CURRICULUM VITAE

Prof. JULIO LLORET FILLOL

Currículum vitae

ResearcherID: A-3102-2009

SURNAME: ***LLORET FILLOL***
NAME: ***JULIO***
DNI: ***20825037D*** *BIRTH DATE:* 18-03-1977
ADDRESS: C/ Ernest Vilches, nº 2, p6 (Tarragona)
CITY: Tarragona *TELF:* 610997016
UNESCO CODE: 2303.21; 2306.11; 2303.07

ACADEMIC EDUCATION

Licenciado en Química	University de Valencia	31/07/2001

PhD

Doctor en Química	University de Valencia	26/06/2006

THESIS DIRECTORS:
Prof. PASCUAL LAHUERTA PEÑA
Prof. JULIA PÉREZ PRIETO

CURRENT PROFESSIONAL STATUS

Organization: Institute of Chemical Research of Catalonia ICIQ
Faculty, School or Institute: Institute of Chemical Research of Catalonia Iciq
Position. Research Group Leader
Start Date: 01-11-2014
Mailing Address: Avenida Paisos Catalans 16, Tarragona 43007
Contact Number: +34 610997016

Organization: Institución Catalana de Investigación y Estudios Avanzados (ICREA)
Position. ICREA Research Professor
Start Date: 01-11-2015
Mailing Address: Avenida Paisos Catalans 16, Tarragona 43007
Contact Number: +34 610997016
Dedication: Full time as ICREA Research Professor

Company: Jolt Solutions (Iciq Spin-Off)
Position. Chief Scientific (CS)
Start Date: 01-04-2022
Mailing Address: Avenida Paisos Catalans 16, Tarragona 43007
Email Address: Jlloret@Jolt-Solutions.Com
Contact Number: +34 610997016
Dedication: 10% time allocation

PREVIOUS ACTIVITIES OF A SCIENTIFIC OR PROFESSIONAL NATURE

Job	Institution	dates
Chief Scientific Officer (CSO)	Jolt Solutions	01/04/2022 –
Chief Scientific Officer (CSO)	Treellum Technologies	15/07/2020 –
ICREA Research Profesor	*Institute of Chemical Research of Catalonia* ICIQ	01/11/2015 –
ICIQ Research Group Leader	*Institute of Chemical Research of Catalonia* ICIQ	01/11/2014 –
Junior Research Group Leader	*Institute of Chemical Research of Catalonia* ICIQ	01/11/2014 - 31/10/2015
Visiting Professor	University of Minnesota (USA)	24/06/2013 - 26/07/2013
Programa Ramon y Cajal. MCYT-2009	Universitat de Girona (Spain)	01/04/2010 - 31/10/2014
Marie Curie IE for career development University of Heidelberg (Germany) 1/05/2008 - 31/03/2010	University of Heidelberg (Germany)	01/05/2008 - 31/03/2010
Post-Doctoral Fellowship MEyC	University of Heidelberg (Germany)	01/12/2006 - 30/04/2008
Invited Professor	University Rovira I Virgili (Spain)	01/10/2006 - 31/10/2006
PhD Researcher	University of Valencia (Spain)	01/01/2006 - 01/07/2006
Post-Doctoral Researcher	University of Valencia (Spain)	01/07/2006 - 30/09/2006
PhD Fellowship MEyC (FPU)	University of Valencia (Spain)	01/01/2003 - 31/12/2005
PhD Fellowship Fundación Jose y Ana Royo.	University of Valencia (Spain)	01/01/2002 - 01/12/2002

LANGUAGES OF SCIENTIFIC INTEREST (R=regular, B=good, C=correctly)

Language	Speaks	read	Writes
Español	C	C	C
Ingles	C	C	C
Catalán	C	C	C

PARTICIPATION IN FUNDED RESEARCH PROJECTS

Title of the project: PHOTOcatalytic Systems for Solar fuels energy INTegration into the industry with local resources (**PHOTOSINT**).
Funding entity: EUROPEAN PROYECT. TOPIC: HORIZONT-CL5-2022-D3-02-06
Participating organizations: ICIQ (+13 parners)
Duration, from: 2023 to: 2025 Grant Amount: TOTAL: 4.998.988,75. For the Lloret-Fillol group: 467.812,50 EUR
Principal Investigator and responsible for the WP1: Julio Lloret Fillol

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Title of the project: Proyectando los límites de la electrocatálisis de CO_2 a combustibles mediante el desarrollo automatizado de catalizadores (ElectroFuel).
Funding entity: Fundación Ramón Areces.
Participating organizations: ICIQ
Duration, from: 2023 to: 2025 Grant Amount: 128.000,00 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: Fabrication of Highly Efficient Electrodes for the Production of CO under Industrial Relevant Conditions in Electrolyzers (**Electra-4-Fuel**).
Funding entity: Ministerio de Ciencia e Innovación, Pruebas de Concepto 2022, PDC2022-133451-I00
Participating organizations: ICIQ
Duration, from: 2022 to: 2024 Grant Amount: 115.000,00 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: **PHOTOSCALE:** Smart Flow photoreactor to industrialize photochemical reactions.
Funding entity: AGAUR, 2021 PROD 00043
Participating organizations: ICIQ
Duration, from: 2022 to: 2024 Grant Amount: 99.961 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: Towards Automatized Development of Electrocatalysts for CO_2-to-Fuels **(Auto4Fuel).**
Funding entity: Ministerio de Ciencia e Innovación, TED2021-132790B-I00
Participating organizations: ICIQ
Duration, from: 2022 to: 2024 Grant Amount: 302,450 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: Fabrication of Highly Efficient Electrodes and Test for the Production of Hydrogen under Industrial Relevant Conditions in Anionic Membrane Exchange Electrolyzers **(Electra-H2).**
Funding entity: Ministerio de Ciencia e Innovación | Ref: PDC2021-121185-I00
Participating organizations: ICIQ
Duration, from: 2021 to: 2023 Grant Amount: 143,750 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: **PHOTO-RX:** desenvolupament i comercialització d'un fotoreactor paral·lel modular industrialitzable
Funding entity: AGAUR, 2019PROD00121
Participating organizations: ICIQ
Duration, from: 2020 to: 2022 Grant Amount: 99.999 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: Development of new catalysts for oxidation and reduction chemistry in the context of Artificial Photosynthesis **(AP2Chem).**
Funding entity: Ministerio de Ciencia e Innovación | Ref: PID2019-110050RB-I00
Participating organizations: ICIQ
Duration, from: 2020 to: 2023 Grant Amount: 169,400 EUR + Beca PFI
Principal Investigator: Julio Lloret Fillol

Title of the project: Reduciones Quimicas Mediadas Por La Luz. De Combustibles A Compuestos Solares. **(RESOL)**
Funding entity: Ministerio de Economía Y Competencia, CTQ2016-80038-R
Participating organizations: ICIQ
Duration, from: 2016 to: 2020 Grant Amount: 70.000 EUR + Beca PFI
Principal Investigator: Julio Lloret Fillol

Title of the project: An Artificial Leaf: a photo-electro-catalytic cell from earth-abundant materials for sustainable solar production of CO_2-based chemicals and fuels
Funding entity: HORIZON-2020 - FET Proactive 732840 A-LEAF
Participating organizations: Consortium
Duration, from: 2017 to: 2020 Grant Amount: 7.980.861 EUR
Principal Investigator: Jose Ramón Galan Mascaros,

Title of the project: **Towards a Greener Reduction Chemistry by Using Cobalt Coordination Complexes as Catalysts and Light-driven Water Reduction as a Source of Reductive Equivalents**

Funding entity: ERC-2014-CoG 648304 (GREENLIGHT_REDCAT)
Participating organizations: ICIQ
Duration, from: 2015 to: 2020 Grant Amount: 1.999.063 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: **Study of intermediates in catalytic H_2 generation with cobalt complexes based on tacn**
Funding entity: Diamond, and Electra SINCROTRONS
Participating organizations: ICIQ
Duration, from: 2015 to: 2015 Grant Amount: measurements aprox. 25.000 EUR
Principal Investigator: Julio Lloret Fillol

Title of the project: **Well-Defined Iron Catalysts for Challenging Tasks**
Funding entity: Fundação para a Ciência e a Tecnologia (PTDC/QEQ-QIN/0565/2012)
Participating organizations: Instituto de Tecnologia Química y Biológica
Duration, from: 2013 to: 2015 Grant Amount: 148.000 EUR
Principal Investigator: Beatriz Royo
Investigador Key: Julio Lloret Fillol

PUBLICATIONS
(A Article, B: Book, C Review)

Authors (signature order): J. W. Faller, J. Lloret, J. Parr
Title: Complexes of elements of groups 9 and 10 with new chiral chelating bisphosphine monosulfide and monoselenide ligands
Journal: NEW JOURNAL OF CHEMISTRY
Volume: 26 **Pages, initial:** 883 **final:**888 **Year:** 2002
Code: A Code Article**:** 013535 **Order:** 001 // citations: 24

Authors (signature order): Klaus Bieger, Francisco Estevan, Pascual Lahuerta, Julio Lloret, Julia Perez-Prieto,* Mercedes Sanaú, Norma Siguero, Salah-Eddine Stiriba
Title: Reaction of Tris(2-thienyl)phosphine with Dirhodium(II) Acetate. Orthometalation of a Heteroaromatic p-System and an Unusual Ring Rearrangement
Journal: 900802 - Organometallics
Volume: 22 **Number:** 9 **Pages, initial:** 1799 **final:** --- **Year:** 2003 **ISSN:** 0276-7333
Code: A Code Article**:** 013535 **Order:** 002 // citations: 17

