Part A. PERSONAL INFORMATION

CV date	17/07/2026

First name	Joaquín		
Family name	García Álvarez		
Gender (*)	Male	Birth date (dd/mm/yyyy)	12/03/1978
Social Security, Passport, ID number	71.637.874-G		
e-mail	garciajoaquin@uniovi.es	URL Web: Link	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-2266-744X	

(*) Mandatory

A.1. Current position

Position	Catedrático de Universidad (Full Professor)		
Initial date	02/01/2026		
Institution	Universidad de Oviedo		
Department/Center	Departamento de Química Orgánica e Inorgánica		
Country	Spain	Teleph. number	+34660773061
Key words	Organometallic Chemistry, Homogeneous Catalysis, Green Chemistry, Deep Eutectic Solvents, Hybrid One-Pot Tandem Synthesis		

A.2. Previous professional status (including breaks in research career, according to what is indicated in the call, indicate total months)

Period	Position/Institution/Country/Interruption cause
2001-2005	PhD student/Universidad de Oviedo/Spain
2005-2007	PostDoctoral Researcher/University of Strathclyde/UK
2005-2009	Regional “Clarín” PostDoctoral Researcher/Universidad de Oviedo/Spain
2009-2011	“Juan de la Cierva” PostDoctoral Researcher/Universidad de Oviedo/Spain
2012-2016	“Ramón y Cajal” PostDoctoral Researcher/Universidad de Oviedo/Spain
2017-2018	Profesor Contratado Doctor (Assistant Professor)/Universidad de Oviedo/Spain
2018-2025	Profesor Titular (Associate Professor)/Universidad de Oviedo/Spain
2026-	Catedrático de Universidad (Full Professor)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
2001-2005	PhD student/Universidad de Oviedo/Spain	2001-2005
2005-2007	PostDoctoral Researcher/University of Strathclyde/UK	2005-2007

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

I studied chemistry at the University of Oviedo, where I graduated in 2001. I got my PhD (April 2005), under the supervision of Drs. J. Gimeno and V. Cadierno, studying the coordination of iminophosphorane ligands in Ru(II) fragments. In May 2005, I joined the group of Dr. R. E. Mulvey (University of Strathclyde, Glasgow, UK) where I did a post-doctoral stay of 2.5 years, working in the field of *s*-block organometallic compounds. In 2007, I returned to the University of Oviedo, as Postdoctoral Researcher thanks to the award of a “Clarín” Contract from a regional program (2007-2009), a Juan de la Cierva Contract (2009-2011), a Ramón y Cajal Contract (2012-2016), later as Profesor Contratado Doctor (2017-2018), Profesor Titular de Universidad (2018-2025) and finally as Catedrático de Universidad (Full Professor; since 2026). Thanks to the award, as PI, of the following research projects: *i*) 1 national project for young researchers (CTQ2008-00506/BQU); *ii*) 3 national projects (CTQ2016-75986-P; PID2020-113473GB-I00; PID2023-148663NB-I00); *iii*) 1 “Leonardo Grant for Young Researchers and Cultural Creators 2017” from the BBVA Foundation; *iv*) an international project within the "*Green Chemistry Grant for Life*" program awarded by PhosAgro/UNESCO/IUPAC in

2018; and *v*) 1 "*Proyecto Investigo*"; I have been able to develop my own and independent scientific career, focusing my studies in the following research lines: *i*) study of the catalytic activity of organometallic complexes in organic synthesis in eutectic mixtures (*DESs*); *ii*) development of synthetic organic processes mediated by RLi/RMgX reagents in *DESs*; *iii*) design of hybrid one-pot tandem processes that combine metal-based catalysts, enzymes and organocatalysts; and *iv*) design of *A*cidic-*D*eep *E*utectic *S*olvent*s* as both promoters/reaction media for the activation of unsaturated molecules under bench-type conditions.

1.- Scientific Contributions:

