

**WORK PROGRAMME OF CONFERENCE ECOBALT 2012  
KONFERENCES ECOBALT 2012 DARBA PROGRAMMA  
(University of Latvia, small Aula)**

Wednesday, 17 October 18:00 – 20:00; Registration and Welcome party Faculty of Chemistry, University of Latvia, Kr. Valdemara street 48.

Thursday, 18 October

9.00-10.30 Participants registration in the lobby of University of Latvia, 19 Raina Blvd., Riga  
10.30-11.00 Conference opening

11:00-12:30 Morning session  
Chairman: prof. Valdis Segliņš

John Upton  
Agilent Technologies, International Distributor Operations  
**THE BENEFITS OF USING PRE CONFIGURED GC-MS BASED ANALYZERS FOR REGULATED WATER ANALYSIS**

Dagnija Blumberga, Andra Blumberga, Ivars Veidenbergs  
Institute of Energy Systems and Environment, Riga Technical University, Riga  
**GREEN ENERGY STRATEGY IN LATVIA**

Georg Vardanyan, Revik Vardanyan, Vineta Zilgalve  
SIA Armgate, Latvia  
**LABORATORY 2040**

Marjan Veber, Matevž Pompe  
Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia  
**THE CONTRIBUTION TO VOC MEASUREMENTS IN THE AIR; SOME ASPECTS OF NON-TARGET ANALYSIS**

Māris Kļaviņš<sup>1</sup>, Linda Ansons<sup>1</sup>, Artis Robalds<sup>1</sup>, Jānis Krūmiņš<sup>1</sup>, Dmitrijs Poršņovs<sup>1</sup>, Arturs Vīksna<sup>2</sup>

<sup>1</sup>Department of Environmental Science, University of Latvia, Riga

<sup>2</sup>Faculty of Chemistry, University of Latvia, Riga

**PEAT AS SORBENT IN NATURE AND INDUSTRY**

12.30-13.45 **Lunch**  
**Pusdienas pārtraukums**

13.45-15.00 **Afternoon session**  
Chairman: prof. Marjan Veber

Ilo Dreyer, Modris Drille  
Riga Technical University, Faculty of Material Science and Applied Chemistry  
**A BROADER LOOK ON SUSTAINABLE DEVELOPMENT**

Krzysztof Kołwzan, Marek Narewski  
Machinery and Equipment Department, Polish Register of Shipping, Gdańsk, Poland  
**ALTERNATIVE FUELS FOR MARINE APPLICATIONS**

Vytautas Smailys, Renata Strazdauskiene, Elvyra Kovaliova  
Air Pollution from Ships Research Laboratory of Klaipeda University (Lithuania)  
**RESEARCH OF INFLUENCE OF AMBIENT AIR POLLUTION BY NITROGEN OXIDES FROM PASSING VESSELS**

Johan Mellqvist<sup>1</sup>, Jörg Beecken<sup>1</sup>, Kent Salo<sup>1</sup>, Johan Ekholm<sup>1</sup>, Konstantin Volodin<sup>2</sup>, Vasily Litvinenko<sup>2</sup> and Dmitry Frank-Kamenetsky<sup>3</sup>

<sup>1</sup>Department of Earth and Space Sciences, Chalmers University of Technology, Göteborg

<sup>2</sup>St. Petersburg City Administration, St Petersburg

<sup>3</sup>State company Mineral, Sankt Petersburg  
**SURVEILLANCE OF SHIP EMISSIONS IN SANKT PETERSBURG WITHIN BSR-INNOSHIP**

Tahir Jan Babar  
Uppsala University  
**ECOTOURISM: A TOOL FOR SUSTAINABLE DEVELOPMENT**

15.00-16.00 **Poster session**  
Chairmans: prof. Arturs Vīksna un Assoc. prof. Modris Drille  
**Kafijas pauze, Coffee break**

16.00-17.30 **Continuing of Afternoon session**  
Chairman: prof. Māris Kļaviņš

Valdis Segliņš  
Department of Applied Geology, University of Latvia, Riga.  
**STATE RESERCH PROGRAM NatRes: PROJECT "MINERAL RESOURCES"**