Authors (signature order): Francisco Estevan, Pascual Lahuerta,* Julio Lloret, Julia Pérez-Prieto,* Helmut Werner*
Title: Stereoselective synthesis and catalytic behavior of rhodium(II) compounds with metalated chiral phospholanes as ligands
Journal: 900802 - Organometallics
Volume: 23 **Number:** 6 **Pages, initial:** 1369 **final:** 1372 **Year:** 2004 **ISSN:** 0276-7333
Code: A Code Article**:** 013536 **Order:** 003 // citations: 12

Authors (signature order): Francisco Estevan, Pascual Lahuerta,* Julio Lloret, Mercedes Sanaú, M. Angeles Ubeda,* Jaume Vila.
Title: Enantio- and diastereocontrol in intermolecular cyclopropanation reaction of styrene catalyzed by dirhodium(II) complexes with bulky ortho-metalated aryl phosphines
Journal: 909184 - Chemical Communications
Volume: --- **Number:** 21 **Pages, initial:** 2408 **final:** 2409 **Year:** 2004 **ISSN:** 1359-7345
Code: A Code Article**:** 013537 **Order:** 004 // citations: 14

Authors (signature order): Estevan,F.; Lahuerta, P.; Lloret Fillol,J.; Peno,D.; Sanaú, M.; M.A. Úbeda
Title: Rhodium (II) compounds with functionalized metalated phosphines as bridging ligands
Journal: Journal of Organometallic Chemistry
Volume: 690 **Number:** 20 **Pages, initial:** 4424 **final:** 4432 **Year:** 2005
Code: A Code Article**:** 013539 **Order:** 005 // citations: 9

Authors (signature order): Lloret Fillol,J.; Bieger,K.; Estevan, F.; Lahuerta, P.; Hirva,P.; Pérez-Prieto,J.; Sanaú, M.
Title: Synthesis of dirhodium(II) complexes with several cyclometalated thienylphosphines
Journal: 900802 - Organometallics
Volume: 25 **Number:** 21 **Pages, initial:** 5113 **final:** 5121 **Year:** 2006 **ISSN:** 0276-7333
Code: A Code Article**:** 013539 **Order:** 006 // citations: 15

Authors (signature order): Estevan,F.; Lloret Fillol,J.; Sanaú, M.; Ubeda, M. A.
Title: Enantio- and diastereocontrol in intermolecular cyclopropanation reaction of styrene catalyzed by dirhodium(II) complexes with bulky ortho- metalated aryl phosphines: Catalysis in water as solvent. Study of a (+)-nonlinear effect
Journal: 900802 - Organometallics
Volume: 25 **Number:** 21 **Pages, initial:** 4977 **final:** 4984 **Year:** 2006 **ISSN:** 0276-7333
Code: A Code Article**:** 013540 **Order:** 007 // citations: 38

Authors (signature order): Lloret Fillol,J.; Estevan,F.; Lahuerta, P.; Hirva, P.;Pérez-Prieto,J.;* Sanaú.M.;
Title: Acid-promoted rearrangement of the metalated thienyl rings in dirhodium(II) complexes with thienyl phosphines as ligands
Journal: 900802 - Organometallics
Volume: 25 **Number:** 13 **Pages, initial:** 3156 **final:** 3165 **Year:** 2006 **ISSN:** 0276-7333

Code: A Code Article**:** 013541 **Order:** 008 // citations: 18

Authors (signature order): Ciclosi, M.;Lloret Fillol, J.; Estevan, F.;Lahuerta, P.; Sanaú, M.;Pérez-Prieto, J.
Title: C3-Symmetrical palladium catalyst with a P-tripodal ligand
Journal: 900624 - Angewandte Chemie-International Edition
Volume: 45 **Number:** 40 **Pages, initial:** 6741 **final:** 6744 **Year:** 2006 **Publication place:** ALEMANIA **ISSN:** 1433-7851
Code: A Code Article**:** 013542 **Order:** 009 // citations: 51

Authors (signature order): Hirva,P.; Esteban,J.; Lloret Fillol,J.; Lahuerta,P.; Pérez-Prieto, J.
Title: Determination of equilibrium constants and computational interaction energies for adducts of [Rh2(RCO2)4-n(PC)n] (n = 0-2)
Journal: 900752 - Inorganic Chemistry
Volume: 46 **Number:** --- **Pages, initial:** 2619 **final:** --- **Year:** 2007 **ISSN:** 0020-1669
Code: A Code Article**:** 013543 **Order:** 010 // citations: 22

Authors (signature order): Lloret Fillol,J.; Estevan,F.; Bieger,K.; Villanueva,C.; Úbeda,M.A.
Title: Immobilized Chiral ortho-Metalated Dirhodium(II) Compounds as Catalysts in the Asymmetric Cyclopropanation of Styrene with Ethyl Diazoacetate
Journal: 900802 - Organometallics
Volume: 26 **Number:** --- **Pages, initial:** 4145 **final:** --- **Year:** 2007 **ISSN:** 0276-7333
Code: A Code Article**:** 013544 **Order:** 011 // citations: 31

Authors (signature order): Herrmann,H.; Lloret Fillol,J.; Wadepohl,H.; GadeL.H.
Title: A Zirconium Hydrazide as a Synthon for a Metallanitrene Equivalent: Atom-by-Atom Assembly of [EN2]2- Units (E=S, Se) by Chalcogen-Atom Transfer in the Coordination Sphere of a Transition Metal
Journal: 900624 - Angewandte Chemie-International Edition Selected as Very Important Paper
Volume: 46 **Number:** --- **Pages, initial:** 8426 **final:** --- **Year:** 2007 **ISSN:** 1433-7851
Code: A Code Article**:** 013545 **Order:** 012 // citations: 66

Authors (signature order): Herrmann, H.; Lloret Fillol,J.; Wadepohl,H.; Gade,L.H.
Title: A Zirconium (1-Pyridinio)imido Complex: Facile N-N Bond Cleavage and N-C Bond Formation
Journal: 900802 - Organometallics
Volume: 27 **Number:**16 **Pages, initial:** 172 **final:** 174 **Year:** 2008 **ISSN:** 0276-7333
Code: A Code Article**:** 013546 **Order:** 013 // citations: 22

Authors (signature order): Lloret Fillol, J.; Stern, M.;Estevan, F.;Sanaú, M.; Úbeda, M. A.
Title: Ortho-metalated dirhodium(II) catalysts immobilized on a polymeric cross-linked support by copolymerization. Study of their catalytic activity in the asymmetric cyclopropanation of styrene with ethyl diazoacetate
Journal: 900802 - Organometallics
Volume: 27 **Number:** --- **Pages, initial:** 850 **final:** --- **Year:** 2008 **ISSN:** 0276-7333
Code: A Code Article**:** 013547 **Order:** 014 // citations: 23

Authors (signature order): Vujkovic, N.; Lloret Fillol,J.; Ward, B.D.; Wadepohl, H.; Mountford,P.; Gade, L.H.
Title: Insertions into azatitanacyclobutenes: new insights into three-component coupling reactions involving imidotitanium intermediates
Journal: 900802 - Organometallics
Volume: 27 **Number:** --- **Pages, initial:** 2518 **final:** --- **Year:** 2008 **ISSN:** 0276-7333
Code: A Code Article**:** 013548 **Order:** 015 // citations: 34

Authors (signature order): Lloret Fillol,J.; Carbó,J. J.; Bo,C.; Lledós, A.;Perez-Prieto, J.
Title: Influence of the nature of the ligand on dirhodium(II) carbene species: A theoretical analysis
Journal: 900802 - Organometallics
Volume: 27 **Number:** --- **Pages, initial:** 2873 **final:** --- **Year:** 2008 **ISSN:** 0276-7333
Code: A Code Article**:** 013549 **Order:** 016 // citations: 24

Authors (signature order): Varea, T.; Alcalde,A.; Granche, A.; Lloret, J.; Asensio,G.; Lledos, A.

