

Scientific Program



6th International Conference on Green Chemistry and Sustainable Engineering



SciKnowledgeTM
European Education Scientific Conferences

GreenCHEM-24 Welcoming Message

Dear Colleagues,

The **6th International Conference on Green Chemistry and Sustainable Engineering (GreenChem-24)** is organized by academics and researchers belonging to different scientific areas of the University of Trás-os-Montes e Alto Douro, University of Salamanca, University of Santiago de Compostela, Instituto Superior de Engenharia de Lisboa, University of Extremadura, Hunan Agricultural University of China, Gogte Institute of Technology, University of Cassino and Southern Lazio, Universidad Complutense of Madrid, City University of Hong Kong, University of Palermo, University of Cantabria and University of Las Palmas de Gran Canaria with the technical support of **SciKnowledge European Conferences**. The **Portuguese Chemical Society (SPQ)** and **Spanish Adsorption Society (SAD)** are preferent partners of this conference.

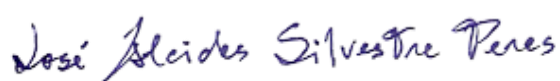
This event aims to create an international forum for academics, researchers and scientists worldwide to discuss worldwide results and proposals regarding the soundest issues related to **Green Chemistry and Sustainable Engineering**.

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-October. 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. José Alcides Peres
Chemistry Department
University of Trás-os-Montes e Alto Douro,
Portugal, UE

ORGANIZING COMMITTEE GREENCHEM-22

Chairman

Prof. José Alcides Peres PhD
Chemistry Department
University of Trás-os-Montes e Alto Douro, Vila Real, Portugal

Co-Chairmans

Prof. Paulo Aloísio Edmond Reís da Silva Augusto PhD
Department of Chemical Engineering
University of Salamanca, Spain

Prof. Avelino Nuñez-Delgado PhD
Department of Edafology and Agricultural Chemistry
University of Santiago de Compostela, Spain

Prof. Luís Miguel Minhalma Ph.D.
Instituto Superior de Engenharia de Lisboa
Instituto Politécnico de Lisboa, ISEL, Portugal

Members

Prof. Raviraj M. Kulkarni, PhD
Department of Chemistry
Gogte Institute of Technology, Udyambag, Belgaum, Karnataka

Prof. Silvia Álvarez Torrellas PhD
Chemical Engineering Department
University Complutense of Madrid, Spain

Prof. Vahid Jabbari PhD
Chemistry Department
The University of Texas at El Paso, US

Prof. Elisenda Pulido Melián PhD
Chemical Department
University of Las Palmas de Gran Canaria, Spain

Prof. Juan García Rodríguez PhD
Chemical Engineering Department
University Complutense of Madrid, Spain

Prof. Marco Race PhD
Department of Civil and Mechanical Engineering
University of Cassino and Southern Lazio, Italy

Prof. Yaoyu Zhou PhD
College of Resources and Environment
Hunan Agricultural University, China

Prof. Joaquín R. Domínguez Vargas PhD
Department of Chemical Engineering and Chemical Physics
University of Extremadura – UEx, Spain

Prof. Sunita Varjani Ph.D.
City University of Hong Kong
Hong Kong, China

Prof. Gianluca Li Puma Ph.D.
Chemical and Environmental Engineering Department
University of Palermo, Italy

Prof. Maria J. Rivero Ph.D.
Department of Chemical and Biomolecular Engineering
University of Cantabria, Spain

Dr Marco S. Lucas Ph.D.
Chemistry Department
University of Trás-os-Montes and Alto Douro, Portugal.

OUR MAIN PARTNERS



SOCIEDADE PORTUGUESA DE QUÍMICA



SEA^d

Sociedad Española de Adsorción
Spanish Adsorption Society

GREENCHEM-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.

