

## Scientific program

Monday, July 6<sup>th</sup>, 2015

10.00-11.00	Reception of participants. Poster mounting, Session 1: CF/PO-01→CF/PO-15 and PO-45→PO-60.
11.00-11.30	<b>OPENING THE WORKSHOP</b>
11.30-12.00	Coffee break
12.00-13.00	<b>INAUGURAL SESSION</b> Chair: <b>Dra. María Jesús Almendral Parra and Dra. María Cruz Moreno Bondi</b>  <b>OPENING CONFERENCE:</b> <i>"Simultaneous involvement of nanotools and nanoanalytes in the same analytical process: a synergistic combination of the two facets of Analytical Nanoscience and Nanotechnology".</i> <b>Dr. D. Miguel Valcárcel Cases.</b> University of Córdoba.
13.00-14.00	Poster Session + Instrumental Presentation
14.00-16.00	<b>Lunch</b> <b>Colegio Arzobispo Fonseca</b>
16.00-16.30	<b>SESSION I</b> <b>Development of new nanomaterials.</b> Chair: <b>Dr. D. Juan Ramón Castillo.</b>  <b>Invited Conference 1:</b> <i>"Colloidal lithography nanopatterning for bioanalytical applications".</i> <b>Dr. D. Borja Sepúlveda.</b> Autonomous University of Barcelona.
16.30-17.00	<b>Invited Conference 2:</b> <i>"Impact of Metallic and Metal Oxide Nanoparticles on Analytical Applications".</i> <b>Dr. D. Mohammed Zougagh.</b> University of Castilla La Mancha.
17.00-17.45	<b>Flash Communications:</b> Chair <b>Dr. D. Miguel Ángel López.</b>  CF/PO-01. <i>"Modulated ion Exchange in Titanium Phosphate Nanoparticles and functionalization thereof".</i> <b>Javier Carrasco Rodríguez.</b> University of Oviedo.  CF/PO-02. <i>"New methodology for the fabrication of free-standing carbon nanotubes electrodes".</i> <b>David Ibáñez.</b> University of Burgos.

	<p>CF/PO-03. <i>“Modulating the properties of Graphene Oxide”</i>. <b>D. López Díaz.</b> University of Salamanca.</p> <p>CF/PO-04. <i>“Effect of film morphology on the photoluminescence properties of QDs”</i>. <b>M.D. Merchán.</b> University of Salamanca.</p> <p>CF/PO-05. <i>“Nanoselenium as active material for antioxidant food packaging. Characterization of nanoparticles and antioxidant properties”</i>. <b>M. Palomo.</b> Complutense University of Madrid.</p> <p>CF/PO-06. <i>“Hydrogels and Aerogels from semiconductor nanoparticles”</i>. <b>Sara Sánchez Paradinas.</b> University of Hannover.</p> <p>CF/PO-07. <i>“Synthesis of shell-isolated silver nanoparticles for Raman spectroelectrochemistry”</i>. <b>Álvaro Colina.</b> University of Burgos.</p>
17.45-18.15	Coffee break + Poster session + Instrumental Presentation
18.15-18.45	<p><b>SESSION II</b> <b>(Bio)analytical tools based on nanostructures</b> Chair: <b>José Manuel Pingarrón.</b></p> <p><b>Invited Conference 3:</b> <i>“Janus Nanoparticles-based enzyme powered nanomachines”</i> <b>R. Villalonga.</b> Complutense University of Madrid.</p>
19.00-20.00	<p><b>Flash communications:</b></p> <p>CF/PO-08. <i>“Methylene Blue Functionalized Poly(amido amine) Dendrimers as Wiring for Bioanalytical Applications”</i>. <b>Isabel Álvarez Martos.</b> Interdisciplinary Nanoscience Center. Aarhus University.</p> <p>CF/PO-09. <i>“Carbon dots as fluorescent nanosensors in the third way of the Analytical Nanoscience and Nanotechnology”</i>. <b>Angelina Cayuela.</b> University of Córdoba.</p> <p>CF/PO-10. <i>“Bioconjugated gold nanoclusters as fluorescent labels in immunoassays”</i>. <b>María Cruz Alonso.</b> University of Oviedo.</p> <p>CF/PO-11. <i>“Strategies of signal amplification using Mn doped ZnS QDs as labels in immunoassays”</i>. <b>M. García Cortés.</b> University of Oviedo.</p>

