RIGA TECHNICAL UNIVERSITY

58th International Scientific Conference

MSAC 2017

MATERIALS SCIENCE AND APPLIED CHEMISTRY

Conference Programme

Friday, 20 October, 2017

9.00-9.45 *Registration* (1st floor hall)*

9.45-10.00 *Opening* (room 272)*

V. Kokars, Dean of Faculty of Materials Science and Applied Chemistry, Latvia

10.00-12.00 *Work in subsection Applied Chemistry (room 320)**

10.00-12.20 *Work in subsection Material Science (room 272)**

12.00-13.20 *Coffee break (1st floor hall)**

12.00-16.00 *Poster session (1st floor hall)**

12.00-15.00 *Voting for best poster*

12.00-16.00 *Exhibition of companies: Saint-Tech, Armgate (1st floor hall)**

13.20-14.20 *Scientific Seminar "Where does the excellence comes from?" (room 272)**

14.20-15.20 *Work in subsection Biotechnology (room 320)**

14.20-15.40 *Work in subsection MaterialScience (room 272)**

15.20-16.00 *Coffee break (1st floor hall)**

16.00 *Closing ceremony, Nomination of the best poster (1st floor hall)**

* **RTU Faculty of Materials Science and Applied Chemistry, Paula Valdena Str. 3/7, Riga, Latvia**

Subsection *Applied Chemistry* (room 320)
10.00-10.20 Synthesis and Thermal Properties of Azobenzene Core Polyester Dendrimers with Trityl Groups at the Periphery **L. Laipniece**, V. Kampars, Institute of Applied Chemistry, Riga Technical University, Latvia
10.20-10.40 Fast Pyrolysis of Rapeseed Oil in Presence of CuO Supported SBA-15 Catalysts **V. Kampars**, S. Zirina, A. Stanke, M. Roze, Institute of Applied Chemistry, Riga Technical University, Latvia
10.40-11.00 Comparison of Luminescent Properties in Solid-State and Polymer Films of Eu(III) Complexes Containing 2-Acylindandione Ligands **I. Malina**, V. Kampars, Institute of Applied Chemistry, Riga Technical University, Latvia
11.00-11.20 Quantum-Chemical Modelling of Solvent-Dependent Electronic Properties of Some Sterically Handicapped Chromophores **I. Mihailovs**, K. Traskovskis, Institute of Applied Chemistry, Riga Technical University, Latvia A. Bundulis, Institute of Solid State Physics, University of Latvia, Latvia
11.20-11.40 Erosoin Wear Mathematical Model for WC-Co Reinforcement Hardness Distribution in Fe-Based Alloy Matrix with Nonlinear Optimization Methods **F. Casesnoves**, Mechanical Engineering Department, Tallinn University of Technology, Estonia
11.40-12.00 Revealing the Inhibition Efficiencies of Artesunate and Rutin for Corrosion of Steel: a Theoretical Study **G. Gece**, Department of Chemistry, Faculty of Natural Sciences, Architecture and Engineering, Bursa Technical University, Turkey
12.00-13.20 *Coffee break (1st floor hall)*
13.20-14.20 *Scientific Seminar"Where does the excellence comes from?"(room 272)*
14.20-15.20 *Work in subsection Biotechnology (room 320)*
14.20-14.40 The Studies on the Antiradical Activity of the Different Antibacterial Plant Extracts **D. Samodova (Dzabijeva)**, I. Nakurte, Faculty of Chemistry, University of Latvia, Latvia A. Boroduske, A. Ramata-Stunda, V. Nikolajeva, M. Boroduskis, Faculty of Biology, University of Latvia, Latvia N. Mazarova, Ltd. "L.E.V." /Ekstraktu rūpnīca/, Latvia
14.40-15.00 Effect of the Fibre Type on the Rheological and Mechanical Properties of Cementitious Composites for Thin Overlays **E. Klaucans**, K. Sams, Ltd. „Auravia Latvia", Latvia
15.00-15.20 Biomass Derived Raw Material Impact on Nitrogen Doped Carbon Porous Structure **A. Plavniece**, Latvian State Institute of Wood Chemistry, Institute of General Chemical Engineering, Riga Technical University, Latvia A. Zurins, G. Dobele, A. Volperts, Latvian State Institute of Wood Chemistry, Latvia
15.20-16.00 *Coffee break (1st floor hall)*
16.00 *Closing ceremony, Nomination of the best poster (1st floor hall)*

