



## XII Iberoamerican Congress on Pulp and Paper Research (CIADICYP)

28<sup>th</sup> June – 1<sup>st</sup> July 2022

## 12<sup>o</sup> Congreso Iberoamericano de Investigación en Celulosa y Papel

28 de junio – 1 de julio de 2022



# Session list

BBE – Biopolymers, biofuels and enzyme-assisted technologies

BBP - Bio-based products from non-woody resources

BC - Biocomposites

C – Coatings

EE – Energy & Environment

FPP – Forest, Pulp and Paper

HML - High added-value macromolecules from lignocellulose

M - Membranes

NA - Nanocellulose applications

NPM - Nanocellulose production and modification



Tuesday 28<sup>th</sup> June 2022

	Aula Magna	Sala de Graus
9:00	Registration	
9:20		
9:40		
10:00		
10:20	Opening ceremony	
10:40		
11:00	Plenary Lecture: Elisabete Frollini	
11:20		
11:40	KN.BC	O.EE.01
12:00		O.EE.02
12:20	O.BC.01	O.EE.03
12:40	O.BC.02	O.EE.04
13:00	Lunch break & Poster session	
13:20		
13:40		
14:00		
14:20	O.BC.03	O.EE.06
14:40	O.BC.05	
15:00	O.BC.06	O.EE.07
15:20	O.BC.07	O.EE.08
15:40	Coffee break & Poster session	
16:00		
16:20	O.BC.12	O.FPP.01
16:40	O.BC.09	O.FPP.02
17:00	O.BC.10	O.FPP.03
17:20	O.BC.11	O.FPP.04
17:40	O.BC.08	O.FPP.05
18:00		O.FPP.06
18:20	Welcome - City Hall of Girona	
18:40		
19:00		
19:20		
19:40		
20:00		
20:20		
20:40		
21:00		
21:20		
21:40		

Wednesday 29<sup>th</sup> June 2022

	Aula Magna	Sala de Graus
9:00	Plenary Lecture: Thomas Heinze	
9:20		
9:40	EPNOE Innovation in Polysaccharides	
10:00		
10:20		
10:40		
11:00	Coffee break & Poster session	
11:20		
11:40	EPNOE Innovation in Polysaccharides	
12:00		
12:20		
12:40		
13:00	Lunch break & Poster session	
13:20		
13:40		
14:00		
14:20	O.FPP.07	KN.BBP
14:40	O.FPP.08	
15:00	O.FPP.09	O.BBP.01
15:20	O.FPP.10	O.BBP.02
15:40	Coffee break & Poster session	
16:00		
16:20	O.FPP.11	O.BBP.03
16:40	O.FPP.12	O.BBP.04
17:00		
17:20		
17:40		
18:00	<p>Visit to MARIMURTRA BOTANICAL GARDEN</p> <p>Conference dinner at MAS PALAU</p> <p>(Bus departure at 18:15 from Plaça Espanya)</p>	
18:20		
18:40		
19:00		
19:20		
19:40		
20:00		
20:20		
20:40		
21:00		
21:20		
21:40		

Thursday 30<sup>th</sup> June 2022

	Aula Magna	Sala de Graus
9:00	Plenary Lecture: Julien Bras	
9:20		
9:40	O.NPM.01	KN.HML
10:00	O.NPM.02	
10:20	O.NPM.03	O.HML.01
10:40	O.NPM.04	O.HML.02
11:00	Coffee break & Poster session	
11:20		
11:40	O.NPM.05	O.HML.03
12:00	O.NPM.06	O.HML.04
12:20	O.NPM.07	O.HML.05
12:40	O.NPM.08	O.HML.06
13:00	Lunch break & Poster session	
13:20		
13:40		
14:00		
14:20	O.M.02	KN.BBE
14:40	O.M.03	
15:00	O.M.04	O.BBE.01
15:20	O.M.05	O.BBE.02
15:40	Coffee break & Poster session	
16:00		
16:20	O.M.06	O.BBP.05
16:40	O.M.07	O.BBP.06
17:00	O.M.08	
17:20	Guided Tour to Girona	
17:40		
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21:40		

