CURRICULUM VITAE ABREVIADO (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION *

First name	Riccardo		
Family name	Peloso		
Gender (*)	M	Birth date	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-9532-7609		

(*) Mandatory

A.1. Current position

Position	Profesor Titular de Universidad		
Initial date	18/12/2019		
Institution	Universidad de Sevilla		
Department/Center	Química Inorgánica		
Country	Spain	Teleph. number	
Key words	Organometallic Chemistry, Coordination Chemistry, Phosphorus Ligands, Homogeneous Catalysis		

A.2. Previous positions (research activity interuptions, indicate total months)

2007	Universitá di Udine (Post-doctoral position, 6 months)
2007-2009	LCC - Université de Strasbourg – CNRS (Post-doctoral position, 15 months)
2009-2019	Universidad de Sevilla (Post-doctoral position, Juan de la Cierva researcher, Ayudante Doctor, Contratado Doctor)

A.3. Education

Industrial Chemistry (degree)	Universidad de Parma	2003
Chemical Science (Ph.D.)	Universidad de Pisa	2007

Part B. CV SUMMARY

Overall indicators of quality of scientific output (*Scopus, 08/12/2025*)

Number of documents: 35
Total number of cites: 706 average cites per document: 20,17
Index h= 18

In 1998, I began my studies in Industrial Chemistry at the University of Parma (Italy), graduating in 2003 with the highest distinction, 110/110 cum laude. During the final stage of my degree, I carried out experimental work on the development of innovative catalytic oxidation processes promoted by Palladium(II) compounds, which provided me with early exposure to the challenges of designing efficient catalytic systems and sparked my long-term interest in transition-metal chemistry.

In 2003, I was awarded a three-year doctoral fellowship at the University of Pisa, where I completed my PhD (2004–2007) in Inorganic–Organometallic Chemistry under the supervision of Prof. Guido Pampaloni. My doctoral research focused on the synthesis and thermodynamic studies of Cu(I) carbonyl and olefin complexes with oxygen- and nitrogen-donor ligands. In February 2007, I defended my thesis entitled "*Synthesis, Characterization and CO / Olefin Exchange Reaction of Copper(I) Derivatives Containing Bidentate Oxygen- and Nitrogen Ligands*." The results of this work were published in five articles in international journals, establishing a solid foundation for my future research career.

Following my PhD, I joined the Organometallic Chemistry group at the University of Udine (Italy) under Professors Pierluigi Rigo and Walter Baratta (2007). Later that year, I was awarded a CNRS postdoctoral contract and moved to Louis Pasteur University of Strasbourg-CNRS, working in Dr. Pierre Braunstein's Coordination Chemistry group. Over sixteen months, I investigated Iridium, Palladium, and Chromium complexes with tridentate NPN ligands. These two postdoctoral experiences not only broadened my expertise in synthetic methodologies and ligand design but also resulted in four publications in high-impact international journals.

In 2009, I joined the Organometallic Chemistry and Homogeneous Catalysis group at the University of Seville-CSIC, directed by Prof. Ernesto Carmona. Initially supported by a postdoctoral contract and later by a Juan de la Cierva fellowship, my research first focused on zinc(I) chemistry, leading to two publications in internationally recognized journals. Subsequently, I expanded my work to metal–metal multiple bond complexes, particularly quadruple and quintuple bonds of group 6 metals (Mo and W). In parallel, I studied platinum, iridium, and rhodium complexes with bulky tridentate phosphine ligands, aiming to design new ligands capable of stabilizing reactive and uncommon species. More recently, my research has concentrated on kinetic studies of organic transformations catalyzed by transition-metal complexes, with the objective of advancing mechanistic understanding, improving catalytic efficiency, and contributing to the rational design of new catalytic systems.

