



**BIOPOL-2015. SCIENTIFIC PROGRAM**

**DONOSTIA-SAN SEBASTIAN. 6<sup>TH</sup> – 9<sup>TH</sup> OCTOBER 2015**



**Tuesday 6<sup>TH</sup> October 2015**

**18.30-20.00 Registration / Welcome Party**



## Wednesday 7<sup>TH</sup> October 2015

**08.45-09.00. Welcome and opening. José M. Kenny, Arantxa Eceiza, Alfonso Jiménez & Fernando Plazaola (Vicepresident for Research and Development, University of the Basque Country)**

### Session 1. Room Julio Caro Baroja. Chairperson Yoshiharu Kimura

**09.00-09.40. Opening Lecture. David Plackett** (University of British Columbia, Canada). “Nanocelluloses and their application in the field of drug delivery”

**09.40-10.10. Keynote Lecture-1. Lars Berglund** (KTH Royal Institute of Technology, Stockholm, Sweden). “Moisture stability in biocomposites through unique interface effects”

**10.10-10.30. Oral Communication-1. Jean Pierre Pascault** (Université de Lyon, Villeurbanne, France). “Epoxy precursors based on Isosorbide: for which applications in thermosetting materials?”

**10.30-10.50. Oral Communication-2. René Saint-Loup** (Roquette Frères, Lestrem, France). “Isosorbide: an interesting monomer for thermoplastics and curable resins”

### Session 1. Room Comedor Real. Chairperson Alfonso Maffezzoli

**10.10-10.30. Oral Communication-3. Cosimo Carfagna** (Institute of Polymers, Composites and Biomaterials (IPCB-CNR), Pozzuoli, Italy). “A biocatalytically-produced phenolic polymer as an efficient natural stabilizer for polyethylene”

**10.30-10.50. Oral Communication-4. Violette Ducruet** (INRA, UMR1145 Ingénierie Procédés Aliments, Massy, France). “Bioproducts of oil industry as toughening agents of polylactide”

**10.50-11.45. Coffee Break and Poster session-1**



## Wednesday 7<sup>TH</sup> October 2015

### Session 2. Room Julio Caro Baroja. Chairperson Luc Averous

**11.45-12.15. Keynote Lecture-2. Philippe Dubois** (University of Mons, Belgium).  
“Shape-memory biopolymers: from polymer blends to reactive extrusion”

**12.15-12.35. Oral Communication-5. Jean François Gérard** (Université de Lyon, France). “Hybrid organic-inorganic materials based on bio-based polymers and monomers”

**12.35-12.55. Oral Communication-6. Patrizia Cinelli** (University of Pisa, Italy).  
“Sustainable biocomposites based on polymers and natural fibres from renewable resources”

**12.55-13.15. Oral Communication-7. Elisabete Frollini** (University of Sao Paulo, Brazil). “Lignocellulosic fibers as a source of macromolecular materials”

### Session 2. Room Comedor Real. Chairperson Lars Berglund

**12.15-12.35. Oral Communication-8. Elena Fortunati** (University of Perugia, Terni, Italy). “Effect of natural hydroxytyrosol on the mechanical, migration and antioxidant properties of PVA-based films for food active packaging”

**12.35-12.55. Oral Communication-9. Arantzazu Valdés** (University of Alicante, Spain).  
“Development and characterization of corn-starch based edible films with added olive oil extract for active food packaging”

**12.55-13.15. Oral Communication-10. Sandra Domenek** (AgroParisTech, Massy, France). “Development of renewable nanocomposites for packaging by the functionalization of nano-polysaccharides”

**13.15-14.30. Lunch**



**Wednesday 7<sup>TH</sup> October 2015**

**Session 3. Room Julio Caro Baroja. Chairperson David Plackett**

**14.30-15.00. Keynote Lecture-3. Andrea Lazzeri** (University of Pisa, Italy). "Bio-based blends and composites: driving melt processing to achieve tailored mechanical properties"

**15.00-15.20. Oral Communication-11. María Lluïsa Maspoch** (Centre Català del Plàstic, Terrassa, Spain). "Injection molded REX-PLA/ABS bioblends: morphological characterization"

**15.20-15.40. Oral Communication-12. Alfonso Maffezzoli** (University of Salento, Italy). "Rotational moulding of PLA reinforced by the wooden backbone of *Opuntia Ficus indica* cladodes"

**15.40-16.00. Oral Communication-13. Francisco Vilaplana** (KTH Royal Institute of Technology, Stockholm, Sweden). "Enzymatic-assisted hydrothermal extraction of hemicelluloses from wheat bran"

**16.00-16.20. Oral Communication-14. Stefano Fiori** (Condensia Química, S.A., Barcelona, Spain). "Recent developments on the synthesis of oligomers of lactic acid"

**16.20-16.40. Oral Communication-15. Bahar Yeniad** (Corbion-Purac BV, The Netherlands). "Sugar in the bottle, not just in the beverage!"

**16.40-17.00. Oral Communication-16. Bernd Jakob** (Thermo Fisher Scientific, Karlsruhe - Germany). "Relevant process parameters for twin screw compounding of biopolymers"

**17.00-18.00. Coffee Break and Poster session-1**



## Wednesday 7<sup>TH</sup> October 2015

### Session 3. Room Comedor Real. Chairperson Alejandro J. Muller

**15.00-15.20. Oral Communication-17. Alberto Frache** (Politecnico di Torino, Alessandria, Italy). "Bio-based polyamide composites: morphological study and mechanical properties evaluation"

**15.20-15.40. Oral Communication-18. Mònica Ardanuy** (Universitat Politècnica de Catalunya, Spain). "Cellular structure and mechanical properties of polyhydroxyalkanoate (PHA) based foams"

**15.40-16.00. Oral Communication-19. Debora Puglia** (University of Perugia. Terni, Italy). "Glycidyl methacrylate (GMA) grafting onto poly(lactic acid) films: effect of lignin nanoparticles and masterbatch process"

**16.00-16.20. Oral Communication-20. Arunjunai Raj Mahernran** (Kompetenzzentrum Holz GmbH, Austria). "Preparation and properties of woven natural fiber reinforced bio-composites"

**16.20-16.40. Oral Communication-21. Erlantz Lizundia** (University of the Basque Country, Spain). "Physical aging and mechanical performance of poly(L-lactide)/ZnO nanocomposites"

**16.40-17.00. Oral Communication-22. Filomena Barreiro** (Polytechnic Institute of Bragança, Portugal). "Valorization of lignin side streams of the pulp and paper industry in chemicals and materials"

**17.00-18.00. Coffee Break and Poster session-1**



## Thursday 8<sup>TH</sup> October 2015

### Session 4. Room Julio Caro Baroja. Chairperson Kristiina Oksman

**09.00-09.40. Invited Lecture. Yoshiharu Kimura** (Kyoto Institute of Technology, Japan). "High-performance polylactides: from synthesis to property control"

**09.40-10.10. Keynote Lecture-4. Luc Averous** (University of Strasbourg, France). "Aliphatic and aromatic polyurethanes from different renewable resources"

**10.10-10.30. Oral Communication-23. Jean-Marie Raquez** (University of Mons, Belgium). "Design of healable poly( $\epsilon$ -caprolactone)-based networks through electrical activations"

**10.30-10.50. Oral Communication-24. Antonio J.F. Carvalho** (University of Sao Paulo, Brazil). "Compatible ternary blends of chitosan/poly(vinyl alcohol)/poly(lactic acid) by emulsion and melt blending techniques"

