

CONFERENCE PROGRAMME

Wednesday, 6 September 2017

16:00 – 19:00 **Registration with welcome buffet**

Thursday, 7 September 2017

9:00 – 9:10 **Opening Ceremony**

LECTURE SESSION: Advanced nanostructured polymers

Chaired by: Arantxa Eceiza (Spain)

- 9:10 – 9:50 Invited lecture IL-01
Jean-François Gérard (*France*)
Generation of nanostructures within polymer networks from self-assembling and (nano)phase separation processes
- 9:50 – 10:10 Oral communication OR-01
Noor Hana Hanif Abu Bakar (*Malaysia*)
Enhanced adsorption of methylene blue by modification of natural rubber with halloysite nanotubes or chitosan
- 10:10 – 10:30 Oral communication OR-02
Marietjie Lutz (*South Africa*)
EVOH nanocomposites with improved antimicrobial properties
- 10:30 – 10:50 Oral communication OR-03
Bolesław Szadkowski (*Poland*)
Electrical and mechanical properties of elastomer nanocomposites containing carbon black and ionic liquids

10:50 – 11:15

Coffee break

LECTURE SESSION: Composites and functional nanoparticles

Chaired by: Jean-François Gérard (France)

- 11:15 – 11:45 Keynote lecture KL-01
Andrea Lazzeri (Italy)
Biocomposites based on polyesters and natural fibres
- 11:45 – 12:05 Oral communication OR-04
Na Re Ko (Republic of Korea)
Novel graphene quantum dot-based theranostic agents for breast cancer treatment
- 12:05 – 12:25 Oral communication OR-05
Marcin Masłowski (Poland)
Reinforced smart magnetic polymer composites
- 12:25 – 12:45 Oral communication OR-06
Anna Margot Beltzung (Switzerland)
Microporous polyacrylonitrile nanoparticles for CO₂-capture

12:45 – 14:15

Lunch

LECTURE SESSION: Bio-based materials and composites

Chaired by: Marietjie Lutz (South Africa)

- 14:15 – 14:45 Keynote lecture KL-02
Arantxa Eceiza (Spain)
Biobased polyurethanes and nanocomposites
- 14:45 – 15:05 Oral communication OR-07
Sébastien Livi (France)
Ionic liquids: New promising additives for biopolymers
- 15:05 – 15:25 Oral communication OR-08
Marcin Włoch (Poland)
Chemical structure and properties epoxy resins cured using amine derivative of dimerized fatty acids
- 15:25 – 15:45 Oral communication OR-09
Justyna Miedzianowska (Poland)
Natural rubber composites containing cereal straw

15:45 – 16:05 Oral communication OR-10
Carlos Eduardo Orrego (*Colombia*)
Biobased-foamed epoxy resin composite as support for lipase immobilization

16:05 – 16:30 *Coffee break*

LECTURE SESSION: Visegrad Session- ABIOG Group

Chaired by: Maria Lujan Auad (USA)

16:30 – 17:00 Keynote lecture KL-03
Szczepan Bednarz (*Poland*)
Itaconic acid: Branched nanogels and imperfect polymeric networks

17:00 – 17:20 Oral communication OR-11
Nóra Hegyesi (*Hungary*)
Controlled bulk degradation of poly- ϵ -caprolactone by the entrapment of lipase enzyme into halloysite nanotubes

17:20 – 17:40 Oral communication OR-12
Eliška Číková (*Slovakia*)
Electroactive scaffolds based on the modified electrospun poly(ϵ -caprolactone) fibres

17:40 – 18:00 Oral communication OR-13
Jana Kredatusová (*Czech Republic*)
Microwave synthesis of PCL/LDH nanocomposites

18:00 – 19:00 **Poster Session**

20:00 – 22:30 **Conference dinner**

Friday, 8 September 2017

LECTURE SESSION: From renewable resources to polymers

Chaired by: Maria Filomena Barreiro (Portugal)

