

# *Scientific Program*



## WWEM-24 Welcoming Message

Dear Colleagues,

The **7th International Congress on Water, Waste and Energy Management (WWEM-24)** is organized by academics and researchers belonging to different scientific areas of Universidad de Granada, Universidad de Jaén, Instituto Superior de Engenharia de Lisboa, Universidad de Extremadura, Universidad de Santiago de Compostela, Università of Cassino and Southern Lazio, Universidad Pablo de Olavide, Hunan Agricultural University of China, Universidad Complutense de Madrid, Polytechnique Institute of Bragança, Gogte Institute of Technology, Universidad Politécnica de Madrid and University of Western Macedonia with the technical support of **Sciknowledge European Conferences**. The **Portuguese Chemical Society (SPQ)** and **Spanish Adsorption Society (SAD)** are preferent partners of this conference.

The *7th International Congress on Water, Waste and Energy Management* will include the participation of renowned keynote speakers, oral presentations, poster sessions, technical conferences related to the topics dealt with in the Scientific Program, and an attractive social and cultural program.

All accepted papers will be published in the Abstract E-book of the Conference. Those communications considered to have enough quality by authors can be further considered for publication in the International Conference Journals associated with this Conference. This Special Call for Papers Presented at the Congress, and for Different Journals, will be sent at the end of the month of September. At the authors' choice, those works not suitable for publication in any of the congress journals will be published in the Extended Proceedings E-book of the Congress.

On behalf of the Organizing Committee, I would like to wish all the participants who attend the conference to share their knowledge and establish new research-fruit relationships.

Looking forward to welcoming you in Lisbon!

Yours sincerely,



Prof. Joaquín R. Domínguez  
Full Professor of Chemical Engineering  
Chairman of WWEM-24  
Chemical Engineering Department  
University of Extremadura - UEx  
Spain, UE

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Department of Chemical Engineering and Chemical Physics  
University of Extremadura, Spain

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Sociedad Española de Adsorción  
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# WWEM-24 PROGRAM (provisional)

## Three-day event

### Important Note:

*Conference attendees have accepted in the terms and conditions of their registration that their presentation will take place on any day and hour of the schedule established by the Conference Organization.*

*The day and order of presentation assigned by the Organization to speakers and poster-type presenters may not be altered by particular requests. Changes will only be accepted for reasons of **delay in the visa or flight**, which must always be **previously accredited documentary**.*

*Presenters who are not in their place in the assigned time slot will lose the right to present the work and obtain their certificate.*

### ORAL PRESENTATIONS

*(12 minutes for presentation + 3 minutes for questions)*

**WWEM-24**

**Wednesday, 24th July 2024 (morning)**

SCHEDULE	MAIN ROOM 1 (ground floor)	ROOM 2 (ground floor)
8:45-9:45	Documentation delivery Only WWEM attendees (Reception desk)	
09:45-10:00	Opening session	
10:00-10:45	<p style="text-align: center;"><b>Plenary Talk 1</b></p> <p style="text-align: center;"><b>Ocean water chemistry in ancient oceans as a proxy of climate evolution</b></p> <p style="text-align: center;">Jose Abel Flores University of Salamanca Spain</p>	

10:45 – 11:30	<p><b>WATER TREATMENT</b></p> <p><b>Micropollutants removal in water with sol-gel carbon xerogel adsorbents regenerated in situ by H<sub>2</sub>O<sub>2</sub> electro-generation</b>  Julien Mahy  University of Liege  Belgium</p> <p><b>Self-immobilisation of functional activated carbon on alumina beads for mineral water treatment</b>  André Torres Pinto  Universidade do Porto  Portugal</p>	<p><b>VALORIZATION &amp; RECYCLING</b></p> <p><b>A comparative study on nitrate/phosphorus sorption capacity of different metal based materials</b>  Sedef Arikan  Dokuz Eylul University  Turkey</p> <p><b>Simultaneous Assessment of Nutrient Removal and Lipid Production by Chromochloris Zofingiensis Grown in Whey Wastewater for Biorefinery Application</b>  Miloudia SLAOU  Higher School of Technology SALE  Morocco</p>
	<p><b>ENERGY &amp; INFRASTRUCTURE</b></p> <p><b>E-Waste as a Resource: Enhancing the Recovery of Critical Raw Materials from LED Lamps</b>  Jannatul Rumky  University of Jyvaskyla  Finland</p>	
11:30-12:00	<p><b>POSTER SESSION</b></p> <p><b>WWEM-1</b></p> <p><b>COFFEE BREAK</b></p>	
12:00 -13:30	<p><b>WATER TREATMENT</b></p> <p><b>Photocatalytic Degradation of a Mixture of Six Antibiotics using TiO<sub>2</sub>-ZnO Nanocomposite</b>  Arhama Tufail Ahd Ansari  Indian Institute of Technology Bombay  India</p> <p><b>Recycled plastics as adsorbents to reduce metal concentrations in industrial effluents</b>  Carolina Mendiguchia  Universidad de Cadiz  Spain</p>	<p><b>VALORIZATION &amp; RECYCLING</b></p> <p><b>Nano-enabled residual cork for water disinfection</b>  Jeniffer Blair  Universitat Politecnica de Catalunya  Spain</p> <p><b>A Cosmic Signature in Wine</b>  Laszlo Elemer  HUN-REN Institute for Nuclear Research  Hungary</p>