### Session 4. Room Comedor Real. Chairperson Stefano Fiori

**10.10-10.30. Oral Communication-25. Sofiya Shopova** (ITENE, Spain). "Bio-based antimicrobial materials prepared from poly(lactic acid) and nanofibrillated cellulose"

**10.30-10.50. Oral Communication-26. Nuria Burgos** (University of Alicante, Spain). "Characterization of trilayer poly( $\epsilon$ -caprolactone)/gelatin-based films with thymol for active food packaging"

**10.50-11.45. Coffee Break and Poster session-2**



## Thursday 8<sup>TH</sup> October 2015

### Session 5. Room Julio Caro Baroja. Chairperson Andrea Lazzeri

**11.45-12.15. Keynote Lecture-5. Carmen Mijangos** (Instituto de Ciencia y Tecnología de Polímeros-CSIC, Madrid, Spain). “Dual pH and temperature responsive composite chitosan hydrogels”

**12.15-12.35. Oral Communication-27. Suprakas Sinha Ray** (DST/CSIR National Centre for Nanostructured Materials, Pretoria, South Africa). “Development of bio-based hydrogels for the effective removal of heavy metals from wastewater”

**12.35-12.55. Oral Communication-28. Artur J M Valente** (University of Coimbra, Portugal). “Curcumin-cyclodextrin-containing modified arabic gum hydrogels: synthesis, release and cytotoxicity studies”

**12.55-13.15. Oral Communication-29. Clara García-Astrain** (University of the Basque Country, Spain). “Bionanocomposite hydrogels with covalently bound nanospecies”

### Session 5. Room Comedor Real. Chairperson Jean-Marie Raquez

**12.15-12.35. Oral Communication-30. Ilaria Armentano** (University of Perugia, Terni, Italy). “Poly(butylene cyclohexanedicarboxylate/diglycolate) random copolymers containing SWCNTs: Material properties and biological applications”

**12.35-12.55. Oral Communication-31. Krystyna Cieśła** (Institute of Nuclear Chemistry and Technology, Warszawa, Poland). “The effects of some compositional factors and ionizing radiation on the properties of starch-PVA films”

**12.55-13.15. Oral Communication-32. Dimitrios Briassoulis** (Agricultural University of Athens, Greece). “Monitoring the biodegradation of three different polymers in marine environment”

**13.15-14.30. Lunch**





**Thursday 8<sup>TH</sup> October 2015**

**Session 6. Room Julio Caro Baroja. Chairperson Philippe Dubois**

**14.30-15.00. Keynote Lecture-6. Antonio Martínez-Richa** (University of Guanajuato, Mexico). "Chemo-enzymatic synthesis, characterization and drug delivery applications of degradable polyester urethanes containing aminoacids moieties"

**15.00-15.20. Oral Communication-33. Tadahisa Iwata** (The University of Tokyo, Japan). "Preparation and characterization of microbial polyester porous fibers and their application for the controlled drug release system"

**15.20-15.40. Oral Communication-34. Lorena Ugarte** (University of the Basque Country, Spain). "Effect of high renewable carbon content polyols on network stiffness in rigid polyurethane foams"

**15.40-16.00. Oral Communication-35. José A. Pomposo** (University of the Basque Country, Spain). "Bioinspired single-chain polymer nanoparticles"

**16.00-16.20. Oral Communication-36. Laura Peponi** (Instituto de Ciencia y Tecnología de Polímeros-CSIC, Madrid, Spain). "Biodegradable nanocomposites with shape memory behaviour"

**16.20-16.40. Oral Communication-37. Michelina Soccio** (University of Bologna, Italy). "New PLA-based triblock copolymers as potential candidates for soft tissue engineering"

**16.40-17.00. Oral Communication-38. Antonella Esposito** (Université et INSA de Rouen, France). "Microstructural differences revealed through molecular mobility in poly(hydroxybutyrate-co-hydroxyvalerate)"

**17.00-18.00. Coffee Break and Poster session-2**



**Thursday 8<sup>TH</sup> October 2015**

**Session 6. Room Comedor Real. Chairperson Jean-Pierre Pascault**

**15.00-15.20. Oral Communication-39. Stéphane Bruzaud** (Université de Bretagne-Sud, Lorient, France). "Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) and polylactide blends: An efficient way to modulate functional properties of materials"

**15.20-15.40. Oral Communication-40. Sarah Montes** (IK4-CIDETEC, San Sebastián, Spain). "Use of nanocellulose in the obtaining of graphene aqueous dispersions and its application in polymeric nanocomposites"

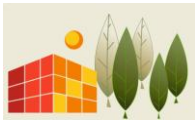
**15.40-16.00. Oral Communication-41. Nathanael Guigo** (Université Nice Sophia Antipolis, France). "Thermoset all cellulose composites from partial periodate oxidation"

**16.00-16.20. Oral Communication-42. Miriam Gallur** (Packaging, Transport and Logistic Research Institute (ITENE), Valencia, Spain). "Nanostructured biodegradable thermoplastic blends based on poly(L-lactic acid) and a poly( $\epsilon$ -caprolactone- $\beta$ -L-lactide) diblock copolymer"

**16.20-16.40. Oral Communication-43. Sébastien Livi** (Université de Lyon, Villeurbanne, France). "Ionic liquids: new innovative additives for biopolymers"

**16.40-17.00. Oral Communication-44. Consuelo González-Martínez** (Universidad Politècnica de València, Spain). "Biodegradability and disintegrability of starch-PVA films as affected by the incorporation of antimicrobial oils"

**17.00-18.00. Coffee Break and Poster session-2**



## Friday 9<sup>TH</sup> October 2015

### Session 7. Room Julio Caro Baroja. Chairperson Carmen Mijangos

**09.00-09.40. Invited Lecture. Kristiina Oksman** (LTU, Lulea, Sweden). “Bio-based nanocomposites; process, properties and potential applications”

**09.40-10.10. Keynote Lecture-7. Alessandro Gandini** (University of Grenoble, France). “Recycling crosslinked rubbers by the Diels-Alder reaction”

**10.10-10.30. Oral Communication-45. Víctor Peinado** (Fundación Aitiip, Zaragoza, Spain). “DIBBIOPACK: Development of injection and blow extrusión molded biodegradable and multifunctional packages by nanotechnology: improvement of structural and barrier properties, smart features and sustainability”

**10.30-10.50. Oral Communication-46. Dimitrios Bikiaris** (Aristotle University of Thessaloniki, Greece). “Synthesis and properties of furan dicarboxylate polyesters”

### Session 7. Room Comedor Real. Chairperson Aleksander Prociak

**10.10-10.30. Oral Communication-47. Jafar Al-Hakkak** (New Zealand Institute for Plant and Food Research Limited, Auckland, New Zealand). “Study on the high pressure processing of starches”

**10.30-10.50. Oral Communication-48. Linsey García-González** (Flemish Institute for Technological Research, Belgium). “Valorization of CO<sub>2</sub>-rich gases to biopolymers through biotechnological process”

**10.50-11.15. Coffee Break**



**Friday 9<sup>TH</sup> October 2015**

**Session 8. Room Julio Caro Baroja. Chairperson Alessandro Gandini**

**11.15-11.45. Keynote Lecture-8. Alejandro J. Muller** (University of the Basque Country, Spain). "Crystallization and morphology of double crystalline biocopolymers"