- Number of publications: 110 (publishing every year without exception since 2002) both in General Chemistry journals [ACIE, JACS, Chem. Sci., Cell Rep. Phys. Sci., Chem. Eur. J., Chem Commun.] or specialized in different fields of Chemistry [ACS Catal., Green Chem., ACS Sustain. Chem. Eng., ChemSusChem, Curr. Opin. Green Sustain. Chem., Org. Lett., Adv. Synth. Catal., Inorg. Chem., Dalton Trans, Organometallics, ChemCatChem, Adv. Organomet. Chem.]
- Number of Q1 publications: 78; Number of publications as corresponding author (*) 75; Total times cited: 3731 (WOS)/4021 (Scopus). H-index: 38 (WOS)/40 (Scopus).
- Work highlighted as: *i*) Very Important Paper (1 ACIE; 2 ChemSusChem, 1 EurJIC, 1 Adv. Synth. Catal.); *ii*) Hot paper (1 Chem. Eur. J.); and iii) Front or Inside Covers (13 times).
- 4 sexenios (six-year research periods, last awarded 31/12/2025).
- 13 book chapters in Homogeneous Catalysis, Sustainable/Organometallic Chemistry.
- PI of international (1), national (6), and (1) regional projects.
- 24 oral communications in national/international conferences, as well as 11 invited lectures and 4 invited plenary lectures.
- Organizer of the Symposium "New strategies in Main-Group Chemistry: from stoichiometric to catalytic processes" at the "XXXIX Reunión Bienal RSEQ, Zaragoza, 2023".
- Top 2% chemist according to the Stanford University Ranking (years 2022, 2023 and 2024).
- Guest-editor of 3 special issues related with Sustainable Chemistry.
- Director of "Grupo De Investigación Química Sintetica Sostenible" of the University de Oviedo (AEI).
- Award of the prize "GEQO-Young scientist" from the GEQO group of the RSEQ in 2016.
- Expert evaluator for: *i*) ANEP; *ii*) Portuguese Foundation for Science and Technology; *iii*) National Research Council of the Romanian Government; *iv*) Andalusian Agency of Knowledge; *v*) National Science Center (Poland); *vi*) Agency for Science, Technology and research (A*STAR, Singapore); *vii*) Agence Nationale de la Recherche (France); and *viii*) Deutsche Forschungsgemeinschaft (Germany).
- Awarded with two "*Visiting Professor Scholarships*" at: *i*) University of Jyväskylä (Finland, August 2024); and *ii*) Universitá degli Study di Bari (Italy, July 2025).

2.- Transfer, dissemination and management:

- 2 patents related with the synthesis of the drug Thenfadil under greener reactions conditions, 5 industrial contracts, two of them with Arcelor-Mittal (study of the synthesis, magnetic properties and microstructure of 3D printed electrical steel); one with CYCLOPE BIO S.L. (Synthesis of organic derivatives with high added value with potential biological applications); and two with Fusoni Componentes S.L. (Design of eco-friendly release agents based on *DESs*).
- Secretary of the: *i*) GEQO group of the RSEQ (2018-2026); and *ii*) "Instituto Universitario de Química Organometálica Enrique Moles" at the University of Oviedo. Vocal of the GEQV group of the RSEQ.

3.- Training and mentoring activities:

- Supervisor of: *i*) 3 PhD Theses (Cum Laude); *ii*) 8 Master´s and 1 Bachelor Thesis; as well as *iii*) 4 End-of-degree studies. I am currently supervising 2 PhD Thesis and one Master Degree.

Part C. RELEVANT MERITS

C.1. Publications

Selection of most relevant scientific papers in the last 10 years [I am corresponding author (*) in all of them)]:

1.- M. López-Aguilar, J. F. Reynes, L. Cicco, A. Suárez-Fernández, V. Capriati, A. Presa Soto, F. García, J. García-Álvarez, **2026**. "Solvent-free/scalable mechanochemical-assisted addition of phosphine oxides to aldehydes: sustainable protocol for one-pot tandem P-C bond formation". *Green Chem*., **2026**, 28,10965 (Selected as Front Cover; Q1 in CHEMISTRY, MULTIDISCIPLINARY).

2.- M. López-Aguilar, N. Ríos-Lombardía, D. Barrena-Espés, M. Gallegos, J. García-Álvarez, C. Concellón, V. del Amo, **2026**. "Synthesis of Primary Thioamides by the Insertion of CS_2 into Aldoximes". *Org. Lett.*, 28, 7667. (Selected as Front Cover).

3.- G. Morís-Menéndez, S. E García-Garrido, P. García-Álvarez, A. Presa Soto, N. Ríos-Lombardía, J. García-Álvarez, **2025**. "Regio-, stereoselective, aerobic and metal-free synthesis of *Z*-vinyl sulfides: one-pot hydroiodination of internal alkynes and in situ sulfenylations". *Adv. Synth. Catal.*, 367, e202500388. (Selected as VIP paper and Front Cover).

4.- M. López-Aguilar, N. Ríos-Lombardía, M. Gallegos, D. Barrena-Espés, J. García-Álvarez, C. Concellón, V. del Amo, **2025** "Unexpected reactivity of nitrones: catalytic insertion of CS_2". *Org. Lett.*, 27, 8338.

5.- N. Ríos-Lombardía, G. Morís-Menéndez, I. Lavandera, V. Gotor-Fernández, J. García-Álvarez, **2024**, "Merging organolithium chemistry and stereoselective biocatalysis: transformation of aromatic nitriles into chiral alcohols". *Adv. Synth. Catal.*, 366: 3144. (selected as VIP paper and Front Cover).

