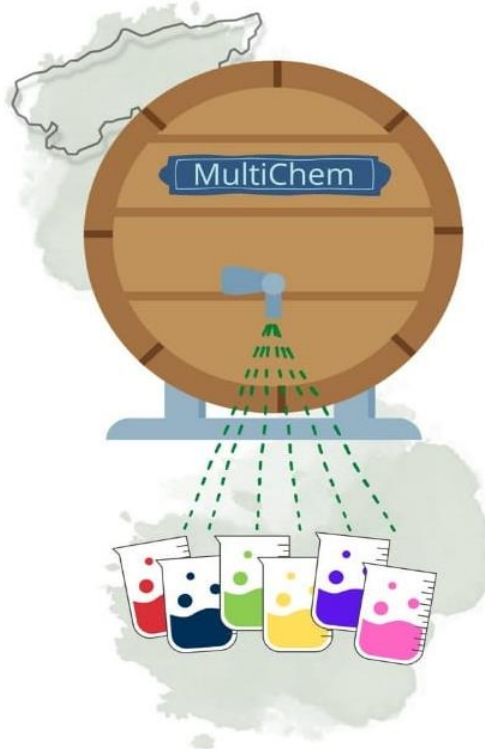


I PhD Multidisciplinary Chemical Congress



January, 19-20, 2023

Escuela Politécnica de Ingeniería de Gijón (EPI)

University of Oviedo



Thursday, January 19th

9:00-9:15	Opening Ceremony
9:15-11:35	Morning session 1 Chairperson: M ^a Jesús Lobo Castañón (University of Oviedo)
9:15-10:15	Plenary Nanobiosensor Devices for Ultrasensitive Diagnostics at the Point-of-need <u>Laura M. Lechuga Gómez</u> Catalan Institute of Nanoscience and Nanotechnology (ICN2-CSIC)
10:15-10:30	Scharlab
10:30-10:50	Keynote A Using large 18-membered macrocycles for the complexation of metals with potential radiopharmaceutical applications <u>Charlene María Harriswangler Harriswangler</u> CICA-University of A Coruña
10:50-11:05	Oral 1 Signal drift in electrochemical, aptamer-based (E-AB) sensors: understanding its mechanism and future challenges <u>Miguel Aller Pellitero</u> Johns Hopkins University
11:05-11:20	Oral 2 Main group mechanochemistry: challenges and opportunities for a sustainable society <u>Javier Fernández Reynes</u> University of Oviedo
11:20-11:35	Oral 3 Impact of chelate cooperativity on the supramolecular structure of self-assembled nanotubes <u>Marina González Sánchez</u> Autonomous University of Madrid
11:35-12:20	Coffee break – Poster session
12:20-13:40	Morning session 2 Chairperson: José Manuel Recio Muñiz (University of Oviedo)
12:20-12:35	Oral 4 Understanding ruthenium-prompted amine fixation: deep insight on Bonding Evolution Theory <u>Daniel Barrena Espés</u> University of Oviedo
12:35-12:50	Oral 5 Optimizing the process variables for microwave-induced synthesis of iron aerogels <u>Judith González Lavín</u> Institute of Carbon Science and Technology, INCAR-CSIC
12:50-13:10	Keynote B Influence of vibronic instabilities on the geometry and properties of layered materials <u>Inés Sánchez de Movellán Sáiz</u> University of Cantabria
13:10-13:25	Oral 6 Determination of methylmercury and inorganic mercury in human hair samples of individuals from Colombia by double spiking isotope dilution and GC-ICP-MS <u>Laura Suárez Criado</u> University of Oviedo
13:25-13:40	Oral 7 Ruthenium(II) complexes as photosensitizers for photoactivated chemotherapy (PACT) with blue light activation: Photochemical properties and DNA binding <u>Piedad Herrera Ramírez</u> NanoBIC. University of Barcelona
13:40-15:30	Lunch

15:30-16:15 Flash poster (FP1)