**11.45-12.05. Oral Communication-49. Aleksander Prociak** (Cracow University of Technology, Poland). "Open-cell flexible polyurethane bio-foams for sound absorbing applications"

**12.05-12.25. Oral Communication-50. Nadia Lotti** (University of Bologna, Italy). "Design of thermoplastic elastomers from fully aliphatic triblock copolyesters"

**12.25-12.45. Oral Communication-51. Gabriela Ruphuy** (Polytechnic Institute of Bragança, Portugal). Preparation and morphological characterization of nano-hydroxyapatite/chitosan scaffolds: Effect of neutralization procedures

**12.45-13.05. Oral Communication-52. Gianmarco Griffini** (Politecnico di Milano, Italy). "Polyurethane thermosets from chemically-unmodified fractionated lignin"

**13.05. Closure of the conference and announcement of BIOPOL-2017.**



**Friday 9<sup>TH</sup> October 2015**

**Session 8. Room Comedor Real. Chairperson Jalel Labidi**

**11.45-12.05. Oral Communication-53. Orietta Monticelli** (Università di Genova, Italy).  
“On novel formulations and properties of stereocomplex PLA-based materials”

**12.05-12.25. Oral Communication-54. J.D. Rodier** (University of Lyon, France). “Bio-based copolyethers from isosorbide and 1.3-propanediol: synthesis and characterization”

**12.25-12.45. Oral Communication-55. Silvina Cervený** (University of the Basque Country, Spain). “Dynamics of supercooled water in a biological model system of the amino acid L-lysine and its oligomers”

**12.45-13.05. Oral Communication-56. Jakob Wohler**t (KTH Royal Institute of Technology, Stockholm, Sweden). “The solubility of cellulose in supercritical water from molecular dynamics computer simulations”

**13.05. Closure of the conference and announcement of BIOPOL-2017.**

**Room Julio Caro Baroja**



## POSTER SESSION 1 (Wednesday 7<sup>TH</sup> October 2015)

- P1.1. Alix Gassiot-Talabot, Christian Carrot, Melinda Desse, Jean-Yves Sanchez. Cellulose whiskers dispersion in poly(oxyethylene) matrix
- P1.2. Farhan Ansari, Anna Sjöstedt, Lars Berglund, Lars Wagberg. Wood pulp fiber composites – utilizing the fiber Wall nanostructure
- P1.3. Araceli García, Alessandro Gandini, Jalel Labidi, Naceur Belgacem, Julien Bras. Obtaining of furan-functionalized celluloses by green processes
- P1.4. Araceli García, E. Johan Foster, Thomas Noyerie, Naceur Belgacem, Julien Bras. Enhancing supramolecular interactions in polystyrene/cellulose nanowhiskers composites
- P1.5. Carlos do Amaral Razzino, Vívian Karina Bianchini, Elias Hage Junior. Rheological, morphological and mechanical properties of wood flour polypropylene
- P1.6. Dimitrios Bikiaris, Zoi Terzopoulou, Panagiotis Xidas, Chara Efstathiou, Margaritis Kostoglou, Aristomenis Antoniadis, Theodoros Karapantsios, Kostas Triantafyllidis. New biobased epoxy resins for micromechanical applications
- P1.7. Xabier Molina, Amaia De La Calle, Cristina Elizetxea, M<sup>a</sup> Ángeles Corcuera, Arantxa Eceiza. Study of the recyclability of thermoplastic composites
- P1.8. Sebastian Woloszczuk, Michal Banaszak. Molecular simulations of self-assembling block copolymers as functional materials with hierarchical order
- P1.9. Erhan Ozsagiroglu, Yuksel Avcibasi Guvenilir. Preparation of poly( $\epsilon$ -caprolactone) - polyethylene glycol – sodium alginate composites using spray dryer
- P1.10. Erhan Ozsagiroglu, Yuksel Avcibasi Guvenilir. Encapsulation and controlled release of L-ascorbic acid via biocomposites
- P1.11. Junkal Gutierrez, Hernane S. Barud, Sydney J. L. Ribeiro, Agnieszka Tercjak. Biocellulose as starting point for designing novel multifunctional materials
- P1.12. Jokin Hidalgo, Soledad Peresin, Alvaro Tejado, Galder Kortaberria. Microscopic characterization of nanofibrillated cellulose-inorganic nanoparticle hybrid systems
- P1.13. Yuanyuan Li, Lars Berglund. Highly transparent hazy paper based on micro-sized cellulose fiber
- P1.14. Francesca Luzi, Elena Fortunati, Debora Puglia, Alberto Jiménez, Amparo Chiralt, José María Kenny, Luigi Torre. Production and characterization of PLA/PBS blends reinforced with cellulose nanocrystals extracted from hemp fibres
- P1.15. Lilian Medina, Lars A. Berglund. Fire-retardant composite foams from cellulose nanofibers and montmorillonite
- P1.16. Ander Orue, Cristina Peña-Rodríguez, Gurutz Mondragon, Jalel Labidi, Arantxa Eceiza, Aitor Arbelaiz. Influence of surface treatments and annealing processes on the dynamic mechanical and thermal properties of sisal fiber/poly(lactic acid) composites



P1.17. Paula González Seligra, Lúdia Eloy Moura, Lucia Famá, Janice Izabel Druzian, Silvia Goyanes. Influence of incorporation of starch nanoparticles in starch:PBAT composites

P1.18. Élia Karina de Carvalho Costa, Jania Betania Alves da Silva, Carolina Oliveira de Souza, Denilson de Jesus Assis, Janice Izabel Druzian. Production and characterization of bio-based films reinforced with cassava starch nanocrystals

P1.19. Oscar Gil-Castell, J. D. Badia, R. Teruel-Juanes, T. Kittikorn, Emma Strömberg, Monika Ek, Sigbritt Karlsson, Amparo Ribes-Greus. Influence of combined water and temperature on the morphology, thermal and viscoelastic performance of polylactide/sisal biocomposites

P1.20. P. Reig-Rodrigo, J. D. Badia, R. Teruel-Juanes, T. Kittikorn, Emma Strömberg, Monika Ek, Sigbritt Karlsson, Amparo Ribes-Greus. Dielectric spectroscopy of polylactide/sisal biocomposites

P1.21. Hendrik Roch, Stefan Zepnik, Natalia Herrera-Vargas, Anneliese Kesselring. Biodegradable blown films for agricultural application based on nano-biocomposites with cellulose or chitin

P1.22. Linda Rozenberga, Linda Vecbiskena, Laura Vikele, Inese Sable. Comparison of bacterial cellulose-chitosan composite films, obtained by various methods

P1.23. Fabiola Vilaseca, Farhan Ansari, Luís A. Granda, Lars A. Berglund. Thermoplastic biopolymers reinforced by wood fibers and/or nanocellulose

P1.24. Tugce Bekat, Mualla Oner. Thermal, mechanical and gas barrier properties of PHBV/ZnO nanocomposites

P1.25. Weijun Yang, Elena Fortunati, Franco Dominici, Jose M Kenny, Debora Puglia. Effect of processing conditions and lignin content on crystallization and mechanical behavior of lignin nanoparticles/poly(lactic acid) bionanocomposites

P1.26. Weijun Yang, Jose M Kenny, Debora Puglia. Structure and properties of biodegradable wheat gluten biocomposites containing lignin nanoparticles