Subsection *Materials Science* (room 272)
10.00-10.20 Photocatalyticaly Active Cotton Fabrics Produced with Anatase Synthesized Using a Low-Temperature Sol-Gel Process **R. Eglitis**, G. Mezinskis, Institute of Silicate Materials, Riga Technical University, Latvia
10.20-10.40 Catalytic Pyrolysis of Wood by Presence of Clay Minerals **R. Svinka**, V. Svinka, O. Lescinskis, L. Lindina, Institute of Silicate Materials, Riga Technical University, Latvia
10.40-11.00 Effect of the Fibre Type on the Rheological and Mechanical Properties of Cementitious Composites for Thin Overlays **A. Lukasenoks**, Faculty of Civil Engineering, Concrete Mechanics Laboratory, Riga Technical University, Latvia R. Cepuritis, Department of Structural Engineering, Norwegian University of Science and Technology, Norway
11.00-11.20 Effect of Algerian Halloysite on the Mechanical and Thermal Properties of Starch-Grafted-Polyethylene Nanocomposites **W.Fermas,** M.Kaci, Laboratory of Advanced Polymer Materials (LMPA), University of Bejaia, Algeria R. Merijs-Meri, J. Zicans, Institute of Polymer materials, Riga Technical University, Latvia
11.20-11.40 Enhancing of Permeability to Water Vapor of Biocomposites Based on Poly(Lactic Acid)/Chitosan and Cloisite 30B for Applications in Food Packaging C. Abdenour, **D. Hocine**, B. Amar, Laboratory of Advanced Polymer Materials (LMPA), University of Bejaia, Algeria J. J. Martinez Vega, University of Toulouse, France Y. Grohens, S. Benjamain, Laboratory of Engineering of Materials of Brittany, University of Lorient, France
11.40-12.00 Effect of Fiber Surface-Treatments on the Properties of Poly (Lactic Acid)/ Olive Husk Flour Biocomposites S. Isadounene, **A. Boukerrou**, D. Hammiche, H. Djidjelli, Advanced Materials Materials Laboratory, Department of Process Engineering, Abderrahmane University MIRA, Algeria D. Rodrigue, Departement of Chemical Engineering and CERMA, Laval University, Canada
12.00-12.20 Investigation on the Effects of Electron Beam Irradiation on PHBV/PLA/Organo-Modified Montmorillonite Nanocomposites **M. Kaci**, I. Zembouai, Laboratory of Advanced Polymer Materials (LMPA), University of Bejaia, Algeria S. Bruzaud, University of Southern Brittany, France
12.20-13.20 *Coffee break (1st floor hall)*
13.20-14.20 *Scientific Seminar "Where does the excellence comes from?"(room 272)*
14.20-15.40 *Work in subsection Materials Science (room 272)*
14.20-14.40 Photoinduced Anisotropy of IWK-2D Azobenzene Molecular Glassy Films **A. Ozols**, E. Letko, P. Augustovs, D. Saharovs, E. Zarins, V. Kokars, Faculty of Material Science and Applied Chemistry, Riga Technical University, Latvia
14.40-15.00 An Influence of Electric Field Strength on Capacitance Change of a Capacito Filled with Silicone Oil/Carbon Black Suspension K. Ozols, **S. Scegoleva**, M. Knite, Institute of Technical Physics, Riga Technical University, Latvia
15.00-15.20 Charge Transport Layer Doping Influence on Perovskite $CH_3NH_3PbI_{3-x}C_{lx}$ Solar Cell Performance **A. Ivanova**, K. Lebedeva, I. Kaulachs, Institute of Physical Energetics, Latvia A. Tokmakov, Institute of Solid State Physics, University of Latvia, Latvia M. Roze, Institute of Applied Chemistry, Riga Technical University, Latvia
15.20-15.40 Application of Additional Coating for Conductive Yarns Protection Against