## Friday 1<sup>st</sup> July 2022

	<b>Aula Magna</b>	<b>Sala de Graus</b>
9:00	<b>Plenary Lecture: Orlando Rojas</b>	
9:20		
9:40	O.NPM.09	O.BBE.03
10:00	O.NPM.10	O.BBE.04
10:20	O.NPM.11	O.BBE.05
10:40	O.NPM.12	O.BBE.06
11:00	<b>Coffee break &amp; Poster session</b>	
11:20		
11:40	O.NA.01	O.C.01
12:00	O.NA.02	O.C.02
12:20	O.NA.03	O.C.03
12:40	O.NA.04	O.C.04
13:00	O.NA.05	O.C.06
13:20	O.NA.06	
13:40	<b>Closing ceremony</b>	
14:00		
14:20		

## Tuesday 28<sup>th</sup> June 2022

9:00 Registration  
10:20 Opening ceremony

11:00 **Plenary Lecture**  
**Elisabete Frollini**  
*Bio-based materials from a high content of renewables: oilseed and lignocellulosics as feedstock*

### Parallel sessions

#### Aula Magna

##### **Biocomposites (I)**

Chair: Gary Chinga-Carrasco and Fabiola Vilaseca

11:40 KN.BC **Kristiina Oksman & Mohini Sain**  
*Cellulose nanomaterials and their use in composites, from laboratory to industrial scale*

12:00

12:20 O.BC.01 **Pruthvi K. Sridhara**  
*Industrial scale melt processing of renewable cellulose nanofibers/polyamide-6 composites*

#### Sala de Graus

##### **Energy and Environment (I)**

Chair: Alex Berg

O.EE.01 **Aicha Ait Sair**  
*Modelling a small scale biorefinery and evaluation of its sustainability in a local context*

O.EE.02 **Henrique Venturelli**  
*Thermodynamic view for vapor pressure, boiling point and heat of dissolution of Kraft black liquors*

O.EE.03 **Hasbleidy Palacios Hinestroza**  
*Pretreatment of agroindustrial waste by ozonolysis to obtain bioenergy*

12:40	O.BC.02	<b>Laura Mabel Sánchez</b> <i>Magnetic polyvinyl alcohol/cellulose nanofibers blend beads</i>	O.EE.04	<b>Roberto Aguado</b> <i>Masterbatch strategy in papermaking: assessment of an easily deliverable micro-/nanofiber-reinforced market pulp</i>
13:00	<b>Lunch &amp; Poster session</b>			
	<b>Biocomposites (II)</b> Chair: Gary Chinga-Carrasco and Daniel Martínez		<b>Energy and Environment (II)</b> Chair: Alex Berg	
14:20	O.BC.03	<b>Meredith Barr</b> <i>Producing cellulose-reinforced biocomposite films from biomass using ionic liquids</i>	O.EE.06	<b>Alexis Metais</b> <i>Z-ECF and Z-TCF bleaching of softwood kraft pulp</i>
14:40	O.BC.05	<b>Laura Andze</b> <i>Discovering potential of hemp fiber materials</i>		
15:00	O.BC.06	<b>Viktor Savov</b> <i>Properties of panels from residual hemp particles</i>	O.EE.07	<b>Ana Maria Sousa</b> <i>Modelling and simulation in pulp bleaching processes to minimize water consumption</i>
15:20	O.BC.07	<b>Dyna Theng</b> <i>Nanocellulose-reinforced PLA biocomposites: masterbatch-like dispersion approach</i>	O.EE.08	<b>Cláudia Esteves</b> <i>Impact of the bleaching on the yield improvement obtained by high alkali impregnation</i>
15:40	<b>Coffee break &amp; Poster session</b>			



### Biocomposites (III)

Chair: Gary Chinga-Carrasco and Daniel Martínez

- 16:20 O.BC.12 **Bruno Valente**  
*All cellulose composites based on thermoplastic cellulose esters and micronized pulp fibers*
- 16:40 O.BC.09 **Chiara Zarna**  
*Influence of compounding parameters on the tensile properties and fibre dispersion of injection moulded polylactic acid (PLA) and TMP fibre biocomposites*
- 17:00 O.BC.10 **Sandra Rodríguez-Fabià**  
*The effects of biocomposite formulations on the mechanical properties and 3D printability of filaments for fused deposition modelling*
- 17:20 O.BC.11 **Francisco Javier Espinach Orús**  
*Evaluation of the micromechanics properties of long flax-oriented fibers as a starch polymer reinforcement*
- 17:40 O.BC.08 **Koon-Yang Lee**  
*Waste as a source: Municipal solid waste derived, lignocellulosic biomass-reinforced, polylactide laminated composites for advanced engineering applications*
- 18:00