GREENCHEM-24

Wednesday, 24th July 2024 (afternoon)

SCHEDULE	MAIN ROOM 1 (Ground floor)	ROOM 2 (Ground Floor)
13:30-14:15	RECEPTION LUNCH	
14:15-15:00 (afternoon)	Documentation Delivery Only GREENCHEM attendees	
15:30-15:45	Opening session	
15:45-16:30	Plenary Talk 1 Carbon dioxide as reactant for the carbonation of polymers harnessing batch and reactive extrusion processes DUFAUD Veronique CNRS France	

Humic acid aggregates with laccase and decreases the performance of the enzyme catalytic systems through various mechanisms

Joao Lopes
 Instituto Politecnico de Leiria
 Portugal

GREENCHEM-24

Thursday, 25th July 2024 (morning)

SCHEDULE	MAIN ROOM 1 (Ground Floor)	ROOM 2 (Ground Floor)
08:45-09:30	<p>Plenary Talk 2</p> <p>Can photocatalysis be a green technology that contributes to sustainable development? Maria J. Rivero Universidad de Cantabria Spain</p>	
09:30 – 11:30	<p>WATER TREATMENT</p> <p>Advancing arsenic removal: leveraging the efficiency of magnetic graphene oxide nanocomposite Jovana Pesic University of Novi Sad Serbia</p> <p>Degradation of halogenated pesticides in H₂/HCOOH/UV system Advanced Reduction Processes (ARPs) approach for wastewater treatment Lukasz Cichocki Gdansk University of Technology Poland</p> <p>Selective adsorption of arsenic over phosphate on bifunctional polymer-metal nanocomposite: gaining insight into interactions using response surface methodology Malcolm Watson University of Novi Sad Serbia</p>	<p>GREEN CHEMISTRY</p> <p>Carbon Dioxide Methanation Enhanced by Ruthenium Nanoparticles Using Sustainable Reaction Media Victoria Paz NOVA ID Portugal</p> <p>Towards Eco-Friendly Industrial Practices: Green Solvent Screening for 1,3-Butadiene Distillation Joao Pedro Gomes Universidade do Porto Spain</p> <p>Aliquot 336 in solvent extraction chemistry of metallic anions ReO₄ Maria Atanassova Petrova University of Chemical Technology and Metallurgy Bulgaria</p>

	<p>(V)</p> <p>Artificial neural network, isotherm and kinetic studies of tannin-modified barium titanate composites on the photodegradation of ciprofloxacin in water under visible light Tugba Hayri-Senel ITU Ayazaga Campus Turkey</p> <p>Supercritical Phase Inversion to Produce Photocatalytic Active PVDF-coHFP_TiO2 Composites for the Degradation of Sudan Blue II Dye Mariangela Guastaferrero University of Pisa Italy</p> <p>Geotechnical properties of washed mineral waste from grit chambers and its potential use as hydro embankment materials Jacek Kostrzewa Politechnika Warszawska Polska</p>	<p>Design of reversible networks for bio-sourced and sustainable resins via experimental and molecular dynamics approach Sebastien Laget ICCF France</p> <p>Valorization and selective depolymerization of polyethylene terephthalate (PET) based-complex waste plastics with Lewis/Bronsted acidic deep eutectic solvents Marco Rollo University of Pisa Italy</p>
<p>POSTER SESSION</p> <p>11:30-12:00</p> <p>WWEM-2</p> <p>GREENCHEM-2</p> <p>COFFEE BREAK</p>		
<p>12:00 – 14:00</p>	<p>VALORIZATION & RECYCLING</p> <p>Liquid-phase recycling of palladium from spent catalysts Ana Paula Paiva FCiências-ID Portugal</p> <p>Hydrogen as indicator for monitoring and diagnosis of anaerobic digestion process in case of substrate changes and nanoparticles addition Carlos Morales Polo Comillas Pontifical University Spain</p> <p>Two-stage separation-immobilization method for municipal solid waste incineration fly ash treatment Danilo Jara Echeverria Universidad Politecnica de Madrid Spain</p>	<p>SUSTAINABLE ENGINEERING</p> <p>CO2-AFP STRATEGY: pilot validation of the Circular Economy archetype for CO2 capture in fermentation processes ABDESSAMAD GUEDDARI-AOURIR CASTILLA-LA MANCHA UNIVERSITY Spain</p> <p>Efficient fractionation of pyrolysis bio-oil and evaluation of the antioxidant properties of the resulting fractions Alfonso Cornejo INAMAT2 Spain</p> <p>Upcycling Polybutadiene into value-added α,ω-dienes Christophe Vos KU Leuven Belgium</p>

