

## Tuesday, 25<sup>th</sup>, 2024

19.45 – 20.30. **Inaugural lecture.**

Nanotechnology's dance with spectroscopy: a two-decade serenade  
(Prof. J.M. Costa, Universidad de Oviedo).

## Wednesday, 26<sup>th</sup>, 2024

09.45 – 10.30. **Plenary lecture 1.**

Applications of Raman Spectroscopy at the Department of Biophysics at the Pavol Jozef Safarik University in Kosice  
(Prof. Z. Jurasekova, P. J. Safarik University in Kosice, Slovakia)

10.30 – 11.30. **Oral sessions 1**

**(10.30 – 10.50)** Direct and fast-sequential determination of magnesium and calcium in mitochondria samples using a micro-sampling method with high resolution continuum source graphite furnace atomic absorption spectrometry  
(Beatriz GÓMEZ-NIETO, Universidad Autónoma de Madrid)

**(10.50 – 11.10)** Sustainability and Reusability of aptamer assays for the nucleocapsid protein of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)  
(Ana GARCÍA-JUAN, Ana, Universidad de Alicante)

**(11.10 – 11.30)** Development of fluorimeter and spectrophotometric sensor for the analytical control of nilotinib in biological fluids  
(María A. GARCÍA-TREJO, Universidad de Castilla -La Mancha)

12.00 – 12.30. **Invited lecture 1**

Near Infrared Spectroscopic sensors for Non-invasive analysis: challenges and future perspectives in agri-food  
(Prof. Ana Soldado, Universidad de Oviedo)

12.30 – 13.30. **Oral sessions 2**

**(12.30 – 12.50)** Hybrid light emitting array for the wireless electroluminescent analysis of mycotoxins  
(Tamara MOYA-CAVAS, Universidad Complutense de Madrid)

**(12.50 – 13.10)** Sensitive luminescence immunosensing platform for cyclopiazonic acid determination in corn and cheese samples  
(Miguel A. MERINO-SIERRA, Universidad Complutense de Madrid)

**(13.10 – 13.30)** Analysis of wines' elemental profile by means of Microwave-sustained inductively coupled atmospheric-pressure plasma optical emission spectroscopy (MICAP-OES)  
(Jorge PÉREZ VÁZQUEZ, Universidad de Alicante)

14.45 – 15.45. **Oral sessions 3**

**(14.45 – 15.05)** Hyperspectral Imaging for non-invasive applications: technology, methodology and opportunities.  
(Verónica MIEITES, Universidad de Cantabria)

**(15.05 – 15.25)** SPECTRIFY: A Comprehensive Web-browser Software for Spectral Data Analysis  
(Rubén PARRILLA, SFTec)

**(15.20 – 15.45)** Spectroscopic analysis for the enhancement of Roman mosaics of Upper Guadalquivir Valley. The project GeoChemMos  
(Alberto SÁNCHEZ, Universidad de Jaén)

16.15 – 17.15. **Oral sessions 4**

**(16.15 – 16.35)** Geochemical Analysis of Ronda Peridotite: Insights into Martian Analogues and Alteration Processes  
(Laura GARCÍA-GÓMEZ, UMALASERLAB, Universidad de Málaga)

**(16.35 – 16.55)** Femtosecond Laser Ablation-ICP-TOFMS for minimal destructive multielemental analysis of gemstones  
(Cristian SOTO-GANCEDO, Universidad de Oviedo)

**(16.55 – 17.15)** Advantages and disadvantages of LA-ICP-MS for rapid, sensitive, and high-resolution elemental mapping of challenging samples  
(Jorge PISONERO CASTRO, Universidad de Oviedo)

## Thursday, 27<sup>th</sup>, 2024

09.45 – 10.30. **Plenary lecture 2.**

Evolution of the trace element speciation in the marine environment  
(Prof. P. Bermejo, Universidad de Santiago de Compostela)).