### Forest, Pulp and Paper (I)

Chair: Miguel Pereira

- O.FPP.01 **Vijaya Vegunta**  
*High Calcium Content of Eucalyptus dunnii Wood Affects Delignification and Polysaccharide Degradation in Kraft Pulping*
- O.FPP.02 **Delfina Godinho**  
*Thermally modified wood of Acacia melanoxylon Preliminary results*
- O.FPP.03 **Afonso Mendes**  
*An approach to the fibre furnish selection for tissue paper based on statistical geometry*
- O.FPP.04 **Ana Lourenço**  
*Acacia biomass exploitation: a tool to reduce wildfires risk in unmanaged forestlands – Acacia4FirePrev project*
- O.FPP.05 **Guillermo Reyes**  
*Dissolved cellulose on alkali conditions for multidimensional hierarchical structures*
- O.FPP.06 **Alma Rosa Saucedo**  
*Characteristics chemical in the fiber and relationship on softness in tissue paper*

19:00

Welcome Cocktail

## Wednesday 29<sup>th</sup> June 2022

09:00 **Plenary Lecture**  
**Thomas Heinze**  
*Polysaccharide-based nanocarriers for biotechnological and medical applications*

### Parallel sessions

#### Aula Magna

#### Sala de Graus

#### Innovation in Polysaccharides – EPNOE (I)

Chair: Pedro Fardim

09:40	EPNOE.01	<b>Pedro Fardim</b> <i>Introduction to EPNOE</i>
10:00	EPNOE.02	<b>Ana Villares</b> <i>Novel enzymatic tools for the deconstruction of cellulose</i>
10:30	EPNOE.03	<b>Katariina Torvinen</b> <i>Sustainability aspects of cellulose based material solutions</i>

11:00 **Coffee break & Poster session**

## Innovation in Polysaccharides – EPNOE (II)

Chair: Pedro Fardim

- 11:40 EPNOE.04 **Jo-Ann Innerlohinger**  
*Man-made Cellulose Fibers in the View of Sustainability and Circularity*
- 12:10 EPNOE.05 **Carmen Freire**  
*Natural fibers based composite materials: challenges, innovations and recent trends*
- 12:40 EPNOE.06 **Discussion session**

13:00

**Lunch & Poster session**

## Forest, Pulp and Paper (II)

Chair: Miguel Zanuttini and M. Àngels Pèlach

- 14:20 O.FPP.07 **Roberto Aguado**  
*Paper-based visual indicators for the rapid detection of heavy metal pollution in water*
- 14:40 O.FPP.08 **Paulo Dias**  
*Structural curl related problems in paper: diagnosis of fiber orientation two-sidedness*
- 15:00 O.FPP.09 **Jorge Pedrosa**  
*Cationic cellulose as a potential biobased flocculant for papermaking*

## Bio-based products from non-woody resources (I)

Chair: Alejandro Rodríguez

- KN.BBP **Pedro Fardim**  
*Production and characterization of novel mixed-mode polysaccharide beads for protein adsorption and purification*
- O.BBP.01 **Meredith Barr**  
*Biochar-based wastewater treatment to combat antimicrobial resistance*

15:20	O.FPP.10	<b>Winnifer Atúncar</b> <i>Effect of nanofibrillar cellulose obtained from bamboo (<i>guadua angustifolia kunth</i>) on physical and mechanical properties of paper made with virgin and recycled fiber</i>	O.BBP.02	<b>Esther Rincón Rubio</b> <i>Designing the valorization of bay tree pruning waste through the extraction and microwave-assisted upgrading of polysaccharides into methyl levulinate</i>
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15:40