P1.27. Abigail Coveney, Franck Quero, Anna E. Lewandoska, Paulo Diaz Calderon, Koon-Yang Lee, Stephen J. Eichhorn, Javier Enrione, Robert M. Richardson, M. Ashraf Alam. Matrix effects and stress transfer in gelatin-bacterial cellulose natural composites

P1.28. Yan Wang, Jakob Wohler, Malin Bergenstråhle-Wohler, Yaoquan Tu, Hans Ågren. Moisture stability in nacre-mimetic xyloglucan/montmorillonite nanocomposites studied by molecular dynamics simulations

P1.29. Antoine Gallos, Johnny Beaugrand, Gabriel Paës, Florent Allais. Correlations between mechanical properties and fibers dispersion in a biobased composite using Confocal Raman Imaging

P1.30. Alireza Hajian, Mahiar M. Hamedi, Lars Wågberg. Strong and conductive nanopapers based on nanocellulose and carbon nanotubes



- P1.31. Sol Ángel Rodríguez, Fernando Torres, Development of biopolymer nanocomposites based on polysaccharides obtained from the red algae *Chondracanthus Chamosoi*, reinforced with nanoclays and chitin whiskers
- P1.32. Carol Lopez de Dicastillo, Camilo Elton, Abel Guarda, María Jose Galotto. Influence of the hydrolysis conditions on obtaining cellulose nanowhiskers and development of electrospun nanocomposites
- P1.33. Nicoletta Rescignano, Rebeca Hernández, Carmen Mijangos, José M. Kenny. Preparation of alginate gels with silver nanoparticles and graphene nanoplatelets as fillers
- P1.34. Nancy Alvarado, Irma Fuentes, Luz Alegría, Galder Kortaberria, Arantxa Eceiza, Ligia Gargallo, Angel Leiva, Deodato Radić. Host-guest interactions in dendronized polymeric nanocomposites with some common drugs
- P1.35. Marina P. Arrieta, Laura Peponi, Juan López, José M. Kenny. Biodegradable electrospun biocomposites based plasticized PLA-PHB
- P1.36. Marina P. Arrieta, Iván Navarro-Baena, Daniel López, José M. Kenny, Laura Peponi. Biodegradable poly(ester urethane) incorporated with catechin with shape memory behaviour
- P1.37. Nasreddine Benbettaïeb, Thomas Karbowiak, Ali Assifaoui, Odile Chambin, Frédéric Debeaufort. The impact of irradiation on chitosan-gelatin film properties for controlled release
- P1.38. Elena Fortunati, Luigi Torre, A. Janke, L. Häußler, J. Pionteck, José M. Kenny. Reinforcement effect of cellulose nanocrystals in thermoplastic polyurethane matrix with potential application in biomedical field
- P1.39. Martina Fabbri, Marco Govoni, Matteo Gigli, Rita Gamberini, Massimo Gazzano, Emanuele Giordano, Lara Finelli, Nadia Lotti, Bianca Rimini, Andrea Munari. Biodegradable and biocompatible poly(butylene/triethylene succinate) random copolyesters with adjustable properties for tissue engineering
- P1.40. Olatz Guaresti, Clara García-Astrain, Arantxa Eceiza, María Ángeles Corcuera, Nagore Gabilondo. Diels-Alder cross-linked biopolymer-based hydrogels
- P1.41. Alejandro Latorre-Sánchez, José A. Pomposo. Protein detection through hybrids of metallic and single chain polymeric nanoparticles
- P1.42. Federica Zuppari, Mario Malinconico, Gabriella Santagata, Barbara Immirzi. Biodegradable nursery pots from renewable/waste resources: Preliminary preparation and characterization
- P1.43. Valentina Sessini, Jean-Marie Raquez, Giada Lo Re, Rosica Mincheva, Philippe Dubois, José María Kenny, Laura Peponi. Starch-based bio-nanocomposites with shape memory properties
- P1.44. Valentina Sessini, Marina P. Arrieta, José María Kenny, Laura Peponi. Biodegradable nanocomposite films based on thermoplastic starch and starch nanocrystals for active food packaging applications





- P1.45. N. Ugur Kaya, Aysen Onen, Yuksel Avcibasi Guvenilir. Enzymatically synthesized polycaprolactone based macrophotoinitiator
- P1.46. J. Silva, Ana S. Abreu, M. Oliveira, Ana Vera Machado. Acetate cellulose membranes for aquatic environments remediation
- P1.47. V. Tsanaktsis, Z. Terzopoulou, G.Z. Papageorgiou, D. Bikiaris. Decomposition mechanism of new polyesters based on 2,5-furandicarboxylic acid and high molecular weight aliphatic diols
- P1.48. P. Siafaka, C. Koulouktsi, S. Nanaki, V. Tsanaktsis, E. Karavas, E. Koutris, D. Bikiaris. Biodegradable copolymers of poly( $\epsilon$ -caprolactone) and D- $\alpha$ -tocopheryl polyethylene glycol 1000 succinate as drug carriers
- P1.49. Jorge Alberto Medina, Jesús Acuña, Carlos Aurelio Díaz, Mauricio Gonzales. Coffee husk as new reinforcement for natural fiber polymer composites
- P1.50. Bárbara Micó-Vicent, Francisco Miguel Martínez-Verdú, Emilio Gilabert, Rafael Balart. Improving mechanical and thermal properties of epoxy bio-resin with natural nanopigments
- P1.51. Andreas Ortner, Caroline Gamerith, Enrique Herrero-Acero, Tayuki Kudanga, Iwona Kaluzna, Stefaan de Wildeman, Gibson S. Nyanhongo, Georg M. Guebitz. Functionalization of flax and coconut fibres enzymatically by laccase
- P1.52. Aitor Arbelaiz, Jon Manterola, Tamara Calvo, Arantzazu Santamaria-Echart, M<sup>a</sup>. Angeles Corcuera, Arantxa Eceiza. Characterization of poly(lactic acid) and thermoplastic polyurethane blends
- P1.53. J.F. Balart, Octavio Fenollar, Lourdes Sánchez-Nacher, Teodomiro Boronat, Rafael Balart, Vicent Fombuena. Improvement of the mechanical properties of green composites from poly(lactic acid) and hazelnut shell wastes with plasticizers from vegetable oils
- P1.54. Octavio Fenollar, D. García-García, J.M. Ferri, Vicent Fombuena, Juan López-Martínez, Rafael Balart. Effects of biodegradable polymeric esters on the thermal properties and morphology of poly(hydroxybutyrate)
- P1.55. Luis Cabedo, A. Martínez-Abad, C.S.S. Oliveira, L. Hilliou, M. Reis, José María Lagarón. Effect of the addition of low cost unpurified PHBV on the properties of a commercial PHBV
- P1.56. Cristian Castro, Ligia Gargallo, Galder Kortaberria, Deodato Radic. Interactions in blends containing sodium alginate and  $\beta$ -cyclodextrin
- P1.57. I. Pinheiro, Amanda Dambros, F.M. Fakhouri, L.H. Innocentini-Mei. Morphological and thermal properties of films based on hydrocolloids containing cranberry extracts
- P1.58. Amanda Dambros, S.M Martelli, F.M. Fakhouri, L.H. Innocentini-Mei. Thermal and structural properties of films composed by arrowroot starch and fibers obtained by thermoplastic extrusion



