

Scientific program

“5th international congress on Green Extraction of Natural Products (GENP2024)”



GENP

2024

The 5th International Congress on
**Green Extraction of Natural
Products**

October 28-30, 2024 • Compiègne, France





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- Receptions
- Gates
- Catering

BF > Benjamin Franklin CT > Technology transfer Centre
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 CR > Research Centre GI > Computer Science Centre

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DAY 1 : Monday, October 28, 2024

10:00	14:00	REGISTRATION Location : « Technology Transfer Center »
14:00	14:20	Opening session
Topic 1 : ALTERNATIVE SOLVENTS FOR GREEN EXTRACTION Conference location: amphitheater Colcombet « Technology transfert center »		
Chairs: Giancarlo CRAVOTTO and Antonela NINCEVIC GRASSINO		
14:20	15:05	Plenary Lecture : (OR-01) "Supercritical Fluid Technology: A sustainable and efficient way to extract and stabilize compounds of interest" Speaker : Pr. BADENS Elisabeth
15:05	15:20	(OR-02) "Simultaneous recovery of proteins and polyphenols from hemp seeds under subcritical water conditions" Speaker : CHEMAT Aziadé
15:20	15:35	(OR-03) "Natural dyes eco-extraction using supercritical CO2" Speaker : SAVOIRE Raphaëlle
15:35	15:50	(OR-04) "Optimization of extraction of polyphenols from Rhamnus alaternus by deep eutectic solvent-based ultrasound assisted extraction" Speaker : NEKKA Amine
15:50	16:20	Coffee break / Posters Location: Technology transfert center
Chairs: Elisabeth BADENS and Anne-Sylvie TIXIER		
16:20	16:35	(OR-05) "Innovative fractionation process for brewer's spent grains upgrading" Speaker : KHELFA Anissa

16:35	16:50	(OR-06) "Sustainable valorisation of industrial hemp: novel technologies and a green solvent" Speaker : CRAVOTTO Christian
16:50	17:05	(OR-07) "Extraction of Bioactive Molecules from Apple Pomace: Evaluation of Antioxidant and Antibacterial activities" Speaker : BRUNA Lauriane
17:05	17:20	(OR-08) "Evaluation of green and bio-based solvents for the extraction of β carotene and lipids from the oleaginous yeast <i>R. toruloides</i> " Speaker : BUCHWEITZ Vanessa
17:20	17:35	(OR-09) "DES-milling combined extraction process targeting pectin from citrus peels and apple pomace" Speaker : PERRET Lucie
17:35	17:50	(OR-10) "Cascade extraction of polyphenols and carotenoids, using Natural Deep Eutectic Solvents" Speaker : SAUVETES Paul
17:50	18:05	(OR-11) "Green solutions to extract bioactive compounds from vitro-derived hop plantlets treated with elicitors" Speaker : LETO Leandra
18:05	18:20	(OR-12) "Efficacy of the bio-solvent 2-methyltetrahydrofuran for microwave-assisted extraction of carotenoids from <i>Chlorella vulgaris</i> . Comparison with other traditional organic solvents." Speaker : MORON-ORTIZ Angeles

DAY 2 : Tuesday, October 29, 2024

8:00	8:45	REGISTRATION Location : « Technology Transfer Center »
Topic 2 : SUSTAINABLE AND CLEAN EXTRACTION TECHNOLOGIES Conference location: amphitheater Colcombet « Technology transfert center »		
Chairs: Nabil GRIMI and Antonio J. MELÉNDEZ-MARTÍNEZ		
8:45	9:30	Plenary Lecture : (OR-13) " Pulsed electric energy treatments to enhance extraction of natural products" Speaker : Pr. VOROBIEV Eugène
9:30	9:45	(OR-14) "Ultrasound- and PEF-assisted Industrial Production of EVOO with higher content of Bioactive Compounds" Speaker : BOFFA Luisa
9:45	10:00	(OR-15) "Green Extraction Technologies Driving Circular Economy in the Sicilian Prickly Pear Industry" Speaker : CAPALDI Giorgio
10:00	10:15	(OR-16) "Microwave assisted hydrodistillation of hop terpenes: An application in the brewing industry" Speaker : CARNAROGLIO Diego
10:15	10:45	Coffee break / Posters Location: Technology transfert center
Chairs: Nikolai LEOVKA and Oleksii PARNIAKOV		
10:45	11:00	(OR-17) "Application of DIC technology for the extraction of high added value compounds from Cannabis Sativa L. buds according to the bio-refinery concept" Speaker : BOUCHEKIOUA Dounia
11:00	11:15	(OR-18) "Alternative recovery of natural acetoin by hybrid pervaporation / distillation process" Speaker : PERNAK Anne-Sophie

