Fecha del CVA	22/11/2018

Parte A. DATOS PERSONALES

Nombre y Apellidos	Jesus Campos Manzano		
DNI/NIE/Pasaporte		Edad	
Núm. identificación del investigador	Researcher ID	I-4994-2014	
	Scopus Author ID	15920652000	
	Código ORCID	0000-0002-5155-1262	

A.1. Situación profesional actual

Organismo	Consejo Superior de Investigaciones Científicas		
Dpto. / Centro	Química Organometálica / Instituto de Investigaciones Químicas		
Dirección			
Teléfono		Correo electrónico	
Categoría profesional	Científico Titular	Fecha inicio	2018
Espec. cód. UNESCO	230316 - Mecanismos de las reacciones inorgánicas; 230321 - Compuestos organometálicos; 230329 - Elementos de transición		
Palabras clave	Química organometálica; Homogénea		

A.2. Formación académica (titulo, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año

A.3. Indicadores generales de calidad de la producción científica

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

During his career, Jesús Campos has worked in different topics mainly in the fields of organometallic chemistry and catalysis. At this early stage, he has a strong publication record, with **49 scientific articles** in international top journals, **23 as the first author and 11 as the corresponding author, including a recent single-author paper in JACS**. His interests include all aspects of inorganic and organometallic chemistry, with particular emphasis in novel catalytic applications for organic synthesis and green chemistry.

Jesús Campos studied Chemistry at Universidad de Sevilla (**First National Award**, 2007), carrying out undergraduate research under the umbrella of two competitive research grants. He moved to the University of Manchester to work with **Prof. John D. Sutherland** (MPhil, 2008). Back to Spain he joined the group of **Prof. E. Carmona** receiving **two PhD Awards** and an **International PhD Distinction** (2012) after spending a **visiting stay (FPU) with Prof. M. Brookhart** (Univ. of North Carolina, 2010). Dr. Campos' research attracted the attention of Astra Zeneca, Novartis and RC Tritec, with who collaborations were established. These investigations were recognized with the **Javier Benjumea Puigcerver Research Prize** to Campos and Carmona (2013). In addition, Dr. Campos obtained a second Master Degree in Crystallography and Crystallization from the International University Menéndez Pelayo (2010).

He returned to the US as a postdoctoral researcher joining the group of **Prof. R. H. Crabtree at Yale University** (2013-2014) **,** to work in green catalysis and energy-related transformations. Dr. Campos led a project focused on the valorization of renewable materials by homogeneous catalysis (e. g. **Nature Comm. 2014, as corresponding author**). This triggered a collaboration with the industrial sector and was recognized with the **Premio Joven a la Cultura Científica** awarded to Dr. Campos by the Sevilla City Council (2015).

He was awarded with a competitive **Talentia/Marie Curie Fellowship** for a second postdoctoral period in the group of **Prof. Simon Aldridge at University of Oxford** (2014-2016), focusing on bond activation and catalysis with Main Group systems. He continued his research in Sevilla after being awarded with a competitive **Marie Curie IF** (2016) under which he has pursued the establishment of his independent research career at University of Sevilla. After a short time, Dr. Campos has secured a **Young Researchers BBVA Foundation**

Project (<5% success rate) as the **Principal Investigator**, anda highly prestigious **ERC Starting Grant** from the European Research Council. In 2017, his scientific achievements were recognized with two **Young Research Awards from the Spanish Royal Society of Chemistry**and from the Sevillian Academy of Sciences.

He is **currently supervising 1 postdoc, 4 PhDs, and 2 last-year undergraduate students** working on diverse projects based on chemical cooperativity and catalysis. In 2017 he has been appointed fully-tenured permanent researcher at CSIC (Científico Titular, Instituto de Investigaciones Químicas, Sevilla).

The applicant has demonstrated to have a wide background in the fields of organometallic chemistry and catalysis, which has provided him with leadership, management, problem-solving and project planning skills, essential to become a young research leader.

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología)

C.1. Publicaciones

1 **Artículo científico**. Espada, M. F.; et al. (5/2). 2015. Methyl-, Ethenyl-, and Ethynyl-Bridged Cationic Digold Complexes Stabilized by Coordination to a Bulky Terphenylphosphine Ligand Angewandte Chemie (International ed. in English). Wiley-VCH. 54, pp.15379-15384.