- P1.59. E. Uitterhaegen, Q.H. Nguyen, O. Merah, C.V. Stevens, T. Talou, L. Rigal, Philippe Evon. New renewable and biodegradable fiberboards from a coriander press cake
- P1.60. Kizkitza González, Loli Martin, Alba González, Arantxa Eceiza, Nagore Gabilondo. 'Green' plasticizers for thermoplastic starch-based materials
- P1.61. Anita Frydrych, Magdalena Ambroziak, Marcin Kąkol, Zbigniew Florjańczyk, Andrzej Plichta. Synthesis and characterization of copolyesters based on lactic acid oligomers
- P1.62. Anita Frydrych, Norbert Langwald, Magdalena Parzuchowska, Zbigniew Florjańczyk, Andrzej Plichta. Modification of lactic acid oligomers by polycarbonates
- P1.63. C.S. Andrade, T. Pimentel, Farayde Matta Fakhouri, G.G. Fonseca. Mechanical properties of biofilms obtained by PHA and hydrocolloids
- P1.64. Laura Puchot, T. Fouquet, C. Vancaeyzeele, F.Vidal, Y. Habibi, P. Verge. Breaking the symmetry of dibenzoxazines: a new paradigm to tailor the processing of bio-based thermosets
- P1.65. Néstor Montañés, Teodomiro Boronat, Octavio Fenollar, J.M. Ferri, A. Carbonell-Verdu. Determination of the coupling agent in composites of biopolyethylen and *Thymus Moroderi*
- P1.66. A. Carbonell-Verdu, María Dolores Samper, Néstor Montañés, Lourdes Sanchez-Nacher, Rafael Balart. Epoxidized cottonseed oil (ECISO) as a plasticizer for poly (vinyl chloride)
- P1.67. D. Bertomeu, María Dolores Samper, Santiago Ferrándiz, Juan López-Martínez. Influence of PLA in mechanical properties of recycled packaging materials
- P1.68. D. Bertomeu, María Dolores Samper, Marina P. Arrieta, Juan López-Martínez. Influence of biodegradable polymers in thermal properties of recycled polypropylene.
- P1.69. Manisara Phiriyawirut, Jirayu Mekaroonluck, Tanakit Hauyam, Atissun Kittilaksanon. Biomass-based foam from crosslinked tapioca starch/polybutylene succinate blends
- P1.70. Manisara Phiriyawirut, Sutasinee Sirima, Kanokwan Sarapat, Anrasee Prasertchol. Porous electrospun nanofiber from biomass-based polyester blends of polylactic acid and polybutylene succinate
- P1.71. Patrycja Kopczyńska, Ilona Deuter, Janusz Datta. Rheological behavior of re-polyols recovered from polyurethanes waste through chemical recycling route
- P1.72. Jennifer Gonzalez-Ausejo, E. Sanchez-Safont, R. Izquierd<sup>1</sup>, Rafael Balart, Luis Cabedo, José Gamez-Perez. Use of poly(hexamethylene) diisocyanate as compatibilizer in PHBV/PLA blends
- P1.73. Ainara Sangroniz, Marian Iriarte, Agustin Etxeberria Influence of the preparation method in the miscibility of a blend based on a biodegradable polymer
- P1.74. Ainara Sangroniz, Marian Iriarte, Agustin Etxeberria. Novel polymer blend based on biodegradable poly(butylenes adipate-co-terephthalate) for packaging applications



- P1.75. Juliano Zanela, Mônica de Oliveira Reis, Juliana Bonametti Olivato, Maria Victória Eiras Grossmann, Fabio Yamashita. Biodegradable sheets of starch polyvinyl alcohol produced by flat die extrusion
- P1.76. Juliana B. Olivato, Maria Victoria E. Grossmann, Fabio Yamashita. Starch/polyester blown films incorporated with  $\alpha$ -tocopherol
- P1.77. Jon Anakabe, A. M. Zaldua Huici, Arantxa Eceiza, Aitor Arbelaiz. Effect of epoxy functionalised poly(styrene-co-acrylate) copolymer on high PLA content PLA/PMMA blends
- P1.78. Daniele Battezzore, Sergio Bocchini, J. Alongi, Alberto Frache. Starch with double face: Main component of bio-based materials and promising natural additive for fire-proofing
- P1.79. Fanny Deleage, Frederic Becquart, Jean-Charles Majesté, Yvan Chalamet. Morphology establishment in biodegradable polymer blends with high viscosity ratio, toward better mechanical properties
- P1.80. Faraz Muneer, Mariette Andersson, Kristine Koch, Carolin Menzel, Mikael S. Hedenqvist, Mikael Gällstedt, Tomás S. Plivelic, Eva Johansson, Ramune Kuktaite. Evaluating protein and starch biopolymers from plants for improved functionality: Understanding structure and function relationship
- P1.81. Naima Sallem-Idrissi, M. Sclavons, D.P. Debecker, J. Devaux. Miscible raw lignin/nylon-6 blends: Study of performance properties
- P1.82. Sheyla Carrasco-Hernandez, Laura Peponi, Agnieszka Tercjak. Optimization of the processing window to obtain PE-b-PEO electrospun fibers
- P1.83. Amandine Codou, Nathanael Guigo, Jesper van Berkel, Ed de Jong, Nicolas Sbirrazzuoli. Crystallization of bio-based poly(ethylene 2,5-furandicarboxylate)
- P1.84. Itziar Otaegi, Gonzalo Guerrica-Echevarría, José Ignacio Eguiazábal. Influence of processing conditions and moisture content on partially bio-based polyamide 410
- P1.85. Toshihisa Tanaka, Yumiko Takayama, Motomu Nishijo, Keigo Matsukawa, Tadahisa Iwata. Structural analysis of biodegradable polyester films prepared by aging on cold crystallization temperature and by soaking solvent effect
- P1.86. Berit Brüster, F. Addiego, D. Ruch, Jean Marie Raquez, Philippe Dubois, S. André. Degradation mechanisms of acryl poly ethylene glycol plasticized polylactide induced by multiple extrusions to simulate recycling
- P1.87. Lucrezia Martino , Jesper van Berkel, Ed de Jong, Nicolas Sbirrazzuoli. Nucleation and self-nucleation behavior of bio-based poly(ethylene 2,5-furandicarboxylate) by fast scanning calorimetry
- P1.88. M<sup>a</sup> del Pilar Muñoz Muñoz, Ana Belén Francés Bueno, M<sup>a</sup> Virtudes Navarro Bañón. Sawdust fibres as filler in flexible polyurethane foams: Foaming process and final properties