11:15	11:30	(OR-19) "Synergistic Extraction of Bioactive Compounds using Enzyme-Assisted Extraction (EAE) in Combination with High-Pressure Homogenization (HPH)" Speaker : MOJARRADI Fatemeh
11:30	11:45	(OR-20) "Optimization of enzyme-assisted extraction of bioactive compounds from the pseudo-fruit of Rosa Canina L. and evaluation of the biological potential of the optimum extract" Speaker : LEMONI Zafeiria
11:45	12:00	(OR-21) "Multi-criteria optimization including environmental impacts of ultrasound-assisted extraction of phenolic antioxidants from blackcurrant pomace by-product" Speaker : KHALAF Doha
12:00	13:15	Lunch Location : Innovation Center
Topic 3 : VALORISATION OF BY PRODUCTS AND BIOREFINERY Conference location: amphitheater Colcombet « Technology transfert center »		
Chairs: Mohamed KOUBAA and Marija BADANJAK SABOLOVIC		
13:15	14:00	Plenary Lecture : (OR-22) "Advanced drying methods and the emerging intensification of drying in the valorization of pumpkin by-products " Speaker : NINCEVIC GRASSINO Antonela
14:00	14:15	(OR-23) "Impact of Time, Temperature, and pH on Hydrothermal Treatment for Hemicellulose Extraction from Fir Sawdust and Characterization by Capillary Electrophoresis" Speaker : NAJJJOUR Nicole
14:15	14:30	(OR-24) "Optimisation of proteins extraction from tenebrio meliotor larvea" Speaker : JABLAOUI Cherif
14:30	14:45	(OR-25) "Economic and Environmental Impact Analysis of Innovative Cascaded Extraction of Lycopene and Cutin from Tomato Processing Residue" Speaker : PATARO Gianpiero
14:45	15:30	Coffee break / Posters Location: Technology transfert center

<p>Session I : Innovative Approaches for Biomass Valorization: From Extraction to Sustainable Applications</p> <p>Conference location: amphitheater Colcombet « Technology transfert center »</p>		
<p>Chairs: Nadia BOUSSETTA and Gianpiero PATARO</p>		
15:30	15:45	<p>(OR-26) "Standardization of plant biomass and valorization of post-extraction residues by way of an innovative mobile pelletizing technology" Speaker : COLLANGE Elea</p>
15:45	16:00	<p>(OR-27) "Ultrasound-assisted green extraction of active compounds from citrus fruits: chemical composition and biological activity against skin-aging" Speaker : EL KAHIA Houda</p>
16:00	16:15	<p>(OR-28) "Enrichment of Refined Sunflower Oil with Phenolic Extracts from Argan (Argania spinosa L. (Skeels)) Co-products Using Ultrasound-Assisted Extraction" Speaker : HALLOUCH Otmane</p>
16:15	16:30	<p>(OR-29) "Unlocking the Potential of Enological By-products: A Cascade Approach for Comprehensive Biomass Valorization through Sustainable Technologies" Speaker : CALCIO GAUDINO Emanuela</p>
16:30	16:45	<p>(OR-30) "Kiwi Peel Valorization: Optimized Phenolic Content Extraction and Bioactivity Assessment" Speaker : LOUKA Nicolas</p>
<p>Session II : Advances in Lignin and Biomass Valorization: From Edible Films to High-Performance Materials</p> <p>Conference location: amphitheater « Innovation Center »</p>		
<p>Chairs: Erwann GUENIN and Anissa KHELFA</p>		
15:30	15:45	<p>(OR-31) "Evaluation of the influence of lignin nanoform on properties of edible films." Speaker : GUÉNIN Erwann</p>
15:45	16:00	<p>(OR-32) "Optimizing extracted lignin from deproteinated brewer's spent grains for chemical valorization" Speaker : SALAMEH Sarah-Joe</p>

16:00	16:15	(OR-33) "Enzymes and green solvents for the sustainable extraction of lignin from horse manure: toward a diversification of the biomethane value-chain" Speaker : DORSCHNER-PELCOQ Lindsay
16:15	16:30	(OR-34) "How Far Can Catalysis Leverage The Transformation of Amorphous Biomass Into Crystalline Carbon-Based Materials?" Speaker : MENNANI Mehdi
16:30	16:45	(OR-35) "Innovative Conversion of Alfa Plant Cellulose Nanocrystals into Hard Carbon Anodes for Sodium-Ion Batteries" Speaker : KASBAJI Meriem
16:45	17:00	(OR-36) "Effect of phosphorylation treatment of lignocellulose obtained from Argan Shells on the mechanical, physical properties and formaldehyde emission of particleboard panels" Speaker : MAARIR Hafida
17:00	18:30	Green Extraction Process (demonstration experiments) & Posters Location : Innovation Center and Technology Transfert Center
20:00	23:00	Gala Dinner Location : Château de Pierrefonds, rue Viollet le Duc, 60350 Pierrefonds