	<p>CF/PO-12. <i>“Isolation and quantification of urinary 5-HIAA with carbon coated titanium dioxide nanotubes under the dispersive m-SPE format”</i>.  <b>M. Teresa García Valverde.</b> University of Córdoba.</p> <p>CF/PO-13. <i>“Voltammetric monitoring of cresol remediation base don MWCNT-SPE detection and Electro-Fenton Technology”</i>.  <b>Elisa González Romero.</b> University of Vigo.</p> <p>CF/PO-14. <i>“Determination of Bisphenol A in milk using a magnetic nanoparticles-nylon 6 composite”</i>.  <b>Emilia M. Reyes Gallardo.</b> University of Córdoba.</p> <p>CF/PO-15. <i>“Analytical contributions for the use and development of Nanocellulose”</i>.  <b>Celia Ruiz Palomero.</b> University of Córdoba.</p>
20.00-20.15	Poster mounting, Session 2: CF/PO-16→CF/PO-36 and PO 61 →PO-74.
20.30	<p><b>WELCOME RECEPTION.</b></p> <p><b>Museo Art Nouveau y Art Déco Casa Lis.</b></p>

**Tuesday, July 7<sup>th</sup>, 2015**

9.00-10.00	<p><b>SESSION III</b>  <b>Methods for detection, characterization and quantification of nanomaterials.</b>  Chair: Dr. D: <b>Miguel Valcárcel Cases</b></p> <p><b>PLENARY CONFERENCE I</b>  <i>“Understanding Enzymatic Acceleration at Nanoparticle Interfaces”</i>.  <b>Dr. Igor L. Medintz.</b> University of British Columbia, Vancouver. Canada.</p>
10.15-10.45	<p><b>Invited Conference 4:</b>  <i>“Sensors for detection and characterization of nanoparticles”</i>.  <b>Juan Ramón Castillo.</b> University of Zaragoza.</p>
10.45-11.40	<p><b>Flash communications:</b>  Chair: Dra. D<sup>a</sup> <b>Cristina González</b></p> <p>CF/PO-16. <i>“Size separation and quantitation of Silica Nanoparticles by Capillary Electrophoresis coupled to Evaporative Light Scattering Detector (CE-ELSD)”</i>.</p>

	<p><b>Carlos Adelantado.</b> University of Castilla La Mancha.</p> <p>CF/PO-17. <i>“Fluorescent determination of Graphene Quantum Dots in water samples”.</i></p> <p><b>Sandra Benítez Martínez.</b> University of Córdoba.</p> <p>CF/PO-18. <i>“Synthesis of HgSe nanoparticles: Characterization and transfer to aqueous solutions”.</i></p> <p><b>Diego Bouzas Ramos.</b> University of Oviedo.</p> <p>CF/PO-19. <i>“Single Particle Detection by Inductively Coupled Plasma Mass Spectrometry: Fast vs. conventional scanning”.</i></p> <p><b>E. Bolea.</b> University of Zaragoza.</p> <p>CF/PO-20. <i>“Determining the exact number of dye molecules attached to colloidal CdSe/ZnS quantum dots in Förster resonant energy transfer assemblies”.</i></p> <p><b>C. Carrillo Carrión.</b> Philipps-University. Marburg.</p> <p>CF/PO-21. <i>“Electrosynthesis of silver nanoparticles: Influence of the reaction media”.</i></p> <p><b>Daniel Izquierdo.</b> University of Burgos.</p> <p>CF/PO-22. <i>“Quantification of quantum dots bioconjugation efficiency by asymmetric flow field-flow fractionation coupled on-line to elemental mass spectrometry”.</i></p> <p><b>Mario Menéndez Miranda.</b> University of Oviedo.</p> <p>CF/PO-23. <i>“Advances and innovations for extracting engineering nanoparticles from food products”.</i></p> <p><b>M. Laura Soriano.</b> University of Córdoba.</p> <p>CF/PO-24. <i>“Nanoceria. Nanoparticle structure and strategy for detection and characterization”.</i></p> <p><b>G. Cepriá.</b> University of Zaragoza.</p>
11.40-12.00	Coffee break + Poster session + Instrumental Presentation
12.00-12.30	<p><b>SESSION III (Continuation)</b></p> <p><b>Methods for detection, characterization and quantification of nanomaterials.</b></p> <p>Chair: Dra. D<sup>a</sup>: <b>Encarnación Lorenzo.</b></p> <p><b>Invited Conference 5:</b></p> <p><i>“Novel bionano approaches for enhanced detection of biomarkers using metal nanoparticles”.</i></p> <p><b>José M. Costa Fernández.</b> University of Oviedo.</p>