	<p>(V)</p> <p>Immobilization of laccase from <i>Lentinus sajor-caju</i> for sulfamethoxazole degradation Helena Sa Universidade do Minho Portugal</p> <p>Activated Carbons from Hydrothermal Carbonization of Municipal Solid Waste Eleonora Stefanelli University of Pisa Italy</p> <p>Effect of shredded vehicle tyres as microplastics on stabilization of a sandy soil Hakki O. Ozhan Yeditepe University Turkey</p>	<p>(V)</p> <p>Production and Comparison of Activated Carbon from Different Types of Hazelnut Shells from Ordu and Giresun Provinces Ozlem SIMSEK Üsküdar University Turkey</p> <p>Life Cycle Environmental Impacts of a Mens Boxer Short Teresa Mata INEGI - Institute of Science and Innovation in Mechanical and Industrial Engineering Portugal</p>
14:00-15:30	LUNCH	
20:00-22:30	<p>AFTERNOON LISBON TOUR, ALL TOGETHER</p> <p>(ASK FOR MEETING POINT at Registration Desk)</p>	

GREENCHEM-24

Friday, 26th July 2024 (morning)

SCHEDULE	MAIN ROOM 1 (Ground Floor)	ROOM 2 (Ground Floor)
	<p>Plenary Talk 3</p> <p>Valorisation of lignin towards high-performance materials, challenges and breakthroughs Anne Beaucamp University Of Limerick Ireland</p>	

08:45-11:30

WATER TREATMENT

Removal of steroid hormones in a natural wastewater treatment system. Effect of natural substrates and aeration

Rayco Guedes-Alonso
University of Las Palmas de Gran Canaria
Spain

Optimization of a bicompartiment electrochemical cell for simultaneous treatment of textile dyeing effluents and H₂ generation

Didac Cuesta-Mota
Universitat Politecnica de Catalunya
Spain

Usability Analysis of Alternative Grey Water Treatment Methods with AHP Multi-Criteria Decision-Making Techniques

Emine Esra Gerek
Eskisehir Technical University
Turkey

Effects of Aerobic Digestion Assisted by Microalgae on Extracellular Polymeric Substances (EPS) and Sludge Features

Hajer Ben Hamed
University of Lige
Belgium

Physicochemical characteristics of a cobalt ferrite and its catalytic activity to degrade organic pollutants from water

Maria del Pilar Fernandez Poyatos
Universidad de Jaen
Spain

VALORIZATION & RECYCLING

(V)

Assessment of the environmental sustainability of an insect value chain for the full valorization of organic waste

Marco Carnevale Miino
University of Insubria
Italy

GREEN CHEMISTRY

Shedding light on the photoelectrocatalytic hydrogen production from seawater using CdS and CdS/TiO₂

Maria J. Rivero
Universidad de Cantabria
Spain

(V)

The Effect of Carburization Temperature of Iron-Based Catalysts on H₂ Production via H₂S Decomposition

HALE AKANSU
GAZI UNIVERSITY
Turkey

Enhancing MPs removal from different water bodies with surface-modified magnetite nanoparticles

Daniel Aragon
Universidad de Cantabria
Spain

(V)

Prouction of multifunctional bioproducts using fungal thermotolerant strains: first steps towards solid-state fermentation scale-up

