

## Thursday, January 19th

9:00-9:15	<b>Opening Ceremony</b>
9:15-11:35	<b>Morning session 1</b>
9:15-10:15	<b>Plenary</b> <u>Laura M. Lechuga Gómez</u> Catalan Institute of Nanoscience and Nanotechnology (ICN2-CSIC)
10:15-10:30	<b>Scharlab</b>
10:30-10:50	<b>Keynote A</b> 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	<b>Oral 1</b> 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	<b>Oral 2</b> Main group mechanochemistry: challenges and opportunities for a sustainable society <u>Javier Fernández Reynes</u> University of Oviedo
11:20-11:35	<b>Oral 3</b> 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	<b>Coffee break – Poster session</b>
12:20-13:40	<b>Morning session 2</b>
12:20-12:35	<b>Oral 4</b> Understanding ruthenium-prompted amine fixation: deep insight on Bonding Evolution Theory <u>Daniel Barrena Espés</u> University of Oviedo
12:35-12:50	<b>Oral 5</b> 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	<b>Keynote B</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	<b>Oral 6</b> 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	<b>Oral 7</b> Ruthenium(II) complexes as photosensitizers for photoactivated chemotherapy (PACT) with blue light activation: Photochemical properties and DNAbinding <u>Piedad Herrera Ramírez</u> NanoBIC. University of Barcelona
13:40-15:30	<b>Lunch</b>

15:30-16:15

**Flash poster (FP1)**

<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)	Influence of vibronic instabilities on the geometry and properties of layered materials
<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 tetrylenes: 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 1**

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**

**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)**

<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 <sub>2</sub> 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 <sub>x</sub> Y <sub>1-x</sub> (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 <sub>2</sub> 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 $\alpha$ -silyl-, germanyl- and stannyl carbenes generated from cyclopropanes
<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

**9:00-9:20 Keynote D**  
Effect of H<sub>2</sub>S in biogas composition on the production of H<sub>2</sub> by sorption enhanced steam reforming (SESR)  
Alma Capa Tamargo  
Institute of Carbon Science and Technology, INCAR-CSIC

**9:20-9:35 Oral 13**  
Development of new pH-responsive delivery systems  
Isabel Coloma Manjón-Cabeza  
Complutense University of Madrid

**9:35-9:50 Oral 14**  
MD and DFT combined simulations  
Jorge Suárez Recio  
University of Oviedo

**9:50-10:05 Oral 15**  
Development of carbon materials for Na-ion capacitors  
Sara Payá González  
Institute of Carbon Science and Technology, INCAR-CSIC

**10:05-10:20 Oral 16**  
Nanostructuring of CPPs based on dyes using a new ultra-mini-emulsion technique for improving their photo(electro)catalytic applications  
Sandra Palenzuela Rebella  
IMDEA Energy, Madrid

**10:20-10:35 Oral 17**  
Graphene aerogels as nanomaterials for electrochemical detection of biomarkers  
Mario Sánchez Suárez  
Institute of Carbon Science and Technology, INCAR-CSIC

**10:35-10:50 Oral 18**  
Compositional similarities and differences between North West Africa (NWA) 2975, 10628 and 1950 Martian Shergottites  
Iratxe Población Concejo  
University of País Vasco (EHU/UPV)

**10:50-11:35 Coffee break – Poster session**

### 11:35-13:40 Morning session 4

**11:35-11:55 Keynote E**  
An original way to synthesize (Z)- $\beta$ -silylenamides by silylium-catalyzed carbosilylation of ynamides  
Paz Yepes García  
University of Oviedo

**11:55-12:10 Oral 19**  
TiO<sub>2</sub>/SnO<sub>2</sub> – silver clusters hybrid nanomaterials for catalytic photodegradation of micropollutants  
María Moreno Pérez  
University of Santiago de Compostela

**12:10-12:25 Oral 20**  
Development of on-site sensors for quality control in agri-food  
Candela Melendreras García  
University of Oviedo

**12:25-12:40 Oral 21**  
Vermellogens” and the development of CB[8]-based supramolecular switches using pH-responsive and non-toxic viologen analogues  
Liliana Inés Barravecchia Prado  
CICA-University of A Coruña

- 12:40-12:55** **Oral 22**  
The enhancing effect of iron on the activity of Ni and Ni/Fe graphene-based catalysts for the electrolysis of water  
María González Ingelmo  
Institute of Carbon Science and Technology, INCAR-CSIC
- 12:55-13:40** **Plenary**  
Amador Menéndez Velázquez  
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- 13:40-14:00** **Closing ceremony**