12.30-13.30	<p><b>SESSION IV</b>  <b>Nanostructured sensors and biosensors.</b></p> <p><b>PLENARY CONFERENCE II:</b>  “SERS Biosensing and Bioimaging”.</p> <p><b>Luis M. Liz-Marzán.</b> CIC biomaGUNE. San Sebastian. Biomedical Research Center in Bioengineering Biomaterials and Nanomedicine (CIBER-BBN).</p>
13.30-14.00	<p><b>Flash communications:</b>  Chair: Dr. D. <b>Alberto Escarpa.</b></p> <p>CF/PO-25. <i>“Elimination of interferences in enzymatic potentiometric sensors”.</i>  <b>Ivan Magriñá.</b> Rovira I Virgili University. Tarragona.</p> <p>CF/PO-26. <i>“An Enzyme-based Potentiometric Redox Biosensor for Glucose on Paper”.</i>  <b>Rafael Hoekstra.</b> Rovira I Virgili University. Tarragona.</p> <p>CF/PO-27. <i>“Aptamer-gated supports as optical probes for small molecules”.</i>  <b>Elena Aznar.</b> Biomedical Research Networking Center in Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN).</p> <p>CF/PO-28. <i>“Synthesis of gold nanoparticles assisted by capping ligands playing a three-in-one role”.</i>  <b>Iria Bravo.</b> Autonomous University of Madrid.</p>
14.00 -15.30	<p style="text-align: center;"><b>Lunch</b>  <b>Colegio Arzobispo Fonseca</b></p>
16.00-17.00	<p><b>SESSION IV</b>  <b>Nanostructured sensors and biosensors (Continuation).</b>  Chair: Dr. D: <b>Dr. D. Xavier Rius</b></p> <p><b>PLENARY CONFERENCE III</b>  <i>“Bipolar electrochemistry: a new nano-life for an old concept”.</i>  <b>Alexander Kuhn.</b> University of Bordeaux.</p>
17.00-17.30	<p><b>Invited Conference 6:</b>  <i>“Biosensor Platforms Based on Ga Nanoparticle Arrays”.</i>  <b>Encarnación Lorenzo.</b> Autonomous University of Madrid.</p>
17.30-18.00	<p><b>Invited Conference 7:</b></p>

	<p><i>"Nanostructuring molecularly imprinted polymers for optical sensing applications"</i>.  <b>María Cruz Moreno Bondi</b>. Complutense University of Madrid.</p>
18.00-18.30	Coffee break + Poster session + Instrumental Presentation.
18.30-19.00	<p><b>SESSION IV</b>  <b>Nanostructured sensors and biosensors</b> (Continuation).  Chair: Dr. D: <b>Agustín Costa</b>.</p> <p><b>Invited Conference 8:</b>  <i>"Temporally and spectrally resolver Förster Resonance Energy Transfer for homogeneous and multiplexed nanometric biosensing"</i>.  <b>Niko Hildebrandt</b>. NanoBioPhotonics. Université Paris-Sud.</p>
19.00-20.00	<p><b>Flash communications:</b></p> <p>CF/PO-29. <i>"Diamond nanoparticles based biosensors for efficient glucose and lactate determination"</i>.  <b>María Briones</b>. Autonomous University of Madrid.</p> <p>CF/PO-30. <i>"Paper-Based Potentiometric Cholesterol Biosensor"</i>.  <b>Rocío Cánovas Martínez</b>. Rovira I Virgili University. Tarragona.</p> <p>CF/PO-31. <i>"Ellipsometric immunosensor platforms based on the plasmonic resonance of gallium nanoparticles"</i>.  <b>Antonio García Marín</b>. Autonomous University of Madrid.</p> <p>CF/PO-32. <i>"Comprehensive study of interaction between phenazines and DNA: Mismatch detection"</i>.  <b>Tania García Mendiola</b>. Autonomous University of Madrid.</p> <p>CF/PO-33. <i>"Determination of dopamine on single walled carbon nanotubes electrodes using a long-optical-path spectroelectrochemistry cell"</i>.  <b>Jesús Garoz Ruiz</b>. University of Burgos.</p> <p>CF/PO-34. <i>"Self-amplified photonic biosensing platform for microRNA-based early diagnosis of diseases"</i>.  <b>Daniel González Lucas</b>. Universitat Politècnica de Valencia.</p> <p>CF/PO-35. <i>"Gold nanoparticles functionalized with a fluorogenic probe as fluorescent sensor to detect cyanide"</i>.  <b>Aránzazu Heras</b>. University of Burgos.</p>
20.00-20.15	Poster mounting, Session 3: CF/PO-37→CF/PO-44 and PO-75→PO-78.

