Fecha del CVA	31/01/2023

Parte A. DATOS PERSONALES

Nombre	Carlos		
Apellidos	Silva Lopez		
Sexo	Hombre	Fecha de Nacimiento	[redacted]
DNI/NIE/Pasaporte	[redacted]		
URL Web			
Dirección Email	carlos.silva@uvigo.es		
Open Researcher and Contributor ID (ORCID)	0000-0003-4955-9844		

A.1. Situación profesional actual

Puesto	Catedrático de Universidad		
Fecha inicio	2022		
Organismo / Institución	Universidade de Vigo		
Departamento / Centro	Departamento de Química Orgánica / Facultad de Química		
País		Teléfono	986812632
Palabras clave	Catálisis; Química computacional		

A.2. Situación profesional anterior (incluye interrupciones en la carrera investigadora - indicar meses totales, según texto convocatoria-)

Periodo	Puesto / Institución / País
2006 - 2011	Investigador Contratado / Universidade de Vigo
2002 - 2005	Becario FPU / Universidade de Vigo
2000 - 2001	Becario de Colaboración (MEC) / Universidade de Vigo
2011 -	Profesor Titular de Universidad / Universidade de Vigo
2006 -	Research Specialist / University of Minnesota
2001 -	Beca 3er Ciclo (Xunta de Galicia) / Universidade de Vigo

Parte B. RESUMEN DEL CV

Prof. Silva graduated in Chemistry in 2001 at the Universidad de Vigo. He finished his degree with excellent academic performance, which was recognized with an award by the Ministry of Education of Spain as one of the most outstanding new graduates in the nation. Later he secured funding to pursue a PhD in Chemistry through a competitive call by the Ministerio de Educación within a program to promote and educate new faculty. This period ended in February 2006, with his dissertation on the structure and reactivity of polyenals and vinyl-allenes, which was also awarded by the Universidad de Vigo as one of the best thesis of that year. In March 2006 he moved to the University of Minnesota to join the research group of Prof. Darrin M. York to study catalytic processes in RNA. At the end of 2006 he moved back to Vigo with a competitive senior researcher position with a tenure-track structure funded by the State Government. During this period he kept a highly international profile, carrying out long term visits to the University of Minnesota, one of which was awarded with a fellowship by the Minnesota Supercomputer Institute (2007). He was also awarded a Young Chemist Award at the 42 IUPAC Congress in 2009. When the tenure track period expired he was promoted to permanent Professor of Organic Chemistry (Dec. 2011).

Once part of the permanent staff, Prof. Silva has been co-leading a research group pivoting around computational chemistry. This research group has potent scientific activity with tangible outputs mainly in the form of scientific articles, many of them in collaboration with international research groups. Currently, his research group at the Universidad de Vigo has been recently recognized by the state government with additional funding earmarked for research units with outstanding productivity. Prof. Silva has successfully supervised 4 PhD students so far and he has been principal investigator of competitive grants since 2009. To date, he has published about 100 research articles in top of the line journals and has participated in numerous

symposia and scientific meetings. He frequently serves as referee to evaluate the merit of scientific articles for renowned journals and editorials (ACS, RSC, Wiley, etc) and to evaluate grant proposals for agencies belonging to the USA, Italy, France, Spain and Panama. In 2015 Prof. Silva joined the CATCO group, led by Profs. Cremer and Kraka as invited professor, and in 2019 he visited Rutgers, the State University of New Jersey, in a combined educational/ research program under the auspices of the Fulbright Foundation. The State University of New Jersey is a top 100 educational institution according to the Shanghai ranking. In 2022 he was promoted to Full Professor of Organic Chemistry at the Universidad de Vigo.