Washing
N. Baribina, I. Baltina, A. Oks, Institute of Design Technologies, Riga Technical University, Latvia

15.40-16.00 *Coffee break (1st floor hall)*

16.00 *Closing ceremony, Nomination of the best poster (1st floor hall)*

Scientific Seminar *"Where does the excellence comes from?"* (room 272)

13.20-13.30 Research and Development of Biomaterials in RTU Rudolfs Cimdins Riga Biomaterials Innovation and Development Centre
D. Loca, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

13.30-13.40 In Vitro and In Vivo Preclinical Studies of Biomaterials in the Latvian Institute of Organic Synthesis
E. Makarova, Laboratory of Pharmaceutical Pharmacology, Latvian Institute of Organic Synthesis, Latvia

13.40-13.50 Application of Biomaterials for Bone Augmentation in Riga Stradins University Institute of Stomatology
I. Salma, Department of Oral and Maxillofacial Surgery, Riga Stradiņš University, Latvia

13.50-14.10 Establishment of Baltic Biomaterials Centre of Excellence
J. Locs, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

12.00-16.00 *Poster Session* (1st floor hall)

P-1 Common and Different in Latvian Clay Minerals
O. Lescinskis, R. Svinka, V. Svinka, Institute of Silicate Materials, Riga Technical University, Latvia

P-2 Influence of Technological Parameters on Thermal Properties of Cordierite Ceramics
M. Rundans, G. Sedmale, Institute of Silicate Materials, Riga Technical University, Latvia
A. Krumina, Institute of Inorganic Chemistry, Riga Technical University, Latvia
A. Ivdre, Latvian State Institute of Wood Chemistry, Latvia

P-3 Characterization of Fe_2O_3-TiO_2 Thin Films Prepared from Sonicated and Unsonicated Sols
G. Mezinskis, D. Larionova, L. Grase, Institute of Silicate Materials, Riga Technical University, Latvia

P-4 Preparation and Characterization of Nanoporous Ceramic Materials
M. Karpe, Institute of Silicate Materials, Riga Technical University, Latvia

P-5 Determination of Quaternary Ammonium Salts in Solution After Organoclay Processing
M. Pals, J. Kostjukovs, J. Karasa, I. Nakurte, Department of Chemistry, University of Latvia, Latvia
I. Putna-Nimane, Latvian Institute of Aquatic Ecology, Latvia
S. Kostjukova, Ltd. Alina

P-6 Hydration of Cement Minerals in a Hydraulic Dolomitic Binder
I. Kirilovica, I. Vitina, L. Lindina, Institute of Silicate Materials, Riga Technical University, Latvia

P-7 Effect of Various Additives and Aeration on the Properties of Lightweight Concrete
G. Shahmenko, Institute of Materials and Structures, Faculty of Civil Engineering, Riga Technical University, Latvia
E. Namsone, Department of Building Materials and Building Products, Faculty of Civil Engineering, Riga Technical University, Latvia
K. Rubenis, A. Dubnika, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia
G. Niparts, JSC "Jauda", Latvia

P-8 Morphologic, Photocatalytic and Antibacterial Properties of ZnO-TiO2 Sol-Gel System
A. Zukuls, G. Meznskis, I. Stafecka, R. Durena, Institute of Silicate Materials, Riga Technical University, Latvia
A. Reinis, I. Skadins, J. Kroica, Department of Biology and Microbiology, Riga Stradins University, Latvia