	<p><b>Development of innovative titanium silicalites with photoactive properties for the efficient degradation of venlafaxine using simulated solar radiation</b> Guillermo Cruz Quesada Universidad de Jaén Spain</p> <p><b>Development of innovative titanium silicalites with photoactive properties for the efficient degradation of venlafaxine using simulated solar radiation</b> Julian J. Garrido Segovia Universidad Publica de Navarra Spain</p> <p><b>Selective adsorption of arsenic over phosphate on bifunctional polymer-metal nanocomposite: gaining insight into interactions using response surface methodology</b> Jasmina Nikić University of Novi Sad Faculty of Sciences Serbia</p>	<p><b>Exploring Waste Reuse: Unveiling the Challenges and Opportunities of Circular Economy in Lebanon</b> May Massoud American University of Beirut Lebanon</p> <p><b>Fertilizers from anaerobic digestate, analysis of environmental perspectives through Life Cycle Assessment</b> Marta Revuelta Aramburu Comillas Pontifical University Spain</p> <p><b>Removing endocrine disruptors from wastewater combined with biogas production using Scenedesmus sp. A biorefinery approach</b> Luis Fernando Bautista Santa Cruz Universidad Rey Juan Carlos Spain</p>
<p><b>13.30-15.00</b> <b>LUNCH</b></p>		

**WWEM-24**  
**Thursday, 25th July 2024 (morning)**

SCHEDULE	MAIN ROOM 1 (Ground Floor)	ROOM 2 (Ground Floor)
08:45-09:30	<p style="text-align: center;"><b>Plenary Talk 2</b></p> <p><b>Can photocatalysis be a green technology that contributes to sustainable development?</b> Maria J. Rivero Universidad de Cantabria Spain</p>	

	<b>WATER TREATMENT</b>	<b>GREEN CHEMISTRY</b>
<b>09:30 – 11:30</b>	<p><b>Advancing arsenic removal: leveraging the efficiency of magnetic graphene oxide nanocomposite</b>            Jovana Pesic            University of Novi Sad            Serbia</p> <p><b>Degradation of halogenated pesticides in H<sub>2</sub>/HCOOH/UV system Advanced Reduction Processes (ARPs) approach for wastewater treatment</b>            Lukasz Cichocki            Gdansk University of Technology            Poland</p> <p><b>Selective adsorption of arsenic over phosphate on bifunctional polymer-metal nanocomposite: gaining insight into interactions using response surface methodology</b>            Malcolm Watson            University of Novi Sad            Serbia</p> <p style="text-align: center;">(V)</p> <p><b>Artificial neural network, isotherm and kinetic studies of tannin-modified barium titanate composites on the photodegradation of ciprofloxacin in water under visible light</b>            Tugba Hayri-Senel            ITU Ayazaga Campus            Turkey</p> <p><b>Supercritical Phase Inversion to Produce Photocatalytic Active PVDF-coHFP_TiO<sub>2</sub> Composites for the Degradation of Sudan Blue II Dye</b>            Mariangela Guastaferro            University of Pisa            Italy</p> <p><b>Geotechnical properties of washed mineral waste from grit chambers and its potential use as hydro embankment materials</b>            Jacek Kostrzewa            Politechnika Warszawska            Polska</p>	<p><b>Carbon Dioxide Methanation Enhanced by Ruthenium Nanoparticles Using Sustainable Reaction Media</b>            Victoria Paz            NOVA ID            Portugal</p> <p><b>Towards Eco-Friendly Industrial Practices: Green Solvent Screening for 1,3-Butadiene Distillation</b>            Joao Pedro Gomes            Universidade do Porto            Spain</p> <p><b>Aliquot 336 in solvent extraction chemistry of metallic anions ReO<sub>4</sub></b>            Maria Atanassova Petrova            University of Chemical Technology and Metallurgy            Bulgaria</p> <p><b>Design of reversible networks for bio-sourced and sustainable resins via experimental and molecular dynamics approach</b>            Sebastien Laget            ICCF            France</p> <p><b>Valorization and selective depolymerization of polyethene terephthalate (PET) based-complex waste plastics with Lewis/Bronsted acidic deep eutectic solvents</b>            Marco Rollo            University of Pisa            Italy</p>
<b>11:30-12:00</b>	<b>POSTER SESSION</b> <b>WWEM-2</b> <b>GREENCHEM-2</b> <b>COFFEE BREAK</b>	