Girts Stinkulis  
Department of Geology, Faculty of Geography and Earth Sciences, University of Latvia, Riga  
**DEVONIAN CLAYS OF LATVIA, THEIR ORIGIN AND PRACTICAL APPLICATION**

Aivars Spalvins, Janis Slangens, Inta Lace, Olgerts Aleksans, Kaspars Krauklis  
Environment Modelling Centre, Riga Technical University, Riga  
**FIRST RESULTS PROVIDED BY REGIONAL HYDROGEOLOGICAL MODEL OF LATVIA**

Edmunds Lodins<sup>1</sup>, Ineta Rozenstrauha<sup>1</sup>, Liga Krage<sup>1</sup>, Modris Drille<sup>1</sup>, Viktors Filipenkovs<sup>1</sup>,  
M.Balode<sup>2</sup>, I.Putna<sup>2</sup>, R.K. Chinnam<sup>3</sup>, A.R. Boccaccini<sup>3</sup>  
<sup>1</sup>Faculty of Material science and Applied Chemistry, Riga Technical University, Riga  
<sup>2</sup>Department of Experimental Hydrobiology, Latvian Institute of Aquatic Ecology, Riga  
<sup>3</sup>Department of Materials Science and Engineering, University of Erlangen-Nuremberg,  
Erlanger  
**USE OF INDUSTRIAL WASTE FOR PRODUCTION OF GLASS-CERAMICS**

Jūlija Karasa, Juris Kostjukovs, Anna Palaša, Andris Actiņš  
Department of Physical Chemistry, University of Latvia, Riga  
**ADVANCED RESEARCH OF THE TRIASSIC CLAY FROM THE BALTIC REGION**

## **Friday, 19 October**

9.30-11.15 **Rīta sēde – Morning session**  
Chairman: Dr. Ilo Dreyer

Janis Kleperis<sup>1,2</sup>, Karlis Kundzins<sup>2</sup>, Liga Grinberga<sup>2</sup>, Anatolijs Sarakovskis<sup>2</sup>  
<sup>1</sup>Housing and Environment Department, Riga City Council, Riga, Latvia;  
<sup>2</sup>Institute of Solid State Physics, University of Latvia, Riga, Latvia  
**BENZENE POLLUTION IN RIGA FREEPORT - MONITORING AND OPPORTUNITIES**

Hans Orru<sup>1,2</sup>  
<sup>1</sup>Department of Public Health, University of Tartu, Tartu  
<sup>2</sup>Department of Public Health and Clinical Medicine, Umea University, Umea  
**HEALTH EFFECTS OF PARTICULATE MATTER IN ESTONIA**

Allan Astrup Jensen  
Nordic Institute of Product Sustainability, Environmental Chemistry and Toxicology, Denmark  
**HEXABROMOCYCLODODCANE(HBCDD) - A HAZARDOUS BROMINATED FLAME  
RETARDANT USED IN POLYSTYRENE INSULATION**

Jānis Kalnačs<sup>1</sup>, Gundars Mežinskis<sup>2</sup>, Laimonis Bidermanis<sup>2</sup>, Valentīns Grehovs<sup>1</sup>, Aleksandrs Murašovs<sup>1</sup>

<sup>1</sup>Institute of Physical Energetics, Riga

<sup>2</sup>Institute of Silicate Materials of the Riga Technical University, Riga

**CONTINUOUS HEAT CAPACITY DETERMINATION WITH DSC MEASUREMENTS OF ENAMELS FOR CONCENTRATED SOLAR THERMAL SYSTEM**

11.15-11.40 **Coffee break, Kafijas pauze**

11.40-13.30 **Continuing of Morning session**

Chairman: Dr. Ilo Dreyer

Andis Bardulis<sup>1</sup>, Aris Jansons<sup>1</sup>, Imants Liepa<sup>2</sup>

<sup>1</sup>Latvian State Forest Research Institute "Silava", Salaspils

<sup>2</sup>Latvia University of Agriculture, Department of Silviculture, Jelgava

**CARBON ACCUMULATION IN ROOT BIOMASS IN SCOTS PINE (*PINUS SYLVESTRIS* L.) YOUNG STANDS OF FORESTED AREAS**

Arta Bardule<sup>1</sup>, Dagnija Lazdina<sup>1</sup>, Andis Bardulis<sup>1</sup>, Andis Lazdins<sup>1</sup>, Arturs Viksna<sup>2</sup>