- 9:00 – 9:40 Invited lecture IL-02
Alessandro Gandini (*France*)
The Diels-Alder reaction applied to polymers from renewable resources: Thermal reversibility and recyclability
- 9:40 – 10:10 Keynote lecture KL-04
Aleksander Prociak (*Poland*)
Rigid polyurethane foams modified with lignin based bio-polyols
- 10:10 – 10:30 Oral communication OR-14
Mikelis Kirpluks (*Latvia*)
Investigation of tall oil fatty acid epoxidation kinetics
- 10:30 – 10:50 Oral communication OR-15
Maria Kurańska (*Poland*)
Synthesis and characterization of bio-polyols from post-used vegetable oils
- 10:50 – 11:10 Oral communication OR-16
Paulina Parcheta (*Poland*)
Fully bio-based polyester polyols for polyurethanes

11:10 – 11:35

Coffee break

LECTURE SESSION: Polyurethanes and environment

Chaired by: Aleksander Prociak (Poland)

- 11:35 – 12:05 Keynote lecture KL-05
Ugis Cabulis (*Latvia*)
Mechanical and thermal properties of polyurethane foams obtained from renewable and recyclable components

- 12:05 – 12:25 Oral communication OR-17
Isabel P. Fernandes (*Portugal*)
Development of a modified pre-polymer method to produce NMP-free polyurethane-urea aqueous dispersions
- 12:25 – 12:45 Oral communication OR-18
Patrycja Maria Jutrzenka Trzebiatowska (*Poland*)
Characterization of cast polyurethanes with high content of recycled polyol
- 12:45 – 13:05 Oral communication OR-19
Sylwia Członka (*Poland*)
Natural oils as a chain extenders in the synthesis of rigid polyurethane foams
- 13:05 – 14:30 *Lunch*
- 13:30 – 14:30 **GCNPC meeting**

LECTURE SESSION: Structured hydrogels and hybrid polymers

Chaired by: Alessandro Gandini (France)

- 14:30 – 15:00 Keynote lecture KL-06
Miroslava Dušková (*Czech Republic*)
Microstructured pHEMA-hydrogels as sustainable materials for biological studies
- 15:00 – 15:20 Oral communication OR-20
Maria Lujan Auad (*USA*)
Interpenetrating hydrogel networks for use in tissue engineering and agricultural applications
- 15:20 – 15:40 Oral communication OR-21
Kamol Dey (*Italy*)
Preparation and assessment of high performance gelatin-based hydrogels for tissue engineering

15:40 – 16:00 Oral communication OR-22
Alexandra Gârea (*Romania*)
Organic-inorganic hybrid polymer: A new
organophylization agent for layered silicates

16:00 – 16:10 **Closing ceremony**

16:10 – 16:40 *Farewell coffee*

LIST OF POSTERS

POSTER SESSION A – GREEN CHEMISTRY OF POLYMERS

- P-01** **A. Abolins**, V. Yakushin, D. Vilsons
Properties of polyurethane coatings based on linseed oil phosphate polyols
- P-02** **P. Jutrzenka Trzebiatowska**, A. Gelo, E. Głowińska, M. Włoch, P. Kosiorek, P. Parcheta, K. Błażek, J. Datta
Rigid polyurethane foams based on semi-product from polyurethane decomposition process
- P-03** N. Petkova, G. Gencheva, **D. Vassilev**, M. Koleva, P. Denev, A. Krastanov
Microwave-assisted isolation and acetylation of inulin from *Helianthus tuberosus* L. tubers
- P-04** **P. Parcheta**, J. Datta, P. Jutrzenka Trzebiatowska, P. Kasprzyk, K. Błażek, E. Głowińska, M. Włoch
The catalyst impact on the fully bio-based poly(propylene succinate) structure
- P-05** **D. Vassilev**, N. Petkova, M. Koleva, P. Denev
Application of ultrasound assisted synthesized sucrose palmitate as bio-plasticiser of poly vinylchloride
- P-06** **E. Vanags**, M. Kirpluks, U. Cabulis
Epoxidation of free fatty acids distilled from tall oil by *in situ* formed peracetic acid
- P-07** **A. Fridrihsone**, U. Cabulis, F. Romagnoli
Cellulose production by-products as a raw material for polyurethane industry – a life cycle assessment approach
- P-08** **R. Bouza**, S. Malmir, B. Montero, M. Rico, L. Barral
Biodegradable films of PHBV/cellulose nanocrystals: Thermal and rheological properties
- P-09** **M. Méndez-López**, C. Saldías, A. Ramos, V. Moreno, D. Radić, A. Leiva
Preparation and characterization of polysaccharide/ conducting polymer films