P-9 Sol-Gel Synthesis of SnO_2-TiO_2 System - Morphologic, Photocatalytic and Antibacterial Properties
A. Zukuls, G. Mezinskis, R. Durena, Institute of Silicate Materials, Riga Technical University, Latvia
A. Reinis, I. Skadins, J. Kroica, Department of Biology and Microbiology, Riga Stradins University, Latvia

P-10 A study on Acidification and Intercalation of Illite Clay Minerals and Their Potential Use as a Filler in SPEEK Composite Membranes
A. Trubaca-Boginska, R. Adina, G. Vaivars, J. Shvirksts, Faculty of Chemistry, University of Latvia, Latvia

P-11 Interaction of Oily Water with Floating Porous Ceramic and Immobilized Microorganisms
A. Berzins, O. Muter, Institute of Microbiology and Biotechnology, University of Latvia, Latvia
R. Svinka, V. Svinka, Institute of Silicate Materials, Riga Technical University, Latvia

P-12 Studies of Raw Flax and Hemp Fibres Properties after Two Step Initial Treatment
A. Bernava, S. Reihmane, Institute of Polymer Materials, Riga Technical University, Latvia

P-13 Development and Characterization of Novel Conductive Nanofiller Based on Multi-Walled Carbon Nanotubes Grafted with Poly(3,4-ethylenedioxythiophene)
G. Vugule, J. Zicans, R. Merijs-Meri, Institute of Polymer Materials, Riga Technical University, Latvia
I. Reinholds, Faculty of Chemistry, University of Latvia, Latvia
K. Ozols, Institute of Technical Physics, Riga Technical University, Latvia

P-14 Optimization of the Parameters Affecting the Adsorption of Textile Dye Onto Diatomite Using the Taguchi Method
H. Aguedal, A. Iddou, Laboratory of Valorization of Materials, Department of Process Engineering, Faculty of Science and Technology, Abdelhamid Ibn Badis University, Algeria
J. Locs, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

P-15 Hydrophilic-Hydrophobic Characteristics of Wood-Polymer Composites Filled with the Modified Wood Particles
J. Jaunslavietis, Latvian State Institute of Wood Chemistry, Institute of General Chemical Engineering, Riga Technical University, Latvia
G. Shulga, B. Neiberte, A. Verovkins, S. Vitolina, T. Betkers, Latvian State Institute of Wood Chemistry, Latvia
J. Ozolins, Institute of General Chemical Engineering, Faculty of Materials Science and Applied Chemistry, Riga Technical University, Latvia

P-16 Pelletizing of Bark Residue Resulting from Debarking of Softwood Trees
A. Andersone, A. Arshanitsa, V. Solodovniks, Latvian State Institute of Wood Chemistry,

Latvia
V. Kampars, Institute of Applied Chemistry, Riga Technical University, Latvia

P-17 Optimization of Proanthocyanidins Extraction from Bark of Local Hardwood
S. Janceva, L. Lauberte, A. Arshanica, J. Akishin, T. Dizhbite, G. Telysheva, Latvian State Institute of Wood Chemistry, Latvia

P-18 On PEO-Based MWCNT and Graphene Composite Electrolyte Structure
A. Jurkane, S. Gaidukov, Institute of Polymer Materials, Riga Technical University, Latvia

P-19 Secondary Insulating Glass Sealant From Synthesized Mercapto Terminated Prepolymer Based On Polyether Polyol And Castor Oil
R. Berzins, R. Merijs-Meri, J. Zicans, Institute of Polymer Materials, Riga Technical University, Latvia

P-20 Polyols From Condensed Tannin Enriched Extracts for Rigid Polyurethane Foam Production
L. Vevere, S. Janceva, A. Arshanitsa, G. Telysheva, Latvian State Institute of Wood Chemistry, Latvia