2 **Artículo científico**. Campos, J.; Aldridge, S.(2/1). 2015. Catalytic Borylation using an Air-stable Zinc Boryl Reagent: Systematic Access to Elusive Acylboranes Angewandte Chemie (International ed. in English). Wiley-VCH. 54, pp.14159-14163.

3 **Artículo científico**. Sharninghausen, L. S.; et al. (5/5). 2015. Gel-assisted crystallization of Ir-4(IMe)(7)(CO)H-10 (2+) and Ir-4(IMe)(8)H-9 (3+) clusters derived from catalytic glycerol dehydrogenation Dalton Transactions. RSC. 44-42, pp.18403-18410.

4 **Artículo científico**. Sharninghausen, Liam S.; et al. (4/2). 2014. Efficient selective and atom economic catalytic conversion of glycerol to lactic acid Nature Communications. Nature Publishing Group. 5.

5 **Artículo científico**. Campos, Jesus; et al. (4/1). 2014. A Carbene-Rich but Carbonyl-Poor [Ir-6(IMe)(8)(CO)(2)H-14](2+) Polyhydride Cluster as a Deactivation Product from Catalytic Glycerol Dehydrogenation Angewandte Chemie-International Edition. Wiley-VCH. 53-47, pp.12808-12811.

6 **Artículo científico**. Dinh Cao Huan Do; et al. 2018. N-nacnac Stabilized Tetrelenes: Formation of an N,P-Heterocyclic Germylene via C–C Bond Insertion Zeitschrift für anorganische und allgemeine Chemie (ZAAC). Wiley - VCH. 644, pp.1238.

7 **Artículo científico**. Marina Pérez Jiménez; et al. (4/2). 2018. Reactivity of a trans-[H–Mo[quadruple bond]Mo–H] unit towards alkenes and alkynes: bimetallic migratory insertion, H-elimination and other reactions Chemical Communications. Royal Society of Chemistry. 54, pp.9186.

8 **Artículo científico**. Moreno, J. J.; et al. (6/5). 2018. Ligand Rearrangement and Hemilability in Rhodium(I) and Iridium(I) Complexes Bearing Terphenyl Phosphines European Journal of Inorganic Chemistry. Wiley. 2018, pp.2309.

9 **Artículo científico**. Espada, M. F.; et al. (8/3). 2017. Cationic (η5-C5Me4R)RhIII Complexes with Metalated Aryl Phosphines Featuring η4-Phosphorus plus Pseudo-Allylic Coordination Organometallics. ACS. 37, pp.11.

10 **Artículo científico**. Curado, N.; et al. (8/3). 2017. An Unsaturated Four-Coordinate Dimethyl Dimolybdenum Complex with a Molybdenum-Molybdenum Quadruple Bond Chemistry European Journal. Wiley. 23, pp.194-205.

11 **Artículo científico**. Campos, J.; et al. (4/1). 2017. A Combined Experimental/Computational Study of the Mechanism of a Palladium-Catalyzed Bora- Negishi Reaction.Chemistry European Journal. Wiley. 23, pp.12655.

12 **Artículo científico**. Shopov, D. Y.; et al. (7/3). 2017. A Full Set of Iridium(IV) Pyridine-Alkoxide Stereoisomers: Highly Geometry-Dependent Redox Properties Chemical Science. Royal Society of Chemistry. DOI: 10.1039/c6sc037-DOI: 10.1039/c6sc037.

13 **Artículo científico**. Campos, J.(1/1). 2017. Dihydrogen and Acetylene Activation by a Gold(I)/Platinum(0) Transition Metal Only Frustrated Lewis Pair Journal of the American Chemical Society. ACS. 139, pp.2944.

14 **Artículo científico**. Protchenko, A. V.; et al. (10/4). 2017. Electronic Delocalization in Two and Three Dimensions: Differential Aggregation in Indium “Metalloid” Clusters Angewandte Chemie International Edition. Wiley. 56, pp.15098.

15 **Artículo científico**. Campos, J.; Carmona, E.(2/1). 2017. Synthesis and Reactivity Studies of Cationic Ir(III) Alkylidines. α-Hydride Abstraction Reactions Journal of the Mexican Chemical Society. 61, pp.77.