- P1.89. Iván Pablo Román-Falcó, M. P. Muñoz-Muñoz, María Virtudes Navarro-Bañón, C. del Castillo, R. Fernández, P. Carretero, C. Schirp, S. Eschig. Bioresins for Wood coatings; effect of film-forming agents
- P1.90. Suheyla Kocaman, Gulnare Ahmetli. The effect of hardeners on epoxy resin properties modified with acrylated epoxidized soybean oil
- P1.91. Suheyla Kocaman, Alize Yucel, Gulnare Ahmetli. The effects of natural shells and their biochars on properties of epoxy-based composites
- P1.92. Lucas B. Landim, Renato C. Tupinambá, Bruno S. Fernandes, Elaine C. De M.C. Albuquerque, José Carlos Pinto, Silvio Cunha, Rosana L. Fialho. FTIR analysis in the synthesis of urea and succinic acid copolymers produced in a closed system under vacuum at different times
- P1.93. Cesar M. C. Filho, Pedro V. A. Bueno, Elizangela M. S. Almeida, Edvani C. Muniz, Artur J. M. Valente. Removal of Polycyclic aromatic hydrocarbons (PAHs), using  $\beta$ -cyclodextrin-containing modified pectin/chitosan BLEND gels
- P1.94. Vanessa Zamora-Mora, Diego Velasco, Rebeca Hernández, Carmen Mijangos. Generation of chitosan microgels through microfluidics. Off-chip and on-chip crosslinking
- P1.95. Alicia Mujica-Garcia, Laura Peponi, José M. Kenny. PLA and PCL electrospun fibers obtained by using different collectors
- P1.96. Alicia Mujica-Garcia, José M. Kenny, Laura Peponi. PLA nanocomposites electrospun fibers: Biodegradation under composting conditions
- P1.97. Nicolas Jacquél, Françoise Fenouillot, Alain Rousseau, Jean Pierre Pascault, René Saint-Loup. Synthesis and modification of poly(butylene succinate) for film blowing extrusion
- P1.98. Perkin-Elmer. Latest Improvements in Thermal Analysis for Biopolymers Characterization
- P1.99. Artem Glova, Sergey Larin, Stanislav Falkovich, Daria Mezhenskaya, Victor Nazarychev, Jose Kenny, Sergey Lyulin. Theoretical study of polylactide-based composites filled with grafted nanocellulose
- P1.100. Alexey A. Polotsky. Adsorption of a homopolymer chain onto a periodic heterogeneous stripe patterned surface: A theoretical study using a simple model



## POSTER SESSION 2. (Thursday 8<sup>TH</sup> October 2015)

- P2.1. Nuria Butchosa, Natalia Ortuño, Ana Beltrán, Mari Pau Balaguer, María Monedero, Estela Rosa Barbosa, M<sup>a</sup> Carmen Gómez, Manuel Albert, Maria Jordá, Susana Aucejo. Development of a bioplastic package for organic cosmetic creams – Biobeauty
- P2.2. Nuria Butchosa, Miriam Gallur, Marcos Latorre, Miguel Ventura, Susana Aucejo. Cereal waste valorisation through development of functional key fibres to innovate in fibre packaging materials (Funkifibre project)
- P2.3. Sofiya Zhopova, Ana Beltrán, Tamara Calvo, Miguel Monedero, Miriam Gallur, Susana Aucejo. Spray drying green microencapsulation of active compounds in carbohydrate blends for food packaging applications (Greensin)
- P2.4. Rodrigo Briones, Claudio Toro, Varaprasad Kokkarachedu, Jalel Labidi. Biopolyols from lignocellulosic agricultural residues for film elaboration
- P2.5. Justine Muller, Alberto Jiménez, Consuelo González, Amparo Chiralt. Influence of plasticizers on crystallization behaviour of poly(lactic acid) films
- P2.6. Olga Moreno, Raul Díaz, Lorena Atarés, Amparo Chiralt. Starch-gelatine biodegradable films containing LAE or lysozyme as antimicrobial agents
- P2.7. Martina Fabbri, B. Vázquez-Lasa, M. Soccio, N. Lotti, R. Gamberini, J. San Román, A. Munari, B. Rimini. Biodegradable PLLA-based copolyesters as potential candidates for antioxidants nanocarriers
- P2.8. Patrícia Soares Bilhalva Dos Santos, Roberto Lessa Pereira, Aline Krolow Soares, Silvia H. Fuentes da Silva, Jalel Labidi, Darci Alberto Gatto. Colour changes of Brazilian *Pinus* wood by natural weathering and accelerated aging
- P2.9. Raquel Requena, Juan Marqués, Alberto Jiménez, María Vargas, Amparo Chiralt. Incorporation of essential oils in PHBV bilayer films and study of their antimicrobial activity
- P2.10. Kateryna Fatyeyeva, Nicolas Delpouve, Clément Desaint, Antonella Esposito, Eric Dargent. Molecular mobility and diffusion properties in polylactide during chemical aging
- P2.11. J. Hernández-Fernández, D. García-García, Santiago Ferrándiz, Juan López. Evaluation of natural antioxidants addition in the polypropylene manufacturing
- P2.12. M. Jiménez-López, Juan López-Martínez, María Dolores Samper, Marina P. Arrieta. Linseed oil and gum rosin derivatives as natural plasticizers for PVC
- P2.13. Miriam Jiménez, Cristina Valencia-Sullca, María Vargas, Alberto Jiménez, Amparo Chiralt. Influence of encapsulated and non-encapsulated active compounds on properties of chitosan films



P2.14. M.J. Bof, D. Locaso, M.A. García, A. Jiménez, Amparo Chiralt. Effect of some active compounds on microstructure and thermal properties of starch-chitosan blends films

P2.15. Lidia G. Quiles, Víctor Peinado, Valeria Bugatti, Vittoria Vittoria, Carolina Peñalva. Modified layered double hydroxides containing antimicrobial active molecules in poly(lactic acid) and poly(hydroxyalkanoates) for food packaging applications

P2.16. Laura Higuera, Gracia López-Carballo, Rafael Gavara, Pilar Hernández-Muñoz. Dynamic biopolymers base don imino reversible bond formation and their application in antimicrobial films for food preservation

P2.17. L. Pérez-Álvarez , Erlantz Lizundia, S. del Hoyo, A. Sagasti, L. Ruiz-Rubio , J. Luis Vilas. Polysaccharide polyelectrolyte multilayer coating on polyethylene terephthalate

P2.18. Laura Genovese, Michelina Soccio, Nadia Lotti, Massimo Gazzano, Lara Finelli, Valentina Siracusa, Marco Dalla Rosa, Andrea Munari. Biodegradable aliphatic copolyesters containing thio-ether linkages for sustainable food packaging applications

P2.19. Lluís Martín-Closas, A. Carceller, A.M. Pelacho. In vitro ecotoxicity analysis of agricultural bioplastic mulches

P2.20. Ana Cristina Mellinas, Esther García-Serna, Alfonso Jiménez, María del Carmen Garrigós. Evaluation of the antioxidant and antifungal properties of active biopolyethylene films

P2.21. Paulius Pavelas Danilovas, Tomas Budnikas, Ramunė Rutkaitė. Cellulose acetate-based active food packaging materials

P2.22. Mercedes A. Peltzer, Juan F. Delgado, Andrés Salvay, Orlando de la Osa, Jorge R. Wagner. Yeast cell wall biofilms – Preparation and properties

P2.23. Cristina Peña-Rodríguez, E. Rey, A. Orue, G. Mondragon, A. González, A. Arbelaz, Arantxa Eceiza. Influence of different tannins on gelatin films properties

P2.24. Arak Pinpueng, Nattakarn Hongsriphan. Study of sorption and biodegradation properties of poly(butylene succinate) blended with natural absorbents for using in agriculture application

P2.25. Jana Šerá, Marek Koutný, Petr Stloukal, Vincent Verney. Biodegradation of aromatic aliphatic co-polyester/starch blend

P2.26. Michelina Soccio, L. Genovese, N. Lotti, M. Gazzano, V. Siracusa, E. Salatelli, F. Balestra, A. Munari. New biodegradable PLA-based triblock copolymers for sustainable food packaging

P2.27. Olga Berenice Álvarez, C. Aguilar, R. Rojas, Arantzazu Valdés, María del Carmen Garrigós. Characterization of antibacterial properties of edible corn starch films incorporated with olive oil extract