P-21 Rheological Properties of Wood Plastic Composites (WPCs) Based on Polypropylene and Birch Wood Plywood Production Residues
J. Kajaks, Institute of Polymer Materials, Riga Technical University, Latvia
K. Kalnins, Institute of Polymer Materials, Riga Technical University, Ltd. "Troja", Latvia
J. Matvejs, JSC "Latvijas finieris", Latvia

P-22 Stability Studies of Bioactive Compounds From Birch Outer Bark Ethanolic Extracts
D. Godina, I. Nakurte, Faculty of Chemistry, University of Latvia, Latvia
A. Paze, J. Rizikovs, Latvian State Institute of Wood Chemistry, Latvia
K. Stankus, I. Virsis, JSC „Latvijas finieris", Latvia

P-23 Hemp Waste Modification by Sol-Gel Method to Create Nanolevel Coatings
Z. Zelca, S. Kukle, Institute of Design Technologies, Riga Technical University, Latvia
J. Kajaks, Institute of Polymer Materials, Riga Technical University, Latvia

P-24 Water as Significant Factor Having Influence on Composite Material Properties Based on Scrap Tyres and Polyurethane Binder
L. Malers,R. Kurme, Institute of Polymer Materials, Riga Technical University, Latvia

P-25 Study of Cellulose-Containing Blended Textiles Chemical Processing
A. Borisova, Institute of Polymer Materials, Riga Technical University, Latvia

P-26 Evaluation of Antibacterial Properties of Flax Textiles Coated by Sol-Gel Technology
S. Vihodceva, Institute of Design Technologies, Riga Technical University, Latvia

P-27 Comfort in Sportswear
I. Ziemele, I. Sroma, A. Kakarane, Institute of Design Technologies, Riga Technical University, Latvia

P-28 Investigation of the Comfort Properties of Knitted Fabrics Containing Elastane
V. Daukantiene, J. Domskiene, Department of Materials Engineering, Faculty of Mechanical Engineering and Design, Kaunas University of Technology, Lithuania

P-29 Hyaluronan Hydrogel/Calcium Phosphate Composites for Medical Application
M. Sokolova, J. Locs, D. Loca, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

P-30 Silver and Fluorine Co-Substituted Hydroxyapatite Synthesis
J. Rimsa, V. Zalite, K. Salma-Ancane, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

P-31 Hydrothermal Processing for Increasing the Hydroxyl Ion Concentration in Hydroxyl Depleted Hydroxyapatite
D. Ubele, L. Pluduma, K. A. Gross, Institutute of Inorganic Chemistry, Riga Technical University, Latvia
A. Viksna, Faculty of Chemistry, University of Latvia, Latvia

P-32 Production and Characterization of Oxyhydroxyapatites
L. Pluduma, K. A. Gross, Institutute of Inorganic Chemistry, Riga Technical University, Latvia
C. Rey, University of Toulouse, France
A. Ubelis, Institute of Atomic Physics and Spectroscopy, University of Latvia, Latvia
A. Berzina, Institute of Technical Physics, Riga Technical University, Latvia

P-33 Impact of Heat Treatment on Specific Surface Area of Amorphous Calcium Phosphate
J. Vecstaudza, J. Locs, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

P-34 Hydroxyapatite/Polyvinyl Alcohol Composite Hydrogels for Bone and Cartilage Tissue Engineering
A. Timofejeva, D. Loca, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

P-35 Characterization of Hydrothermal Processing Influence on Strontium Substituted Apatite by Investigating Stable Oxygen Isotope Ratio and Antibacterial Activity of Obtained Peroxyapatite
V. Valkovska, A. Osite, L. Busa, Faculty of Chemistry, University of Latvia, Latvia
V. Nikolajeva, Department of Microbiology and Biotechnology, University of Latvia, Latvia

P-36 Suppression of Phyllospheric Microbiota Alters Content of Pharmacologically Relevant Compounds of S. nigra Flowers
A. Boroduske, N. Rostoks, Faculty of Biology, University of Latvia, Latvia
I. Nakurte, Faculty of Chemistry, University of Latvia, Latvia