<sup>1</sup>Latvia State Forest research institute "Silava", Salaspils

<sup>2</sup>Department of Analytical Chemistry, University of Latvia, Riga

**UTILIZATION OF WOOD ASH, SEWAGE SLUDGE AND DIGESTATE IN A SHORT ROTATION BIOENERGY PLANTATION IN LATVIA**

Linda Mezule, Tihomirova K., Nescerecka A., Talis Juhna

Department of Water Engineering and Technology, Riga Technical University, Riga

**PRODUCTION OF A NEW GENERATION BIOFUEL - BIOBUTANOL FROM LIGNOCELLULOSIC WASTE**

Inese Mierina, Mara Jure, Maija Strele, Rasma Serzane

Faculty of Material Science and Applied Chemistry, Riga Technical University, Riga

**ANTIOXIDANTS OF OAT EXTRACTS AND THEIR ANALOGUES**

Aigars Pazhe, Janis Zandersons, Janis Rizhikovs, Galina Dobeles, Baiba Spince, Vilhelmine Jurkjane, Ausma Tardenaka

Latvian State Institute of Wood Chemistry, Riga

**OBTAINING OF TRITERPENE DERIVATIVES FROM OUTER BIRCH BARK IN THE EXTRACTION PROCESS**

Jevgenija Ponomarenko<sup>1,2</sup>, Tatiana Dizhbite<sup>2</sup>, Arturs Viksna<sup>1</sup>, Maris Lauberts<sup>1,2</sup>, Galina Telysheva<sup>2</sup>, Jelena Krasilnikova<sup>1</sup>

<sup>1</sup>Latvian State Institute of Wood Chemistry, Riga

<sup>2</sup>Department of Analytical Chemistry, University of Latvia, Riga

**SULPHUR-FREE HARDWOOD LIGNINS AS POTENT ENVIRONMENT-FRIENDLY ANTIOXIDANTS**

**Lunch**

13.30-15.00 **Pusdienas pārtraukums**

15.00-16.30 **Afternoon session**

Chairmans: prof. Arturs Viksna un Asoc. prof. Modris Drille

Madars Reimanis<sup>1</sup>, Linda Mezule<sup>2</sup>, Jurijs Ozolins<sup>1</sup>, Juris Malers<sup>1</sup>, Talis Juhna<sup>2</sup>

<sup>1</sup>Institute of General Chemical Technology, Riga Technical University

<sup>2</sup>Department of Water Engineering and Technology, Riga Technical University

**DRINKING WATER DISINFECTION WITH ELECTROLYSIS METHODS**

Kristīne Ruģele<sup>1,2</sup>, Simona Larsson<sup>1</sup>

<sup>1</sup>Department of Water Engineering and Technology, Faculty of Civil Engineering, RTU, Riga

<sup>2</sup>Institute of General Chemical Engineering, Faculty of Material Science and Applied Chemistry, RTU, Riga

**ACID WHEY POTENTIAL FOR BIOGAS PRODUCTION**

Anda Svagere, Zanda Gavare, Valters Dzelme, Rolands Zvejnieks  
Institute of Atomic Physics and Spectroscopy, University of Latvia, Riga

**INSIGHT IN MERCURY CONCENTRATION MEASUREMENTS IN WATER IN LATVIA**

Tatjana Griba<sup>1</sup>, Zaiga Petriņa<sup>1</sup>, Vizma Nikolajeva<sup>2</sup>

<sup>1</sup>Institute of Microbiology and Biotechnology, University of Latvia, Riga

<sup>2</sup>Department of Microbiology and Biotechnology, Faculty of Biology, University of Latvia, Riga

**IMMOBILIZATION OF *PSEUDOMONAS PUTIDA* ON CERAMIC GRANULES FOR ENVIRONMENTAL BIOREMEDIATION**

Juris Burlakovs, Maris Klavins, Anete Karklina

Department of Environmental Science, University of Latvia, Riga

**REMEDICATION BY ZEOLITE AND HUMIC ACID ADDITIVES FOR COMBINED CONTAMINATION WITH HEAVY METALS AND OIL PRODUCTS**

Roberts Fedorovskis<sup>1</sup>, Zanda Zanriba<sup>1</sup>, Kristaps Kucins<sup>1</sup>, Raimonds Poplausks<sup>2</sup>, Donats Erts<sup>2</sup>, Igors Susinskis<sup>3</sup>, Kaspars Kuprevics<sup>3</sup>, Juris Hmelnickis<sup>3</sup>, Silvija Abele<sup>1</sup>