16 **Artículo científico**. Sharninghausen, L. S.; et al. (7/5). 2017. The Neutron Diffraction Structure of [Ir4(IMe)8(H)10]2+ Polyhydride Cluster: Testing the Computational Hydride Positional Assignments Journal of Organometallic Chemistry. Royal Society of Chemistry. 849, pp.17.

17 **Artículo científico**. Ortega-Moreno, L.; et al. (10/5). 2016. Synthesis, Properties, and Some Rhodium, Iridium, and Platinum Complexes of a Series of Bulky m-Terphenylposphine Ligands Polyhedron. 116, pp.170-181.

18 **Artículo científico**. Rit, A.; et al. (4/2). 2016. A stable heavier Group 14 analogue of vinylidene Nature Chemistry. Nature. 8, pp.1022-1026.

19 **Artículo científico**. Usher, M.; et al. (7/4). 2016. A systematic study of structure and E-H bond activation chemistry by sterically encumbered germylene complexes Chemistry a European Journal. 22, pp.11685-11698.

20 **Artículo científico**. Bottari, G.; et al. (6/4). 2016. Reaction of [TpRh(C2H4)2] with Dimethyl Acetylenedicarboxylate: Identification of Intermediates of the [2+2+2] Alkyne and Alkyne–Ethylene Cyclo(co)trimerizations Chemistry a European Journal. Wiley. 22, pp.13715-13723.

21 **Artículo científico**. Campos, J.; et al. (4/1). 2016. Transition metal methyl complexes Chemistry European Journal. Wiley-VCH. Just accepted-10.1002/chem.2015044.

22 **Artículo científico**. Mo, Z.; et al. (5/3). 2016. Catalytic BN Dehydrogenation using Frustrated Lewis Pairs: Evidence for a Chain-Growth Coupling Mechanism Journal of the American Chemical Society. ACS. 138-10, pp.3306-3309.

23 **Artículo científico**. Mo, Z.; et al. (6/4). 2015. Facile Reversibility by Design: Tuning Small Molecule Capture and Activation by Single Component Frustrated Lewis Pairs Journal of the American Chemical Society. American Chemical Society. 137-38, pp.12227-12230.

24 **Artículo científico**. Frank, Rene; et al. (8/3). 2015. Cobalt Boryl Complexes: Enabling and Exploiting Migratory Insertion in Base-Metal-Mediated Borylation.Angewandte Chemie (International ed. in English). Wiley-VCH. 54-33, pp.9586-90.

25 **Artículo científico**. Campos, Jesus; et al. (7/1). 2015. Reactivity of Cationic Agostic and Carbene Structures Derived from Platinum(II) Metallacycles Chemistry-a European Journal. Wiley-VCH. 21-24, pp.8883-8896.

26 **Artículo científico**. Shopov, Dimitar Y.; et al. (5/3). 2015. Stable Iridium(IV) Complexes of an Oxidation-Resistant Pyridine-Alkoxide Ligand: Highly Divergent Redox Properties Depending on the Isomeric Form Adopted Journal of the American Chemical Society. ACS. 137-22, pp.7243-7250.

27 **Artículo científico**. Roa, A. E.; et al. (9/2). 2015. Synthesis of new heteroscorpionate iridium(I) and iridium(III) complexes Dalton Transactions. RSC. 44-15, pp.6987-6998.

28 **Artículo científico**. Szabla, Rafal; et al. (6/2). 2015. Excited-state hydrogen atom abstraction initiates the photochemistry of beta-2 '-deoxycytidine Chemical Science. RSC. 6-3, pp.2035-2043.

29 **Artículo científico**. Allen, Kate E.; et al. (4/2). 2015. Living Polymerization of Ethylene and Copolymerization of Ethylene/Methyl Acrylate Using "Sandwich" Diimine Palladium Catalysts Acs Catalysis. ACS. 5-1, pp.456-464.

30 **Artículo científico**. Campos, Jesus; et al. (4/1). 2015. Methanol Dehydrogenation by Iridium N-Heterocyclic Carbene Complexes Inorganic Chemistry. ACS. 54-11, pp.5079-5084.

31 **Artículo científico**. Campos, Jesus; Carmona, Ernesto. (2/1). 2015. Rhodium and Iridium Complexes of Bulky Tertiary Phosphine Ligands. Searching for Isolable Cationic M-III Alkylidenes Organometallics. ACS. 34-11, pp.2212-2221.