Coffee break & Poster session

**Forest, Pulp and Paper (III)**

Chair: Miguel Zanuttini and M. Àngels Pèlach

16:20	O.FPP.11	<b>M. Concepción Monte</b> <i>Recyclability of papers containing cellulose nanofibers</i>
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**Bio-based products from non-woody resources (II)**

Chair: Alejandro Rodríguez

O.BBP.03	<b>Luiz Pereira Ramos</b> <i>Combination of green solvents for efficient sugarcane bagasse fractionation</i>
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16:40	O.FPP.12	<b>Ronalds W. Gonzalez</b> Comparison of Wood and Non-Wood Market Pulps for Tissue Paper Applications
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O.BBP.04	<b>Eduardo Espinosa</b> <i>Hybrid nanocellulose/TiO<sub>2</sub> aerogels for NO<sub>x</sub> pollution control by photochemical oxidation processes</i>
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18:15 Costa Brava Tour & Gala Dinner

## Thursday 30<sup>th</sup> June 2022

### 09:00 Plenary Lecture

**Julien Bras**

*Engineered (nano)cellulose for advanced paper-based materials in sustainable packaging*

### Parallel sessions

#### Aula Magna

#### Nanocellulose production and modification (I)

Chair: Paulo J.T. Ferreira

- 09:40 O.NPM.01 **Miguel Ángel Zanuttini**  
*Preparation and characterizing of cellulose micro/nano fibrils using oxalic acid and different mechanical pre-treatments*
- 10:00 O.NPM.02 **Jorge Velásquez-Cock**  
*Transformation of colombian agroindustrial by-products in nanocellulose characteristics and potential applications*
- 10:20 O.NPM.03 **José Luis Sánchez-Salvador**  
*Sustainable production of cellulose nanofibers: From lab scale to synergic applications in industry*

#### Sala de Graus

#### High added-value macromolecules from lignocellulose (I)

Chair: Carlos Martín and Juan Carlos Villar

- KN.HML **Mary Lopretti**  
*Lignocellulosics, an opportunity in the development of the bioeconomy and the circular economy: New bioactives and materials*
- O.HML.01 **Filipa Manuela Alves Calvo Casimiro**  
*Valorization and Characterization of Hardwood and Softwood Lignins from Sulfite Liquors*

10:40	O.NPM.04 <b>Miguel A. Pereira</b> <i>Production and characterization of lignocellulose nanofibrils from Pinus radiata pressure groundwood pulp</i>	O.HML.02 <b>Manorma Sharma</b> <i>Improving the fractionation of kraft black liquor by optimizing the operating conditions of the ultrafiltration process</i>
11:00	<b>Coffee break &amp; Poster session</b>	
	<b>Nanocellulose production and modification (II)</b> Chair: Paulo J.T. Ferreira	<b>High added-value macromolecules from lignocellulose (II)</b> Chair: Carlos Martín and Juan Carlos Villar
11:40	O.NPM.05 <b>Hongyu Xu</b> <i>Optimization of reagents consumption in TEMPO-mediated oxidation of Eucalyptus cellulose to obtain cellulose nanofibers</i>	O.HML.03 <b>Pooja Dixit</b> <i>Fractionation of Norway spruce wood using <math>\gamma</math>-valerolactone for production of advanced biofuels</i>
12:00	O.NPM.06 <b>André Mazega</b> <i>Kinetic study of TEMPO-mediated oxidation and real-time monitoring strategy</i>	O.HML.04 <b>Susana Lozano Calvo</b> <i>Application of cold alkaline extraction process of the elephant grass to optimize the energy use and valorization of the hemicellulosic fraction</i>
12:20	O.NPM.07 <b>Giovana Signori Iamin</b> <i>Prediction of cellulose micro/nanofibers aspect ratio and yield of nanofibrillation using machine learning techniques</i>	O.HML.05 <b>Patrícia Henriques</b> <i>Hardwood Kraft Pulp for the Production of Prebiotics</i>
12:40	O.NPM.08 <b>Jorge Velásquez-Cock</b> <i>Cellulose nanofibers from fique residues: isolation and characterization</i>	O.HML.06 <b>Patrícia Moreira</b> <i>Protective effects of extracts from Eucalyptus globulus biomass in Alzheimer's disease in vitro and in vivo models</i>