<sup>1</sup>The Faculty of Chemistry, University of Latvia, Riga

<sup>2</sup>The Institute of Chemical Physics, University of Latvia, Riga

<sup>3</sup>ISC "Grindeks", Riga

**ORGANIC MONOLITHS - PERSPECTIVE STATIONARY PHASE FOR HPLC**

16.30 Closing of conference  
Conference chairmans, Discussions

**POSTER SESSION**

- PO1 A. Abramenkovs\*, G. Abramenkova, M. Kļaviņš  
Faculty of Geographical and Earth Sciences, University of Latvia, Riga, Latvia  
\*Environmental Protection Service, Radiation Safety Centre, Riga, Latvia  
**INVESTIGATION OF THE LEAKAGE OF RADIONUCLIDES FROM CEMENTED RADIOACTIVE WASTE**
- PO2 A. Abramenkovs, M. Kļaviņš\*, J. Rudzītis, A. Popelis  
Latvian Environment, Geology and Meteorology Centre, Riga, Latvia  
\*Faculty of Geographical and Earth Sciences, University of Latvia, Riga, Latvia  
**INVESTIGATION OF THE RADIONUCLIDES SORPTION ON THE PEAT**
- PO3 L. Ansons<sup>1</sup>, L. Eglite<sup>1</sup>, M. Klavins<sup>1</sup>  
<sup>1</sup>Department of Environmental Science, University of Latvia, Riga, Latvia  
**SORPTION OF ARSENIC ONTO PEAT AND SYNTHETIC SORBENTS**
- PO4 E. Ausekle<sup>1</sup>, M. Priede<sup>2</sup>, P. Mekšs<sup>1</sup>, I. Kļimenkovs<sup>1</sup>, A. Bērziņš<sup>1</sup>, A. Prikšāne<sup>1</sup>, A. Zicmanis<sup>1</sup>  
<sup>1</sup>Department of Chemistry, University of Latvia, Riga, Latvia  
<sup>2</sup>Latvian Institute of Organic Synthesis, Riga, Latvia  
**SYNTHESIS OF LONG CHAIN SYMMETRICAL ETHERS IN SULFONIC ACID-FUNCTIONALIZED IONIC LIQUIDS**
- PO5 D. Āriņa<sup>1</sup>, J. Kalnačs<sup>2</sup>, V. Grehovs<sup>2</sup>, D. Grigale<sup>2</sup>, A. Murašovs<sup>2</sup>, A. Orupe<sup>2</sup>  
<sup>1</sup>Latvia University of Agriculture  
<sup>2</sup>Institute of Physical Energetics, Latvia  
**CHARACTERIZATION OF THE ASH AS THE ORGANIC PART OF THE MUNICIPAL SOLID WASTE**
- PO6 M. Baitimirova<sup>1</sup>, J. Katkevics<sup>1</sup>, A. Osīte<sup>1</sup>, A. Viksna<sup>1</sup>  
<sup>1</sup>Department of Analytical Chemistry, University of Latvia, Riga, Latvia  
**ZETA POTENTIAL ANALYSIS OF PARTICULATE MATTER**
- PO7 A. Beloborodko<sup>1</sup>, M. Rosa<sup>1</sup>,  
<sup>1</sup>Riga Technical University, Institute of Energy Systems and Environment, Riga, Latvia  
**PROMOTING THE DEVELOPMENT OF INDUSTRIAL SYMBIOSIS IN LATVIA**