DAY 3 : Wednesday, October 30, 2024

Topic 4 : INNOVATIVE TECHNOLOGIES FOR SEPARATION AND FRACTIONATION PROCESSES

Conference location: amphitheater Colcombet « Technology transfert center »

Chairs: Eugène VOROBIEV and Marwen MOUSSA

8:30	9:15	Plenary Lecture : (OR-37) " The pivotal role of natural preparations in the flavor industry" Speaker : ALBERTINO Andrea
9:15	9:30	(OR-38) "Green extraction coupling microwaves and centrifugation : trends and insights" Speaker : GINISTY Pascal
9:30	9:45	(OR-39) "Extractive fermentation of biobased compounds in the frame of bioeconomy" Speaker : MOUSSA Marwen
9:45	10:00	(OR-40) "Numerical simulation of membrane electroseparation of mixtures composed of particles of different sizes" Speaker : LEBOVKA Nikolai
10:00	10:15	(OR-41) "Optimizing stilbene recovery from cell culture media: A comprehensive study of the adsorption process" Speaker : CHADNI Morad
10:15	10:45	Coffee break / Posters Location: Technology transfert center
Chairs: Houcine MHEMDI and Morad CHADNI		
10:45	11:00	(OR-42) "Chestnut Wood Waste Valorization: Innovative Green Methods to Enhance Bioactive Fractionations" Speaker : AIMONE Clelia
11:00	11:15	(OR-43) "Overcoming the Shortfall in Green Metrics for Extraction Processes: The SIX Score Approach" Speaker : GRILLO Giorgio

11:15	11:30	(OR-44) "Assessment of the impact of treated wastewater on essential oil yield and agrophysiological responses of <i>Rosmarinus officinalis</i> ." Speaker : KAMMOUN Aya
11:30	11:45	(OR-45) "Eradication of the invasive species <i>Fallopia japonica</i> and valorization of its rhizomes by extraction as a part of a complete value chain" Speaker : COUPE Florentin
11:45	12:00	(OR-46) "Computational Solvent Screening Using COSMO-RS Approach for Extracting Bioactive Compounds from Cocoa Bean Shells" Speaker : BRAGAGNOLO Felipe Sanchez
12:00	12:15	(OR-47) "From Black and Green Tea (<i>Camellia sinensis</i>) By-products to Potential Natural Health Boosters: Optimization of Polyphenol Extraction and Assessment of Antioxidant and Antibacterial Potentials" Speaker : EL DARRA Nada
12:15	13:30	Lunch Location : Innovation Center
13:30	14:00	Awards & Closing Ceremony Conference location: amphitheater Colcombet « Technology transfer center »

Poster Overview

Nr	Title	Presenting author
PO-01	A Tuneable process for the extraction and purification of chitosan from mealworm larvae	JABLAOUI Cherif
PO-02	Antioxidant activity, antimicrobial activity, and chemical profile of caraway (<i>Carum carvi</i>) essential oil obtained under different conditions	MILOSEVIC Sanja
PO-03	Application of subcritical water extraction for the production of high value components from agricultural byproducts : Comparison with conventional hydroalcoholic extraction	LEONARD Kevin
PO-04	Aqueous extraction of clean label oleosomes from plant seeds	MOUSSA Marwen
PO-05	Centrifugal Partition Chromatography fractionation of Stilbenes and Anthraquinones from Japanese Knotweed (<i>Reynoutria japonica</i>) toward Nutraceuticals and Pharmaceutical Applications	HILALI Soukaina
PO-06	Comparison of chemical profile and bioactivity of dill essential oil obtained by conventional and innovative distillation techniques	BOZOVIC Danica
PO-07	Eco-Friendly Synthesis of Lignin Beads for Improved Adsorption of Methylene Blue and Methyl Orange	KASBAJI Meriem
PO-08	Eco extraction of valuable compounds from wood by supercritical CO ₂ process: influence of raw material and operating conditions	HARSCOAT-SCHIAVO Christelle
PO-09	Eco-extraction of biomolecules of interest from microorganisms by coupling of innovative technologies	MAHFOUD Sarah