13:00

**Lunch & Poster session**

**Membranes (I)**

Chair: Quim Tarrés and Sami Boufi

**Biopolymers, biofuels and enzyme-assisted technologies (I)**

Chair: Luiz Pereira Ramos and Pedro Fardim

14:20

O.M.02      **Nanci Ehman**  
*Sustainable MFC acetylation by citric acid for the production of films combined with polyols for barrier packaging application*

KN.BBE      **Carlos Orestes Martín Medina**  
*Biorefinery utilization of quinoa residues for producing biofuels and biopolymers*

14:40

O.M.03      **Paulina Mocchiutti**  
*Preparation and characterization of biobased films reinforced with micro/nano-fibrillated cellulose*

15:00

O.M.04      **Hamidreza Ahadian**  
*Overcoming the dewatering challenges of nanopapers*

O.BBE.01      **Luisa Leonor García Fuentevilla**  
*Laccase-catalysed polymerization of kraft lignin from Eucalyptus globulus*

15:20

O.M.08      **Carmen Freire**  
*Nanocellulose membranes enriched with an eucalyptus globulus leaves extract for anti-aging skin-care applications*

O.BBE.02      **Galya Simeonova**  
*Xylanase stage in ECF pulp bleaching and its impact on the environmental footprint of the pulp mill and the pulp properties*

15:40

**Coffee break & Poster session**

**Membranes (II)**

Chair: Quim Tarrés and Sami Boufi

**Bio-based products from non-woody resources (III)**

Chair: Alejandro Rodríguez

16:20	O.M.06	<b>Carla Vilela</b> <i>Ion-conducting membranes of nanocellulose &amp; lignosulfonates for application in fuel cells</i>	O.BBP.05	<b>Philippe Evon</b> <i>Co-products of sunflower cultivation, a promising source of biostimulatory molecules and construction materials</i>
16:40	O.M.07	<b>Ana Villares</b> <i>Cellulose-based actuators prepared by tailored modification and assembly</i>	O.BBP.06	<b>Ramon Morcillo Martín</b> <i>Suitability of raspberry waste (<i>Rubus ideaus L.</i>) for nanocellulose obtention and its application in edible films and coatings</i>
17:00	O.M.05	<b>Fabiola Vilaseca</b> <i>Conductive nanocellulose-based substrates for more sustainable sensors and biosensors</i>		

18:00      **Guided tour Girona**



## Friday 1<sup>st</sup> July 2022

09:00

### Plenary Lecture

Orlando Rojas

*New Advances to Approach Circularity with Wood, Fibrillated Lignocelluloses and Biomass Residuals*

### Parallel sessions

#### Aula Magna

#### Nanocellulose production and modification (III)

Chair: Ángeles Blanco

09:40

O.NPM.09 **Alexandre F. Santos**  
*Modeling fibrillation in the mechanical production of lignocellulosic micro/nanofibers using neural networks*

10:00

O.NPM.10 **Javier Carvajal**  
*Formation of hydrogels by extraction and acid hydrolysis of ivory nut endospermic nanocellulose*

10:20

O.NPM.11 **Justin Zoppe**  
*Self-assembly of asymmetric and symmetric end-grafted cellulose nanocrystals*

#### Sala de Graus

#### Biopolymers, biofuels and enzyme-assisted technologies (II)

Chair: Luiz Pereira Ramos and Pedro Fardim

O.BBE.03 **Mariana Amândio**  
*Fermentation Improvement to favour the production of bioethanol from eucalyptus bark*

O.BBE.04 **Raquel Cañadas**  
*Sustainable solvent extraction of inhibitors in the bioethanol production from steam exploded *Eucalyptus globulus**

O.BBE.05 **Forough Momayez**  
*Upgrading Enzymatic Hydrolysis Residue from Biochemical Conversion of Softwood Using GVL*