P2.28. Gabriela Azevedo Motta, Alceu Gomes Alves Filho, Vívian Karina Bianchini, Carlos do Amaral Razzino, Matheus Silva Castro. Competitive strategy and operation strategy: Case studies in the production of packaging obtained from polyethylene of sugarcane source



P2.29. Dimitrios Briassoulis, A. Mistriotis, N. Papardaki. Biodegradability of lubricants in natural soil

P2.30. Blanca Maria Lekube, Christoph Burgstaller. Can PLA impact the recycling of PET and PS? Influence of the biopolymer and study of interactions

P2.31. Caroline Gamerith, Doris Ribitsch, Enrique Herrero-Acero, Irina Druzhinina, Christian P. Kubicek, Georg M. Guebitz. Enhanced hydrolysis of polyethylene terephthalate by hydrophobin-cutinase fusionproteins

P2.32. Jennifer González-Ausejo, Antonio Martínez-Abad, José Gámez-Pérez, José María Lagarón, Luis Cabedo. Biodegradable and high performance PHBV/TPU blends

P2.33. Jon Trifol, A. Garcia, C. Mericer, David Plackett, C. Sillard, M. Minelli, O. Hassager, A. E. Daugaard, M. Giacinti, J. Bras, P. Szabo. Hybrid nanocellulose/nanoclay PLA-based nanocomposites for food packaging applications

P2.34. Monique Randrianarivo, Anne-Marie Riquet, Natalia Campos, Stéphanie Baumberger, Sandra Domenek. Development of an ESR method for measuring the radical scavenging power of lignins

P2.35. Laura Neira Hazime, Juan P. Espinosa, Josefa F. Martucci, Roxana A. Ruseckaite. Fish gelatin with primary antioxidant activity

P2.36. Juan P. Espinosa, Diana C. Marín, Pablo M. Stefani, Roxana A. Ruseckaite. New carboxylic acid / epoxy resin based on 10-undecenoic acid

P2.37. Carolin Menzel, Kristine Koch. Impact of the production method on the molecular and microstructure and barrier properties of starch-based films and coatings

P2.38. Carolin Menzel, Mariette Andersson, Roger Andersson, José L. Vázquez-Gutiérrez, Geoffrey Daniel, Maud Langton, Mikael Gällstedt, Kristine Koch. How does varying amylopectin structure and amylose content of starch from genetically modified potatoes effect material properties of solution-cast films?

P2.39. Tamara Calvo-Correas, Arantzazu Santamaria-Echart, Nagore Gabilondo, M<sup>a</sup> Ángeles Corcuera, Arantxa Eceiza. Effect of the chain extender structure on bio-based polyurethane properties

P2.40. Arantzazu Santamaria-Echart, Tamara Calvo-Correas, Lorena Ugarte, Aitor Arbelaiz, M<sup>a</sup> Ángeles Corcuera, Arantxa Eceiza. Synthesis of waterborne polyurethane dispersions and cellulose nanocrystals isolation for nanocomposites preparation

P2.41. Shanmugam Thiyagarajan, Willem Vogelzang, Rutger J.I. Knoop, Jacco van Haveren, Daan S. van Es. Novel bio-based copolyesters with tuneable glass-transition temperatures

P2.42. J-D. Rodier, E. Fleury, A. Rousseau. Bio-based copolyethers from isosorbide and 1,3-propanediol: synthesis and characterization

P2.43. Alessandro Pellis, Enrique Herrero-Acero, Martin Brandauer, Caroline Gamerith, Valerio Ferrario, Cynthia Ebert, Georg M. Guebitz, Lucia Gardossi. Novel biocatalysts and reaction systems for environmentally friendly enzymatic synthesis of bio-based polyesters





- P2.44. Merle Juliette, Marc Birot, Hervé Deleuze, H  l  ne Carr  , Fatima Charrier-El Bouthoury. Synthesis of bio-based foams from tannins and lignin
- P2.45. Amparo Jim  nez-Quero, V. Phalip, Eric Pollet, Luc Averous. Itaconic and fumaric acids production from biomass valorization, towards bio-based polymers elaboration
- P2.46. Geoffrey Hibert, Etienne Grau, Didier Pintori, S  bastien Lecommandoux, Henri Cramail. Glycolipids as a platform for the synthesis of biodegradable polymers
- P2.47. Jessica Desport, M  nica Moreno, Mar  a J. Barandiaran. Production of sustainable polymers in aqueous dispersed media by means of biomass resources conversion
- P2.48. Geraldine Le  n, Nicolas Paret, Philipp Erni, Lahoussine Ouali, Damien L. Berthier. Preparation and characterization of formaldehyde-free microcapsules
- P2.49. Olivia Condassamy, Fr  d  rique Pichavant, Henri Cramail, St  phane Grelier. Extraction, purification, characterization and chemical modification of an industrial alkaline lignin: Towards the development of new bio-based aromatic building from lignin
- P2.50. Thomas Lebarb  , Guillaume Chollet, E. Grau, E. Perry, A. Longerias, Henri Cramail. Tailored impact modification of PLA using bio-based polyesters originated from vegetable oils
- P2.51. Maria Barbara Banella, Claudio Gioia, Micaela Vannini, Martino Colonna, Annamaria Celli, Alessandro Gandini. A new approach to the synthesis of monomers and polymers incorporating furan/maleimide Diels-Alder adducts
- P2.52. Maria Barbara Banella, Claudio Gioia, Micaela Vannini, Martino Colonna, Annamaria Celli, Alessandro Gandini. Synthesis of isophthalic acid-like and phthalic acid-like molecules through a Diels-Alder reaction starting from bio-based precursors
- P2.53. Szymon B  k, Aleksander Prociak. Flexible polyurethane foams modified with natural fillers and rapeseed oil-based polyol
- P2.54. Heura Ventura, J. Claramunt, A. Navarro, M. A. Rodr  guez-P  rez, M  nica Ardanuy. The influence of fiber treatment on the mechanical properties of biocomposites reinforced with flax nonwovens
- P2.55. Leire Urbina, A. Prieto, M  .   ngeles Corcuera, Arantxa Eceiza, Nagore Gabilondo, Alo  na Retegi. By-products of the cider production: A potential source of nutrients to produce bacterial cellulose
- P2.56. Karina Cruz-Aldaco, Crist  bal No   Aguilar-Gonz  lez, Erika Flores-Loyola, Nuria Burgos, Alfonso Jim  nez. Synthesis and thermal characterization of polyurethanes obtained from vegetable oil-based polyols
- P2.57. Cansu Ulker, Nurefsan Gokalp, Didem Saloglu, Yuksel Guvenilir. A comparative study of properties of lipases immobilized onto different silica-based materials via physical adsorption to polymerize polycaprolactone