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES

C.1. Publicaciones más importantes en libros y revistas con "peer review" y conferencias

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores. Si aplica, indique el número de citaciones

1 **Artículo científico**. Alvarez-García, J.; García-Lago, R.; Alonso-Gómez, J.L.; López, C.S.; Cid, M.M.2022. Accessible triplet excited states in the photoisomerization of allenes with extended conjugation Dalton Transactions. 51-4, pp.1357-1363.
2 **Artículo científico**. Lombardi, Lorenzo; Cerveri, Alessandro; Giovanelli, Riccardo; Castiñeira Reis, Marta; Silva López, Carlos; Bertuzzi, Giulio; Bandini, Marco. 2022. Direct Synthesis of α-Aryl-α-Trifluoromethyl Alcohols via Nickel Catalyzed Cross-Electrophile Coupling Angewandte Chemie International Edition. 61-47, pp.e202211732-e202211732.
3 **Artículo científico**. Santalla, H.; Nieto Faza, O.; Gómez, G.; Fall, Y.; López, C.S.2022. On the mechanism of the dyotropic expansion of hydrindanes into decalins Organic and Biomolecular Chemistry. 20-5, pp.1073-1079.
4 **Artículo científico**. Cerveri, A.; Giovanelli, R.; Sella, D.; Pedrazzani, R.; Monari, M.; Nieto Faza, O.; López, C.S.; Bandini, M.2021. Enantioselective CO2 Fixation Via a Heck-Coupling/Carboxylation Cascade Catalyzed by Nickel Chemistry - A European Journal. 27-28, pp.7657-7662.
5 **Artículo científico**. Sokolovicz, Y.C.A.; Nieto Faza, O.; Specklin, D.; Jacques, B.; López, C.S.; Dos Santos, J.H.Z.; Schrekker, H.S.; Dagorne, S.2020. Acetate-catalyzed hydroboration of CO2 for the selective formation of methanol-equivalent products Catalysis Science and Technology. 10-8, pp.2407-2414.
6 **Artículo científico**. Castiñeira Reis, M.; Marín-Luna, M.; Janković, N.; Nieto Faza, O.; Silva López, C.2020. Au(III) catalyzes the cross-coupling between activated methylenes and alkene derivatives Journal of Catalysis. 392, pp.159-164.
7 **Artículo científico**. Lopez, C.S.; Sanz, R.; Feberero, C.; Sedano, C.; Suarez-Pantiga, S.2020. Experimental and computational study of the 1,5-o --> n carbamoyl snieckus-fries-type rearrangement Journal of Organic Chemistry. 85-19, pp.12561-12578.
8 **Artículo científico**. Álvarez-García, J.; Rubio-Pisabarro, V.; Silva-López, C.; Cid, M.M.2020. Photochemically Driven Tandem Process in the Construction of a Biscyclopropylcage from 2,5-Dimethoxy- p-benzoquinone and Terminal Acetylenes Organic Letters. 22-11, pp.4527-4531.
9 **Artículo científico**. An, J.; Pedrazzani, R.; Monari, M.; Marin-Luna, M.; Lopez, C.S.; Bandini, M.2020. Site-selective synthesis of 1,3-dioxin-3-ones: Via a gold(i) catalyzed cascade reaction Chemical Communications. 56-56, pp.7734-7737.
10 **Artículo científico**. Saadat, K.; Villar López, R.; Shiri, A.; Nieto Faza, O.; Silva López, C.2020. The effect of solvation in torquoselectivity: Ring opening of monosubstituted cyclobutenes Organic and Biomolecular Chemistry. 18-32, pp.6287-6296.
11 **Artículo científico**. Stylianakis, I.; Nieto Faza, O.; López, C.S.; Kolocouris, A.2020. The key role of protodeauration in the gold-catalyzed reaction of 1,3-diynes with pyrrole and indole to form complex heterocycles Organic Chemistry Frontiers. 7-8, pp.997-1005.
12 **Artículo científico**. Virumbrales, C.; Suárez-Pantiga, S.; Marín-Luna, M.; Silva López, C.; Sanz, R.2020. Unlocking the 5-exo Pathway with the AuI-Catalyzed Alkoxycyclization of 1,3-Dien-5-ynes Chemistry - A European Journal. 26-38, pp.8443-8451.

13 **Artículo científico**. Cid, M.M.; Lago-Silva, M.; Comesaña, M.G.; Nieto Faza, O.; López, C.S.2019. Computational and experimental studies on Cu/Au-catalyzed stereoselective synthesis of 1,3-disubstituted allenes Org. Chem. Front.6-11, pp.1780-1786.

14 **Artículo científico**. Castro-Fernández, S.; Álvarez-García, J.; García-Río, L.; Silva-López, C.; Cid, M.M.2019. Double Protonation of a cis-Bipyridoallenophane Detected via Chiral-Sensing Switch: The Role of Ion Pairs Org. Lett.21-15, pp.5898-5902.