Arnau Sala Marti
Universitat Autònoma de Barcelona
Spain

Synthesis of flavonoid derivatives precursors of active pharmaceutical ingredients by mechanochemistry

Imen abid
IMT Mines Albi
France

(V)

Ammonia synthesis over electric field using solid heterogeneous La-based catalysts

Fiza Akbar
University of Poitiers
France

11:30-12:00

POSTER SESSION

WWEM-3

GreenCHEM-3

COFFEE BREAK

AWARD FOR THE BEST POSTER

12:00 – 14:00

ENERGY & INFRASTRUCTURE

Turning Waste into Power: Pyrolysis of Pulper Rejects for Sustainable Energy Generation

Letizia Marchetti
University of Pisa
Italy

Addressing Water Stress: Implications for Green Infrastructure Planning and Sustainable Design

MAHSA SEIFHASHEMI
University of Salford
United Kingdom

(V)

Optimisation model for a closed-loop industrial water-energy system within a ceramic industry plant

Miguel Castro Oliveira
ISQ - Instituto De Soldadura e Qualidade
Portugal

Innovative use of waste FCC catalyst in 3D-printed geopolymers for wastewater treatment

Carla Costa
ISEL-High Institute of Engineering of Lisbon
Lisbon

Assessment of olive mill pomace compost maturity by fluorescence spectroscopy technology

Marta P. Rueda
University of Jaen
Spain

GREEN CHEMISTRY

(V)

New sorbents for the hydrometallurgical recovery of gold from electric and electronic wastes

Francesco Di Natale
University of Naples Federico II
Italy

Organotin Schiff bases as halofluorochromic dyes: green synthesis, chemio-photophysical characterization, and their fluorescent bioimaging in vitro

Victor Jimenez Perez
Universidad Autonoma de Nuevo Leon
Mexico

(V)

The bioconversion of glucan to ethanol in one step by yeast displaying a bifunctional glucosidase gene from anaerobic fungus *Neocallimastix patriciarum* J11

Jeng-Chen Liu
National Pingtung University
Taiwan

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

GreenCHEM-1

Wednesday, 24 July 2024 (afternoon) 17:45-18:15

TOPIC 1: GREENCHEMISTRY

TOPIC 2: SUSTAINABLE ENGINEERING

Synthesis of Palladium-functionalized Hierarchical Porous Carbon Materials (HPCM@Pd) for Enhanced Hydrogen Storage: A Novel Approach	Lubos Zauska	14	1
Optimization of Mechanical Recycling in The Circular Economy of Plastics for Energy Sustainability	Mauricio Pane	36	2
Green extracts from Douro harvest vineyards wastes as raw materials for the production of new antifouling agents	Marta Correia da Silva	103 & 124	2
Cellulose phosphate nanofibres as new nanocomponent of polymer membranes	Marcin Kudzin	101	2
Long-term testing of the biological methanation process in pilot scale trickle bed reactors	Marisa Mastroleo	60	1
Eco-friendly extraction: Green approaches to maximizing phenolic compounds from <i>Sideritis raeseri</i> using response surface methodology	Maria Irakli	98	2
Porous HKUST-1(Cu)@HPCM composites: Preparation methods, characterisation and carbon dioxide capture	Miroslav Almasi	04	2
Challenges for biotreating the pyrolysis oil of Waste from Electrical and Electronic Equipment plastic-rich stream	Naiara Rojo	30	1
Production of carbonaceous adsorbents from biomass waste for the removal of antibiotics in water	Naiara Rojo Azaceta	25 & 30	1
Unlocking the Potential of <i>Osmundea Pinnatifida</i> for Green Synthesis of Gold Nanoparticles: A Promising Path Towards Sustainable Nanotechnology	Noelia Gonzalez Ballesteros	88	2