P-37 Proteome Analysis of Colorectal Cancer Cell Line SW480 Released Extracellular Vesicles
I. Nakurte, Faculty of Chemistry, University of Latvia, Latvia
K. Jekabsons, R. Muceniece, Faculty of Medicine, University of Latvia, Latvia
E. Zanberga, A. Abols, A. Line, Latvian Biomedical Research and Study Center, Latvia

P-38 Chemical Stability and Preservation of Esomeprazole in Human Plasma During an LCMS/MS Assay
K. Adams, P. Oliiver, M. Stander, S. Naidoo, Division of Clinical Pharmacology, Faculty of Medicine and Health Sciences, Stellenbosch University, South Africa

P-39 Bioremoval of Lead (II) and Cadmium (II) in Single and Multicomponent Systems Using Penicillium sp.
H. Khodja, A. Iddou, H. Aguedal, A. Aziz, Laboratory of Valorization of Materials, Department of Process Engineering, Faculty of Science and Technology, Abdelhamid Ibn Badis University, Algeria
A. Shishkin, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia

P-40 Study on Synthesis of N-Protected 2-Triazolyl Azetidines
V. Peipins, K. Suta, M. Turks, Institute of Technology of Organic Chemistry, Riga Technical University, Latvia

P-41 Novel Ciprofloxacin Derivatives for Polymer-Based Drug Delivery Systems
T. Gerasimova, V. Rjabovs, M. Turks, Institute of Technology of Organic Chemistry, Riga Technical University, Latvia

P-42 Extracts of Peppermint, Chamomile and Lavender as Antioxidants
I. Mierina, L. Adere, M. Jure, Institute of Technology of Organic Synthesis, Riga Technical University, Latvia
L. Jakaite, S. Kristone, Riga State Gymnasium No. 3, Latvia

P-43 Synthesis of Tetrahydroindazole-Triazole Conjugates and their Derivatization by the Ritter Reaction
K. Greitans, D. Ribena, M. Turks, Institute of Technology of Organic Chemistry, Riga Technical University, Latvia

P-44 Production of Biodiesel and Triacetin by Interesterification of Rapeseed Oil
K. Malins, V. Kampars, R. Kampare, Z. Sustere, A. Arenta, Institute of Applied Chemistry, Riga Technical University, Latvia

P-45 Competitive Interesterification-Transesterification of Rapeseed Oil with Methyl Acetate in Presence of Potassium Metoxide Solutions
E. Sile, V. Kampars, Z. Sustere, Institute of Applied Chemistry, Riga Technical University, Latvia

P-46 Phase Composition and Nanomorphology of Tungsten Oxide Nanoflakes Produced via a Pyrolytic Process
D. Zablockis, Institute of Physics, University of Latvia, Latvia
V. Serga, A. Krumina, M. Lubane, G. Heidemane, Institutute of Inorganic Chemistry, Riga Technical University, Latvia

P-47 Electrical Dielectric Permittivity and Conductivity Analysis of Poly (N-carbazole) (PVK) Blending With Polyvinylpyrrolidone (PVP)
A. N. Alias, Z. M. Zabidi, N. Ramlee, M. K. Harun, A. M. M. Ali, Faculty of Applied Sciences, MARA University of Technology, Malaysia
M.Z.A. Yahya, Faculty of Science and Technology, Malaysia National Defense University, Malaysia

P-48 Characteristics of Sintered Materials Obtained from Ferrite Nanopowders Synthesised with Different Methods
I. Zalite, G. Heidemane, A. Krumina, D. Rasmane, J. Grabis, Institutute of Inorganic Chemistry, Riga Technical University, Latvia
M. Maiorov, Institute of Physics, University of Latvia, Latvia