	<b>VALORIZATION &amp; RECYCLING</b>	<b>SUSTAINABLE ENGINEERING</b>
<b>12:00 – 14:00</b>	<p><b>Liquid-phase recycling of palladium from spent catalysts</b> Ana Paula Paiva FCiências-ID Portugal</p> <p><b>Hydrogen as indicator for monitoring and diagnosis of anaerobic digestion process in case of substrate changes and nanoparticles addition</b> Carlos Morales Polo Comillas Pontifical University Spain</p> <p><b>Two-stage separation-immobilization method for municipal solid waste incineration fly ash treatment</b> Danilo Jara Echeverria Universidad Politecnica de Madrid Spain</p> <p>(V)</p> <p><b>Immobilization of laccase from <i>Lentinus sajor-caju</i> for sulfamethoxazole degradation</b> Helena Sa Universidade do Minho Portugal</p> <p><b>Activated Carbons from Hydrothermal Carbonization of Municipal Solid Waste</b> Eleonora Stefanelli University of Pisa Italy</p> <p><b>Effect of shredded vehicle tyres as microplastics on stabilization of a sandy soil</b> Hakki O. Ozhan Yeditepe University Turkey</p>	<p><b>CO2-AFP STRATEGY: pilot validation of the Circular Economy archetype for CO2 capture in fermentation processes</b> ABDESSAMAD GUEDDARI-AOURIR CASTILLA-LA MANCHA UNIVERSITY Spain</p> <p><b>Efficient fractionation of pyrolysis bio-oil and evaluation of the antioxidant properties of the resulting fractions</b> Alfonso Cornejo INAMAT2 Spain</p> <p><b>Upcycling Polybutadiene into value-added <math>\alpha,\omega</math>-dienes</b> Christophe Vos KU Leuven Belgium</p> <p>(V)</p> <p><b>Production and Comparison of Activated Carbon from Different Types of Hazelnut Shells from Ordu and Giresun Provinces</b> Ozlem SIMSEK Üsküdar University Turkey</p> <p><b>Life Cycle Environmental Impacts of a Mens Boxer Short</b> Teresa Mata INEGI - Institute of Science and Innovation in Mechanical and Industrial Engineering Portugal</p>
<b>14:00-15:30</b>	<b>LUNCH</b>	
<b>20:00-22:30</b>	<b>AFTERNOON LISBON TOUR, ALL TOGETHER</b> <b>(ASK FOR MEETING POINT at Registration Desk)</b>	