UV-Driven Sustainable Synthesis of Au/TiO ₂ Nanocomposites for Photocatalytic Degradation of Pharmaceuticals in Water	Noelia Gonzalez Ballesteros	89 & 88	1
Broadening the Integrated Capture and Conversion of CO ₂ to Produce Cyclic Carbonates with Bifunctional Ionic Liquids	Pablo Navarro	18	1
Limonene Carbonate Production Driven by Ionic Liquids as a Sustainable Way to Use CO ₂	Pablo Navarro	18 & 19	1
Comparative assessments of volatiles and bioactive potential of green phenolic extracts obtained by microwave-assisted extraction of Sideritis species grown in Greece	Paschalina Chatzopoulou	109	2
Application of froth flotation to the recovery of graphite from spent alkaline and Zn/C batteries	Ana Mendez	56	2
The use of sustainable and low cost metal/glycine fertilizers in Zn deficient soils	Ana Mendez	57	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 NO _x capture	Carmen Martiinez Garcia	149	3
Electrochemical process for organic matter removal and H ₂ 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	Lineker Max Goulart	25	2

rainwater retention capacity	Coelho		
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	1
Convective drying of crushed mango stone.	Francisco J. Gomez-de la Cruz	98	1
Adapt water reserves to climate change study case Romania	Gabriela Elena Dumitran	90	1
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	2
The Application of Benthic Biotic Indices for Ecological Status Assessment in the Saudi Waters of the Western Arabian Gulf	Jayachandran Paravanparambil Rajakumar	68	1
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	1

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
Environmental Footprint of Tinplate Aerosol Cans	Teresa Mata	90	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	2
Metaheuristic Feature Selection and Ensemble Classifiers: A Novel Approach to Flash Flood Mapping	Mustafa Ghaleb	81	2
Application of hydrophobic magnetic deep eutectic solvent for rapid and effective removal of inhibitor compounds from post-fermentation broth media	Zhila Honarmandrad	3	1

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	
Cyclic carbonates from vegetable oils as potential raw materials for sustainable polyurethanes	M ^a Virtudes Navarro	27	
Biological properties of cotton-copper composites obtained by the sputter deposition	Zdzislawa Mrozilska	99	
Combining experiments and DFT calculations in the design of novel catalyst for the OER reaction	Abderrahim Bouaid	134	

Environmental Assessment of Recycling of Waste Plastic Pyrolysis Oil for Naphtha Feedstock in Korea	JAE-DONG KIM	145	
The green and organocatalytic multitasking of ynals. One substrate and plenty of possibilities.	Kamil Hanek	72	
Characteristics of Waste Plastic Pyrolysis Oils Fractionated by Vacuum Distillation for Using as Petroleum Products	Younghoon Ko	143	
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	
A Sustainable and Green Multistep Synthesis of New Reactivators for Nerve Agents Inhibited Cholinesterases	Rachid Baati	141	
Olive washing wastewater treatment by physicochemical and advanced oxidation processes	José Alcides Peres	79	
Hetero-trans-glucanase: an ancient plant enzyme with unique ability to restructure cellulosic materials	Stephen C. Fry Lenka Frankova	133	
Selective Recovery of Copper from Acidic Solutions using Simple Recyclable Precipitants	Susanna Vance	144	
New approach for the synthesis of cyclic Spirooxindoles	Imene SEHOUT	45	
A green and efficient method for the synthesis of 5-arylidene barbituric and thiobarbituric acid derivatives	Imene SEHOUT	44	
Kinetic study of peroxidase-catalyzed oxidation of bisphenol A in presence of biosurfactant Escin	Ruta Ivanec-Goranina	50	
The application of plant-based ZnO photocatalysts in the removal of Deoxynivalenol from water utilizing simulated solar irradiation	Sandra Jakšić	95	
Advances in circularity in copper electrorefining: recycling of hydrochloric acid and secondary production of antimony	Maria Teresa Montanes Sanjuan	119	
Recycle of platinum from spent automotive catalysts	Francesco Di Natale	54	