10:40	O.NPM.12	<b>Alex Berg</b> <i>Production and application of chemically modified nanocellulose: From the laboratory to a pilot plant scale</i>	O.BBE.06	<b>Jaakko Wallenius</b> <i>Methanol Purification, A-Recovery+, Case Mönsterås</i>
11:00	<b>Coffee break &amp; Poster session</b>			
	<b>Nanocellulose applications (I)</b> Chair: Carmen Freire		<b>Coatings (I)</b> Chair: Roberto Aguado	
11:40	O.NA.01	<b>Katarina Torvinen</b> <i>Novel sustainable developments in lignocellulose-based electronics, diagnostics and energy storage devices</i>	O.C.01	<b>Mohit Sharma</b> <i>New developments in paper coating with micro-/nanofibrillated cellulose for improving printing quality</i>
12:00	O.NA.02	<b>Belkis Coromoto Sulbaran</b> <i>Materials based on nanocellulose from agave bagasse with potential uses in energy</i>	O.C.02	<b>Le Gallic Florian</b> <i>Approaching Young's modulus changes during aqueous coating</i>
12:20	O.NA.03	<b>Guang Chu</b> <i>Transfer Imprinting of Photonic Microparticle Array through Self-Assembled Nanocellulose 'Glue'</i>	O.C.03	<b>Quim Tarrés</b> <i>Electrospray Deposition of Cellulose Nanofibers on Paper: Overcoming the Limitations of Conventional Coating</i>
12:40	O.NA.04	<b>Nicole Lameirinhas</b> <i>Gellan gum-nanofibrillated cellulose based bioinks for 3d bioprinting applications</i>	O.C.04	<b>Vanesa López</b> <i>Eco-sustainable hydrophobic and antimicrobial coatings for textiles</i>

13:00	O.NA.05	<b>Helena Oliver</b> <i>Bacterial Cellulose Network from Kombucha Fermentation reinforced Poly(methyl methacrylate) composites</i>	O.C.06	<b>Rosana Moriana Torro</b> <i>Circular packaging barriers for single-use cellulose fibre-based moulded products</i>
13:20	O.NA.06	<b>Sami Boufi</b> <i>Twin-screw extrusion for the production of nanocellulose-PVA gels with a high solid content: insight on the disintegration mechanism and properties of the resulting nanopapers</i>		
13:40	Closing ceremony			

## Poster sessions

Tuesday 28<sup>th</sup> June 2022 & Wednesday 29<sup>th</sup> June 2022

### Biocomposites

- P.BC.01 **Boris Landívar**  
*Effect of chitosan or nanoclay addition on barrier properties of packaging paper coated with starch*
- P.BC.02 **Dyna Theng**  
*Effect of fiber content on PCL-based composites for multi-material 3D-printed structures*
- P.BC.03 **Viktor Savov**  
*Effect of hot-pressing temperature on properties of fibreboards bonded with hydrolysis lignin and phenol-formaldehyde resin*
- P.BC.04 **José Alberto Méndez**  
*Polyhydroxy-3-butyrate reinforced barley waste composites for agriculture purposes*
- P.BC.05 **Elizabeth Elgueta**  
*Adsorbents derived from xylan hemicellulose with removal properties of pollutant metals*
- P.BC.06 **Dyna Theng**  
*Feasibility study of injection planting pot from rice straw fiber*
- P.BC.07 **Belkis Coromoto Sulbaran**  
*Uso de nanocristales de agave tequilana weber en el reforzamiento de hidrogeles de acrilicos*
- P.BC.08 **Eduart A. Gutiérrez-Pineda**  
*From Traditional Use of Fique Fibers (*Furcraea* spp) to Novel Bionanocomposite for Wastewater Depuration Technologies*

### Coatings

- P.C.01 **Paulina Mocchiutti**  
*Natural polyelectrolyte complexes with micro/nano fibrillated cellulose for improving paper barrier properties*
- P.C.02 **María Graciela Aguayo**  
*Structural characteristics of cellulose nanocrystals from kraft pulp for application in the wood industry*
- P.C.03 **Antonio Veloso-Fernández**  
*Paper coatings based in biopolymers for Single Use Plastics (SUPs) replacement*

P.C.04 **Antonio Veloso-Fernández**  
*Paper coated by bioplastic for single use plastics replacement*

## **Energy and Environment**

P.EE.01 **Juan Pedro Hernández Touset**  
*Heat recovery system design for the paper machine at Pulpa Cuba paper factory*

P.EE.02 **Juan Carlos García Domínguez**  
*Prospective caracterizacion of lignocellulosic biomasses to obtain biorefinery fractions of interest in asphalts*

