.L., Oreshkin I., Tereshchenko G.F.†, Ermilova M.M., Orekhova N.V.
UV-ACTIVATION OF METHANE COUPLING IN THE MEMBRANE REACTOR A.V. Topchiev Institute of Petrochemical Synthesis RAS (Moscow), Russia

PP-II-11. Benamrane B.¹, Bourmada N.¹, Chetouani Y.²
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²University of Rouen, France

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²Togliattiazot (Togliatti), Russia

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¹Department of Chemical Engineering, Vrije Universiteit Brussel (Brussels), Belgium
²Eni S.p.A Divisione Refining & Marketing (Milan), Italy

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¹Department of Chemical Engineering, Fukuoka University (Fukuoka), Japan
²Department of Microbiology and Immunology, Fukuoka University, School of Medicine (Fukuoka), Japan
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\textsuperscript{2}Novosibirsk State University (Novosibirsk), Russia

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\textsuperscript{2}Novosibirsk State University (Novosibirsk), Russia
\textsuperscript{3}JSC Tobolsk-Neftehim (Tobolsk), Russia
\textsuperscript{4}JSC “NPK Sintez” (Barnaul), Russia

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1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
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¹Riga Technical University (Riga), Latvia
²RTU Institute of Inorganic Chemistry (Riga), Latvia

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¹INASMET-TECNALIA (San Sebastián), Spain
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¹Max Planck Institute for Dynamics of Complex Technical Systems
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²Otto-Von -Guericke University (Magdeburg), Germany

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¹School of Engineering (UPV/EHU), c/ Alameda Urquijo s/n (Bilbao), Spain
²Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

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Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

PHASE BEHAVIOR OF ORIENTABLE DIMERS ADSORBED ON SURFACES WITH DIFFERENT GEOMETRY

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2Institute of Hydrocarbon Processing SB RAS (Omsk), Russia


CATALYTIC TRANSFORMATION OF METHANE (VIA CHLOROMETHANE) ON CATALYSTS BASED ON SAPOS AND HZSM-5 ZEOLITES

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


CO REMOVAL AT THE MICROSCALE: A 1-CENT GOLD PROX REACTOR

1Universitat Politècnica de Catalunya (Barcelona), Spain
2University of Barcelona (Barcelona), Spain


HYDROGEN PRODUCTION FROM METHANOL USING STRUCTURED CATALYSTS

1Kogakuin University (Hachioji-shi, Tokyo), Japan
2CASIO Computer Co Ltd (Tokyo), Japan


NON CATALITIC PRODUCTION OF BIODIESEL

D. Mendeleyev University of Chemical Technology of Russia (Moscow), Russia


REACTORS FOR SYNTHESIS OF LACTIDE FROM BUTIL LACTATE

D. Mendeleyev University of Chemical Technology of Russia (Moscow), Russia


METHOD FOR COMPLEX PROCESSING OF POLYMERIC WASTES INTO FUEL FRACTIONS

D. Mendeleyev University of Chemical Technology of Russia (Moscow), Russia


FUEL PRODUCTION BY HYDROTREATING OF TRIGLYCERIDES ON NiMo/Al₂O₃ CATALYST

1University of Pannonia, Institute of Chemical and Process Engineering, Department of Hydrocarbon and Coal Processing (Veszprém), Hungary
2MOL Hungarian Oil and Gas Plc. (Százhalombatta), Hungary


PHOTOCATALYTIC HYDROGEN PRODUCTION FROM WATER SOLUTION OF GLYCEROL

1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
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1Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
2Novosibirsk State University (Novosibirsk), Russia
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Åbo Akademi University (Turku/Abo), Finland

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*ZAO ECAT (Perm), Russia
^Perm State University (Perm), Russia

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Technical University of Lodz (Lodz), Poland

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^Russian Federal Nuclear Center – All-Russian Scientific Research Institute of Experimental Physics (Capore), Россия
^Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
^Lavrentyev Institute of Hydrodynamics of SB RAS (Novosibirsk), Russia
^International Science and Technology Center (Moscow), Russia

