

## Personal Information

Name: José M<sup>a</sup> López de Luzuriaga Fernández

DATE

01-03-2024

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## Current position

Institution: University of La Rioja. Faculty of Science and Technology

Department of Chemistry (Inorganic Chemistry) c/ Madre de Dios 53. 26006-Logroño

Professional Category: Full Professor (Catedrático de Universidad)

Head of the Chemistry Research Institute of the University of La Rioja.

## Education

Year	University	Degree
1990	Zaragoza	BSc in Chemistry
1990	Zaragoza	MSc in Chemistry
1994	La Rioja	PhD in Science

## Indicators of Quality in Scientific Production

a) 5800 overall full career citations. 310 average number of citations per year during the last five years. h=39.

b) 202 publications in JCR-listed Journals and book chapters.

c) Thesis supervised 19 (All with honours and 7 awarded with the doctoral prize). 7 in the last five years

e) Six-years periods of research: 5 (last one given 31-05-2021).

f) 2 patents (“[AuAg(C<sub>6</sub>F<sub>5</sub>)<sub>2</sub>]-1/2 O(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub> como sensor de moléculas básicas volátiles” and “Método de obtención de nanopartículas de plata”).

g) 30 research projects (4 EU).

## CV Summary

JMLL graduated in 1994 with a PhD Thesis supervised by Prof. Antonio Laguna in the field of Organometallic Chemistry, more specifically in the use of acetylacetonate gold derivatives for the preparation of polynuclear methanide gold complexes. After graduating he occupied a position of **Assistant Professor** and in 1996 he started a **postdoctoral stay at the Technische Universität München (TUM) (Alexander von Humboldt fellowship)**, under the supervision of Prof. Hubert Schmidbaur. He was involved in the project Gold clustering at N-, P- and S-donor centers publishing 7 JCR papers on this topic in one year. **In 1998 and 2001 he moved at Texas A&M University** for two stays supervised by Prof. John P. Fackler, Jr., where he was familiar with the luminescence technique. Since then, this knowledge was one of the main research activities of his group and his pioneering work in Spain have been considered as the embryo of the development of groups dedicated to the study of luminescent properties thorough many collaborations and formative stays of researchers. He moved all over the range in positions, from **Assistant** (1997) to **Associate Professor** (2000) and finally **Full Professor** (2009).

He is **Founder of the research group** “Study of Metallic Interactions and Applications” in 2009, group that is devoted to the study of all properties that appear as consequence of the presence of intermetallic interactions in the complexes or nanomaterials, as luminescence, vapo-chromism, solvatochromism, thermochromism, mechanochromism, catalytic activity, plasmonic, etc. Over the years, these studies have allowed a growth toward the above-mentioned indicators, resulting in **frequent invitations** to JMLL to present his last contributions in renowned meetings and universities.

In 2021 he was elected as **Head of the Research Center in Chemical Synthesis of the University of La Rioja (CISQ)** and since 2022 is **Head of the Chemistry Research Institute of the University of La Rioja (IQUR)**.

## Results

### Publications (10 Selected among a total of 36 of the last 5 years). All as main corresponding author

1- A. Sorroche, S. Moreno, M. E. Olmos, M. Monge, J. M. López-de-Luzuriaga.

Deciphering the Primary Role of Au...H-X Hydrogen Bonding in Gold Catalysis

**Angew. Chem. Int. Ed.** 2023, e202310314.

2- M. Gil-Moles, M. E. Olmos, M. Monge, M. Beltrán- Visiedo, I. Marzo, J. M. López-de-Luzuriaga, C. Gimeno.

Silver-Based terpyridine Complexes as Antitumor Agents.

**Chem. Eur. J.** 2023, 29, e202300116

3- D. Blasco, F. Reboiro, D. Sundholm, M. E. Olmos, M. Monge, J. M. López-de-Luzuriaga.

A “gold standard” computational proof for the existence of gold(III) aurophilicity.

**Dalton Trans.**, 2023, 52, 2219-2222

4- I. Soldevilla, A. García-Camacho, R. T. Nasibullin, M. E. Olmos, M. Monge, D. Sundholm, R. R. Valiev, J. M. López-de-Luzuriaga, M. Rodríguez-Castillo

Influence of Perhalophenyl Groups in the TADF Mechanism of Diphosphino Gold(I) Complexes

**J. Mat. Chem. C**, 2022, 10, 4894-4904

5- J. M. López-de-Luzuriaga, M. Monge, S. Moreno, M.E. Olmos, M. Rodríguez-Castillo.

