

X INTERNATIONAL CONGRESS ON ANALYTICAL NANOSCIENCE & NANOTECHNOLOGY

The X International Congress on Analytical Nanoscience & Nanotechnology (NyNA) is held every two years in different Spanish cities. NyNA is closely related to Prof Miguel Valcárcel research group who organized the first workshop in Córdoba, Spain. This year the X NyNA was celebrated in Ciudad Real, Spain, from 5th to 8th of September of 2022. This meeting was organized by the Analytical Nanogroup, Real Sociedad Española de Química, Universidad de Castilla La Mancha, and Grupo de Ciencia y Tecnologías (Bio)Analíticas with the collaboration of Facultad de Ciencias y Tecnologías Químicas. It was chaired by Dr Ángel Ríos and co-chaired by Dr Rosa C. Rodríguez.

The main goal of this congress was to favor the exchange of ideas and knowledge on the fields of the Analytical Chemistry related to the use of nanomaterials for sample preparation, analytical nanometrology, nano(bio)sensors, development of analytical strategies based on nanomaterials, nanotechnological applications, miniaturized nanosystems and identification, determination, and characterization of nanomaterials.

The conference was held for four days, divided into five different sessions and it was organized into 11 plenary lectures, 5 keynotes, 19 oral communications, and 21 flash poster speeches. Furthermore, 5 poster sessions with a total of 87 posters were held during the coffee sessions. The presented posters deal with the main goals of the meeting, as, the development of (bio)sensors based on different nanomaterials for the determination of compounds with interest in the medicinal or environmental field, or the characterization or detection of nanomaterials by different techniques such as single particle inductively coupled plasma mass spectrometry or graphite furnace atomic absorption spectrometry.

The meeting started on Monday 5th with the opening ceremony presided by the Rector of Universidad de Castilla La Mancha, and a plenary lecture given by Prof Mamantos I. Prodromidis from University of Ioannina, Greece, about the formation of nanoparticles by spark discharge. A plenary lecture and a keynote given by Prof Encarnación Lorenzo and Pilar Campins, respectively, started the Session 1 *Nano(bio)sensors* of the congress. Later, the participants could enjoy a welcome party.

On Tuesday 6th, the second session of *Nano(bio)sensors* took place between 9 a.m. and 19 p.m. During this day, the presentations were divided according to their topic into three sessions. A total of 10 oral communications about Nano(bio)sensors (Session 1), Analytical nanometrology (Session 2) and Synthesis, detection, characterization, and quantification of nanomaterials

(Session 3), were presented by PhD, postdoctoral students, and full professors. Each session started with a plenary lecture. Session 2 was sponsored by Agilent Technologies, and a tribute session in memory of Prof Valcárcel, Prof. Castillo and Prof Moreno-Bondi was chaired by Ángel Rios, Francisco Laborda and Elena Benito. In this tribute session, their scientific achievements and career were presented by close friends. Also, during this day a total of 5 flash poster speeches were presented. Poster sessions 1 and 2 were carried out during the coffee break after the lunch. During this poster sessions and coffee breaks, an exchange of ideas and interesting discussions were established between the different attendances. In the evening, a Town Hall Reception was celebrated in Museo López Villaseñor and the participant could enjoy the typical Spanish food.

On Wednesday 7th, the meeting start with the continuation of the Session 3 about *Synthesis, detection, characterization, quantification of nanomaterials* with the plenary lecture presented by Dr Susana Campuzano about “(Nano)bioelectroanalytical tools to accelerate the arrival of futuristic personalized medicine”. An oral communication and 4 flash poster speeches were presented during this session. Session 4 (*Miniaturized Nanosystems and Nanotechnological applications*) started with a plenary lecture and Poster Sessions 3 and 4. After lunch, a plenary lecture, flash poster speeches and Poster session 5 about *Applied analytical strategies involving nanomaterials* (Session 5) were carried out. When the session was finished, the participants enjoyed a nice tour in Almagro, and they can visit The Corral de Comedias and enjoyed a typical theatrical performance of the Spanish Golden Age. The Gala Dinner was held in Almagro in “Restaurante El Corregidor” a restaurant that offers good traditional Manchego food.

The last day of the congress (Thursday 8th) started with the plenary lecture of Prof Francesco Cubadda about the *Analytical challenges in assessing the safety of applications of nanotechnology in food and nutrition*. This plenary lecture was followed by different oral communications and flash poster speeches about the application of strategies based on nanomaterials. After the coffee break, the last plenary lecture, oral communications, and flash poster speech were presented. Prof Wolfgang Parak from University of Hamburg gave the closing plenary lecture entitled *Entry and exit of nanoparticle into/out of cells and its detection*. Finally, the closing ceremony was chaired by Ángel Rios and during this session the Oral Communication and Posters awards by *Microchimica Acta Journal*, *Analytical and Bioanalytical Chemistry Journal* and Micrux Company were announced and the participants were invited to attend the XI International Congress on Analytical Nanoscience & Nanotechnology that will be held in Santiago de Compostela, Spain, in 2024.

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