- PO8 R. Bublione  
Department of Law, Vilnius Gediminas Technical University, Lithuania  
**METHODS OF ODOUR MEASUREMENTS AND LEGAL REGULATION OF ODOUR EMISSIONS**
- PO9 V. Cidzikienė<sup>1</sup>, V. Jakimavičiūtė-Maselienė<sup>2</sup>  
<sup>1</sup>Vilnius Gediminas Technical University, Saulėtekio al. 11, Vilnius, LT-10223, Lithuania  
<sup>2</sup>Vilnius University, Institute of Geology and Geography, Vilnius, Lithuania  
**INVESTIGATION OF EQUIVALENT DOSE RATE VARIATION IN THE GROUND-LEVEL AIR**
- PO10 L. Drukmane<sup>1</sup>, C. Rochas<sup>1</sup>  
<sup>1</sup>Ekodoma, Riga, Latvia  
**ENERGY SAVING OUTDOOR LIGHTING TOWARDS ENERGY EFFICIENCY**
- PO11 D. Dudare<sup>1</sup>, M. Klavins<sup>1</sup>  
<sup>1</sup>Department of Environmental Sciences, University of Latvia, Riga, Latvia  
**PEAT HUMIC ACIDS COMPLEX-FORMING PROPERTIES INFLUENCED BY PEAT HUMIFICATION**
- PO12 E. Eglīte<sup>1</sup>, J. Aigars<sup>1</sup>, R. Poikāne<sup>1</sup>  
<sup>1</sup>Latvian Institute of Aquatic Ecology, Riga, Latvia  
**DENITRIFICATION ACTIVITY IN THE GULF OF RIGA**
- PO13 E. Elksnis<sup>1</sup>, A. Skudra<sup>2</sup>, A. Viksna<sup>1</sup>  
<sup>1</sup>Faculty of Chemistry, University of Latvia, Riga, Latvia  
<sup>2</sup>Institute of Atomic Physics and Spectroscopy, University of Latvia, Riga, Latvia  
**DIAMOND SYNTHESIS USING PLASMA CHEMICAL VAPOUR DEPOSITION METHOD**
- PO14 E. Ērmāne<sup>1</sup>, A. Bārdule<sup>2</sup>, Z. Balcerbule<sup>1</sup>, R. Gigele<sup>1</sup>  
<sup>1</sup>Department of Analytical Chemistry, University of Latvia, Riga, Latvia  
<sup>2</sup>Latvia State Forest Research Institute „Silava”, Salaspils, Latvia  
**MACRO ELEMENT CONTENT IN FERTILIZED FOREST SOIL IN THE SPRUCE (*PICEA ABIES* (L.) H. KARST.) STAND IN LATVIA**
- PO15 S. Grinberga<sup>1</sup>, M. Avota<sup>1</sup>, M. Eglīte<sup>1</sup>, J. Dundurs<sup>1</sup>, B. Aulika<sup>1</sup>  
<sup>1</sup>Department of Occupational and Environmental Medicine, Riga Stradiņš University, Riga, Latvia  