15 **Artículo científico**. Virumbrales, Cintia; Solas, Marta; Suárez-Pantiga, Samuel; Fernández-Rodríguez, Manuel A.; Marín-Luna, Marta; López, Carlos Silva; Sanz, Roberto. 2019. Gold(i)-catalyzed nucleophilic cyclization of β-monosubstituted o-(alkynyl)styrenes: a combined experimental and computational study Org. Biomol. Chem.17, pp.9924-9932.

16 **Artículo científico**. Cerveri, A.; Faza, O.N.; López, C.S.; Grilli, S.; Monari, M.; Bandini, M.2019. Phosphine-Catalyzed Stereoselective Dearomatization of 3-NO2-Indoles with Allenoates J. Org. Chem.84-10, pp.6347-6355.

17 **Artículo científico**. Castiñeira Reis, M.; Silva López, C.; and Faza, O.; Tantillo, D.2019. Pushing the limits of concertedness. A waltz of wandering carbocations Chem. Sci.Ranking JCR:. 10.1039-C8SC03567A, pp.2159-2170.

18 **Artículo científico**. Parodi, A.; Battaglioli, S.; Liu, Y.; Monari, M.; Marín-Luna, M.; Silva-López, C.; Bandini, M.2019. Scandium catalysed stereoselective thio-allylation of allenyl-imidates Chemical Communications. 55-65, pp.9669-9672.

19 **Artículo científico**. Yang Liu; Alessandro Cerveri; Assunta De Nisi; Magda Monari; Olalla Nieto Faza; Carlos Silva Lopez and Marco Bandini. 2018. Nickel catalyzed regio- and stereoselective arylation and methylation of allenamides via coupling reactions. An experimental and computational study Org. Chem. Front.Ranking JCR:. 5, pp.3231-3239.

20 **Artículo científico**. Villar López, R.; Nieto Faza, O.; Matito, E.; and López, C.2017. Cycloreversion of the CO2 trimer: a paradigmatic pseudopericyclic [2 + 2 + 2] cycloaddition reaction Org. Biomol. Chem.Ranking JCR:. 15, pp.435-441.

21 **Artículo científico**. Villar López, R.; Faza, O.; and Silva López, C.2017. Dynamic Effects Responsible for High Selectivity in a [3,3] Sigmatropic Rearrangement Featuring a Bispericyclic Transition State J. Org. Chem.Ranking JCR:. 82, pp.4758-4765.

22 **Artículo científico**. Santalla, H.; Faza, O.; Gómez, G.; Fall, Y.; and Silva López, C.2017. From Hydrindane to Decalin: A Mild Transformation through a Dyotropic Ring Expansion Org. Lett.Ranking JCR:. 19, pp.3648-3651.

23 **Artículo científico**. An, J.; Parodi, A.; Monari, M.; Reis, M.; Lopez, C.; and Bandini, M.2017. Gold-Catalyzed Dearomatization of 2-Naphthols with Alkynes Chem. Eur. J.Ranking JCR:. 23, pp.17473-17477.

24 **Artículo científico**. Kiriakidi, S.; Nieto Faza, O.; Kolocouris, A.; and López, C.2017. Governing effects in the mechanism of the gold-catalyzed cycloisomerization of allenic hydroxylamine derivatives Org. Biomol. Chem.Ranking JCR:. 15, pp.5920-5926.

25 **Artículo científico**. Silva López, C.; Faza, O.; Mansell, A.; Theis, Z.; and Bellert, D.2017. Three Reaction Channels with Signature Proton Transfers in the Ni(I)-Catalyzed Decomposition of Ethyl Acetate Organometallics. Ranking JCR:. 36, pp.761-766.

26 **Artículo científico**. Castiñeira Reis, M.; Marín-Luna, M.; Silva López, C.; and Faza, O.2017. [MoO2]2+-Mediated Oxygen Atom Transfer via an Unusual Lewis Acid Mechanism Inorg. Chem.Ranking JCR:. 56, pp.10570-10575.

27 **Artículo científico**. De Vicente Poutás, L.; Castiñeira Reis, M.; Sanz, R.; López, C.; and Faza, O.2016. A Radical Mechanism for the Vanadium-Catalyzed Deoxydehydration of Glycols Inorg. Chem.Ranking JCR: 4/46 Q1. 55, pp.11372-11382.