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^Department of Energy and Environment Systems Faculty of Engineering, Fukuoka University (Fukuoka), Japan
^Department of Chemical Engineering, Fukuoka University (Fukuoka), Japan

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\textsuperscript{1}Universidad Industrial de Santander, Chemical Engineering Department (Bucaramanga), Colombia
\textsuperscript{2}Texas A&M University (College Station), USA

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\textsuperscript{1}Foundation for Research and Technology-Hellas (FORTH), Institute of Chemical Engineering & High Temperature Chemical Processes (ICE-HT) (Patras), Greece
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\textsuperscript{1}University of Pannonia, Institute of Chemical and Process Engineering, Department of Hydrocarbon and Coal Processing (Veszprém), Hungary
\textsuperscript{2}Chemical Research Center, Institute of Chemistry, Hungarian Academy of Sciences (Budapest), Hungary

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\textsuperscript{1}D. Mendeleyev University of Chemical Technology of Russia (Moscow), Russia
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\textsuperscript{1}Politecnico di Torino (Torino), Italy
\textsuperscript{2}Institute of Thermal Engineering (Freiberg), Germany

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D. Mendeleyev University of Chemical Technology of Russia (Moscow), Russia

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\textsuperscript{1}A.E. Arbuzov Institute of Organic and Physical Chemistry KazRC RAS (Kazan), Russia
\textsuperscript{2}Kazan State Technological University (Kazan), Russia

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\textsuperscript{1}Universidad Industrial de Santander, Chemical Engineering Department (Bucaramanga), Colombia
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\textsuperscript{1}University of Warwick (Coventry), UK
\textsuperscript{2}INCATTECH LLC (St. Petersburg), Russia
\textsuperscript{3}Ioffe Physical Technical Institute RAS (St. Petersburg), Russia

PP-III-63. Shtertser N.V., Minyukova T.P., Filonenko G., Khassin A.A.

THREE-PHASE DIRECT OILS HYDROGENATION
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\textsuperscript{1}Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
\textsuperscript{2}Institute of Solid State Chemistry UB RAS (Ekaterinburg), Russia

PP-III-65. Simakova O.\textsuperscript{1}, Solkina Y.S.\textsuperscript{2}, Mäki-Arvela P.\textsuperscript{1}, Simakova I.\textsuperscript{2}

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\textsuperscript{1}Åbo Akademi University (Turku/Åbo), Finland
\textsuperscript{2}Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia

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\textsuperscript{1}Novosibirsk State Technical University (Novosibirsk), Russia
\textsuperscript{2}Boreskov Institute of Catalysis SB RAS (Novosibirsk), Russia
PP-III-67. Soongprasit K.¹, Aht-Ong D.¹, Sricharoenchaikul V.¹, Atong D.²
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¹Chulalongkorn University (Bangkok), Thailand
²National Metal and Materials Technology Center (Pathumthani), Thailand

PP-III-68. Stishenko P.V.¹, Myshlyavtsev A.V.¹²
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¹Omsk State Technical University (Omsk), Russia
²Institute of Hydrocarbon Processing SB RAS (Omsk), Russia

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¹Max-Planck Institute of Colloid and Interface (Potsdam), Germany
²Institut für Chemie, Technische Universität Berlin (Berlin), Germany

PP-III-70. Sugano M.¹, Kajita J.¹, Takagi N.¹, Iwai S.², Hirano K.¹
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¹Nihon University, College of Science and Technology, Department of Materials and Applied Chemistry (Tokyo), Japan
²Department of Transportation Engineering and Socio-Technology (Tokyo), Japan

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PP-III-73. Suraja P.V.¹, Yaakob Z.¹, Binitha N.N.¹², Silija P.P.¹
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¹National University of Malaysia (Bangi), Malaysia
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²Nizhnekamskneftekhim Co. (Nizhnekamsk), Russia

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