**ENVIRONMENTAL EDUCATION AT THE DEPARTMENT OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE OF RIGA STRADIŅŠ UNIVERSITY**
- PO16 S. Igaune-Blumberga, I. Barbane, I. Vitina, I. Timma  
Riga Technical University, Institute of Silicate Materials, Riga, Latvia, Azenes street 14/24, LV-1048  
**CORROSION OF HISTORICAL STONE MATERIALS OF THE RIGA STOCK EXCHANGE BUILDING**
- PO17 S. Janceva<sup>1</sup>, M. Lauberts<sup>1</sup>, T. Dizhbite<sup>1</sup>, G. Telysheva<sup>1</sup>, R. Kazernaviciute<sup>2</sup>, R. Venskutonis<sup>2</sup>  
<sup>1</sup>Latvian State Institute of Wood Chemistry, Riga, Latvia  
<sup>2</sup>Kaunas University of Technology, Kaunas, Lithuania  
**ASSESSMENT OF ANTIOXIDANT ACTIVITY OF OLIGOMERIC PHENOLIC COMPOUNDS ISOLATED FROM HARDWOOD BARKS USING DIFFERENT TESTING METHODS**
- PO18 R. Jankevics<sup>1</sup>, A. Strautins<sup>1</sup>, P. Jefimenko<sup>1</sup>, I. Rozenstrauha<sup>2</sup>, I. Pastare<sup>2</sup>  
<sup>1</sup>Department of Ship's Electrical automation, Latvian Maritime Academy, Riga, Latvia  
<sup>2</sup>Department of General Education, Latvian Maritime Academy, Riga, Latvia  
**THE DEVELOPMENT OF THE SHIPS' SHORE POWER SUPPLY SYSTEM ON THE PASSENGER PORT OF RIGA**
- PO19 L. Jashina<sup>1</sup>, T. Dizbite<sup>1</sup>, L. Martinova<sup>2</sup>, G. Telysheva<sup>1</sup>  
<sup>1</sup>Latvian State Institute of Wood Chemistry, Riga, Latvia  
<sup>2</sup>Department of Chemistry, University of Latvia, Riga, Latvia  
**INFLUENCE OF OXIDATIVE MODIFICATION OF WHEAT STRAW LIGNIN ON ITS SORPTION CAPACITY TOWARDS HEAVY METALS**
- PO20 A. Jersova<sup>1</sup>, K.A. Gross<sup>2</sup>, D. Grossin<sup>3</sup>, A. Viksna<sup>1</sup>  
<sup>1</sup>Department of Analytical Chemistry, University of Latvia, Riga, Latvia  
<sup>2</sup>Institute of Biomaterials and Biomechanics, Riga Technical University, Riga, Latvia  
<sup>3</sup>Université de Toulouse, CIRIMAT, Toulouse, France  
**UPTAKE AND RELEASE OF STRONTIUM FROM METAL PHOSPHATES OF VARYING CRYSTALLINITY**
- PO21 J. Karušs, V. Segliņš<sup>1</sup>  
<sup>1</sup>Department of Applied Geology, University of Latvia, Riga, Latvia