Chairperson: Marina Ramos Martín

<u>Paula Gómez Meijide</u> (University of Oviedo)	Prostate cancer diagnosis by PSA detection using new electrochemical aptasensors
<u>Clara de Lorenzo González</u> (University of Oviedo)	Hydrogels-based systems for the controlled release of therapeutic agents: an innovative treatment for osteoarthritis
<u>Nayara Carral Sainz</u> (University of Cantabria)	Second principles density functional theory models: a procedure to obtain their tight-binding parameters automatically
<u>Daniel Núñez Díaz</u> (University of Oviedo)	Effect of landfill leachate age on ultrafiltration performance
<u>Ángela Arnosa Prieto</u> (University of Santiago de Compostela)	Effect of Interleukin 4 loaded Citrate Coated Iron Oxide Nanoparticles on Macrophage Polarization for Bone Regeneration
<u>Toraya Fernández Ruiz</u> (University of Cantabria)	Modelling Optical Phenomena via Real-Time TD-DFT using Second-Principles: Measuring the effect of electron-hole interactions
<u>Silvia Vázquez Díaz</u> (Center for Cooperative Research in Biomaterials (CIC biomaGUNE) País Vasco)	Protein-nanoclusters as effective electrocatalyst for the production of inkjet printed paper analytical devices
<u>Montserrat Redondo Velasco</u> (University of Oviedo)	Determination of Chlorine-containing compounds by GC-ICP-MS/MS in plastic-based pyrolysis oil samples
<u>Lucía Pola Fernández</u> (University of Oviedo)	Kraft lignin as a source of carboxylic acids by wet oxidation
<u>Miriam López García</u> (Institute of Carbon Science and Technology, INCAR-CSIC)	A freeze-casted Ni/Fe graphene oxide aerogel as a catalyst for the electrolysis of water
<u>Cristina Méndez López</u> (University of Oviedo)	Halogen determination in liquid samples via optical emission spectroscopy: towards online analysis
<u>Rubén García Soriano</u> (University of Oviedo)	Phosphane and quinoline functionalized amidinato-type heavier tetrahydropyridines: A new class of ligands
<u>Raúl Llamas Unzueta</u> (Institute of Carbon Science and Technology, INCAR-CSIC)	Stacked Archimedean spirals reactor with porous carbon walls, made from 3D printed sacrificial PLA moulds
<u>Nieves García Ledesma</u> (University of Salamanca)	One-Pot diastereoselective synthesis of indolizidine and pyrrolo-[1,2-a]azepine heterocycles

16:15-17:05 Afternoon session 1Chairperson: Rosa M^a Sainz Menéndez (University of Oviedo)**16:15-16:30 Oral 8**

Development of a paste extruder system and production of Ni-electrodes by diw for water splitting

Pablo Rodríguez Lagar

Institute of Carbon Science and Technology, INCAR-CSIC

16:30-16:45 Oral 9

Albumin-based nanomaterials: a novel treatment for triple-negative breast cancer

Victoria García Almodóvar

King Juan Carlos University

16:45-17:05 Keynote C

Determination of endogenous proteins in individual cells from an in vitro model by elemental mass spectrometry

Paula Menero Valdés

University of Oviedo

17:05-17:50 Coffee break – Poster session**17:50-18:35 Afternoon session 2**

Chairperson: Alejandro Presa Soto (University of Oviedo)

17:50-18:05 Oral 10

Discrimination of TNT and its metabolites in the environment using voltammetric sensors, modified with molecularly imprinted polymers

Yohana López Aparicio

Autonomous University of Barcelona

18:05-18:20 Oral 11
 Scalable divergent synthesis of diterpenoid pyrones
Olaya García Pedrero
 University of Oviedo

18:20-18:35 Oral 12
 Perylene-based chromonic self-assemblies for the preparation of hierarchically porous silica and carbon nanofibers
Adrià Pérez Calm
 Institute of Advanced Chemistry of Catalunya (IQAC)-CSIC