P.EE.03 **Javier Mauricio Loaiza**  
*Pyrolysis kinetic, thermodynamic and product analysis of different leguminous biomass by Kissinger-Akahira-Sunose and pyrolysis-gas chromatography-mass spectrometry*

P.EE.05 **Naycari Forfora**  
*Life Cycle Assessment of Softwood and Eucalyptus Cultivation for Pulp Production*

## **Forest, Pulp and Paper**

P.FPP.03 **María Leonor Román Miranda**  
*Floristic composition of forest species for timber use in living fences*

P.FPP.05 **Paulo Dias**  
*Methodology to characterize the fiber orientation in zd of paper sheets: development and testing*

P.FPP.06 **Daniel Moreno**  
*Development of fiber-based products with improved barrier, surface, and mechanical properties to be used as substitutes of single-use-plastics*

P.FPP.07 **Isabel Carrillo-Varela**  
*Hydrogels fabricated from different cellulose sources and their performance for sorption purposes.*

P.FPP.08 **Nuria Gómez**  
*Effect of coating thickness with cellulosic nanofibers on barrier properties of packaging paper*

P.FPP.09 **Belkis Coromoto Sulbaran Rangel**  
*Antibacterial papers made from agave bagasse fiber doped with silver nanoparticles and chitosan*

P.FPP.10 **Priscilla Vergara Alarcón**  
*Effect of coating based on lignin-starch mixtures on packaging paper*

P.FPP.11 **Bruno José Alves Almeida**  
*Influence of surfactant additives in the kraft cooking of e. Globulus mixtures with e. Urograndis or e. Nitens*

- P.FPP.12 **André Cunha**  
*TCF vs ECF bleaching of prehydrolysis kraft pulp*
- P.FPP.13 **Thalita Pedroso Damaceno**  
*Solvent exchange: effect on cellulose fibers dissolution in LICL/DMAC*
- P.FPP.14 **Thalita Pedroso Damaceno**  
*Characterization of cellulose fibers and their potential for lyocell process*
- P.FPP.15 **Rui Moreira**  
*The effect of epoxidized compounds on the structure of Kraft pulp cellulose film*
- P.FPP.16 **Ricardo Costa**  
*Pulp and handsheets potential of pre-treated E. Globulus stumps in a biorefinery context*
- P.FPP.17 **José Luis Sánchez-Salvador**  
*Characterization of the retention of cellulose nanofibrils in papermaking*
- P.FPP.18 **M. Concepción Monte**  
*Interaction of the cellulose nanofibers with the dissolved and colloidal material in paper recycling*
- P.FPP.19 **Ana Balea**  
*Marine biomass from Posidonia Oceanica as raw material for nanocellulose production and its application in papermaking*
- P.FPP.20 **Antonio Tijero**  
*Cationic nanofibrillated cellulose as flocculant in recycling papermaking*
- P.FPP.21 **Juan Carlos Villar**  
*Recyclability of packaging papers with nanocellulose coatings*

## Thursday 30th June 2022 & Friday 1st July 2022

### **Bio-based products from non-woody resources**

- P.BBP.01 **Cátia Oliveira**  
*Chemical characterization of different morphological parts of *Acacia dealbata* and potential biological activities of extracts*
- P.BBP.02 **Luiz Pereira Ramos**  
*Conversion of carbohydrates to organic acids using Lewis acid catalysts in aqueous medium*
- P.BBP.03 **Luiz Pereira Ramos**  
*Organosolv fractionation of cane bagasse using aqueous ethanol and organic acids in the presence of supercritical CO<sub>2</sub>*
- P.BBP.04 **Yalchev Ivo**  
*Utilisation of corn fiber to furfural*
- P.BBP.05 **Yineth Pineros-Castro**  
*Pineapple wastes as a natural source of sugars and antioxidants*