SCHEDULE	MAIN ROOM 1 (Ground Floor)	ROOM 2 (Ground Floor)
<p><b>Plenary Talk 3</b></p> <p><b>Valorisation of lignin towards high-performance materials, challenges and breakthroughs</b>            Anne Beaucamp            University Of Limerick            Ireland</p>		
<p>08:45-11:30</p>	<p style="text-align: center;"><b>WATER TREATMENT</b></p> <p><b>Removal of steroid hormones in a natural wastewater treatment system. Effect of natural substrates and aeration</b>            Rayco Guedes-Alonso            University of Las Palmas de Gran Canaria            Spain</p> <p><b>Optimization of a bicompartiment electrochemical cell for simultaneous treatment of textile dyeing effluents and H<sub>2</sub> generation</b>            Didac Cuesta-Mota            Universitat Politecnica de Catalunya            Spain</p> <p><b>Usability Analysis of Alternative Grey Water Treatment Methods with AHP Multi-Criteria Decision-Making Techniques</b>            Emine Esra Gerek            Eskisehir Technical University            Turkey</p> <p><b>Effects of Aerobic Digestion Assisted by Microalgae on Extracellular Polymeric Substances (EPS) and Sludge Features</b>            Hajer Ben Hamed            University of Lige            Belgium</p>	<p style="text-align: center;"><b>GREEN CHEMISTRY</b></p> <p><b>Shedding light on the photoelectrocatalytic hydrogen production from seawater using CdS and CdS/TiO<sub>2</sub></b>            Maria J. Rivero            Universidad de Cantabria            Spain</p> <p style="text-align: center;">(V)</p> <p><b>The Effect of Carburization Temperature of Iron-Based Catalysts on H<sub>2</sub> Production via H<sub>2</sub>S Decomposition</b>            HALE AKANSU            GAZI UNIVERSITY            Turkey</p> <p><b>Enhancing MPs removal from different water bodies with surface-modified magnetite nanoparticles</b>            Daniel Aragon            Universidad de Cantabria            Spain</p> <p style="text-align: center;">(V)</p> <p><b>Prouction of multifunctional bioproducts using fungal thermotolerant strains: first steps towards solid-state fermentation scale-up</b>            Arnau Sala Marti            Universitat Autonoma de Barcelona            Spain</p>

	<p><b>Physicochemical characteristics of a cobalt ferrite and its catalytic activity to degrade organic pollutants from water</b>          Maria del Pilar Fernandez Poyatos          Universidad de Jaen          Spain</p> <p><b>VALORIZATION &amp; RECYCLING</b></p> <p>(V)</p> <p><b>Assessment of the environmental sustainability of an insect value chain for the full valorization of organic waste</b>          Marco Carnevale Miino          University of Insubria          Italy</p>	<p><b>Synthesis of flavonoid derivatives precursors of active pharmaceutical ingredients by mechanochemistry</b>          Imen abid          IMT Mines Albi          France</p> <p>(V)</p> <p><b>Ammonia synthesis over electric field using solid heterogeneous La-based catalysts</b>          Fiza Akbar          University of Poitiers          France</p>
<p><b>11:30-12:00</b></p> <p><b>POSTER SESSION</b></p> <p><b>WWEM-3</b></p> <p><b>GreenCHEM-3</b></p> <p><b>COFFEE BREAK</b></p> <p><b>AWARD FOR THE BEST POSTER</b></p>		
<p><b>12:00 – 14:00</b></p>	<p><b>ENERGY &amp; INFRASTRUCTURE</b></p> <p><b>Turning Waste into Power: Pyrolysis of Pulper Rejects for Sustainable Energy Generation</b>          Letizia Marchetti          University of Pisa          Italy</p> <p><b>Addressing Water Stress: Implications for Green Infrastructure Planning and Sustainable Design</b>          MAHSA SEIFHASHEMI          University of Salford          United Kingdom</p> <p>(V)</p> <p><b>Optimisation model for a closed-loop industrial water-energy system within a ceramic industry plant</b>          Miguel Castro Oliveira          ISQ - Instituto De Soldadura e Qualidade          Portugal</p> <p><b>Innovative use of waste FCC catalyst in 3D-printed geopolymers for wastewater treatment</b>          Carla Costa          ISEL-High Institute of Engineering of Lisbon          Lisbon</p>	<p><b>GREEN CHEMISTRY</b></p> <p>(V)</p> <p><b>New sorbents for the hydrometallurgical recovery of gold from electric and electronic wastes</b>          Francesco Di Natale          University of Naples Federico II          Italy</p> <p><b>Organotin Schiff bases as halofluorochromic dyes: green synthesis, chemio-photophysical characterization, and their fluorescent bioimaging in vitro</b>          Victor Jimenez Perez          Universidad Autonoma de Nuevo Leon          Mexico</p> <p>(V)</p> <p><b>The bioconversion of glucan to ethanol in one step by yeast displaying a bifunctional glucosidase gene from anaerobic fungus Neocallimastix patriciarum J11</b>          Jeng-Chen Liu          National Pingtung University          Taiwan</p>