PO-10	Exploring Artemisia Absinthium: Dual-Use Phytochemicals for Combating Cancer and Bacterial Resistance	LOUKMAN Salma
PO-11	Extraction and Analysis of Minerals and Heavy Metals from Black Truffle By-Products Using Non-Conventional Methods: Pressurised Liquid Extraction and Supercritical Fluid Extraction	MARTI-QUIJAL Francisco J.
PO-12	Recovery of Polyphenols from Black Truffle By-products Using Non-conventional Technologies: Characterization of Phenolic Profile by Triple-TOF-LC-MS-MS	MARTI-QUIJAL Francisco J.
PO-13	Extraction of mustard bran oil using supercritical CO ₂	DULLIER Cloé
PO-14	From waste to cosmeceuticals: buccal in situ gelling formulation including a polyphenols-enriched secondary raw material from green recovery of grape processing waste	BELFIORE Elena
PO-15	Xanthophyll-loaded nanoemulsions from plant matrices: enhancement of carotenoid bioavailability with a sustainable process	CONTINO-PEPIN Christine
PO-16	Macromolecular composition of Corchorus olitorius L.: toward the eco-extraction of hydrocolloids and other components	BONNOT Emma
PO-17	Optimization of Pulsed electric fields-assisted extraction parameters of lutein from Marigold (Tagetes erecta L.) Using response surface methodology	PATARO Gianpiero
PO-18	Lignin Phosphorylation for bio-based resin applications	EL KHAYAT DRIAA Yassine
PO-19	Optimizing Cellulose Phosphorylation for Enhanced Thermal Properties and Flame Retardance in Wood Adhesives	EL KHAYAT DRIAA Yassine

PO-20	Physically and chemically cross-linked hybrid hydrogels for the controlled extraction and release of medications	LEBOVKA Nikolai
PO-21	Subcritical Water Extraction of Bioactive Compounds from Red Ginseng Marc	SUH Dong Jin
PO-22	Supercritical CO ₂ extraction of β -carotene and lipids from the oleaginous yeast <i>R. Toruloides</i>	BUCHWEITZ Vanessa
PO-23	Synthesis and characterization of lignin nanoparticles	DENG Yanqin
PO-24	Unveiling the Multiscale Structural Dynamics and Retrogradation Behavior of Potato Starch via Integrated Enzymatic Hydrolysis Enhanced by Microwave	GRIMI Nabil
PO-25	Purification and concentration of C-Phycocyanin from spirulina extract by the combination of CaCl ₂ precipitation and membrane diafiltration technologies	GRIMI Nabil
PO-26	Cultivation of two psychrophilic microalgae <i>Sphaerocystis</i> sp. And <i>Pleurastream</i> sp. For carotenoids extraction	GRIMI Nabil
PO-27	Valorization of Chitosan Extracted from Shrimp Shell Waste for Manufacturing of Particleboard Composites	GRIMI Nabil
PO-28	Valorization of Coffee Silverskin Using Extraction Cycles and Water as a Solvent: Design of Process.	CHEMAT Aziade
PO-29	Valorization of silk by-products for lipopeptide surfactant production using green technologies	WEHBE Lara

PO-30	Valorization of Wine By-Products for High Added-Value Extracts	KARASTERGIOU Anna
PO-31	The Protective Role of Exogenous Proline in Alleviating Oxidative Stress Induced by Heavy Metals in Sour Orange Plants (<i>Citrus aurantium</i> L.)	KARASTERGIOU Anna
PO-32	Valorization of forced chicory roots: extraction and thermochemical conversion	RHAYEM Lynn
PO-33	Influence of ohmic heating in the bioactive compounds of extracts from Iranian brown macroalgae (<i>Nizimuddinia zanardini</i>)	KOUBAA Mohamed
PO-34	Evaluation of physical properties of Ajwain (<i>Trachyspermum Copticum</i> (L.)) extract microcapsules prepared by Freeze Drying	KOUBAA Mohamed
PO-35	Stibenoids eco-extraction from vineyard coproducts : vitisin B extraction by ASE compare to Sc-CO ₂	SAVOIRE Raphaëlle
PO-36	Investigating a Straightforward Process Coupling Extraction and Membrane Separation for Hydroxytyrosol Recovery from "Picholine Marocaine" Cv. Olive Pomace	DHAIDHI Hamza
PO-37	Optimization of Bioactive Compound Extraction from Rosemary Solid Residues Using Box-Behnken Design	BARAR Anissa
PO-38	Optimization of Bioactive Compounds Extraction Assisted by Non-ionic Surfactant from <i>Tetraclinis articulata</i> Solid Residues Using Response Surface Methodology	BARAR Anissa
PO-39	High Voltage Electrical Discharges as a Pre-Treatment for Extraction of Bioactive Compounds from Solid Residues of Thuya	BARAR Anissa



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PO-40	Valorization of sesame seed coat waste: phenolic composition, antibacterial efficacy, and nanoemulsion encapsulation for food preservation	EL DARRA Nada
PO-41	Removal of Contaminants from Water using Tomato Leaves as Adsorbent	EL DARRA Nada