### **Biopolymers, biofuels and enzyme-assisted technologies**

- P.BBE.01 **Jorge Rocha**  
*Integrated configuration for bioethanol production from primary sludge and *Eucalyptus globulus* bark: evaluation of several operating conditions*
- P.BBE.02 **Luiz Pereira Ramos**  
*Valuable chemicals from pyrolysis of Lignoforce<sup>TM</sup> lignins*
- P.BBE.03 **Carolina Mendieta**  
*Optimization of the simultaneous saccharification and fermentation strategy for 2G ethanol production in a pine sawdust biorefinery*
- P.BBE.04 **Félix García-Ochoa**  
*Optimization of organosolv-pretreated wheat straw saccharification*
- P.BBE.05 **Rocio Cardozo**  
*Design of a biorefinery for bioethylene production and lignin recovery from forest industrial waste*
- P.BBE.06 **Nicolás Clauser**  
*Process design for obtaining polymers from sugarcane bagasse autohydrolysis spent liquors in a biorefinery*
- P.BBE.07 **Alicia Hernández Peñaranda**  
*Bioethanol production using pineapple and banana agroindustrial residues*

- P.BBE.09 **José Matos**  
*Xylanase Pre-Bleaching Treatment of Oxygen-Delignified Eucalypt Kraft Pulp*
- P.BBE.10 **Regis Teixeira Mendonça**  
*Effect of alkalization and supramolecular structure of cellulose on enzymatic treatment of Eucalyptus nitens and Pinus radiata kraft pulps*

### **High added-value macromolecules from lignocellulose**

- P.HML.01 **Giselle González**  
 *$\gamma$ -valerolactone as a green solvent for the delignification of sugarcane bagasse*
- P.HML.02 **Jorge de Haro Niza**  
*PLA / lignin biobased composites 3D printing for food packaging industry*
- P.HML.03 **Rita Fabiana Silva Simões**  
*Eucalyptus globulus leaves as source of chemical compounds with successive fractionation*
- P.HML.04 **André Cunha**  
*Wood prehydrolysis in a flow-through reactor: hydrolysate characterization*
- P.HML.05 **Luisa Leonor García Fuentesvilla**  
*Different kraft lignins sources for electrospun nanostructure production*
- P.HML.06 **Juan Carlos Villar**  
*Intensification of the lignocellulosic biomass fractionation process with ethanol-water by liquor reuse*
- P.HML.07 **Juan Carlos García Domínguez**  
*Obtaining furfural by isothermal autohydrolysis from agricultural by-product*

### **Membranes**

- P.M.02 **Agustina Ponce de León**  
*Combined effects of glycerol/sorbitol plasticizers on the properties of CNF films*
- P.M.03 **Agustina Ponce de León**  
*Influence of lignin content and plasticizer load in nanocellulose/sorbitol films*
- P.M.04 **Nanci Ehman**  
*Plasticizer polyols/MFC films production for single-use primary food packaging*



- P.M.05 **Anna Mestre**  
*Improving nanocellulose film properties by adding isolated kraft lignin*
- P.M.06 **Eduart A. Gutiérrez-Pineda**  
*Exploring Agro-industrial by-products to Produce Novel Electroconductive Nanomaterials*

### **Nanocellulose applications**

- P.NA.01 **Sandra Martínez**  
*Nobel nanocellulose-based separators for Lithium-Sulfur batteries (LISA Project)*
- P.NA.02 **Jorge Pedrosa**  
*Cyto-genotoxic effects of distinct micro/nanocelluloses in human osteoblastic and mice fibroblastic cells*
- P.NA.03 **Eduardo Espinosa**  
*Hybrid nanocellulose/CuO aerogels with antimicrobial properties by Colloidal Processing*

### **Nanocellulose production and modification**

- P.NPM.02 **Sergio Arango**  
*Evaluation of Fibrillar Nanocellulose (NCF) of Bolaina blanca (Guazuma crinita) wood from a plantation in Ucayali, Peru.*
- P.NPM.03 **Ana Balea**  
*Ozonization as alternative pretreatment in the production of cellulose nanofibers*
- P.NPM.04 **Priscilla Vergara**  
*Bacterial nanocellulose production: properties on static and agitated processes*
- P.NPM.05 **Miguel Ángel Zanuttini**  
*Effect of homogenization pressure on the obtaining of cellulose micro/nano fibrils. Interaction with a natural complex*
- P.NPM.06 **Fabiola Vilaseca**  
*Biotechnology for the production of bacterial cellulose*