6.- B. Parra-Cadenas, I. Fernández, F. Carrillo-Hermosilla, J. García-Álvarez, D. Elorriaga, **2024** "Addition of allyl Grignard to nitriles in air and at room temperature: experimental and computational mechanistic insights in pH-switchable synthesis". *Chem. Sci.*, 15: 5929. (Selected as Inside Cover).

7.- D. Elorriaga, B. Parra-Cadenas, A. Antiñolo, F. Carrillo-Hermosilla, J. García-Álvarez, **2022**, "Combination of air/moisture/ambient temperature compatible organolithium chemistry with sustainable solvents: selective and efficient synthesis of guanidines and amidines". *Green Chem.*, 24: 800 (Q1 in CHEMISTRY, MULTIDISCIPLINARY).

8.- F. F. Mulks, L. J. Bole, L. Davin, A. Hernán-Gómez, A. R. Kennedy, J. García-Álvarez, E. Hevia, **2020**, "Ambient moisture accelerates hydroamination reactions of vinylarenes with alkali-metal amides under air". *Angew. Chem. Int. Ed.*, 59: 19021.

9.- C. Vidal, J. García-Álvarez, A. Hernán-Gómez, A. R. Kennedy, E. Hevia, **2016**, "Exploiting Deep Eutectic Solvents and organolithium reagent partnerships: chemoselective ultrafast addition to imines and quinolines under aerobic ambient temperature conditions". Angew. Chem. Int. Ed., 55: 16145-16148.

10.- N. Ríos-Lombardía, C. Vidal, E. Liardo, F. Morís, J. García-Álvarez, J. González-Sabín, **2016**, "From a sequential to a concurrent reaction in aqueous medium: Ruthenium catalyzed allylic alcohol isomerization and asymmetric bioreduction". *Angew. Chem. Int. Ed.*, 55: 8691-8695

C.2. Congress

Selection of most relevant oral communications or invited/plenary lectures since 2022:

1.- "*Water and Air-Tolerant One-Pot Chemoenzymatic Cascades Merging Polar Organometallic Reagents (RLi/RMgX) with Laccases and ADHs*". 2nd International Symposium on Green and Sustainable Chemistry. Universidad de Murcia, May 2026, Cartagena (Spain). *Keynote Invited Lecture*.

2.- "*Expanding the frontiers of organometallic/organic chemistry: sustainable transformations in Deep Eutectic Solvents (DESs) and water*". 50th Conference of the Divisione di Chimica Inorganica (INORG2025). Societá di Chimica Italiana, Naples (Italy), September 2025. *Invited Plenary Lecture*.

3.- "*Deep Eutectic Solvents: Green Partners in Transition Metal Catalysis, Main-Group Chemistry and Biocatalysis*". 1st International Symposium on Deep Eutectic Solvents (ISYDES-2025). Università degli Studi di Bari "Aldo Moro", June 2025, Bari (Italy). *Keynote Invited Lecture*.

4.- "*Merging aerobic/moisture-compatible s-block organometallic reagents (RLi/RMgX) with enzymes for the enantioselective synthesis of chiral alcohols*". XXVI European Conference on Organometallic Chemistry (EuCOMC25), University of Bern (Switzerland), July 2025. *Oral Presentation.*

5.- "*Synthetic Versatility of Acidic-Deep Eutectic Solvents (ADESs): Active Reaction Media for Selective Functionalization of Alkynes/Alkenes*". International Symposium in Green Chemistry 2025 (ISGC-2025), Centre National de la Recherche Scientifique (CNRS), La Rochelle (France), May 2025. *Oral Presentation.*

6.- "*Design of hybrid one-pot tandem protocols by merging organometallic chemistry, organo- and biocatalysis in green solvents*". Departement für Chemie, Biochemie und Pharmazie. University of Bern (Switzerland), October 2024. *Invited lecture*.

7.- "*Polar s-block organometallic chemistry in sustainable protic solvents (Deep Eutectic Solvents and water) under bench-type reaction conditions*" GECOM-CONCOORD 2024, Laboratoire de Chimie de Coordination (LCC-CNRS) and Laboratoire hétérochimie fondamentale et appliquée (LHFA-CNRS), Ax-les-Thermes (France), May 2024. *Oral Presentation*.