32 **Artículo científico**. Manas, Michael G.; et al. (5/2). 2015. Selective catalytic oxidation of sugar alcohols to lactic acid Green Chemistry. RSC. 17-1, pp.594-600.

33 **Artículo científico**. Sinha, Shashi Bhushan; et al. (4/2). 2014. Co(II), a catalyst for selective conversion of phenyl rings to carboxylic acid groups Rsc Advances. RSC. 4-90, pp.49395-49399.

34 **Artículo científico**. Thomsen, Julianne M.; et al. (7/4). 2014. Electrochemical Activation of Cp* Iridium Complexes for Electrode-Driven Water-Oxidation Catalysis Journal of the American Chemical Society. ACS. 136-39, pp.13826-13834.

35 **Artículo científico**. Campos, Jesus; et al. (4/1). 2014. Metal-free amidation of ether sp(3) C-H bonds with sulfonamides using PhI(OAc)(2) Rsc Advances. RSC. 4-89, pp.47951-47957.

36 **Artículo científico**. Chen, Jeffrey; et al. (5/2). 2014. Distortional Effects of Noncovalent Interactions in the Crystal Lattice of a Cp*Ir(III) Acylhydroxamic Acid Complex: A Joint Experimental-Computational Study Organometallics. ACS. 33-17, pp.4417-4424.

37 **Artículo científico**. Campos, Jesus; et al. (5/1). 2014. Catalyst Activation by Loss of Cyclopentadienyl Ligands in Hydrogen Transfer Catalysis with Cp*Ir-III Complexes Acs Catalysis. ACS. 4-3, pp.973-985.

38 **Artículo científico**. Hintermair, Ulrich; et al. 2014. Hydrogen-Transfer Catalysis with Cp*Ir-III Complexes: The Influence of the Ancillary Ligands Acs Catalysis. ACS. 4-1, pp.99-108.

39 **Revisión bibliográfica**. Campos, J.(1/1). 2018. Dehydrogenation of alcohols and polyols from a hydrogen production perspective Physycal Sciences Reviews. De Gruyter. 10.1515/psr-2017-001.

40 **Revisión bibliográfica**. Campos, J.(1/1). 2017. Pares de Lewis frustrados basados en metales de transición Anales de Química. RSEQ. 113, pp.224-230.

C.2. Proyectos

1 ERC Starting grant: Cooperative Catalysis: Using Interdisciplinary Chemical Systems to Develop New Cooperative Catalysts ERC Starting Grant. Jesús Campos Manzano. (CSIC). 01/02/2018-31/01/2023. 1.445.000 €. Investigador principal.

2 EQC2018-004437-P, Adquisición de Equipo Estándar de Difracción de Rayos X de Monocristal Ministerio de Ciencia, Innovación y Universidades. Ayudas para la adquisición de equipamiento científico-técnico. (Instituto de Investigaciones Químicas - CSIC). 01/01/2019-31/12/2020. 216.952,64 €.

3 CTQ2017-92622-EXP, Funcionalización del dióxido de carbono mediante nuevos materiales cooperativos basados en clusters metálicos Ministerio de Ciencia, Innovación y Universidades. Explora Ciencia 2017. Jesús Campos Manzano. (Instituto de Investigaciones Químicas - CSIC). 01/11/2018-31/10/2020. 36.300 €. Investigador principal.

4 Desarrollo de interclusters metálicos supramoleculares para la valorización de biomasa Ayudas Fundación BBVA Jóvenes Investigadores. Jesús Campos Manzano. (Universidad de Sevilla). 01/10/2016-30/04/2018. 40.000 €. Investigador principal.

C.3. Contratos

Estudio de Viabilidad Producción Catalítica de Hidrógeno a partir de Hidrosilanos y Aminoboranos Hynergreen Technologies, S.A.. Ernesto Carmona Guzmán. (Universidad de Sevilla). 02/2011-01/08/2011. 16.992 €.

C.4. Patentes

Jesús Campos Manzano; Ana Cristina Esqueda Oliva; Ernesto Carmona Guzmán. P201000507. Cationic Complexes Bearing Cyclopentadienyl Ligands and their Use as Catalyst for the Preparation of Deuterated and Tritiated Silanes España. 2010. Universidad de Sevilla-CSIC.