**Assessment of olive mill pomace compost maturity by fluorescence spectroscopy technology**

Marta P. Rueda  
University of Jaen  
Spain

**Exploring co-catalyst integration methods in titanium(IV)-based metal-organic gels for photocatalytic hydrogen production**

Maite Perfecto-Irigaray  
University of the Basque Country  
Spain

**14:00-15:30**

**CLOSING COCKTAIL**

**and**

**MUSIC CHAMBER CONCERT**

*Flute and Piano Duet*

## POSTER SESSIONS

### WWEM-1

**Wednesday, 24 July 2024 (morning) 11:30-12:00**

**TOPIC 1: WASTE**

**TOPIC 2: WATER**

**TOPIC 3: ENERGY ENGINEERING and CLIMATE CHANGE**

Title	Name	ID	Topic
Exploiting the ability of some yeast strains in the bioremediation of municipal and industrial wastewaters	Carmen Mateescu	155	1
Valorization of municipal solid waste incineration fly ash focused on life cycle analysis. A Review	Danilo Jara Echeverria	96	1
Direct recycling of spent lithium-ion batteries for the recovery of cathode active material by solid-state relithiation	Eleonora Stefanelli	115	1
Zeolite synthesis from arid washing sludge and granite sludge	Francisco Javier Iglesias Godino	153	1
Characterization of natural and recycled cellulose fibers for reinforcement of industrial plastics. Applying the circular economy	Francisco Javier Iglesias Godino	154	1
USE OF IRON-RICH WASTES FOR THE MANUFACTURE OF LIGHTWEIGHT AGGREGATES BASED ON THE DESIGN OF MIXTURES OBTAINED BY STATISTICAL METHODS	Maria Teresa Cotes Palomino	151	1

ENVIRONMENTAL COMPARISON OF THE MANUFACTURE OF LIGHTWEIGHT AGGREGATES FROM MINING WASTE: A LIFE CYCLE ASSESSMENT APPROACH	Maria Teresa Cotes Palomino	152	1
Simulated sunlight-driven g-C3N4 photocatalysis for the activation of hypochlorite and removal of acetaminophen	André Torres Pinto	102	2
Inactivation of E-coli in ultrapure water by advanced oxidation processes	Teresa Gonzalez Montero	9	2
Inactivation of E-coli in WWTP effluent by advanced oxidation processes	Teresa Gonzalez Montero	10	2
Modeling and Prediction of Fouling in Reverse Osmosis by Combining Film Theory and Diffusion Transport through the Membrane.	FAHED MOHAMMED ALSUBAIE	80	2
Biodegradation of diclofenac in a sequencing batch reactor with aerobic granular sludge	Joana Batista	104	2
Resource extraction from end-of-life passenger vehicles in Morocco's informal sector	Miloudia SLAOUI	73	3
Assessment of the influence of soil moisture on the dendrometric changes of the walnut	Viliam Barek	84	1
Cavitation-assisted technologies for the pretreatment of food wastes as a substrate of anaerobic digestion	Zahra Askarniya	24	1
Impact of different types of biochar (renewable biomass) on soil water content and CO2 emissions from two different soils	Jan Horak	85	1
Free-living amoebae as vectors of antibiotic resistant bacteria in treated sludge	Laura Moreno-Mesonero	45	1
Enhancement of water circularity and food wastes valorisation in the meat industry	Miquel Bistue Rovira	159	1
Characterisation of leachates from sludge processing in the ATAD technology	Pawel Biedka	46	1
A circular vision for chromite mining by-products	Peleka Effrosyni	37	1
Effectiveness of ultrafiltration and nanofiltration in removing pharmaceuticals from municipal landfill leachate	Manuel Sanchez Polo	58	2
Modified carbon nitride catalyst in a 3D-photoanode system for simulated and natural water disinfection	Inmaculada Velo Gala	59	2