20.30	<b>WORKSHOP DINNER.</b> <b>Jardines del Parador de Salamanca.</b>
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**Wednesday, July 8<sup>th</sup>, 2015**

9.00-9.30	<p><b>SESSION IV</b>  <b>Nanostructured sensors and biosensors (Continuation).</b>  Chair: Dr. D: <b>Ángel Ríos.</b></p> <p><b>Invited Conference 9:</b>  <i>"Nanomaterials as electrochemical transducers and electroactive labels in sensors devices"</i>.  <b>Agustín Costa García.</b> University of Oviedo.</p>
9.30-10.00	<p><b>Invited Conference 10:</b>  <i>"Microfluidic chips coupled to nanomaterial-based electrochemical detection"</i>.  <b>Alberto Escarpa.</b> University of Alcalá de Henares.</p>
10.00-10.30	<p><b>Flash communications:</b>  Chair: <b>José Manuel Costa</b></p> <p>CF/PO-36. <i>"Selective catalytic electrodeposition of silver on quantum dots as electrochemical label for biosensors"</i>.  <b>Daniel Martín Yerga.</b> University of Oviedo.</p> <p>CF/PO-37. <i>"Wearable potentiometric sensors for monitoring sport performance"</i>.  <b>Marc Parrilla.</b> Rovira i Virgili University. Tarragona.</p> <p>CF/PO-38. <i>"Mesoporous silica nanoparticles for Mycoplasma genomic DNA recognition"</i>.  <b>Lluís Pascual.</b> Universitat Politècnica de Valencia. CIBER Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN).</p> <p>CF/PO-39. <i>"Automated and low cost method to manufacture addressable solid-state nanopores"</i>.  <b>Milena Vega.</b> National Technological University. Buenos Aires.</p> <p>CF/PO-40. <i>"Electrochemical immunosensor for sensitive determination of peptide YY based on diazonium chemistry at reduced graphene oxide"</i>.  <b>L. Agüí.</b> Complutense University of Madrid.</p>

10.30-11.00	Coffee break + Poster session + Instrumental Presentation.
11.00-11.30	<p><b>SESSION V</b>  <b>Toxicological and environmental impact of nanomaterials.</b></p> <p><b>Flash communications:</b>  Chair: Dr. D. Jordi Riu</p> <p>CF/PO-41. <i>"SILAC-based quantitative proteomics identifies mechanisms of AgNPs-induced toxicity in HepG2 cells"</i>.  <b>M. N. Fernández Muñiz.</b> Complutense University of Madrid.</p> <p>CF/PO-42. <i>"Bioconcentration of ionic cadmium and cadmium selenide quantum dots in zebrafish larvae"</i>.  <b>R. Muñoz Olivas.</b> Complutense University of Madrid.</p> <p>CF/PO-43. <i>"Evaluation of a carboxylated multiwalled carbon nanotubes monolithic microextraction unit for the determination of selected triazines from waters"</i>  <b>B. Fresco Cala.</b> University of Córdoba.</p> <p>CF/PO-44. <i>"DNA-functionalized hybrid materials for the recognition of mycoplasma bacteria."</i>  <b>Lluís Pascual,</b> Isabel Baroja, Elena Aznar, Félix Sancenón, José Ramón Murguía and Ramón Martínez Máñez.</p>
11.30- 12.00	<p><b>SESSION VI</b>  <b>Nanomaterials for medical applications</b>  Chair: <b>Dr. D. Bernardo Moreno.</b></p> <p><b>Invited Conference 11:</b>  <i>"Protein nanodevices and nanomaterials for Biomarker and Drug Discovery"</i>.  <b>Manuel Fuentes.</b> Cancer Research Center. University of Salamanca.</p>
12.00-12.30	<p><b>Invited Conference 12:</b>  <i>"Gel Synthesis from Colloidal Metal and Semiconductor Nanoparticle Building Blocks"</i>.  <b>Dra. Nadja Bigall.</b> University of Hannover Research Center.</p>
12.30-13.30	<p><b>PLENARY CONFERENCE IV.</b>  <i>"Environment-sensitive (nano-)particles for analysis of particle-cell interaction"</i>.  <b>Wolfgang J. Parak.</b> Philipps Universität Marburg.</p>



13.30-14.00

## Closing Session

Conclusions.

Poster and flash communications awards.

Presentation of the VIII Workshop NyNA 2017.