I actively collaborate with several leading international scientific journals, including *Inorganic Chemistry*, *Dalton Transactions*, *Organometallics*, and *Molecules*, serving as an expert reviewer in organometallic chemistry, homogeneous catalysis, and coordination chemistry. I am co-author of 37 peer-reviewed scientific publications, including two book chapters, and have co-supervised three PhD theses in chemistry as well as more than 20 undergraduate and master research projects. These experiences have allowed me to mentor young researchers, foster collaborative work, and strengthen my leadership skills in guiding complex scientific investigations.

My academic trajectory and postdoctoral research have been consistently framed within Organometallic and Coordination Chemistry, with particular emphasis on synthetic methodologies, spectroscopic characterization, and mechanistic studies. This background provides a strong foundation for leading innovative research projects in the field of transition-metal catalysis, ligand design, and hydrogenation processes.

Since 2011, I have collaborated extensively in teaching activities at the University of Seville, contributing to both undergraduate and postgraduate programs. In June 2015, the National Agency for Quality Assessment and Accreditation (ANECA) granted me a positive evaluation of my teaching and research activities for appointment as Associate Professor. In December 2019, I was formally appointed Associate Professor at the University of Seville.

Through my combined research, teaching, and mentoring activities, I have developed a comprehensive academic profile that integrates scientific excellence, international collaboration, and educational commitment.

Part C. RELEVANT MERITS

C.1. Publications (selected, last 10 years)

1. C.J. Laglera-Gándara, R. Jiménez-Rioboó, L. Alvarez-Rodríguez, R. Peloso, P. Ríos, P, A. Rodríguez, *Nickel-Catalyzed Deuteration of Primary, Secondary, and Tertiary Silanes: Scope and Mechanistic Insights*, *Org. Chem.* **2025**, *90*, 5206.

2. M. T. Martín, MT, G. G. del Postigo, P. Sánchez, E. Alvarez, C. Maya, M. C. Nicasio, R. Peloso, *Copper(I) Complexes with Terphenyl-Substituted NPN Ligands Bearing Pyridyl Groups: Synthesis, Characterization, and Catalytic Studies in the S-Arylation of Thiols*, *Molecules* **2025**, *30*, 3167.

3. C. J. Laglera-Gándara, E. Mora-Fernández, R. Peloso, P. Ríos, A. Rodríguez, *Catalytic activation of nitrous oxide: boryl versus hydride nickel complexes*, *Inorg. Chem. Front.* **2025**, DOI: 10.1039/d5qi02041g

4. Á. Beltrán, I. Gata, C. Maya, J. Avó, J. C. Lima, C. A. T. Laia, R. Peloso, M. Outis, M. C. Nicasio, *Dinuclear Cu(I) Halides with Terphenyl Phosphines: Synthesis, Photophysical Studies and Catalytic Applications in CuAAC Reactions, Inorg. Chem.* **2020**, *59*, 10894.

5. M. M. Alcaide, P. Sánchez, E. Álvarez, C. Maya, J. López-Serrano, R. Peloso, *Electrophilic activation of alkynes promoted by a cationic alkylidene complex of Pt(II), Dalton Trans.* **2022**, *51*, 5777.

6. L. Ortega-Moreno, R. Peloso, J. López-Serrano, J. Iglesias-Sigüenza, C. Maya, E. Carmona, *A Cationic Unsaturated Platinum(II) Complex that Promotes the Tautomerization of Acetylene to Vinylidene*, *Angew. Chem. Int. Ed.* **2017**, *56*, 2772.

7. R. Peloso, E. Carmona, *Non-heteroatom-substituted alkylidene complexes of groups 10 and 11*, *Coord. Chem. Rev.* **2018**, *355*, 116.

8. R. J. Rama, M. T. Martín, R. Peloso, M. C. Nicasio, *Low-coordinate M(0) complexes of group 10 stabilized by phosphorus(III) ligands and N-heterocyclic carbenes*, *Adv. Organomet. Chem.* **2020**, *74*, 241.