## POSTER SESSIONS

### WWEM-2

Thursday, 25 July 2024 (morning) 11:30-12:00

**TOPIC 1: WASTE**

**TOPIC 2: WATER**

**TOPIC 3: ENERGY ENGINEERING and CLIMATE CHANGE**

Title	Name	ID	Topic
Development of a Comprehensive Database for the Characterisation of Construction and Demolition Waste: Methodology and Applications	Carmen Martiinez Garcia	150	3
Preliminary characterisation of mining waste for use in the manufacture of artificial lightweight aggregates functionalised for NOx capture	Carmen Martiinez Garcia	149	3
Electrochemical process for organic matter removal and H2 generation in mercerization effluents for potential reuse	Didac Cuesta-Mota	31	3
Optimization of the preparation of activated carbon from sewage sludge using phosphoric acid as an activating agent	Dunia E. Santiago	79	1
Comparison of different methods to estimate green roof rainwater retention capacity	Lineker Max Goulart Coelho	25	2
Low-cost IoT sensor applied to real-time monitoring of a vertical rainwater delay system	Lineker Max Goulart Coelho	99	2
Effect of water matrix on the efficiency of catalytic wet peroxide oxidation for removal of paracetamol	Adriano Silva	55	2
Metal and microplastic pollution in sediments of a small-sized harbor in western Baltic Sea (Kalmar, Sweden)	Cheng Chang	143	2
Filamentous bulking in anammox processes feed with aerobically and anaerobically pre-treated wastewater	Ziqing Wei	26	2
Effect of Sponge Iron on the Start-up of Organotrophic Anaerobic Ammonium Oxidation Processes Induced by Low C/N Wastewater	Kehuan Guo	20	2
Comparative study on mathematical modelling of the drying air temperatures in an industrial olive mill waste rotary dryer by autoregressive methods and neural networks.	Francisco J. Gomez-de la Cruz	9798	3
Convective drying of crushed mango stone.	Francisco J. Gomez-	98	3

	de la Cruz		
Adapt water reserves to climate change study case Romania	Gabriela Elena Dumitran	90	3
Analyzing the impact of power generation sources on Thermoelectric Coolers (TECs) using the Life Cycle Impact Assessment (LCIA) method in South Korea	Hyoyoung Kim	23	3
The Application of Benthic Biotic Indices for Ecological Status Assessment in the Saudi Waters of the Western Arabian Gulf	Jayachandran Paravanparambil Rajakumar	68	3
Evaluating the Influence of Check Dam Construction on Runoff Processes in Al-Dayer Watershed: A Modern Assessment Employing an Advanced Physically-Based Hydrologic Model	Ahmed M. Al-Areeq	71	3

## POSTER SESSIONS

### GreenCHEM-2

Thursday, 25 July 2024 (morning) 11:30-12:00

#### TOPIC 1: GREENCHEMISTRY

#### TOPIC 2: SUSTAINABLE ENGINEERING

Microwave-assisted extraction of phenolic compounds from rapeseed cake as a precursor for optimizing material for protein isolation	Aleksandar Maric	12	1
Isolation and characterization of faba bean proteins using different techniques	Aleksandar Maric	155	1
Molybdenum carbide as efficient catalyst for Flow-Through Reductive Catalytic Fractionation of lignocellulosic biomass.	Alfonso Cornejo	22 & 23	1
Eco-friendly Bleaching Process of the Cellulose Materials Using Ozone and Hydrogen Peroxide in the Gas Phase	Anna Kaczmarek	87	1
Preparation of activated and N-doped carbons derived from pinecones	Ariel Farias	62	1
Synthesis, characterization, and application of new metal oxides-based catalyst for renewable energy production	Abderrahim Bouaid	97	1
Biosurfactant recovery from corn steep waters at closed dialysis pilot scale process	Benita Perez	126	2
Green synthesis of fluorescent Schiff bases: chemio-photophysical characterization, X-ray structures, and their bioimaging	Blanca M Munoz Flores	78	1
Optimization of Phenolic Compounds Removal from Rapeseed Cake Utilizing Sustainable Techniques	Branislava Djermanovic	13	1

Valorization of Greek oregano distillation residues: green extraction of polyphenols with ultrasound assistance and assessment of their bioactive potential and phytochemical profile	ELISAVET BOULOUMPASI	116	1
Potential biobased polyurethane additives	Ainoa Candela Gil	26	2
Balancing the Carbon Footprint of Corporations Through CO2 Capture and Utilisation	Abdessamad Gueddari-Aourir	77	2
A Digital Twin approach for sustainable water management in commercial buildings	Francesco Bianco	118	2
Supported PdAu bimetallic nanoparticles as an efficient catalyst for the hydrodeoxygenation of vanillin with formic acid at room temperature	Xinxin Huang	82	1
Computational analysis of lubricating grease soap thickener molecules stacks stability in nonpolar environment	Ines Despotovic	131	2
Solar Photocatalysis for Winery Bio-recalcitrant Pollutants Removal Using 3D Structured Photocatalyst	Jaime Carbajo	111	1
Functionalized corn starch for simultaneous removal of pharmaceuticals	Juan Garcia Rodriguez	105	1
Environmental application of carbonaceous materials from sewage sludge to remove cytostatic compounds	Juan Garcia Rodriguez	106	1
New synthesis of pyrazolo[3,4-d]pyrimidin-6-ol and pyrazolo[3,4-d]pyrimidine-6-thiol derivatives	Nemouchi Sara	51	1

