

Curriculum Vitae

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Info.:



Work experience

2019 – present **Post-doc, Laboratoire de Chimie des Polymères Organiques (LCPO), Centre national de la recherche scientifique (CNRS), Bordeaux, France.**

I work as part of Prof. Dr. Sébastien Lecommandoux and Pr. Dr. Henri Cramail research groups focused in the study of physical-chemistry properties of several macromolecules and their biological applications in drug delivery systems.

2016 – 2019 **Post-doc & Ph.D student, Dept. of Physical Chemistry and Thermodynamic, Universidad de Córdoba, Spain.**

I worked as part of Prof. Dr. Luis Camacho research group in the air-water and air-solid interface field. I have been preparing, thin films of several organic materials characterized by isotherms, BAM, UV-Vis reflexion, CD, among others for biological applications. **Research Stay at Ohio State University** in the Prof. Dr. Heather C. Allen group using Raman, IRRAS and V-SFG.

2014 – 2016 **Research Assistant, Dept. of Physical Chemistry, Universidad Complutense de Madrid, Spain.**

I worked under the supervision of Prof. Dr. Francisco Ortega in the fabrication of colloid nanoparticles as drug delivery systems using the extrusion technique and microemulsions as template. The

biodegradable nanoparticles were analysed by DLS, Zeta potential and UV-Vis Spectroscopy.

2012 – 2013 Research Assistant, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA), Madrid, Spain.

300 hours of training during dedicated to the analytical analysis of food and vegetation, using HPLC with UV detector. It was realized under the supervision of the Dr. Pilar Sandín España and the Prof. Dr. Lourdes Agüi Chicharro.

Publications as first/co-author

- Subtle chemical modification for enrichment of Fmoc-amino acid at phospholipid interface. *RSC Advances*. **2019**, 9, 37188-37194. ([10.1039/C9RA03896E](https://doi.org/10.1039/C9RA03896E))
- Optimization of Aminoacid Sequence of Fmoc-Dipeptides for Interaction with Lipid Membranes. *The journal of Physical Chemistry B*. **2019**, 123, 3721-3730. ([10.1021/acs.jpcc.9b01132](https://doi.org/10.1021/acs.jpcc.9b01132))
- Folding of Cytosine-Based Nucleolipid Monolayer by Guanine Recognition at the Air-Water Interface. *Journal of Colloid and Interface Science*. **2019**, 537, 694-703. ([10.1016/j.jcis.2018.11.036](https://doi.org/10.1016/j.jcis.2018.11.036))
- Fluorinated CdSe/ZnS Quantum Dots: Interactions with Cell Membrane. *Colloids and Surfaces B: Biointerfaces*. **2019**, 173, 148-154. ([10.1016/j.colsurfb.2018.09.050](https://doi.org/10.1016/j.colsurfb.2018.09.050))
- Surface-active fluorinated quantum dots for enhanced cellular uptake. *Chemistry: A European Journal*. **Hot paper**, **2019**, 25, 195-199. ([10.1002/chem.201804704](https://doi.org/10.1002/chem.201804704))
- Preparation and Application in Drug Storage and Delivery of Agarose Nanoparticles. *International Journal of Polymer Science*. **2018**, 7823587. ([10.1155/2018/7823587](https://doi.org/10.1155/2018/7823587))
- Unravelling the 2D Self- Assembly of Fmoc-Dipeptides at Fluid Interfaces. *Soft Matter*. **Back cover**, **2018**, 14, 9343-9350. ([10.1039/c8sm01508b](https://doi.org/10.1039/c8sm01508b))
- Formation of surfactant free microemulsions in the ternary system water/eugenol/etanol. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. **2017**, 521, 133-140. ([10.1016/j.colsurfa.2016.04.062](https://doi.org/10.1016/j.colsurfa.2016.04.062))

Congress & Curses Attendance

- Participation in the “8th Iberian Meeting on Colloids and Interfaces” in Aveiro (Portugal) on July (2019) with the project: “Fmoc-dipeptides, air-water interface self-assembly and lipid membrane Interactions”.
- Participation in the “16th European Conference on Organized Films” in Paris (France) on July (2019) with the projects: ““Increase of the internationalization rate of Quantum Dots by fluorinated organic ligand” & ***Best poster presentation*** “Promoting the interaction of Fmoc-dipeptides with lipid membranes by the adjustment of the hydrophobicity sequence”.
- Participation in the “ESC2019” in Varna (Bulgary) on June (2019) with the project: “A general route established for the 2D self-assembly of Fmoc-dipeptides”.
- Participation in the “NanoUCO VII” in Córdoba (Spain) on January (2018) with the project: “Fmoc-dipeptides, self-assembled structure at the air/water interface”.
- Participation in the “Reunión de Jóvenes Investigadores en Coloides e Interfases IV” in Córdoba (Spain) on February (2018) with the project: “Lipids as matrix for the cytosine-guanine interaction determination at the air-water interface”.
- Participation in the “VI Congreso Científico de Investigadores en Formación” in Córdoba (Spain) on January (2018) with the project “Folding of cytosine nucleolipid matrix by guanine recognition at the air-water interface”.
- Participation in the “15th European Conference on Organized Films” in Dresden (Germany) on July (2017) with the projects: “Interfacial self-assembly of dipeptides” & “Phospholipid/nucleolipid mixed films for guanine recognition at the air-water interface”.
- Participation in the “VIII Iberian Meeting on Colloids and Interfaces” in Madrid (Spain) on July (2017) with the project “*Phospholipid/nucleolipid mixed films for Guanine recognition at the air-water interface*”.
- Participation in the “NanoUCO VI” in Córdoba (Spain) in January (2017) with the project “*Monocapas mixtas de nucleolípido para reconocimiento de guanina en la interfase aire-agua*”.
- Assistance to the “III Reunión de Jóvenes Investigadores en Coloides e Interfases” in Madrid (Spain) on October (2016).
- Participation in the “VIII European School on Molecular Science” in Paris (France) on October (2015) with the project “*Reverse micelles: a new route to create agarose nanoparticles*”.

- Assistance to the School “Complex Wetting Phenomena” in Madrid (Spain) on September (2015).
- Participation in the “XVI Escuela Nacional de Materiales Moleculares” in Santa Pola (Spain) on February (2015) with the project “*Reverse micelles: a new route to create agarose nanoparticles*”.
- Postgraduate course of “*Preparation, characterization and applications of recoverments and thin sheets*” over 44 hours. It was realized in the Instituto de Ciencia de Materiales de Madrid, ICMM (CSIC) during May 2014.

Qualification

Doctorate

Cum Laude and International Thesis: “*Assembly of Nanostructured matrices in Langmuir Films*” (2016-2019) at the Universidad de Córdoba.

Master

Interuniversity Master: “*Molecular nanoscience and nanochemistry*” (2014-2016) offered by Universidad Autónoma de Madrid and Universidad de Valencia, among others.

- Master project: “*Fabrication of agarose nanoparticles as drug delivery system*”. It was realized at the Universidad Complutense de Madrid, under the supervision of the Prof. Dr. Francisco Ortega Gómez.

Bachelor

Graduate in Chemistry by the Universidad Complutense de Madrid (2009-2013).

- Graduate project: “*Colloidal chemistry and nanomaterials: fabrication of nanocapsules and nanoparticles*”. It was realized under the supervision of Prof. Dr. Francisco Ortega Gómez and Prof. Dr. Ramón González Rubio.