

Date of the CVA

14/07/2020

Section A. PERSONAL DATA

Name and Surname	JOAQUÍN LÓPEZ SERRANO		
DNI/NIE/Passport		Age	
Researcher's identification number	Researcher ID	A-2267-2011	
	Scopus Author ID	56565692400	
	ORCID	0000-0003-3999-0155	

A.1. Current professional situation

Institution	Universidad de Sevilla		
Dpt. / Centre	Departamento de Química Inorgánica / Facultad de Química		
Address			
Phone		Email	
Professional category	Profesor Titular de Universidad	Start date	2017
UNESCO spec. code			
Keywords			

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Dr. CIENCIAS (QUIMICAS)	Universidad de Murcia	

A.3. General quality indicators of scientific production

Joaquín López-Serrano has co-authored more than 60 research articles in international journals (55 in 1st quartile journals).

He has received more than 1800 citations and has an h-index of 23.

Section B. SUMMARY OF THE CURRICULUM

Joaquín López-Serrano studied chemistry at the University of Murcia, Spain, where he also completed his PhD thesis (2004) with Dr. A. Abad and Prof. J. Vicente. Then he joined the group of Prof. S. B. Duckett at the University of York (UK), with a postdoctoral position and there he used hyperpolarization techniques, within Nuclear Magnetic Resonance spectroscopy (NMR) to study the mechanism of inorganic reactions and catalysis. During this time, he took part in the early development of a new hyperpolarization technique, Signal Amplification by Reversible Exchange or SABRE, and became interested in the use of molecular modelling in the study of reaction mechanisms, following a visit to the group of Prof. Agustí Lledós at the UAB, Spain. In 2008 he returned to Spain and obtained a Ramón y Cajal Research contract at the University of Seville, working in the group of Prof. E. Carmona at the Instituto de Investigaciones Químicas (IIQ; US-CSIC). In 2017 he became Profesor Titular (associate professor) of Inorganic Chemistry. His interests include all aspects of molecular inorganic and organometallic chemistry, with emphasis in the use of computational methods in the study reaction mechanisms and molecular properties.

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

- Scientific paper.** Hidalgo, Nereida; et al. 2020. Evidence for Genuine Bimetallic Frustrated Lewis Pair Activation of Dihydrogen with Gold(I)/Platinum(0) Systems Chemistry : a European journal.VCH Verlagsgesellschaft. 26-27, pp.5982-5993. ISSN 0947-6539.
- Scientific paper.** Romero-Arenas, Antonio; et al. 2020. Ir-Catalyzed Atroposelective Desymmetrization of Heterobiaryls: Hydroarylation of Vinyl Ethers and Bicycloalkenes Journal of the American Chemical Society.American Chemical Society,. 142-5, pp.2628-2639. ISSN 0002-7863.

- 3 **Scientific paper.** León, Félix; et al. 2019. Double asymmetric hydrogenation of conjugated dienes: a self-breeding chirality route for C2 symmetric 1,4-diols Chem. Commun.The Royal Society of Chemistry. 55, pp.786-789.
- 4 **Scientific paper.** Marín, Mario; et al. 2019. Evaluating stereoelectronic properties of bulky dialkylterphenyl phosphine ligands Journal of organometallic chemistry. Elsevier Science BV,. 896, pp.120-128. ISSN 0022-328X.
- 5 **Scientific paper.** Zamorano, Ana; et al. 2018. Activation of Small Molecules by the Metal–Amido Bond of Rhodium(III) and Iridium(III) (η^5 -C5Me5)M-Aminopyridinate Complexes Inorganic Chemistry. 57-1, pp.150-162.
- 6 **Scientific paper.** Hernandez-Juarez, M.; et al. 2018. Hydrogenation of an iridium-coordinated imidazol-2-ylidene ligand fragment Chem. Commun.The Royal Society of Chemistry. 54, pp.3843-3846.
- 7 **Scientific paper.** Guan, Dexin; et al. 2017. Following palladium catalyzed methoxycarbonylation by hyperpolarized NMR spectroscopy: a parahydrogen based investigation Catal. Sci. Technol.The Royal Society of Chemistry. 7, pp.2101-2109.
- 8 **Scientific paper.** Pablo Ríos; Amor Rodríguez; Joaquín López-Serrano. 2016. Mechanistic Studies on the Selective Reduction of CO₂ to the Aldehyde Level by a Bis(phosphino)boryl (PBP)-Supported Nickel Complex ACS CATALYSIS. American Chemical Society. 6, pp.5715-5723. ISSN 2155-5435.
- 9 **Scientific paper.** Hernández-Juárez, M.; et al. 2015. Ruthenium(II) complexes containing lutidine-derived pincer CNC ligands: Synthesis, structure, and catalytic hydrogenation of C=N bonds Chemistry - A European Journal. 21-20, pp.7540-7555.
- 10 **Scientific paper.** Adams, R.W.; et al. 2009. Reversible interactions with para-hydrogen enhance NMR sensitivity by polarization transfer Science. 323-5922, pp.1708-1711.

C.2. Participation in R&D and Innovation projects

- 1 ACTIVACION DE PEQUEÑA MOLECULA Y CATALISIS MEDIANTE PARES DE LEWIS FRUSTRADOS BASADOS EN METALES DE TRANSICION (METAL-FLP) Jesús Campos Manzano. (Instituto de Investigaciones Químicas). 01/06/2020-29/05/2023. 108.900 €.
- 2 Equipamiento para la Caracterización y Purificación de Sistemas Paramagnéticos Moleculares, Nanoparticulados y Biológicos Joaquín López Serrano. (Universidad de Sevilla). 01/01/2019-31/12/2020. 116.700 €.
- 3 CTQ2016-76267-P, COMPLEJOS METALICOS CON LIGANDOS CARBENO NHETEROCICLICO Y DIFOSFINO-BORILO: DISEÑO ESTRUCTURAL PARA APLICACIONES CATALITICAS Salvador Conejero Iglesias. (Instituto de Investigaciones Químicas). 01/01/2017-31/12/2019. 66.000 €. Team member.
- 4 CTQ2016-75193-P, LIGANDOS FOSFORADOS VOLUMINOSOS Y QUELATANTES BIFUNCIONALES EN EL ESTUDIO DE PROCESOS ORGANOMETALICOS FUNDAMENTALES Y EN EL DESARROLLO DE NUEVAS APLICACIONES CATALITICAS Antonio Pizzano Mancera. (Instituto de Investigaciones Químicas). 01/01/2017-31/12/2019. 120.000 €. Team member.

C.3. Participation in R&D and Innovation contracts

C.4. Patents

Duckett-,Simon B.; Green-,Gary G.; Elliott-,Paul I. P.; JOAQUÍN LÓPEZ SERRANO. 12/452,113. HYPERPOLARIZING NUCLEI United States of America. 10/04/2012. The University of York (UK).