Rational Assembly of Metallophilic Gold(I)–Lead(II) and Gold(I)–Gold(I) Puzzle Pieces

**Angew. Chem. Int. Ed.**, 2021, 60, 640–644 (*Hot Paper*)

6-D. Blasco, J. M. López-de-Luzuriaga, M. Monge, M. E. Olmos, M. Rodríguez-Castillo, H. Amaveda, M. Mora, V. García Sakai, J. A. Martínez-González.

Multidisciplinary study on the hydrogelation of the digold complex  $[\{Au(9N\text{-adeninate})\}_2(\mu\text{-dmpe})]$ : optical, rheological, and quasi-elastic neutron scattering perspectives.

**Inorg. Chem. Front.** 2021, 8, 3705-3715

7- J. M. López-de-Luzuriaga, M. Monge, M. E. Olmos, M. Rodríguez-Castillo, I. Soldevilla, D. Sundholm, R. R. Valiev. Perhalophenyl Three-Coordinate Gold(I) Complexes as TADF Emitters: A Photophysical Study from Experimental and Computational Viewpoints.

**Inorg. Chem.**, 2020, 59, 14236–14244

8- J. M. López-de-Luzuriaga, G. Mahmoudi, M. Monge, M. E. Olmos, M. Rodríguez-Castillo, M. Villar, F. I. Zubkov, E. A. Kvyatkovskaya.

Zigzag vs Helicoidal Gold-Silver 1D Chains: Influence of Subtle Interactions in the Spatial Arrangements of Supramolecular Systems.

**Inorg. Chem.**, 2020, 59, 9443-9451

9- D. Blasco, J. M. López-de-Luzuriaga, M. Monge, M. E. Olmos, M. Rodríguez-Castillo.

Balancing ionic and H-bonding interactions for the formation of hydrometallogels.

**Dalton Trans.**, 2019, 48, 7519-7526

10- J. M. López-de-Luzuriaga, M. Monge, M. E. Olmos, J. Quintana, M. Rodríguez-Castillo.

Stimuli-Responsive Solvatochromic Au(I)-Ag(I) Clusters. Reactivity and Photophysical Properties Induced by the Nature of the Solvent.

**Inorg. Chem.**, 2019, 58, 1501–1512

### Projects and Research Contracts with Industry as PI (last 5 years)

1.- Design of group 11 compounds and materials with improved optical, biological and catalytic properties.

Ministerio de Ciencia, Innovación y Universidades. REF: PID2022-139739NB-I00

01-09-2023 to 31-08-2026

185.000 €

2.- Search for molecular complexity for the optimization of properties: from materials science to medicine.

Ministerio de Ciencia, Innovación y Universidades. REF: PID2019-104379RB-C22

01-06-2020 to 31-05-2023

144.000 €

3.- New technologies for the treatment of wastewater from the agri-food industry

INTERREG-POCTEFA REF:EFA356/19 NUTRIA (European Union)

31/10/2019 a 31/05/2022

139.768 €

4.- Espectrofluorímetro para el Centro de Investigación en Síntesis Química de la Universidad de La Rioja (SUES-CISQ) (Código EQC2018-004082-P)

392.661€

5.- Applications of gold compounds in photophysics, medicine and catalysis.

Ministerio de Ciencia e Innovación REF: CTQ2016-75816-C2-2-P

01-01-2017 to 31-12-2019

120.000 €

6.- (Industry) Hollow nanostructures: synthesis, functionalization and modification of their properties according to the content. Application in footwear.

A.P.I.D.I.T. de la Industria del Calzado y Conexas de La Rioja and Universidad de La Rioja

04/09/2014 to 03/09/2017

35.604,89 €

7.- (Industry) Synthesis of silver nanoparticles for use in conductive coatings

TORRECID S.A. and Universidad de La Rioja

01-02-2019 a 31-01-2021

42.808,56 €

### Lectures, Session Chairs, Scientific committees...

Invited and Plenary Lectures: 20

Session Presidencies in meetings: 5

Member of the Review Panel for the ANECA in the field of Knowledge Transfer, Spain in 2019-2020.

Member of the Review Panel for the National Research Program, Spain in 2021 and 2022.

### Prizes and Distinctions

- Doctoral Prize of the University of La Rioja 1998.

- Research Prize to the GEIMA research group awarded by the Consejo Social de la Universidad de La Rioja in 2012.

- Research Excellence Prize awarded by GEQO-RSEQ (Grupo Especializado de Química Organometálica de la Real Sociedad Española de Química) 2018