Title: Regioselectivity in the ligand-assisted addition of vinylmagnesium bromide: An experimental and theoretical study on the gamma-alkoxycyclobutenone model
Journal: 900789 - Journal of Organic Chemistry
Volume: 73 **Number:** 17 **Pages, initial:** 6521 **final:** 6533 **Year:** 2008 **ISSN:** 0022-3263
Code: A Code Article**:** 013550 **Order:** 017 // citations: 10

Authors (signature order): Herrmann, H.; Lloret Fillol, J.; Gehrmann, T.; Enders, M.; Wadepohl, H.; Gade, L. H.
Title: Bonding and Bending in Zirconium(IV) and Hafnium(IV) Hydrazides
Journal: 908895 - Chemistry-A European Journal
Volume: 14 **Number:** 27 **Pages, initial:** 8131 **final:** 8146 **Year:** 2008 **ISSN:** 0947-6539
Code: A Code Article**:** 013551 **Order:** 018 // citations: 35

Authors (signature order): Langlotz,B. K.; Lloret Fillol, J.; Gross, J. H.; Wadepoh, H.; Gade, L. H.
Title: Living radical polymerization of acrylates mediated by 1,3-bis(2-pyridylimino)isoindolatocobalt(ii) complexes: monitoring the chain growth at the metal
Journal: 908895 - Chemistry-A European Journal
Volume: 14 **Number:** 33 **Pages, initial:** 10267 **final:** 10279 **Year:** 2008 **Publication place:** ALEMANIA **ISSN:** 0947-6539
Code: A Code Article**:** 013552 **Order:** 019 // citations: 76

Authors (signature order): Gehrmann,T.; Lloret Fillol,J.; Wadepohl, H.; Gade, L. H.
Title: Assembly of an R3N52- chain by cycloaddition of a hydrazinediide and an azide at zirconium and its thermal fragmentation
Journal: 900624 - Angewandte Chemie-International Edition
Volume: 48 **Number:** 12 **Pages, initial:** 2152 **final:** 2156 **Year:** 2009 **ISSN:** 1433-7851
Code: A Code Article**:** 013553 **Order:** 020 // citations: 41

Authors (signature order): Marco Ciclosi, Julio Lloret, Francisco Estevan, Mercedes Sanaú, Julia Pérez-Prieto*
Title: Intramolecular Apical Metal---H-Csp3 Interaction in Molybdenum and Silver Complexes
Journal: 912705 - Dalton Transactions
Volume: --- **Number:** --- **Pages, initial:** 5077 **final:** 5082 **Year:** 2009 **ISSN:** 1477-9226
Code: A Code Article**:** 013554 **Order:** 021 // citations: 5

Authors (signature order): Julio Lloret, Francisco Estevan, Pascual Lahuerta,* Pipsa Hirva,* Julia Pérez-Prieto,* Mercedes Sanaú
Title: Dirhodium(II) Compounds with Bridging Thienyl Phosphines: Studies on Reversible P,C/P,S Coordination
Journal: 908895 - Chemistry-A European Journal
Volume: 15 **Number:** 31 **Pages, initial:** 7706 **final:** 7716 **Year:** 2009 **ISSN:** 0947-6539
Code: A Code Article**:** 013555 **Order:** 022 // citations: 15

Authors (signature order): Katharina Weitershaus, Julio Lloret Fillol, Hubert Wadepohl and Lutz H. Gade*
Title: Reactions of Titanium Hydrazinediido Complexes with Unsaturated Organic Substrates
Journal: 900802 - Organometallics
Volume: 28 **Number:** 16 **Pages, initial:** 4747 **final:** 4757 **Year:** 2009 **ISSN:** 0276-7333
Code: A Code Article**:** 013556 **Order:** 023 // citations: 28

Authors (signature order): Konrad, F.;Lloret Fillol,J.; WadepohlH.; Gade, L.H.
Title: Bis(oxazolinylmethyl)pyrrole derivatives and their coordination as chiral-pincer-ligands to rhodium
Journal: 900752 - Inorganic Chemistry
Volume: 48 **Number:** 17 **Pages, initial:** 8523 **final:** 6535 **Year:** 2009 **ISSN:** 0020-1669
Code: A Code Article**:** 013557 **Order:** 024 // citations: 30

Authors (signature order): Konrad,F.; Lloret Fillol, J.; Rettenmeier,C.; Wadepohl, H.;Gade, L. H.
Title: bis(oxazolinylmethyl) derivatives C4H4E heterocycles (E = NH, O, S) as C-2-chiral meridionally coordinating ligands for nickel and chromium
Journal: 910604 - European Journal of Inorganic Chemistry
Volume: --- **Number:** 33 **Pages, initial:** 4950 **final:** 4961 **Year:** 2009 **ISSN:** 1434-1948
Code: A Code Article**:** 013558 **Order:** 025 // citations: 14

Authors (signature order): Gehrmann, T.; Lloret Fillol, J.; Wadepohl , H.; Gade, L.H.
Title: Bridging n-aminoisocyanate ligands in heterobimetallic complexes: coupling of zirconium hydrazinediides and transition-metal carbonyls
Journal: 900802 - Organometallics
Volume: 29 **Number:** 1 **Pages, initial:** 28 **final:** 31 **Year:** 2010 **ISSN:** 0276-7333
Code: A Code Article**:** 013559 **Order:** 026 // citations: 23

Authors (signature order): Thorsten Gehrmann, Julio Lloret Fillol, Solveig Scholl, Hubert Wadepohl, Lutz H. Gade,
Title: Zirconium-Catalyzed Multistep Reaction Sequences of Hydrazines with Alkynes: A Non-Fischer Type Pathway to Indoles.
Journal : ***Angew. Chem., Int. Ed.***
Code: A Volume: 50 Pages, initial: 5757 Year: **2011** **Order:** 027 // citations: 54

Authors (signature order): Julio Lloret Fillol, Achim Kruckenberg, Peter Scherl, Hubert Wadepohl, Lutz H. Gade
Title: Stitching Phospholanes Together Piece by Piece: New Modular Di- and Tridentate Stereodirecting Ligands.
Journal : ***Chem. Eur. J.***
Code: A Volume: 17 Pages, initial: 14047 Year: **2011** **Order:** 028 // citations: 42

Authors (signature order): Julio Lloret Fillol,* Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, Juan José Pla, Miquel Costas,*
Title: Efficient Water Oxidation Catalysts Based on Readily Available Iron Coordination Complexes.
Journal : ***Nat. Chem.*** **(Identified as Highly Cited Paper by ISI, Highlighted by *Nachrichten aus der Chemie*, 2011, *59*, p.1030, as one of the most important achievements in the chemistry of 2011.)**
Code: A Volume: Pages, initial: 807 Year: **2011** **Order:** 029 // **citations crossref: > 730**

Authors (signature order): Lara-Isabel Rodríguez, Torsten Roth, Julio Lloret Fillol, Hubert Wadepohl, Lutz H. Gade
Title: The More Gold – The More Enantioselective: Cyclohydroaminations of γ-Allenyl Sulfonamides with Mono-, Bis- and Trisphospholane Gold(I) Catalysts
Journal : ***Chem. Eur. J.***
Code: A Volume: 18 Pages, initial 3721 – 3728 Year: **2012** **Order:** 030 // citations: 60

Authors (signature order): Thorsten Gehrmann, Solveig A. Scholl, Julio Lloret Fillol, Hubert Wadepohl, and Lutz H. Gade
Title: Alternative Reaction Pathways in Domino Reactions of Hydrazinediidozirconium Complexes with Alkynes
Journal : ***Chem. Eur. J.*** **2012**, *18*, 3925-3941
Code: A Volume: 18 Pages, initial: 3925-3941 Year: **2012** **Order:** 031 // citations: 27

Authors (signature order): Anna Company,* Julio Lloret,* Laura Gómez,* Miquel Costas**,***
Title: Alkane C-H Oxidation Catalyzed by Transition Metal Complexes.
Libro*: Book Chapter Alkane C-H Activation by Single-Site Metal Catalysis, Springer Netherlands* ***2012*****.** V10, I38, 143-228
Code: B Volume: Pages, initial: In press Year: **2012** **Order:** 032

Authors (signature order): Thorsten Gehrmann, Julio Lloret Fillol, Hubert Wadepohl, and Lutz H. Gade
Title: Synthesis, Characterization, and Thermal Rearrangement of Zirconium Tetraazadienyl and Pentaazadienyl Complexes
Journal : ***Organometallics*** **2012**, *31*, 4504-4515.
Code: A Volume: 31 Pages, initial: 4504-4515 Year: **2012** **Order:** 033 // citations: 32

Authors (signature order): Isaac García-Bosch, Zoel Codolà, Irene Prat, Xavi Ribas, Julio Lloret-Fillol,* Miquel Costas*
Title: Iron Catalyzed C-H Hydroxylation and Olefin cis-Dihydroxylation with a Single e Oxidant and Water as Oxygen Atom Source.
Journal : ***Chem. Eur. J.*** **2012**, *18*, 13269
Code: A Volume: 18 Pages, initial: 13269 Year: **2012** **Order:** 034 // citations: 53

Authors (signature order): Zoel Codolà, I. Garcia-Bosch, F. Acuña, Irene Prat, Josep M. Luis, Miquel Costas*, and Julio Lloret Fillol*
Title: Electronic Effects on Single Site Iron Water Oxidation Catalyst.