- PO22 **SEDA PEAT BOG DEPOSIT RESEARCH WITH GROUND PENETRATION RADAR (GPR)**  
R. Kazakovs, M. Bertins, S. Pastare  
AUKK laboratorija, SIA "Rigas udens", Riga, Latvia
- PO23 **COMPARISON OF METHODS FOR DETERMINATION OF BOD IN WASTEWATER TREATMENT PLANT BTP "DAUGAVGRIVA"**  
V. Kirsanovs<sup>1</sup>  
<sup>1</sup>Institute of Energy Systems and Environment, Riga Technical University, Riga, Latvia
- PO24 **OXYGEN CONCENTRATION CHANGES IN THE FLUE GAS IMPACT ON BOILER COMBUSTION PARAMETERS AND EMISSIONS QUANTITIES**  
A. Kokins<sup>1</sup>, V. Segliņš<sup>2</sup>  
<sup>1</sup>SIA "szk un partneri", Riga, Latvia.  
<sup>2</sup>Department of Applied Geology, University of Latvia, Riga
- PO25 **THE SOURCE OF NATURAL MINERAL PIGMENTS IN LATVIA, PREHISTORIC TIME PERIOD**  
V. Lakevičs<sup>1</sup>, J. Brovkina<sup>1</sup>, V. Stepanova<sup>1</sup>, I. Dušenkova<sup>1</sup>, J. Ozoliņš<sup>1</sup>, G. Šulga<sup>2</sup>, L. Bērziņa-Cimdiņa<sup>1</sup>  
<sup>1</sup>Riga Technical University, 14/24 Azenes str., LV-1045, Riga, Latvia  
<sup>2</sup>Latvian State Institute of Wood Chemistry, 27 Dzerbenes str, LV 1006, Riga, Latvia
- PO26 **USING SORBENTS, DEVELOPED ON LATVIAN CLAY BASIS, IN SOLVING ENVIRONMENTAL PROBLEMS**  
K. Lamsters<sup>1</sup>, R. Ošs<sup>1</sup>  
<sup>1</sup>Department of Geography and Earth Sciences, University of Latvia, Riga, Latvia
- PO27 **THE DISTRIBUTION AND COMPOSITION OF THE ZEMGALE RIBBED MORAINES AND RELATED MINERAL DEPOSITS, CENTRAL LATVIAN LOWLAND, SE BALTIC**  
K. Lazdoviča, L. Liepiņa, V. Kampars  
Institute of Applied Chemistry, Riga Technical University, Riga, Latvia
- PO28 **TG – FTIR ANALYSIS OF WHEAT STRAW PYROLYSIS**  
A. Ludboržs  
Latvian Environment, Geology and Meteorology Centre
- PO29 **COMPLEXITIES OF AUTHORISATION PROCESS IN THE EU CHEMICALS LEGAL SYSTEM REACH NO. 1907/2006**  
V. Maksimova<sup>1</sup>, L. Kļaviņa<sup>2</sup>  
<sup>1</sup>Faculty of Chemistry, University of Latvia  
<sup>2</sup>Department of Environmental Sciences, University of Latvia
- PO30 **ANALYSIS AND IDENTIFICATION OF HYDROPHOBIC COMPOUNDS IN SOME BRYOPHYTES**  
K. Malins<sup>1</sup>, V. Kampars<sup>1</sup>, E. Palcevskis<sup>2</sup>, A. Blums<sup>1</sup>, J. Brinks<sup>1</sup>, D. Jankovica<sup>2</sup>, I. Steins<sup>2</sup>, J. Grabis<sup>2</sup>, J. Prilucka<sup>1</sup>  
<sup>1</sup>Institute of Applied Chemistry, Riga Technical University, Riga, Latvia  
<sup>2</sup>Institute of Inorganic Chemistry, Riga Technical University, Riga, Latvia
- PO31 **HETEROGENEOUS CATALYSTS FOR BODIESEL PREPARATION BASED ON NANOSIZED PLASMA PROCESSED ALUMINA**  
K. Malins<sup>1</sup>, V. Kampars<sup>1</sup>, E. Palcevskis<sup>2</sup>, A. Blums<sup>1</sup>, J. Brinks<sup>1</sup>, D. Jankovica<sup>2</sup>, I. Steins<sup>2</sup>, J. Grabis<sup>2</sup>, J. Prilucka<sup>1</sup>  
<sup>1</sup>Institute of Applied Chemistry, Riga Technical University, Riga, Latvia  
<sup>2</sup>Institute of Inorganic Chemistry, Riga Technical University, Riga, Latvia
- PO32 **PREPARATION OF BODIESEL USING HETEROGENEOUS CATALYSTS**  
I. Mārtiņšone<sup>1</sup>, I. Vanadžiņš<sup>2</sup>, M. Eglīte<sup>3</sup>  
<sup>1</sup>Laboratory of Hygiene and Occupational Diseases, Riga Stradins University, Riga, Latvia  
<sup>2</sup>Institute of Occupational Safety and Environmental Health, Riga Stradins University, Latvia  
<sup>3</sup>Department of Occupational and Environmental Medicine, Riga Stradins University, Latvia
- PO33 **DEVELOPMENT OF TRAINING PROGRAM "ENVIRONMENTAL QUALITY MODELLING" IN RIGA STRADIN'S UNIVERSITY**  
A. Opolais, V. Rudovica, A. Viksna  
Department of Analytical Chemistry, University of Latvia, Riga, Latvia
- PO34 **REDUCTION OF POLYATOMIC INTERFERENCES USING DYNAMIC REACTION CELL INDUCTIVELY COUPLED PLASMA MASSPECTROMETRY**  
S. Osipovs<sup>1</sup>, A. Viksna<sup>2</sup>  
<sup>1</sup>Department of Chemistry, Daugavpils University, Daugavpils, Latvia  
<sup>2</sup>Department of Analytical Chemistry, University of Latvia, Riga, Latvia