10.30 – 11.30. **Oral sessions 5.**

**(10.30 – 10.50)** Adaptogens as promising agents for cervical cancer therapy: Micro- and nanospectroscopic imaging at the single-cell level  
(Ewa PIETA, Polish Academy of Sciences, Krakow)

**(10.50 – 11.10)** A rapid and ecofriendly strategy via CE-UV-DAD for therapeutic monitoring of revumenib, a new promising player in the fight against leukemia  
(Sergio FERNÁNDEZ-TRUJILLO, Universidad de Castilla-La Mancha)

**(11.10 – 11.30)** Self-assembly method for the synthesis of food-grade vitamin D3-loaded mixed T60/QS nanomicelles with drug release capability  
(Natalia VILLAMAYOR MORENO, Universidad de Castilla-La Mancha)

12.00 – 12.30. **Invited lecture 2**

Exploring the potential of fluorescent (nano)probes in biomedical applications  
(Prof. Maria J. MARÍN, School Of Chemistry, University Of East Anglia, UK)

12.30 – 13.30. **Oral session 6**

**(12.30 – 12.50)** Characterizing organic - mineral interactions by spectroscopy: simulating prebiotic earth and early mars conditions  
(Antonio LÓPEZ-GARCÍA, Centro de Astrobiología, Instituto Nacional de Tecnología Aeroespacial)

**(12.50 – 13.10)** In-situ spectroscopic study of L-cystine adsorption on pyrite (100) surface exposed under O<sub>2</sub> and CO<sub>2</sub> atmosphere conditions  
(Santos GALVEZ-MARTINEZ, Centro de Astrobiología, Instituto Nacional de Tecnología Aeroespacial)

**(13.10 -13.30)** Acoustic and optical simultaneous spectroscopic data from laser-induced plasmas: the new informative mix to Mars and beyond.  
(Markéta BOSÁKOVÁ, Masaryk University, Dept. Chemistry, Czeck Republic)

14.45 – 15.45. **Oral session 7**

**(14.45 – 15.05)** Raman and Surface-Enhanced Raman scattering analysis of iron gall inks employed in historic manuscripts  
(Santiago SÁNCHEZ-CORTES, Consejo Superior de Investigaciones Científicas)

**(15.05 – 15.25)** Simultaneous and colocalised Raman and SEM imaging for correlated multimodal analysis  
(Riccardo TAGLIAPIETRA, Renishaw)

**(15.25 – 15.45)** Linear Vibronic Coupling Approach for SERS: From Quantum Dynamics to Spectra  
(Francisco GARCÍA-GONZÁLEZ, Universidad de Málaga)

16.15 – 17.15. **Societies meetings.**

## Friday, 28<sup>th</sup>, 2024

09.00 – 09.45. Plenary lecture 3.

Front-face excitation-emission molecular fluorescence combined with second-order multiway discrimination tools for the discrimination, monitorization and detection of adulterations in extra virgin olive oil samples  
(Prof. A. Muñoz de la Peña, Universidad de Extremadura).

09.45 – 10.45. **Oral session 8**

**(09.45 – 10.05)** Modular automatic microanalyzers for monitoring the hydrometallurgical zinc purification process  
(Antonio CALVO-LÓPEZ, Institut de Recerca Sant Joan de Déu)

**(10.05 – 10.25)** Potential of cellulose/titania based polymeric nanocomposites for the photocatalysis/sorption removal of environmental pollutants  
(Ángela LÓPEZ-LORENTE, Universidad de Córdoba)

**(10.25 – 10.45)** Multifunctional co-doped Carbon Dots: promising nanotags for targeted bioimaging  
(Guillermo REDONDO-FERNANDEZ, Universidad de Oviedo)

11.15 – 11.45. **Invited lecture 3**

Computational Spectroscopy Beyond the Born-Oppenheimer Approximation: Diabatization Schemes and Excited State Coupling  
(Dr. Daniel ARANDA, Universidad de Málaga)

11.45 – 12.45. **Oral session 9**

**(11.45 – 12.05)** Potential of asymmetrical flow field flow fractionation (AF4) hyphenated to multi-detector array platform for the study of AuNPs in biological media  
(Andrea LÓPEZ-GUTIÉRREZ, Universidad de Castilla - La Mancha)

**(12.05 – 12.25)** Microphysiological devices and spICP-MS for assessing in vitro bioavailability of silver nanoparticles  
(Antonio MOREDA-PIÑEIRO, Universidad de Santiago de Compostela)

**(12.25 – 12.45)** Arsenic quantification in pyrolysis oils by coupling a total sample introduction system (hTISIS) to an ICP-MS/MS  
(Rebeca PÉREZ-RAMÍREZ, Universidad de Alicante)

**(12.45 – 13.05)** Analytical screening of biomolecular targets indicative of oxidative stress status in nucleic acids using HPLC-MS  
(Jeniffer de la Caridad MARTÍNEZ-GONZÁLEZ, Universidad de Castilla - La Mancha)