Journal : ***Chem. Eur. J. 2013. (Frontispiece)***
Code: A Volume: 19 Pages, initial: 8042–8047 Year: **2013** **Order:** 035 // citations: 135

Authors (signature order): Thorsten Gehrmann, Julio Lloret Fillol, Heike Herrmann, Hubert Wadepohl and Lutz H. Gade,*
Title: Zirconium Hydrazides as Metallanitrene Synthons: Release of Molecular N2 from a Hydrazinediido Complex Induced by Oxidative N-N-Bond Cleavage
Journal : ***Organometallics***
Code: A Volume: 32 Pages, initial: 3877-3889 Year: **2013** **Order:** 036 // citations:8

Authors (signature order): M. Ángeles Medranoa, A. Álvarez-Valdésa, J. Perlesb, J. Lloret-Fillol, S. Muñoz-Galvánd, A. Carnerod, C. Navarro-Ranningera, A. G. Quiroga.*
Title: Oxidation of anticancer Pt(II) monodentate phosphine complexes. Towards stable but active Pt(IV) prodrugs
Article***: Chem. Commun.***
Code: A Volume: 49 Pages, initial: 4806 Year: **2013** **Order:** 037 // citations:23

Authors (signature order): Zoel Codolà, João M. S. Cardoso, Beatriz Royo, Miquel Costas, and Julio Lloret-Fillol*
Title: Highly Effective Water Oxidation Catalysis with Iridium Complexes through the use of $NaIO_4$
Article***: Chem. Eur. J.***
Code: A Volume: 19 Pages, initial: 7203-7213 Year: **2013** **Order:** 038 // citations: 86

Authors (signature order): Ofal Cusso, Isaac Garcia-Bosch, Xavi Ribas, Julio Lloret-Fillol, Miquel Costas*
Title: Asymmetric Epoxidation with H_2O_2 by Manipulating the Electronic Properties of Non-Heme Iron Catalysts
Journal : ***J. Am. Chem. Soc***
Code: A Volume: 135 Pages, initial: 14871 Year: **2013** **Order:** 039 // citations: 88

Authors (signature order): Ofal Cusso, Isaac Garcia-Bosch, Xavi Ribas, Julio Lloret-Fillol, Miquel Costas*
Title: Highly Stereoselective Epoxidation with H_2O_2 Catalyzed by Electron-Rich Aminopyridine Manganese Catalysts
Journal : ***Org. Lett.***
Code: A Volume: 15 Pages, initial: 6158-6161 Year: **2013** **Order:** 040 // citations: 251

Authors (signature order): Mainak Mitra, Julio Lloret-Fillol, Matti Haukka, Miquel Costas,* Ebbe Nordlander*
Title: Evidence that Steric Factors Modulate Reactivity of Tautomeric Iron-Oxo Species in Stereospecific Alkane C-H Hydroxylation
Journal : ***Chem. Comm. (Cover Picture)***
Code: A Volume: 50 Pages, initial: 1408-1410 Year: **2014** **Order:** 041 // citations: 41

Authors (signature order): Ferran Acuña, Zoel Codolá Miquel Costas Josep M. Luis, * and Julio Lloret Fillol*
Title: Unraveling the mechanism of water oxidation catalyzed by non-heme iron complexes
Journal : ***Chem. Eur. J.*** **doi:** 10.1002/chem.201304367
Code: A Volume: 20 Pages, initial: 5696-5707 Year: **2014** **Order:** 042 // citations: 83

Authors (signature order): Anna Company,* Julio Lloret,* Miquel Costas*****
Title: Small molecule models for non-prophyrinic iron and manganese oxygenases
Libro***: Book Chapter, Comprehensive Coordination Chemistry II*****.**
Code: B Volume: 3.18 Pages, initial: 487 – 564 In press Year: **2013** **Order:** 043

Authors (signature order): Anna Company, María González-Béjar, Gerard Sabeña, Laura Gómez, Julia Pérez-Prieto, Miquel Costas, Julio Lloret-Fillol*
Title: Triggering the generation of an iron(IV)-oxo compound and its reactivity towards sulfides by Ru^{II} photocatalysis
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Code: A Volume: 136 Pages, initial: 4624-4533 Year: **2014** **Order:** 044 // citations: 72

Authors (signature order): Arnau Call, Zoel Codolà, Miquel Costas and Julio Lloret-Fillol*
Title: Photo- and electro-catalytic H2 production by new 1st row transition metal complexes based on an aminopyridine pentadentate ligand
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Authors (signature order): Zoel Codolà, Julio Lloret-Fillol,* Miquel Costas*
Title: Aminopyridine Iron and Manganese Complexes as Molecular Catalysts for Challenging Oxidative Transformations
Article*: Progress in Inorganic Chemistry.* 10.1002/9781118869994.ch07
Code: B Volume: 59 Pages, initial: 447-532 Year: **2014 Order:** 046 // citations: 25

Authors (signature order): Ferran Acuña-Parés, Miquel Costas, Josep M. Luis* and Julio Lloret-Fillol*
Title: Theoretical Study of the Water Oxidation Mechanism with Non-heme Iron Complexes. Evidence that the $Fe^{IV}(O)$ Species Cannot React with the Water Molecule to Form the O-O Bond
Article*: Inorg. Chem.*
Code: A Volume: 53 Pages, initial: 5474-5485 Year: **2014 Order:** 047 // citations: 47

Authors (signature order): Henrik Junge, Zoel Codolà, Anja Kammer, Nils Rockstroh, Shu-Ping Luo, Michael Karnahl, Marga-Martina Pohl, Sebastian Wohlrab, Julio Lloret-Fillol, Miquel Costas, and Matthias Beller*
Title: Light-Driven Hydrogen Generation: Efficient Copper-Based Water Reduction Catalysts
Article*: Journal of Molecular Catalysis A: Chemical*
Code: A Volume: 395 Pages, initial: 449 Year: **2014 Order:** 048 // citations: 25

Authors (signature order): *Mireia Rovira, Marc Font, Ferran Acuña-Parés, Teodor Parella, Josep M. Luis, Julio Lloret-Fillol, Xavi Ribas** **Title:** Aryl-Copper(III)-acetylides as key intermediates in Csp2-Csp model couplings under mild conditions
Article*: Chemistry–A European Journal*
Code: A Volume: 20 Páginas: 10005-10010 Year: **2014 Order:** 049 // *cites: 28*

Authors (signature order): Marc Font, Ferran Acuña-Parés, Teodor Parella, Jordi Serra, Josep M Luis, Julio Lloret-Fillol, Miquel Costas, Xavi Ribas
Title: Observació directa de cicles redox de Ag (I)/Ag (III) de dos electrons en catàlisi de funcionalització d'halurs d'aril
Article*: Journal de la Societat Catalana de Química,*
Code: A Volume: 13 Páginas: 40-50 Year: **2014 Order:** 050

Authors (signature order): *Marc Font, Ferran Acuña-Parés, Teodor Parella, Jordi Serra, Josep M. Luis, Julio Lloret-Fillol, Miquel Costas, Xavi Ribas**
Title: Direct observation of two-electron Ag(I)/Ag(III) redox chemistry in silver-catalyzed aryl halide functionalizations
Article*: Nature Communications* *07/2014; 5:4373.*
Code: A Volume: Pages, initial: Year: **2014 Order:** 051 // cites 70

Authors (signature order): Olaf Cusso, Xavi Ribas, Julio Lloret-Fillol, and Miquel Costas*
Title: Synergistic Interplay of a Non-Heme Iron Catalyst and Amino Acid Co-Ligands in H2O2 Activation for Asymmetric Epoxidation of a-Alkyl-Substituted Styrenes
Article*: Angew. Chem Int Ed. 2015,* 10.1002/anie.201410557, **Very Important Paper**
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Authors (signature order): Zoel Codolà, Laura Gómez, Scott T. Kleespies, Lawrence Que, Jr.,* Miquel Costas* and Julio Lloret-Fillol*
Title: Evidence for an Oxygen Evolving Fe–O–Ce Intermediate in Iron-Catalysed Water Oxidation
Article*: Nature Communication 01/2015; 6:5865.*
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Authors (signature order): Azin Hassanpour, Ferran Acuña-Parés, Josep M Luis, Olaf Cusso, Silvia Morales de la Rosa, José Miguel Campos-Martín, Jose LG Fierro, Miquel Costas, Julio Lloret-Fillol, Rubén Mas-Ballesté
Title: H_2 oxidation versus organic substrate oxidation in non-heme iron mediated reactions with H_2O_2
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Authors (signature order): Teresa Corona, Florian F Pfaff, Ferran Acuña-Parés, Apparao Draksharapu, Christopher J Whiteoak, Vlad Martin-Diaconescu, Julio Lloret-Fillol, Wesley R Browne, Kallol Ray, Anna Company
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Code: A Volume: 21 Pages, initial: 15029 – 15038, Year: **2015** **Order:** 055 // cites 109

Authors (signature order): M. Mitra, H. Nimir, S. Demeshko, S. Bhat, M. Haukka, J. Lloret-Fillol, G. C. Lisensky, F. Meyer, A. A. Shteinman, W. R. Browne, D. A. Hrovat, M. G. Richmond, M. Costas, and E. Nordlander*
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Code: A Volume: 54 Pages, initial: 7152 - 7164 Year: **2015** **Order:** 056 // cites 72

Authors (signature order): J. Serra, C. J. Whiteoak, F. Acuña-Parés, M. Font, J. M. Luis, J. Lloret-Fillol and Xavi Ribas,*
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Authors (signature order): Julio Lloret-Fillol, Miquel Costas
Title: Water oxidation: High five iron
Article*: Nature Energy* *4-March-2016 10.1038/nenergy.2016.23*
Code: Highlight, (*News and Views)* Volume: Pages, initial: , Year: **2016** **Order:** 058 // cites 53

Authors (signature order): Carla Casadevall, Zoel Codola, Miquel Costas, Julio Lloret-Fillol*
Title: Spectroscopic, electrochemical and computational characterization of Ru species involved in catalytic water oxidation. Evidence for [Ru^{V}(O)(Py_2Metacn)] intermediate.
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Authors (signature order): Zoel Codolà, Arnau Call, Ferran Acuña-Parés, Carla Casadevall, Julio Lloret Fillol*
Title: Nuevas estrategias para la conversión de la energía solar en enlaces químicos
Article*: Anales*
Code: C Volume: 112 Pages, initial: 133 Year: **2016** **Order:** 060

Authors (signature order): Ilaria Gamba, Zoel Codolà, Julio Lloret-Fillol,* Miquel Costas,*
Title: Making and Breaking of the O-O Bond at Iron Complexes
Review*: Coordination Chemistry Reviews*
Code: C Volume: 334 Pages, initial: 2-24 Year: **2017** **Order:** 061 // cites: 68