- P2.58. Nurefsan Gokalp, Cansu Ulker, Didem Saloglu, Yuksel Guvenilir. Enzymatic ring opening polymerization of  $\epsilon$ -caprolactone by using lipases immobilized on rice husk ash and precipitated silica by crosslinking method
- P2.59. Anna Sienkiewicz, Piotr Czub. Synthesis and mechanical properties of epoxy-polyurethane materials based on modified soybean oil
- P2.60. Anna Sienkiewicz, Piotr Czub. Study on gelation phenomenon in the process of the synthesis of novel epoxy-polyurethane materials obtained with the use of modified vegetable oils
- P2.61. Qiliang Fu, Lars Berglund. Modification of balsa Wood (*Ochroma Lagopus*): Preparation and functionalization
- P2.62. Andrzej Plichta, Tomasz Jaskulski, Monika Wasyleczko. Block copolymer conjugates comprising camptothecin and biodegradable PLA segments
- P2.63. Catalina M. Pérez-Berumen, Lars Berglund, Mats Johansson, Martin Lawoko. Synthesis of "controlled" epoxy resins based on well-defined lignin
- P2.64. Laura Peponi, Karla A. Barrera-Rivera, Ivan Navarro-Baena, Angel Marcos-Fernández, Daniel Lopez, José M. Kenny, Antonio Martínez-Richa. Synthesis of PCL-PLA based-materials by biocatalysis
- P2.65. F. Carrasco, O.O. Santana, M.A. Sánchez-Soto, J. Cailloux, J.J. Bou, M<sup>a</sup> Lluisa Maspoch. Reactive extrusion: A useful process to improve the thermal stability of poly(lactic acid)
- P2.66. Izaskun Combarro-Palacios. A. Alegría, Silvina Cervený. Dynamics of  $\epsilon$ -Poly(lysine) in aqueous solution
- P2.67. Anna Kundys, Jaroslav Mosnáček, Anita Andicsová. Reversible-deactivation radical polymerization of methyl methacrylate induced by photochemical reduction of copper catalysts
- P2.68. Anna Kundys, Andrzej Plichta, Agnieszka Zychewicz, Paulina Lisowska, Paweł Parzuchowski, Edyta Wawrzyńska, Zbigniew Florjańczyk. Multi arm star-shaped polylactides obtained in melt in the presence of hyperbranched oligoglycerols
- P2.69. I. Kellersztein, Ana Dotan. PCL grafted wheat straw fibers via ring-opening polymerization for PLA reinforcement
- P2.70. Lorenza Gardella, Mahdi Forouharshad, Orietta Monticelli. Preparation of PLLA (sc-PLA)/high surface area high surface nano-graphite systems by using a "green" approach
- P2.71. Itziar Egüés, A.M. Stepan, Arantxa Eceiza, G. Toriz, P. Gatenholm, Jalel Labidi. Improvement of material properties of corncob arabinoxylan for films production
- P2.72. Gianmarco Griffini, Carmela Scarica, Marinella Levi, Stefano Turri. Lignin-based polyester coatings
- P2.73. Oihana Gordobil, Rafael Delucis, Itziar Egüés, Jalel Labidi. Kraft lignin as filler in PLA to improve ductility



P2.74. Sandra Gómez-Fernández, Lorena Ugarte, M. Zubitur, A. Mugica, M<sup>a</sup> Ángeles Corcuera, Arantxa Eceiza. Study of flame retardancy of flexible polyurethane foam nanocomposites based on castor oil-derived polyol and layered double hydroxides

P2.75. Sergejs Gaidukovs, A. Paberza, G. Gaidukova, Ugis Cabulis. Structure and thermal properties of polyurethane rigid foams from rapeseed oil and recycled polyethylene terephthalate

P2.76. Ana S. Carreira, I. Pais, R. Vaz Vieira, R. Teixeira, A. Beirão, M.M. Figueiredo, M.H. Gil. Textile functionalization with biodegradable microparticles for sustained release

P2.77. J. Dias, Cristina T. Filgueiras, A. Dambrós, N.H. Zarate, S.M. Martelli, F.M. Fakhouri. Effect of edible coating base on turmeric starch in fresh cheese

P2.78. Anna Bryskiewicz, Joanna Ryszkowska. Modification of polyurethane foams by the natural origin additions

P2.79. Milena Zieleniewska, Leonard Szczepkowski, Joanna Ryszkowska. Bio-based polyurethane composites for industrial applications

P2.80. Ioannis Liakos, Francesca D'autilia, Alice Garzoni, Cristina Bonferoni, Alice Scarpellini, Virgilio Brunetti, Riccardo Carzino, Paolo Bianchini, Pier Paolo Pompa, Athanassia Athanassiou. Bio-based cellulose acetate – essential oil antimicrobial nanocapsules for health care

P2.81. Abi Santhosh Aprem. Controlled release of metal ions from a medical device implant using a biodegradable polymer

P2.82. Samira Fernandes Nassar, Alain Guinault, Cyrille Sollogoub, Nicolas Delpouve, Sandra Domenek. Confinement of PLLA by layer multiplying co-extrusion: Effect on gas barrier properties

P2.83. Liang Wang, Miguel Sánchez-Soto, Jordi J. Bou, Maria Lluisa MasPOCH. Foam-like materials from renewable resources

P2.84. Kamila Mizera, Joanna Ryszkowska. Polyurethane elastomers from polyols based on soybean oil with a different molar ratio

P2.85. Denilson de Jesus Assis, Élia Karina de Carvalho Costa, Elisiane Cristina Andrade Reis, Janice Izabel Druzian. The effect of carbon source on the production and thermal properties of poly(hydroxyalkanoates) synthesized by *Bacillus megaterium*

P2.86. Sueli Carvalho dos Santos, Fúlvia Soares Campos de Sousa, Elisiane Cristina Andrade Reis, Luiz Lázaro Franco Batista, Janice Izabel Druzian, Paulo Fernando de Almeida, Denilson de Jesus Assis, Fabio Alexandre Chinalia. Preliminary characterization of *Enterobacter* sp biopolymer produced with residual glycerol waste

P2.87. Paulo Leonardo Lima Ribeiro, Janice Izabel Druzian. Production and molar mass distribution of novel poly(hydroxyalkanoates) by different bacterial strains from crude glycerol

P2.88. Paulo Leonardo Lima Ribeiro, Janice Izabel Druzian. Influence of co-products of biodiesel industry on the spectrometric profile of bacterial alginates



- P2.89. J.R. Rocca-Smith, T. Karbowiak, A. Lagorce-Tachon, J. P. Bellat, E. Marcuzzo, A. Sensidoni, F. Piasente, Frederic Debeaufort. Effect of CO<sub>2</sub> sorption on PLA properties
- P2.90. J.R. Rocca-Smith, T. Karbowiak, D. Champion, E. Marcuzzo, A. Sensidoni, F. Piasente, D. O Connell, Frederic Debeaufort Changes in PLA structure and properties when ageing at various RH and temperatures far and close T<sub>g</sub>
- P2.91. Elham Zeinali, Shima Akbarpoursarabi. Oxo and bio-degradation studies on LLDPE starch composites film
- P2.92. Shima Akbarpoursarabi, Elham Zeinali. Investigation on starch and plastomer effect on biodegradation and physical properties on LLDPE/starch/plastomer composites
- P2.93. Eulalio Gracia, Cristina Gutiérrez, María Teresa García, Antonio de Lucas, Juan Francisco Rodríguez, Ignacio Gracia. Influence of polymer degradation on the indomethacin from PLGA and PLA foams
- P2.94. Monika Auguścik, Adam Szugajew, Leonard Szczepkowski, Łukasz Wierzbicki, Joanna Ryszkowska. Polyurethane foams for use in the cosmetics industry containing additive to speed up biodegradation
- P2.95. Chanchai Thongpin, Sudsiri Hemsri. Effect of glycerol and heat treatment of wheat gluten on cure characteristics and tensile properties of NR/wheat gluten blend