18:35-19:20 Flash poster (FP2)
 Chairperson: Daniel Núñez Díaz

<u>Andrés Suárez Priede</u> (University of Oviedo)	ICP-MS based characterization of biogenic SeNPs and evaluation of their potential antibacterial activity
<u>Juan Rivas-Santisteban</u> (National Biotechnology Center (CNB-CSIC))	Characterization of a chemical bias shaping microbial functional evolution
<u>Leonardo Amaral</u> (King Juan Carlos University)	Magnetic MoS ₂ based nanocomposites for the photodegradation of pesticides
<u>Ana da Lama Vázquez</u> (CICA-University of A Coruña)	One-step synthesis of BODIPY dyes and analogues under microwave irradiation
<u>Alejandro Rodríguez Penedo</u> (University of Oviedo)	Determination of GFAP biomarker in human serum using metal nanoclusters as label by elemental mass spectrometry and cyclic voltammetry
<u>Raquel Pérez Guevara</u> (CICA-University of A Coruña)	Synthesis of benzannulated spiroketals by indium-catalyzed intramolecular double dihydroalkoxylation of alkyne diols
<u>Helena Pérez del Pulgar Villena</u> (King Juan Carlos University)	A three-pollutant simultaneous photodegradation. BiOX _x Y _{1-x} (X=Br or Cl; Y=I) as a photocatalytic solution for water treatment
<u>David Valero Calvo</u> (University of Oviedo)	Detection of MMP-9 biomarker using nanochannels
<u>Uxía Gómez Bouzó</u> (University of Vigo)	The goal to create new vitamin D analogs with selective biological activity
<u>Marcos López Aguilar</u> (University of Oviedo)	Design of a hybrid one-pot tandem combination of the Cu(II)-catalyzed oxidation of alcohols with an enantioselective organocatalyzed aldol reaction
<u>David González Lizana</u> (King Juan Carlos University)	Very efficient organo-zinc scorpionates for the CO ₂ fixation into a variety of cyclic carbonates
<u>Helena Fernández Piedra</u> (University of Oviedo)	Halogen-bonding assisted generation of vinyl radicals: stereoselective cross coupling between thiols and vinyl halides
<u>Lourdes del Álamo Rodríguez</u> (Complutense University of Madrid)	Supramolecular self-assembly of metal-metal bonded species
<u>Dario Coto Menéndez</u> (University of Oviedo)	Catalytic cyclopropanation reactions with α -silyl-, germanyl- and stannyl carbenes generated from cyclopropenes
<u>Patricia García Martínez</u> (University of Oviedo)	Synthesis of new phenethylamine-azulene conjugates via regioselective ring opening of 2-aryl-N-sulfonyl aziridines

Friday, January 20th

9:00-10:50	Morning session 3 Francisco Calderón Celis (University of Oviedo)
9:00-9:20	Keynote D Effect of H ₂ S in biogas composition on the production of H ₂ by sorption enhanced steam reforming (SESR) <u>Alma Capa Tamargo</u> Institute of Carbon Science and Technology, INCAR-CSIC
9:20-9:35	Oral 13 Development of new pH-responsive delivery systems <u>Isabel Coloma Manjón-Cabeza</u> Complutense University of Madrid
9:35-9:50	Oral 14 MD and DFT combined simulations <u>Jorge Suárez Recio</u> University of Oviedo
9:50-10:05	Oral 15 Development of carbon materials for Na-ion capacitors <u>Sara Payá González</u> Institute of Carbon Science and Technology, INCAR-CSIC
10:05-10:20	Oral 16 Graphene aerogels as nanomaterials for electrochemical detection of biomarkers <u>Mario Sánchez Suárez</u> Institute of Carbon Science and Technology, INCAR-CSIC
10:20-10:35	Oral 17 Compositional similarities and differences between North West Africa (NWA) 2975, 10628 and 1950 Martian Shergottites <u>Iratxe Población Concejo</u> University of País Vasco (EHU/UPV)
10:35-11:35	Coffee break – Poster session
11:35-13:40	Morning session 4 Chairperson: Félix Rodríguez Iglesias (University of Oviedo)
11:35-11:55	Keynote E An original way to synthesize (Z)- β -silylenamides by silylium-catalyzed carbosilylation of ynamides <u>Paz Yepes García</u> University of Oviedo
11:55-12:10	Oral 18 TiO ₂ /SnO ₂ – silver clusters hybrid nanomaterials for catalytic photodegradation of micropollutants <u>María Moreno Pérez</u> University of Santiago de Compostela
12:10-12:25	Oral 19 Development of on-site sensors for quality control in agri-food <u>Candela Melendreras García</u> University of Oviedo
12:25-12:40	Oral 20 “Vermellogens” and the development of CB[8]-based supramolecular switches using pH-responsive and non-toxic viologen analogues <u>Liliana Inés Barravecchia Prado</u> CICA-University of A Coruña
12:40-12:55	Oral 21 The enhancing effect of iron on the activity of Ni and Ni/Fe graphene-based catalysts for the electrolysis of water <u>María González Ingelmo</u> Institute of Carbon Science and Technology, INCAR-CSIC
12:55-13:40	Plenary Chemistry facing the challenges of our era <u>Amador Menéndez Velázquez</u> Idonial
13:40-14:00	Closing ceremony