Authors (signature order): Gerard Sabenya, Laura Lázaro, Ilaria Gamba, Vlad Martin-Diaconescu,* Erik Andris, Thomas Weyhermüller, Frank Neese,* Jana Roithova,* Eckhard Bill,* Julio Lloret-Fillol,* Miquel Costas.*
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Authors (signature order): *Arnau Call, Carla Casadevall, Ferran Acuña-Parés, Alicia Casitas, and Julio Lloret-Fillol[**
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Authors (signature order): Octavio Gonzalez-del Moral, Arnau Call, Federico Franco, Jose Antonio Nieto-Rodríguez, María Frias, Sergio Díaz-Tendero, Jose Aleman, Jose L. G. Fierro, Miquel Costas, Julio Lloret-Fillol, Rubén Mas-Ballesté*

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Authors (signature order): Federico Franco, Mara F. Pinto, Beatriz Royo, * and Julio Lloret-Fillol*
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Article***: Angew. Chem.*****, 2018***, 57,* 4603-4606; **DOI:** 10.1002/anie.201800705
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Authors (signature order): Ruixi Fan, Joan Serrano-Plana, Williamson N. Oloo, Apparao Draksharapu, Anna Company, Margarida Borrell, Julio Lloret-Fillol, Yisong Guo,* Emile Bominaar,* Lawrence Que Jr.,* Miquel Costas,* Eckard Münck,*
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Authors (signature order): Ekaterina S. Smirnova, Ferran Acuña-Parés, Eduardo C. Escudero-Adán, Christian Jelsch, Julio Lloret-Fillol*
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Authors (signature order): Moneo-Corcuera, A., Nieto-Castro, D., Cirera, J., Gómez, V., Sanjosé-Orduna, J., Casadevall, C., Molnár, G., Bousseksou, A., Parella, T., Martínez-Agudo, J.M., Lloret-Fillol, J., Pérez-Temprano, M.H., Ruiz, E. & Galán-Mascarós, J.R
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Article*: ACS Appl. Energy Mat. 2024, Accepted*
Code: A Volume: Pages, initial: Year: **2023** **Order:** 0106 DOI: 10.1021/acsaem.3c03117

PARTICIPATION IN RESEARCH CONTRACTS OF SPECIAL RELEVANCE WITH COMPANIES AND/OR ADMINISTRATIONS

Title of the Contract: **Personal Investigador**

Financial Administration Company: **University de Wuerzburg, SFB 347**
From: **16-08-01** *To:* **31-12-01**
Principal Researcher: **Prof. Helmut Werner**

Title of the Contract: **Personal Investigador**

Financial Administration Company: **BASF**
From: **1-12-01** *To:* **31-12-01**
Principal Researcher: **Prof. Helmut Werner**

Title of the Contract: ***Chief Scientist***

Financial Administration Company: **JOLT SOLUTIONS**
From: **01/04/2022** *To:*
10% time allocation.

PATENTS AND UTILITY MODELS

1.- Inventors (signature order):J. Lloret Fillol, Z. Codolà, I. Garcia-Bosch, L. Gómez, JJ. Pla, M. Costas
Title: Procedimiento de oxidación catalítica de agua mediante catalizadores de hierro
Application N.º: P1969ES00 Priority country: España Date de prioridad: 06/07/2011
Owner entity: Universitat de Girona
Countries it has spread to: EUROPA

2.- Inventors (signature order):O. Cusso, D. Font Gimbernat, I. Prat Casellas, A. Company Casadevall, L. Gomez Martín, X. Ribas Salamaña, I. Garcia Bosch, J. Lloret Fillol, M. Costas Salqueiro
Title: Catalizadores para la epoxidación de alquenos
Application N.º: P2012311746 Priority country: España Date de prioridad: 13/11/2012
Owner entity: Universitat de Girona
Countries it has spread to: EUROPA

3.- Inventors (signature order):Xavi Rivas, Miquel Costas, Olaf Cussó, Anna Company, Julio Lloret, Manual Sánchez, Clotilde Marín, María Jose Rosales, Francisco Olmo
Title: Compuesto poliamínicos y complejos metálicos que comprenden para su uso como agentes antiparasitarios
Application N.º: P201331558, Priority country: España Date de prioridad: 23/11/2013
Owner entity: Universitat de Girona
Countries it has spread to: -

4.- Inventors (signature order):Xavi Rivas, Miquel Costas, Olaf Cussó, Anna Company, Julio Lloret, Manual Sánchez, Clotilde Marín, María Jose Rosales, Francisco Olmo
Title: Compuesto metálicos que comprenden compuestos poliamínicos y dichos compuestos para su uso como agentes antiparasitarios
Application N.º: P201331559, Priority country: España Date de prioridad: 23/11/2013
Owner entity: Universitat de Girona
Countries it has spread to: -

5.- Inventors (signature order):J. Lloret Fillol, A. Call Quintana, C. Casadevall Serrano, A. Casitas Montero.
Title: Un procedimiento de reducción fotocatalítico y una composición catalizadora utilizada en el procedimiento
Application N.º: PCT/ES2017/070314, Priority country: España, Date de prioridad: 16/05/2017
Owner entity: ICIQ, ICREA
Countries it has spread to: PCT internacional

6.- Inventors (signature order):Lloret-Fillol, J.; Casadevall, C.; León, J.; Call, A.; Casitas, A.; Pla, J. J.; Hernández, P. J.; Caldentey, X. F.:
TITLE: Photoreactor.
European Patent. Fundació privada Institut Català d'Investigació Química (Application N.º 17382313.9-1370, application date 31.05.2017), Under exploitation by Treellum technologies

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7.- Inventors (signature order):Julio Lloret-Fillol, Miquel Claros, Felix Ungeheuer, Alicia Casitas
TITLE: Process for the activation of chloride organic compounds and a catalytic composition used in the process
Submitted as: PCT patent application ICIQ, ICREA
Application N.º: es2017/070314, application date 15.05.2018

8.- Inventors (signature order):Julio Lloret-Fillol, Alberto Bucci
TITLE: Method of Preparation of Electrodes for Electrocatalysis
Submitted as: PCT, ICIQ, ICREA
Application N.º: PCT/EP2021/059779, application date 15/04/2020, Under exploitation by Jolt solutions

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STAYS IN FOREIGN CENTERS

Code D=PhD, P=postdoc. Y= invited, C=hired, O=other (specify)

CENTER: University of Loughborough
PLACE: Loughborough COUNTRY: Inglaterra YEAR: 2001 *DURATION: 6 meses*
TOPIC: Synthesis, Characterisation and Chemistry with Metals Group 9 and 10 of New chiral phophine monochalcogenides from (S)-N,N-bis-(diphenylphosphino)methylbenzylamine CODE: Erasmus

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CENTER: University de Wuerzburg
PLACE: Wuerzburg COUNTRY: Alemania YEAR: 2001 *DURATION: 6 meses*
TOPIC: Reactividad de sisTOPICs de Rh(II) con fosfolanos quirales. CODE: C y D

CENTER: University de Joensuu
PLACE: Joensuu COUNTRY: Finlandia YEAR: 2004 DURATION: 3 meses
TOPIC: Estudio teórico al nivel DFT de complejos ortometalados de Rh(II) con tienilfosfinas CODE: D

CENTER: University de Heildelberg
PLACE: Heidelberg COUNTRY: Alemania YEAR: 2005 DURATION: 3 meses
TOPIC: Síntesis de nuevas difosfinas quirales. CODE: D

CENTER: University de Heildelberg
PLACE: Heidelberg COUNTRY: Alemania YEAR: 2006-2010 DURATION: 3 Years y 4 meses
TOPIC: Design Principles in the stereoselective catalysis. CODE: P

CENTER: University de Minnesota
PLACE: Minneapolis COUNTRY: USA YEAR: 2013 DURATION: 1 mes y una semana
TOPIC: Study of intermediates in water oxidation catalysis. CODE: Profesor Y

CONGRESSS, MEETINGS AND INVITED LECTURES

AUTHORS: **F. Estevan, P. Lahuerta*, J. Lloret, J. Pérez-Prieto* and H. Werner*.**
TITLE: Catalytic Behaviour of Rhodium(II) Compounds with Metalated Chiral Phospholanes as Ligands
PARTICIPATION TYPE: ***poster***
CONGRESS: **STEREOCAT Roma COST D24 (Italia)**
HELD PLACE: **Frascati (Italia)**
YEAR: ***2003 // Nº Order 1***

AUTHORS: **J. Lloret.**
TITLE: Dirhodium(II) Compounds with Thienylphosphines as ancillary ligands: Synthesis and Acid-Promoted Rearrangement.
PARTICIPATION TYPE: ***Comunicación Oral***
CONGRESS: **COST D24 Project Number: D24/0008/02 2004**
HELD PLACE: **Gif-Sur-à-Yvette (Francia*)***
YEAR: ***2004 // Nº Order 2 // Nº Order Oral Presentation 1***

AUTHORS: **F. Esteban, P. Lahuerta, J. Lloret, M. Sanaú, M. Ubeda and J. Vila.**
TITLE: Enantio- and Diastereocontrol in Intermolecular Cyclopropanation Reaction Catalized by Dirhodium Complexes with Bulky Ortho-metalated Aryl Phoshpines.
PARTICIPATION TYPE: ***poster***
CONGRESS: **14th Internacional Symposium on Homogeneous Catálisis**
HELD PLACE: **Munich (Alemania)**
YEAR: **2004** ***// Nº Order 3***