8.- "*Innovative catalysis: transition metals, main-group elements, and biocatalysis in eco-friendly solvents*". Vellore Institute of Technology, Department of Chemistry, Vellore (India), June 2024. *Invited Plenary Lecture*.
9.- "*Design of hybrid one-pot tandem protocols by using transition-metal or s-block organometallic chemistry under greener reaction conditions*". XIV International School of Organometallic Chemistry. ISOC 2023, University of Camerino (Italy), September 2023. *Invited Plenary Lecture*.
10.- "*Transition-metal-catalysis, main-group chemistry and biocatalysis in sustainable solvents*". Dipartimento di Chimica, Università degli Studi di Torino (Italy), June 2022. *Invited lecture*.
11.- "*Design of Greener Synthetic Protocols in Transition-Metal-Catalysis, Main-Group Chemistry and Biocatalysis in Sustainable Solvents*". Barluenga Lectureship Symposium (2022), Oviedo (Spain) 26-28 October 2022. *Invited Plenary Lecture*.

C.3. Research projects

Selection of most relevant research projects in the last 10 years (All as PI):

1.- "*Funcionalización eficiente, selectiva y sostenible de moléculas orgánicas empleando Disolventes Eutécticos (DESs) y reactivos organometálicos de los grupos representativos*". Ministerio de Ciencia e Innovación (MCINN-24-PID2023-148663NB-I00). PIs: Joaquín García Álvarez and Alejandro Presa Soto (Universidad de Oviedo); 01/09/2024 - 31/08/2027 (198.750,00 € + Beca FPI).
2.- "*Subvención del Programa Investigo para la contratación de personas jóvenes demandantes de Empleo*". Servicio Público de Empleo del Principado de Asturias (SEPEPA-24-AYUD/2023/36906-3891). PI: Joaquín García Álvarez (Universidad de Oviedo); 16/08/2024 - 15/08/2025 (33.109,71 €).
3.- "*Diseño de procesos tándem metal/bio/organocatalizados para la transformación selectiva de moléculas orgánicas insaturadas en disolventes sostenibles [Mezclas Eutécticas, Agua]*"; Ministerio de Ciencia e Innovación (MCI-21-PID2020-113473GB-I00); PIs: Joaquín García Álvarez and Alejandro Presa Soto; 01/09/2021 - 31/08/2024 (145.000,00 €).
4.- "*Metal- and Bio-catalyzed reactions in Deep Eutectic Solvents: Selective and sustainable tools for the conversion of lignin into high-added-value enantiopure molecules*"; PhosAgro/UNESCO/IUPAC (Research Grant in Green Chemistry for Young Scientists 2017); PI: Joaquín García Álvarez (Universidad de Oviedo); 01/09/2018 – 31/08/2019 (25.000,00 US$).
5.- "*Combinación sinérgica de Disolventes Eutécticos Profundos con la dupla metales de Transición/Grupos Principales: Reacciones sostenibles y selectivas a temperatura ambiente y en presencia de aire*"; Fundación BBVA (Becas Leonardo a Investigadores y Creadores Culturales); PI: Joaquín García Álvarez (Universidad de Oviedo); 15/05/2017 - 14/05/2019 (40.000,00 €).

C.4. Contracts, technological or transfer merits

- "*Sustainable process for the synthesis of molecules with antihistamine activity in unconventional biodegradable solvents (Deep Eutectic Solvents)*". A. F. Quivelli, V. Capriati, F. M. Perna, P. Vitale, F. V. Rossi, J. García-Álvarez. EP22213255 (12/12/2022). European Patent.
- Two Industrial projects with Arcelor Mittal: *i*) "*Síntesis de materiales poliméricos para BinderJett*" FUO-22-334. PIs: J García Álvarez and A. Presa Soto; 01/09/2022 - 30/06/2023 (40.000 €); *ii*) "*Estudio de recubrimientos en infiltraciones para BinderJett*" FUO-23-291. ARCELORMITTAL INNOVACIÓN PIs: J. García Álvarez and A. Presa Soto; 12/09/2023 - 11/09/2024 (40.000 €)
- Industrial project with CYCLOPE BIO S.L. "*Síntesis de derivados orgánicos de alto valor añadido con potenciales aplicaciones biológicas*" FUO-25-027. PIs: J. García Álvarez and A. Presa Soto; 15/01/2025 - 14/01/2026 (5.000 €).
- Two Industrial project with Fusoni Componentes S.L.: *i*) "*Diseño y formulación de desmoldeantes ecológicos libres de COVs basados en mezclas eutécticas (DESs)*" FUO-25-119. PIs: J. García Álvarez and A. Presa Soto; 01/03/2025 - 28/02/2026 (5.000 €); *ii*) "*Síntesis y optimización de nuevos ésteres fosfato para el control de propiedades interfaciales en formulaciones desmoldeantes*" FUO-26-122. PIs: J. García Álvarez and A. Presa Soto; 31/03/2026 - 28/02/2027 (10.000 €).

C.5. Awards

- In 2016, I received the "GEQO Young Scientist Award" from the GEQO group of the RSEQ.