- P-10 V. Moreno-Serna**, M. Méndez-López, A. Leiva, D. Radić
Preparation and characterization of chitosan:poly(3-hexylthiophene) and quantum dots hybrid films
- P-11 C. M. Trindade**, L. C. G.de S. Santos, **E. Ayres**
Effect of sorbitol on swelling behavior of chitosan films prepared with lactic acid
- P-12 L. C. G.de S. Santos**, E. Ayres, M. L. B. Almeida, R. L. Oréface
Synthesis and evaluation of bio-based waterborne
- P-13 J. Datta**, M. Włoch, K. Błażek, M. Tomaszewska, U. Ostaszewska
Natural rubber vulcanizates obtained using chemical recycling products of polyurethanes as a plasticizers
- P-14 S. Michałowski**, M. Palka, A. Prociak
Rigid polyurethane foams obtained using reactive catalysts
- P-15 K. Tošovská**, P. Innemanová, H. Beneš, A. Paruzel, J. Kredatusová, Z. Kruliš
Biodegradation of polyester polyols-based polyurethane foams for agricultural landscape applications
- P-16 K. Beyaz**, A. Benaboura, C. Vaca-Garcia, S. Thiebaud-Roux
Graft-copolymerization of acrylic monomers onto cellulose extracted from palm leaves

POSTER SESSION B – NANOTECHNOLOGIES IN POLYMER SCIENCE

- P-17 L. Sartore**, **K. Dey**
Organic-inorganic hybrid composites for removal of heavy metal ions from water
- P-18 E. Głowińska**, J. Datta, M. Włoch, K. Załęska, P. Jutrzenka Trzebiatowska
Structure, morphology and thermal properties of polyurethane composites containing spirulina
- P-19 E. Głowińska**, J. Datta, M. Włoch, P. Parcheta, N. Kaźmierczak
New approaches of spirulina as a filler in natural rubber based composites

- P-20 P. Threepopnatkul**, W. Thongsong, C. Kulsetthanchalee
Effect of nano fillers on properties of PBAT/PET thin film
- P-21 M. Włoch**, J. Datta, E. Głowińska, K. Błazek, P. Kosiorek
Green natural rubber-based composites filled with buckwheat husks powder
- P-22 S. Krejcikova**, A. Ostafinska, D. Michalkova, Z. Kruliš, M. Slouf
Thermoplastic starch composites with high contents of titanium dioxide particles and homogeneous morphology
- P-23 E. Pietrzykowska**, A. Chodara, B. Romelczyk, T. Chudoba, W. Łojkowski
New production methods of orthopedic composites from polymers and ceramic

POSTER SESSION C – VISEGRAD ADVANCED MATERIAL GROUP (ABIOG)

- P-24 W. Kasprzyk**, W. Mak, S. Bednarz, D. Bogdał
Citric acid based fluorescent polymers
- P-25 A. Eckstein - Andicsová**, A. Šišková, E. Kozma
Potential application of silk fibroin as biomaterials
- P-26 B. Gyarmati**, E. Krisch, B. Szilágyi, A. Szilágyi
Thiolated poly(amino acid)s displaying *in situ* oxidation induced gelation
- P-27 A. Paruzel**, H. Beneš, J. Kredatusová, Z. Kruliš, K. Tošovská, P. Innemanová
Biodegradable polyurethane foams from polyester-ether polyols and renewable resources
- P-28 H. Beneš**, A. Paruzel, Z. Walterová, O. Trhlíková
Role of natural oil structure for polycarbonate conversion into polyurethane polyols