AUTHORS: **M. Ciclosi, J. Lloret, P. Lahuerta, F. Esteban, M. Sanaú, J. Pérez-Prieto.**
TITLE: C3-Symmetrical Palladium Catalyst with a P-Tripodal Ligand.
PARTICIPATION TYPE: ***poster***
CONGRESS: **STEREOCAT COST D24**
HELD PLACE: **Barcelona (España)**
YEAR: **2005** ***// Nº Order 4***

AUTHORS: **J. Lloret, P. Lahuerta, J. Pérez-Prieto.**
TITLE: Acid Promoted Rearrangement of the Metalated Thienyl Rings in Dirhodium(II) Complexes with Thienyl Phosphines as Ancillary Ligands
PARTICIPATION TYPE: ***Comunicación Oral***
CONGRESS: **STEREOCAT COST D24**
HELD PLACE: **Barcelona (España)**
YEAR: **2005** ***// Nº Order 5 // Nº Order Oral Presentation 2***

AUTHORS: **J. Lloret**
TITLE: ***COMPUESTOS CICLOMETALADOS DE Rh(II) APLICACIONES EN CATÁLISIS***
PARTICIPATION TYPE: ***Invited Lecture***
CONGRESS: **University Jaume I**
HELD PLACE: **Castellon (España)**
YEAR: **2005** ***// Nº Order 6 // Nº Order Oral Presentation 3***

AUTHORS: **J. Lloret.**
TITLE: DFT calculations on the reactivity of dirhodium (II) complexes with aryl phosphine ligands
PARTICIPATION TYPE: ***Comunicación Oral***
CONGRESS: **COST D24 Project Number: D24/0008/02**
HELD PLACE: **Valencia (España)**
YEAR: **2006** ***// Nº Order 7 // Nº Order Oral Presentation 4***

AUTHORS: **J. Lloret, K. Bieger, F. Esteban, P. Lahuerta, P. Hirva, J. Pérez-Prieto, M. Sanaú.**

TITLE: Synthesis of Chiral Metalated Thienyl Ring in Rh(II) Carboxylate Complexes and Unusual Thienyl Ring Rearrangement.
PARTICIPATION TYPE: ***poster***
CONGRESS: **XXII International Conference on Organometallic Chemistry.**
HELD PLACE: Zaragoza, Spain
YEAR: **2006 *// Nº Order 8***

AUTHORS: **M. Ciclosi, J. Lloret, F. Estevan, P. Lahuerta, J. Pérez-Prieto.**
TITLE: Synthesis and Reactivity of New C_3-Symmetrical Palladium complexes.
PARTICIPATION TYPE: ***poster***
CONGRESS: **XXII International Conference on Organometallic Chemistry.**
HELD PLACE: Zaragoza, Spain
YEAR: **2006 *// Nº Order 9***

AUTHORS: **P. Hirva, J. Esteban, J. Lloret, P.Lahuerta, J. Pérez-Prieto.**
TITLE: Determination of Equilibrium Constants And Computational Interaction Energies for Adducts Of $[Rh_2(RCO_2)_{4-n}(PC)_n]$, (n =0,1,2) With Lewis Bases
PARTICIPATION TYPE: ***poster***
CONGRESS: **XXII International Conference on Organometallic Chemistry.**
HELD PLACE: Zaragoza, Spain
YEAR: **2006 *// Nº Order 10***

AUTHORS: **P. Hirva, J. Esteban, J. Lloret, P.Lahuerta, J. Pérez-Prieto.**
TITLE: Determination of Equilibrium Constants And Computational Interaction Energies for Adducts Of $[Rh_2(RCO_2)_{4-n}(PC)_n]$, (n =0,1,2) With Lewis Bases
PARTICIPATION TYPE: ***poster***
CONGRESS: **XXII International Conference on Organometallic Chemistry.**
HELD PLACE: Zaragoza, Spain
YEAR: **2006 *// Nº Order 11***

AUTHORS: **J. Lloret, H. Herrmann, H. Wadepohl, Lutz H. Gade.**
TITLE: Zirconium Hydrazide as Masked Metallanitrenes
PARTICIPATION TYPE: ***poster***
CONGRESS: XXIII International Conference on Organometallic Chemistry. Rennes, France, July **2008**.
HELD PLACE: Rennes, France
YEAR: **2008 *// Nº Order 12***

AUTHORS: **J. Lloret Fillol, T. Gehrmann, H. Herrmann, H. Wadepohl, Lutz H. Gade**
TITLE: Zirconium Hydrazide as Masked Metallanitrenes
PARTICIPATION TYPE: ***poster***
CONGRESS: Organometallic Zing Conference. Antigua and Barbuda, March **2009**.
HELD PLACE: Antigua and Barbuda
YEAR: **2009 *// Nº Order 13***

AUTHORS: **T. Gehrmann, J. Lloret Fillol, H. Wadepohl, Lutz H. Gade**
TITLE: Assembly and thermal fragmentation of a $R_3N_5^{-2}$ chain at a Zirconium (IV) centre.
PARTICIPATION TYPE: ***poster***
CONGRESS: Organometallic Zing Conference. Antigua and Barbuda, March **2009**.
HELD PLACE: Antigua and Barbuda
YEAR: **2009 *// Nº Order 14***

AUTHORS: **J. Lloret Fillol,**
TITLE: Application of Theoretical Modelling Tools to Catalytic Reactions
PARTICIPATION TYPE: ***Lecture***
CONGRESS: Workshop on Asymmetric catalysis and related topics. Albé 03-October -2009 (France)
HELD PLACE: . Albé - (France)
YEAR: **2009 *// Nº Order 15 // Nº Order Oral Presentation 5***

AUTHORS: **J. Lloret Fillol,**
TITLE: New Modular Polydentate Phospholane Ligands and their Application in Stereoselective Catalysis
PARTICIPATION TYPE: ***Lecture***
CONGRESS: Werkstattgespräch (SFB-623. Teilproject B-6) -2009
HELD PLACE: Heidelberg, Germany
YEAR: **2009** ***// Nº Order 16 // Nº Order Oral Presentation 6***

AUTHORS: **J. Lloret Fillol,**
TITLE: Diseño y síntesis de complejos quirales y sus aplicaciones en catálisis
PARTICIPATION TYPE: ***Lecture***
CONGRESS: Invited Lecture Girona 09-Setembre-2009
HELD PLACE: Girona, Spain
YEAR: **2009** ***// Nº Order 17 // Nº Order Oral Presentation 7***

AUTHORS: Julio Lloret Fillol,* Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, Juan José Pla, and Miquel Costas*
TITLE: Reactividad de complejos de hierro en altos estados de oxidación
PARTICIPATION TYPE: ***Poster***
CONGRESS: XXXIII Reunión Bienal Valencia 25–07–2011
HELD PLACE: Valencia, Spain
YEAR: **2011** ***// Nº Order 18***

AUTHORS: Julio Lloret Fillol, Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, and Miquel Costas,**
TITLE: Catalysts Based on Iron Coordination Complexes
PARTICIPATION TYPE: ***Poster***
CONGRESS: Faraday Discussion 155: Artificial Photosynthesis 5 - 7 September 2011
HELD PLACE: Edimburgo, UK
YEAR: **2011** ***// Nº Order 19***

AUTHORS: Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, Miquel Costas, and Julio Lloret Fillol,**
TITLE: catalysts based on readily available iron coordination complexes
PARTICIPATION TYPE: ***Poster***
CONGRESS: Faraday Discussion 155: Artificial Photosynthesis 5 - 7 September 2011
HELD PLACE: Edimburgo, UK
YEAR: **2011** ***// Nº Order 20***

AUTHORS: Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, Miquel Costas, and Julio Lloret Fillol,**
TITLE: catalysts based on readily available iron coordination complexes
PARTICIPATION TYPE: ***Poster***
CONGRESS: Post-Faraday Meeting, Discussion 155: Artificial Photosynthesis 5 - 7 September 2011
HELD PLACE: Edimburgo, UK
YEAR: **2011** ***// Nº Order 21***

AUTHORS: Julio Lloret Fillol
TITLE: Mechanism Insights into Water Oxidation Catalysts Based on Iron Coordination Complexes
PARTICIPATION TYPE: ***Oral Presentation***
CONGRESS: Post-Faraday Discussion 155: Artificial Photosynthesis 8 - 9 September 2011
HELD PLACE: Edimburgo, UK
YEAR: **2011** ***// Nº Order 22 // Nº Order Oral Presentation 8***

AUTHORS: Julio Lloret Fillol
TITLE: Efficient Water Oxidation Catalysts Based on Readily Available Iron Coordination Complexes
PARTICIPATION TYPE: ***Invited Lecture***
CONGRESS: University de Valencia
HELD PLACE: Burjasot, Valencia (Spain)
YEAR: **2011** ***// Nº Order 23 // Nº Order Oral Presentation 9***

AUTHORS: Julio Lloret Fillol, Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, and Miquel Costas,**
TITLE: Ligand Structure Influence on Water Oxidation Iron Coordination Complexes

PARTICIPATION TYPE: ***Poster Presentation***
CONGRESS: XXXIII Coordination Chemistry Conference, Zing Coordination Conference 2011 Mexico
HELD PLACE: Cancun, Mexico
YEAR: **2011** ***// Nº Order 24***