- PO35 **CALCULATION OF THE TAR DEW POINT**  
S. Ostrovska, S. Vitolina, G. Shulga, B. Neiberte, A. Verovkins, J. Brovkina  
Latvian State Institute of Wood Chemistry, Riga, Latvia
- PO36 **CHARACTERISTICS AND PROPERTIES OF SODA LIGNIN OBTAINED FROM ASPEN WOOD BY-PRODUCT**  
A. Osvalde, G. Cekstere, A. Karlsons  
Institute of Biology University of Latvia, Salaspils, Latvia
- PO37 **PLANT RESPONSES TO NITROGEN DEFICIENCY AND WATER STRESS IN GROWTH ENVIRONMENT**  
A. Priksane<sup>1</sup>, A. Flint<sup>2</sup>, K. Neumann<sup>2</sup>, J. Logins<sup>1</sup>, E. Ausekle<sup>1</sup>, E. Bakis<sup>1</sup>  
<sup>1</sup> University of Latvia, Riga, Latvia  
<sup>2</sup> University Rostock, Rostock, Germany
- PO38 **THE CONCEPT „CHEMISTRY FOR LIFE” AND ENVIRONMENTAL EDUCATION**  
S. Rancāne<sup>1</sup>, A. Arshanitsa<sup>2</sup>, V. Solodovnik<sup>2</sup>, D. Lazdiņa<sup>3</sup>  
<sup>1</sup> LLU agency 'Research Institute of Agriculture', Latvia  
<sup>2</sup> Latvian State Institute of Wood Chemistry, Latvia  
<sup>3</sup> State Forest research institute 'Silava', Latvia
- PO39 **POTENTIAL OF REED CANARY GRASS AS AN ENERGY CROP IN LATVIAN CONDITIONS**  
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- PO40 **APPLICATION OF RECYCLED POLYETHYLENE TEREPHTHALATE/ 4-HYDROXYBENZOIC ACID COPOLYESTERS FOR IMPROVEMENT OF THERMOMECHANICAL PROPERTIES OF RADIATION MODIFIED HIGH DENSITY POLYETHYLENE**  
D. Riekstina, J. Berzins, O. Veveris  
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- PO41 **ASSESSMENT OF NATURAL RADIONUCLIDES LEVEL IN BUILDING MATERIALS**  
A. Robalds, M. Klavins, L. Dreijalpe  
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- PO42 **SORPTION OF THALLIUM (I) IONS FROM AQUEOUS SOLUTION BY PEAT O. Roots**  
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Estonian Marine Institute, University of Tartu, Tallinn, Estonia
- PO43 **NUTRITION RECOMMENDATIONS FOR ESTONIAN FISHERMEN (DIOXINS AND DIOXIN-LIKE POLYCHLORINATED BIPHENYLS)**  
I. Rozenstrauha<sup>1</sup>, L. Krage<sup>2</sup>, M. Drille<sup>1</sup>  
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- PO44 **SKILFUL APPLICATION OF INORGANIC INDUSTRIAL WASTE**  
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- PO45 **THE PREDICTION OF RETENTION PARAMETERS OF SMALL AND MEDIUM MOLECULES BY SOLVATION SORPTION MODEL USING METHANOL AS ORGANIC MODIFIERS**  
E. Sproģe<sup>1</sup>, S. Cornaja<sup>1</sup>, K. Dubencovs<sup>1</sup>, L. Kulikova<sup>2</sup>, V. Serga<sup>2</sup>, V. Kampars<sup>1</sup>  
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- PO46 **ENVIRONMENTALLY FRIENDLY LACTIC ACID PRODUCTION BY CATALYTIC OXIDATION OF GLYCEROL**  
R. Svinka<sup>1</sup>, V. Svinka<sup>1</sup>, L. Dabare<sup>1</sup>  
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- PO47 **SORPTION OF INORGANIC SUBSTANCES ON THE POROUS LATVIAN CLAY CERAMIC**  
G. Telysheva<sup>1</sup>, G. Lebedeva<sup>1</sup>, G. Dobele<sup>1</sup>, A. Volpert<sup>1</sup>, L. Vevere<sup>2</sup>  
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- CORN PLANT DEVELOPMENT ON THE BACKGROUND OF SOIL WITH LOW RATE OF**

- PO48 **BIOCHAR**  
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- PO49 **MEMBRANE TECHNOLOGIES IN SOLVING ENVIRONMENTAL PROBLEMS**  
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- PO50 **THE CONTENT OF MICROELEMENTS IN THE LATVIAN CLAY BEFORE AND AFTER TREATMENT BY ACID**  
L. Zariņa<sup>1</sup>, V. Segliņš<sup>2</sup>  
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- PO51 **THE POSSIBLE SOURCES OF FLINT IN THE PREHISTORIC STAGE IN TERRITORY OF LATVIA**  
A. Zarkov, A. Zalga, S. Tautkus, A. Kareiva  
Faculty of Chemistry, Vilnius University, Vilnius, Lithuania
- PO52 **NOVEL ANALYTICAL APPROACH FOR THE DETERMINATION OF ZIRCONIUM AND YTTRIUM IN YSZ POWDERS**  
O. Purmalis, M. Klavins, I. Silamikele  
Department of Environmental Sciences, University of Latvia, Riga, Latvia
- PEAT ACCUMULATION IN OMBROTROPHIC BOGS**