9. L. Ortega-Moreno, R. Peloso, C. Maya, A. Suárez, E. Carmona, *Platinum(0) Olefin Complexes of a Bulky Terphenylphosphine ligand. Synthetic, Structural and Reactivity studies*, *Chem. Commun.* **2015**, *51*, 17008.

10. N. Curado, M. Carrasco, E. Álvarez, C. Maya, R. Peloso, A. Rodriguez, J. López-Serrano, E. Carmona, *Lithium Di- and Trimethyl Dimolybdenum(II) Complexes with Mo-Mo Quadruple Bonds and Bridging Methyl Groups*, *J. Am. Chem. Soc.* **2015**, *137*, 12378.

C.2. Congresses (last 10 years)

1. P. Sánchez, J. López-Serrano, R. Peloso, E. Carmona, "*Synthesis and Reactivity of Metallacyclic Complexes of Pd (II) and Pt (II) based on Bulky Phosphines*".
   Escuela de Química Organometálica Marcial Moreno Mañas, Sevilla, 2015.
   Poster.

2. P. Sánchez, J. López-Serrano, R. Peloso, E. Carmona, "*Synthesis and Reactivity of Metallacyclic Complexes of Pd (II) and Pt (II) based on Bulky Phosphines*".
   OMCOS 2015, Sitges, 2015.
   Poster.

3. L. Ortega-Moreno, A. Suárez, R. Peloso, E. Carmona, "*Platinum complexes of bulky terphenylphosphine ligands. Synthetic, structural, and reactivity studies*".
   GEQOR2016, Punta Umbría (Huelva), 2016.
   Flash oral communication.

4. P. Sánchez, M.T. Martín, J. López-Serrano, R. Peloso, E. Carmona, "*Metallacyclic Complexes of Platinum and Palladium Stabilized by Sterically Demanding P-Donor Ligands*".
   Reunión Bienal de la RSEQ, Sitges 2017.
   Oral communication.

C.3. Research projects (last 10 years)

1. *Estrategias catalíticas para la formación de enlaces carbono-carbono y carbono-heteroátomo en estructuras hidrocarbonadas.*
   Ministerio de Ciencia e Innovación
   1/09/2021 - 31/12/2024
   PI: M. Carmen Nicasio Jaramillo

2. *Complejos de bajo número de coordinación de metales del grupo 10 (Ni, Pd y Pt) con ligandos fosforados voluminosos. Aplicaciones en catálisis.*
   Junta de Andalucía
   01/02/2020 - 30/04/2022
   PI: M. Carmen Nicasio Jaramillo

3. *Ligandos fosforados voluminosos y quelatantes bifuncionales en el estudio de procesos organometálicos fundamentales y en el desarrollo de nuevas transformaciones catalíticas.*
   MINECO
   1/01/2017 - 31/12/2019
   PI: Antonio Pizzano Manchera

4. *Complejos de metales nobles con ligandos fosforados voluminosos. Activación de enlaces C-H y aplicaciones catalíticas.*
   MINECO
   01/01/2014 - 31/12/2016
   PI: Ernesto Carmona Guzmán

C.4. Others. Ph.D. Theses

1. Irene Mendoza González, "*Complejos de Molibdeno, Wolframio, Rodio e Iridio y ligandos voluminosos*".
   Supervisors: Ernesto Carmona, Riccardo Peloso.
   04/02/2015

2. Laura Ortega Moreno, "*Synthesis, Structure, and some catalytic applications of platinum complexes with terphenyl phosphine ligands*".
   Supervisors: Ernesto Carmona, Riccardo Peloso.
   22/06/2016

3. María Moreno Alcaide, "*Nuevos ligandos fosforados voluminosos y sus complejos mono- y dinucleares de platino: síntesis, propiedades y estudios computacionales*".
   Supervisors: Joaquín López Serrano, Riccardo Peloso.
   16/06/2023