AUTHORS: *Julio Lloret Fillol,* Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, and Miquel Costas,**
TITLE: Water Oxidation Catalysts Based on Iron Coordination Complexes
PARTICIPATION TYPE: ***Oral Presentation***
CONGRESS: Zing Coordination Conference 2011 Mexico
HELD PLACE: Cancun, Mexico
YEAR: **2011** ***// Nº Order 25 // Nº Order Oral Presentation 10***

AUTHORS: *Julio Lloret Fillol*
TITLE: Efficient Water Oxidation Catalysts Based on Readily Available Iron Coordination Complexes
PARTICIPATION TYPE: ***Invited Lecture***
CONGRESS: University Autonoma de Madrid
HELD PLACE: Madrid (Spain)
YEAR: **2011** ***// Nº Order 26 // Nº Order Oral Presentation 11***

AUTHORS: *Julio Lloret Fillol,* Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, and Miquel Costas,**
TITLE: Water Oxidation Catalysts Based on Iron Coordination Complexes
PARTICIPATION TYPE: ***Poster***
CONGRESS: XXX GECO,
HELD PLACE: Castellon, Spain
YEAR: **2012** ***// Nº Order 27***

AUTHORS: *Julio Lloret Fillol,* Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, Irene Prat and Miquel Costas,**
TITLE: Homogeneous Water Oxidation Catalysts with Iron Complexes
PARTICIPATION TYPE: ***Poster***
CONGRESS: ISHC,
HELD PLACE: Toulouse, Francia
YEAR: **2012** ***// Nº Order 28***

AUTHORS: *Julio Lloret Fillol,* Zoel Codolà, Isaac Garcia-Bosch, Laura Gómez, Irene Prat and Miquel Costas,**
TITLE: Homogeneous Water Oxidation Catalysts with Iron Complexes
PARTICIPATION TYPE: ***Oral Comunication***
CONGRESS: ADHOC, International Symposium on Activation of Dioxygen & Homogeneous Catalytic Oxidation
HELD PLACE: Jerusalem, Israel
YEAR: **2012, 2-7 Sept.** ***// Nº Order 29 // Nº Order Oral Presentation 12***

AUTHORS: *Zoel Codolà*, *Isaac Garcia-Bosch, Laura Gómez, Irene Prat and Miquel Costas,* Julio Lloret Fillol,**
TITLE: Electronic Effects on Single Site Iron Catalysts for Water Oxidation
PARTICIPATION TYPE: ***Poster***
CONGRESS: ADHOC, International Symposium on Activation of Dioxygen & Homogeneous Catalytic Oxidation
HELD PLACE: Jerusalem, Israel
YEAR: **2012, 2-7 Sept.** ***// Nº Order 30***

AUTHORS: *Isaac Garcia-Bosch, Zoel Codolà*, *Irene Prat Xavi Ribas, Julio Lloret Fillol,* and Miquel Costas,**
TITLE: Iron Catalyzed C-H Hydroxylation and Olefin *cis*-Dihydroxylation with a Single Electron Oxidant and Water as Oxygen Atom Source. A Model for O_2-Independent Oxidative Enzymes
PARTICIPATION TYPE: ***Poster***
CONGRESS: ADHOC, International Symposium on Activation of Dioxygen & Homogeneous Catalytic Oxidation
HELD PLACE: Jerusalem, Israel
YEAR: **2012, 2-7 Sept.** ***// Nº Order 31***

AUTHORS: Arnau Call, Zoel Codolà, Miquel Costas and Julio Lloret-Fillol*
TITLE: Photoinduced catalytic water reduction to hydrogen by new cobalt complexes based on tetra- and pentadentate nitrogenate ligands
PARTICIPATION TYPE: Poster
CONGRESS: 4th EurChems Chemistry Congress (4th Congress of the Europen Assiciation for Chemical and Molecular Sciences).
HELD PLACE: Prague, Czech Republic
DATES: August 26-30, 2012 ***// Nº Order 32***

AUTHORS: Arnau Call, Zoel Codolà, Miquel Costas and Julio Lloret-Fillol*
TITLE: Nuevos complejos de cobalto basados en ligandos nitrogenados tetra y pentadentados capaces de reducir el agua a hidrógeno
PARTICIPATION TYPE: Poster
CONGRESS: IX Simposio de Investigadores Jóvenes
HELD PLACE: Zaragoza
DATES: 7-10 Noviembre del 2012 ***// Nº Order 33***

AUTHORS: Julio Lloret-Fillol*
TITLE: Mechanistic Insight of Homogeneous Water Oxidation Catalysts with Iron Coordination Complexes
PARTICIPATION TYPE: Oral Presentation
CONGRESS: IX Simposio de Investigadores Jóvenes
HELD PLACE: Zaragoza
DATES: 7-10 Noviembre del 2012 ***// Nº Order 34 // Nº Order Oral Presentation 13***

AUTHORS: Julio Lloret-Fillol*, Zoel Codola, Isaac Garcia Bosch, Irene Prat, Ferran Acuña, Jose M. Lluis, Miquel Costas.
TITLE: Mechanistic Insight of Homogeneous Water Oxidation Catalysts with Iron Coordination Complexes.
PARTICIPATION TYPE: Poster
CONGRESS: Gordon Research Conference in Inorganic Reaction Mechanism
HELD PLACE: Galveston /USA
DATES: 3-8 Marzo del 2013 ***// Nº Order 35***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Mechanistic Insight of Homogeneous Water Oxidation Catalysis with Iron Coordination Complexes
PARTICIPATION TYPE: Invited Lecture
CONGRESS: 1st Workshop on Advanced Materials for Solar Fuels Applications.
HELD PLACE: Castellón
DATES: 11 Febrero del 2013 ***// Nº Order 36 // Nº Order Oral Presentation 14***

AUTHORS: Ferran Acuña-Parés, Zoel Codolà, Josep M. Luis, Miquel Costas and Julio Lloret-Fillol*.
TITLE: Computational Insights into the Mechanism of Water Oxidation Catalyzed by non-heme Iron Complexes
PARTICIPATION TYPE: Oral presentation.
CONGRESS: 1st Workshop on Advanced Materials for Solar Fuels applications.
HELD PLACE: Castellón, Spain.
DATES: 11/02/2013. ***// Nº Order 37 // Nº Order Oral Presentation 15***

AUTHORS: Arnau Call, Zoel Codolà, Ferran Acuña-Parés, Julio Lloret-Fillol*
TITLE: Photo- and electrocatalytic proton reduction to hydrogen by new 1st row transition metal complexes based on a pentadentate nitrogenous ligand
PARTICIPATION TYPE: poster
CONGRESS: ICBIC16 Conference
HELD PLACE: Grenoble (France)
YEAR: Julio del 2013 ***// Nº Order 38***

AUTHORS: Zoel Codolà, Isaac Garcia–Bosch, Ferran Acuña–Parés, Irene Prat, Josep M. Luis, Miquel Costas,* and Julio Lloret–Fillol.*
PARTICIPATION TYPE: Poster
CONGRESS: ICBIC 2013
HELD PLACE: Grenoble, France
DATES Julio del 2013 ***// Nº Order 39***

AUTHORS: **Zoel Codolà**, Isaac Garcia–Bosch, Ferran Acuña–Parés, Irene Prat, Josep M. Luis, Miquel Costas,* and Julio Lloret–Fillol*.
PARTICIPATION TYPE: Oral communication
CONGRESS: Joves Investigadors dels Països Catalans, 2013
HELD PLACE: Andorra La Vella, Andorra
DATES 27-29.11.2013 ***// Nº Order 40 // // Nº Order Oral Presentation 16***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Mechanistic Insight of Homogeneous Water Oxidation Catalysis with Iron Coordination Complexes
PARTICIPATION TYPE: Invited Speaker
CONGRESS: SiLQCOM-POLYMAT 2013.
HELD PLACE: Huatulco (Pacific coast of Oaxaca, Mexico)
DATES: 13-17 Octubre del 2013 ***// Nº Order 41 // Nº Order Oral Presentation 17***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Homogeneous Water Oxidation Catalysis with Iron Coordination Complexes
PARTICIPATION TYPE: Invited Speaker
CONGRESS: COST action CM1003
HELD PLACE: Utrecht 2013 (Netherlans).
DATES: Octubre del 2013 ***// Nº Order 42 // Nº Order Oral Presentation 18***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Homogeneous Water Oxidation Catalysis with Iron Coordination Complexes
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: University of Minnesota
DATES: 25 Junio 2013 ***// Nº Order 43 // Nº Order Oral Presentation 19***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Homogeneous Water Oxidation Catalysis with Iron Coordination Complexes
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: Utah State University
HELD PLACE: Utrecht 2013 (Netherlans).
DATES: 15 Julio 2013 ***// Nº Order 44 // Nº Order Oral Presentation 20***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Homogeneous Water Oxidation Catalysis with Iron Coordination Complexes
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: University of Michigan
DATES: 22 Julio 2013 ***// Nº Order 45 // Nº Order Oral Presentation 21***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Catálisis aplicada a la producción de energía
PARTICIPATION TYPE: Profesor invitado / Curso de posgrado
HELD PLACE: Curso en la University nacional autónoma de (UNAM, Mexico)
DATES: 21 al 23 de octubre 2013 (4.5h) ***// Nº Order 46 // Nº Order Oral Presentation 22***

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*AUTHORS: Julio Lloret Fillol**
TITLE: Homogeneous Water Oxidation Catalysis with First Row Coordination Complexes
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: University of Lund (Suecia)
DATES: 23 de May 2014 ***// Nº Order 47 // Nº Order Oral Presentation 23***