P-49 Preparation of Au, Pt, Pd and Ag Doped TiO_2 Nanofibers and Their Photocatalytic Properties Under LED Illumination
R. Drunka, J. Grabis, A. Krūmiņa, Institutute of Inorganic Chemistry, Riga Technical University, Latvia

P-50 Au Supported TiO_2-Nanofibers as Novel Catalysts for Glycerol Oxidation
S. Chornaja, R. Drunka, K. Dubencovs, S. Zhizhkuna, D. Jankovica, J.Kunakovs, A. Krumina, E. Sile, Institute of Applied Chemistry, Institute of Inorganic Chemistry, Riga Technical University, Latvia

P-51 A Study on Friction Stir Welding Process for AA2219/AA2195 Joints
H. S. Lee, J. T. Yoo, J. H. Yoon, Launcher Structure and Materials Team, Korea Aerospace Research Institute, Republic of Korea
K. No, Department of Aerospace System Engineering, University of Science & Technology, Korea

P-52 A Study on Solid State Welding of Aerospace Materials
H. S. Lee, J. H. Yoon, J. T. Yoo, Launcher Structure and Materials Team, Korea Aerospace Research Institute, Republic of Korea

P-53 Hydration Behaviour of Sufonated Polyetheretherketone (SPEEK) Membranes
K. Veldre, E. Sala, E. Aboltina, G.Vaivars, Faculty of Chemistry, University of Latvia, Latvia

P-54 Synthesis of Symmetric Ethers Using Monocationic and Dicationic Acidic Ionic Liquids
A. Eglite, L. Pudnika, M. A. Balode, A. Priksane, Faculty of Chemistry, University of Latvia, Latvia

P-55 Evaluation of Glyphosate Ecotoxicity and Biodegradability in the Municipal Wastewaters
T. Birsa, University of Nova Gorica, Slovenia, Institute of Microbiology and Biotechnology, University of Latvia, Latvia
K. Kalneniece, M. Kalnins, I. Ozolina, A. Berzins, O. Mutere, Institute of Microbiology and Biotechnology, University of Latvia, Latvia
M. Jansons, Scientific Institute "BIOR", Latvia
V. Svinka, R. Svinka, Institute of Silicate Materials, Riga Technical University, Latvia

V. Bartkevics, Faculty of Chemistry, University of Latvia, Latvia
P-56 Study of the Dynamics Controlling the Biotransfomation of Chromium (VI) Using Serratia Marcescens in Aqueous Solution S. Bensadek, A. Iddou, H. Aguedal, A. Aziz, Laboratory of Valorization of Materials, Department of Process Engineering, Faculty of Science and Technology, Abdelhamid Ibn Badis University, Algeria
P-57 Sustainable Utilization of Sewage Sludge. Review of Technologies A. Stunda-Zujeva, I. Kreicbergs, O. Medne, Institute of General Chemical Engineering, Riga Technical University, Latvia
P-58 Activated Carbon Design from Sludge to Remove Red Scarlet Nylosan "F3GL" in Aqueous Solution F. Bensalah, A. Iddou, H. Hentit, A. Aziz, Laboratory of Valorization of Materials, Department of Process Engineering, Faculty of Science and Technology, Abdelhamid Ibn Badis University, Algeria A. Shishkin, Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of RTU, Institute of General Chemical Engineering, Riga Technical University, Latvia
P-59 Growing and Drying Spirulina/ Arthrospira for Producing Food and Nutraceuticals: A Review A. Stunda-Zujeva, K. Rugele, Institute of General Chemical Engineering, Riga Technical University, Latvia
P-60 Multilayer Adsorption of Purple NR5 Industrial Dye by Aristeus Antennatus Shell in Aqueous Solution H. Benchekor, A. Iddou, H. Hentit, A. Aziz, Laboratory of Valorization of Materials, Department of Process Engineering, Faculty of Science and Technology, Abdelhamid Ibn Badis University, Algeria S. P. Jeferson, Food Engineering Department, University of Passo Fundo, Brazil