## POSTER SESSIONS

### WWEM-3

**Friday, 26 July 2024 (morning) 11:30-12:00**

**TOPIC 1: WASTE**

**TOPIC 2: WATER**

**TOPIC 3: ENERGY ENGINEERING and CLIMATE CHANGE**

Title	Name	ID	Topic
Evaluation of different strategies to enhance the removal of pharmaceutical compounds in a pond-constructed wetland system	Rayco Guedes-Alonso	162	2
Effectiveness of ultrafiltration and nanofiltration in removing pharmaceuticals from municipal landfill leachate	Izabela Talalaj	187	2



Hidden hydro as empowering water obstacles and FPV in a large city	Liana Ioana Vuta	107	3
Metaheuristic Feature Selection and Ensemble Classifiers: A Novel Approach to Flash Flood Mapping	Mustafa Ghaleb	81	3
Application of hydrophobic magnetic deep eutectic solvent for rapid and effective removal of inhibitor compounds from post-fermentation broth media	Zhila Honarmandrad	3	2

## POSTER SESSIONS

### GreenCHEM-3

**Friday, 26 July 2024 (morning) 11:30-12:00**

**TOPIC 1: GREEN CHEMISTRY**

**TOPIC 2: SUSTAINABLE ENGINEERING**

Computational analysis of lubricating grease soap thickener molecules stacks stability in nonpolar environment	Sinisa Despotovic	94	2
Cyclic carbonates from vegetable oils as potential raw materials for sustainable polyurethanes	M <sup>a</sup> Virtudes Navarro	27	2
Biological properties of cotton-copper composites obtained by the sputter deposition	Zdzislawa Mrozilska	99	2
Combining experiments and DFT calculations in the design of novel catalyst for the OER reaction	Abderrahim Bouaid	134	1
Environmental Assessment of Recycling of Waste Plastic Pyrolysis Oil for Naphtha Feedstock in Korea	JAE-DONG KIM	145	2
The green and organocatalytic multitasking of ynals. One substrate and plenty of possibilities.	Kamil Hanek	72	2
Characteristics of Waste Plastic Pyrolysis Oils Fractionated by Vacuum Distillation for Using as Petroleum Products	Younghoon Ko	143	1
Responsible production (SDG12) of safer-by-design antifouling additive for marine coatings to conserve and to sustainably use the oceans, seas and marine resources (SDG14)	M. Correia-da-Silva	124	2
A Sustainable and Green Multistep Synthesis of New Reactivators for Nerve Agents Inhibited Cholinesterases	Rachid Baati	141	1
Olive washing wastewater treatment by physicochemical and advanced oxidation processes	José Alcides Peres	79	1
Hetero-trans-glucanase: an ancient plant enzyme with unique ability to restructure cellulosic materials	Stephen C. Fry Lenka Frankova	133	2
Selective Recovery of Copper from Acidic Solutions using Simple Recyclable Precipitants	Susanna Vance	144	1

New approach for the synthesis of cyclic Spirooxindoles	Imene SEHOUT	45	1
A green and efficient method for the synthesis of 5-arylidene barbituric and thiobarbituric acid derivatives	Imene SEHOUT	44	1
Kinetic study of peroxidase-catalyzed oxidation of bisphenol A in presence of biosurfactant Escin	Ruta Ivanec-Goranina	50	1
The application of plant-based ZnO photocatalysts in the removal of Deoxynivalenol from water utilizing simulated solar irradiation	Sandra Jakšić	95	1
Advances in circularity in copper electrorefining: recycling of hydrochloric acid and secondary production of antimony	Maria Teresa Montanes Sanjuan	119	2
Recycle of platinum from spent automotive catalysts	Francesco Di Natale	54	2