28 **Artículo científico**. González Comesaña, M.; Nieto Faza, O.; Cid, M.; and Silva López, C. 2016. Copper-Catalyzed Skeletal Rearrangement of O-Propargyl Oximes: A Mechanistic Manifold ChemCatChem. Ranking JCR: 29/146 Q1. 8, pp.2696-2703.

29 **Artículo científico**. Velasco, R.; Silva López, C.; Nieto Faza, O.; and Sanz, R.2016. Exploring the Reactivity of ?-Lithiated Aryl Benzyl Ethers: Inhibition of the [1,2]-Wittig Rearrangement and the Mechanistic Proposal Revisited Chem. Eur. J.Ranking JCR: 29/166 Q1. 22, pp.15058-15068.

30 **Artículo científico**. Castiñeira Reis, M.; López, C.; Kraka, E.; Cremer, D.; and Faza, O.2016. Rational Design in Catalysis: A Mechanistic Study of ?-Hydride Eliminations in Gold(I) and Gold(III) Complexes Based on Features of the Reaction Valley Inorg. Chem.Ranking JCR: 4/46 Q1. 55, pp.8636-8645.

31 **Artículo científico**. Carlos Silva López; Olalla Nieto Faza; Marek Freindorf; Elfi Kraka and Dieter Cremer. 2016. Solving the Pericyclic?Pseudopericyclic Puzzle in the Ring-Closure Reactions of 1,2,4,6-Heptatetraene Derivatives J. Org. Chem.Ranking JCR: 8/59 Q1. 81, pp.404-414.

32 **Artículo científico**. Costa, I.; Marín-Luna, M.; Comesaña, M.; Faza, O.; and Silva López, C. 2016. The Outer-Sphere Mechanism of Nitrene Transfer onto Gold(I) Alkyne Complexes ChemCatChem.Ranking JCR: 29/146 Q1. 8, pp.2387-2392.

C.3. Proyectos o líneas de investigación

1 **Proyecto**. Synthesis, Spectroscopy and Simulation (Grupos de Referencia Competitiva). XUNTA DE GALICIA. Magdalena Cid Fernández. 01/01/2021-20/11/2024. 200.000 €.

2 **Proyecto**. Catálisis homogénea computacional: procesos de transferencia de oxígeno y activación de enlaces múltiples. Carlos Silva Lopez. 01/09/2021-31/08/2024. 84.700 €.

3 **Proyecto**. Cluster de Investigación e Transferencia Agroalimentario do Campus da Auga (CITACA). XUNTA DE GALICIA. Ana Torrado Agrasar. Desde 01/01/2018. 424.000 €.

4 **Proyecto**. Synthesis, Spectroscopy and Simulation (Grupos de Referencia Competitiva). XUNTA DE GALICIA. Magdalena Cid Fernández. Desde 01/01/2017. 200.000 €.

5 **Proyecto**. Catalisis in-silico para el desarrollo de nuevas metodologias sinteticas sostenibles. Ministerio de Economía y Competitividad (MINECO). Carlos Silva López y Olalla Nieto Faza. Desde 30/12/2016. 36.300 €.

6 **Proyecto**. Catálisis computacional: aplicación de la modelización molecular para desarrollar nuevos sistemas catalíticos basados en oro, molibdeno o ácidos de Bronsted. Ministerio de Economía y Competitividad (MINECO). Carlos Silva López y Olalla Nieto Faza. Desde 01/10/2014. 36.300 €.

7 **Proyecto**. Synthesis, Spectroscopy and Simulation (Grupos con Potencial de Crecimiento). XUNTA DE GALICIA. Maria Magdalena Cid Fernández. Desde 01/01/2014. 70.000 €.

8 **Proyecto**. PIRSES-GA-2012-318930 - InTechSE. International network on integrated techniques in structural elucidation. Commission of the European Communities (FP7-PEOPLE 2012). Maria Magdalena Cid Fernández. Desde 01/09/2012. 21.000 €.

9 **Proyecto**. Simulation in Organic Chemistry (SimOC 2011). Ministerio de Ciencia e Innovacion (MICINN). Carlos Silva Lopez. Desde 01/07/2011. 3.000 €.