AUTHORS: Julio Lloret-Fillol*, Zoel Codola, Isaac Garcia Bosch, Irene Prat, Ferran Acuña, Jose M. Lluis, Miquel Costas
TITLE: Mechanistic Insight of Homogeneous Water Oxidation Catalysts with Iron Coordination Complexes
PARTICIPATION TYPE: Poster
HELD PLACE: Venture, California (USA)
DATES: 18-19 de January 2014 ***// Nº Order 48***

AUTHORS: Julio Lloret-Fillol*
TITLE: Water Oxidation Catalysis with Nonheme Iron Complexes
PARTICIPATION TYPE: Invited key note Lecture
HELD PLACE: NIS-Colloquium, Photo- and electrochemical Cells for Solar Fuels - Torino (Itali)
DATES: 28th March 2014 ***// Nº Order 49 // Nº Order Oral Presentation 24***

AUTHORS: Julio Lloret-Fillol*
TITLE: Intermediates in Homogeneous Iron-Catalysed Water Oxidation
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: Cost Meting CARISMA – Venecia (Itali)
DATES: 5-7 April 2014 ***// Nº Order 50 // Nº Order Oral Presentation 25***

AUTHORS: Julio Lloret-Fillol*
TITLE: Intermediates in Homogeneous Iron-Catalysed Water Oxidation
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: ISAACS13 – Dublin (UK)
DATES: 1-4 July 2014 ***// Nº Order 51 // Nº Order Oral Presentation 26***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine ligands as platforms for well-defined Iron Water Oxidation and Cobalt Water reduction catalyst
PARTICIPATION TYPE: Lecture
HELD PLACE: EUCHEM 2014 – Stambul
DATES: Sept 2014 ***// Nº Order 52 // Nº Order Oral Presentation 27***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine ligands as platforms for well-defined Water Oxidation and reduction catalysis
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: COST MEETING – LIGANS: Synthesis and Design – Tarragona
DATES: 1-4 July 2014 ***// Nº Order 53 // Nº Order Oral Presentation 28***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine ligands as platforms for well-defined Water Oxidation and reduction catalysis
PARTICIPATION TYPE: Invited Speaker
HELD PLACE: XXXIII-Reunión GEQO – Madrid
DATES: 1-4 July 2014 ***// Nº Order 54 // Nº Order Oral Presentation 29***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine Ligands as Platforms for Well-Defined Light-Driven Cobalt Reduction and Iron Water Oxidation Catalysts
PARTICIPATION TYPE: Lecture
HELD PLACE: Ruhr-Universität Bochum, Young researcher talk.
DATES: 8 June 2015 ***// Nº Order 55 // Nº Order Oral Presentation 30***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine Ligands as Platforms for Well-Defined Light-Driven Cobalt Reduction and Iron Water Oxidation Catalysts
PARTICIPATION TYPE: Lecture
HELD PLACE: Max Planck Institute for Chemical Energy Conversion
DATES: 9 June 2015 ***// Nº Order 56 // Nº Order Oral Presentation 31***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine Ligands as Platforms for Well-Defined Iron Water Oxidation Catalysts and Light-Driven Cobalt Reduction Catalysts
PARTICIPATION TYPE: Speaker
HELD PLACE: Bienal RSEQ – A Coruña
DATES: 21 July 2015 ***// Nº Order 57 // Nº Order Oral Presentation 32***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine ligands as platforms for well-defined Water Oxidation and reduction catalysis
PARTICIPATION TYPE: Plenary Speaker
HELD PLACE: XII-Simposio de Investigadores Jóvenes– Barcelona
DATES: 6 Nov. 2015 ***// Nº Order 58 // Nº Order Oral Presentation 33***

AUTHORS: Julio Lloret-Fillol*
TITLE: WELL-DEFINED WATER OXIDATION AND LIGHT-DRIVEN REDUCTION CATALYSTS
PARTICIPATION TYPE: Invited Speaker
HELD PLACE: University de Zaragoza
DATES: 25 Nov. 2015 ***// Nº Order 59 // Nº Order Oral Presentation 34***

AUTHORS: Julio Lloret-Fillol*
TITLE: Aminopyridine ligands as platforms for well-defined Water Oxidation and reduction catalysis
PARTICIPATION TYPE: Invited Speaker
HELD PLACE: Pacific Chem
DATES: 15 Dic. 2015 ***// Nº Order 60 // Nº Order Oral Presentation 35***

AUTHORS: Julio Lloret-Fillol*
TITLE: Spectroscopic, electrochemical and computational characterization of Ru species involved in catalytic water oxidation
PARTICIPATION TYPE: Key Note
HELD PLACE: CARISMA - COST – Ljubljana (Slovenia)
DATES: 21-23 March - 2016 ***// Nº Order 61 // Nº Order Oral Presentation 36***

AUTHORS: Julio Lloret-Fillol*
TITLE: Water Oxidation catalysts based on aminopyridine ligands
PARTICIPATION TYPE: Invited Speaker
HELD PLACE: 2nd International Symposium on Chemical Energy Conversion Processes (ISCECP-2) (Fukuoka, JAPAN)
DATES: 22-26 May - 2016 ***// Nº Order 62 // Nº Order Oral Presentation 37***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Cobalt-Catalyzed Light-Driven Reduction of Ketones and Aldehydes**
PARTICIPATION TYPE: Poster
HELD PLACE: GORDON - Renewable Energy: Solar Fuels - ITALY
DATES: 02/28/2016 - 03/04/2016 - 2016 ***// Nº Order 63***

AUTHORS: Lloret Fillol J.; Call A.; Casadevall C.; Acuña-Parés F.; Fernández S.
TITLE: Cobalt Complexes Mediating Photo- and Electrocatalytic Reduction Reactions
PARTICIPATION TYPE: Poster
HELD PLACE: GEQO
DATES: 23-25 May - 2016 ***// Nº Order 64***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Catalytic light-driven reduction of water and organic compounds by well-defined cobalt complexes**
PARTICIPATION TYPE: Oral Presentation
HELD PLACE: EUCHEMS-2016 (Sevilla, Spain)
DATES: 11-15 Sept - 2016 ***// Nº Order 65 // Nº Order Oral Presentation 38***

AUTHORS: Carla Casadevall, Julio Lloret-Fillol*
TITLE: **Combustibles solares**
PARTICIPATION TYPE: Outreach Activity
HELD PLACE: CAIXAFORUM -2017 (Lleida, Spain)
DATES: 7 - Feb - 2017 ***// Nº Order 66 // Nº Order Oral Presentation 39***

AUTHORS: Julio Lloret-Fillol*
TITLE: **MOLECULAR CATALYSTS FOR WATER SPLITTING, A technological and scientific perspective**
PARTICIPATION TYPE: Tutorial at the Graduate school "Chemical Photocatalysis" at Regensburg University
HELD PLACE: REGENSBURG -2017 (Germany)
DATES: 2nd March - 2017 ***// Nº Order 67 // Nº Order Oral Presentation 40***

AUTHORS: Julio Lloret-Fillol*
TITLE: **From Solar Fuels to Solar Chemicals**
PARTICIPATION TYPE: Lecture
HELD PLACE: REGENSBURG -2017 (Germany)
DATES: 2nd March - 2017 ***// Nº Order 68 // Nº Order Oral Presentation 41***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Catalytic light-driven reductive transformations mediated by cobalt complexes**
PARTICIPATION TYPE: Oral Presentation
HELD PLACE: ACS -2017 (San Francisco, USA)
DATES: 4th April - 2017 ***// Nº Order 69 // Nº Order Oral Presentation 42***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Towards Artificial Photosynthetic Schemes for Light-Driven Transformations**
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: University de Barcelona -2017 (Spain)
DATES: 26th April - 2017 ***// Nº Order 70 // Nº Order Oral Presentation 43***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Catalytic Light-Driven Reductive Transformations Mediated by Cobalt Complexes**
PARTICIPATION TYPE: Oral Lecture
HELD PLACE: i-Chat Frascati, Roma (Italy)
DATES: 2nd-6th July - 2017 ***// Nº Order 71 // Nº Order Oral Presentation 44***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Water oxidation catalysis with well-defined Fe and Ru complexes**
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: University of Oviedo -2017 (Spain)
DATES: 27th July - 2017 ***// Nº Order 72 // Nº Order Oral Presentation 46***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis from Solar Fuels To Solar Chemicals**
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: ISOC - XI edition of the International School of Organometallic Chemistry
Organometallic chemistry: from theory to applications
DATES: 5th Sept - 2017 ***// Nº Order 73 // Nº Order Oral Presentation 47***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Light-Driven Reduction Chemistry. From Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: 2017 Barluenga Lectureship
DATES: 11th Nov - 2017 ***// Nº Order 74 // Nº Order Oral Presentation 48***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis from Solar Fuels To Solar Chemicals**
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: University of Arizona
DATES: 25th Jan - 2018 ***// Nº Order 75 // Nº Order Oral Presentation 51***

AUTHORS: C. Casadevall, V. Martin-Diaconescu, F. Franco, J. Benet-Buchholtz, B. Lasaille-kaiser, J. Lloret-Fillol*
TITLE: **Isolation and characterization of an elusive Ru(IV) peroxo: A missing link**
PARTICIPATION TYPE: Selected as Oral presentation of the poster
HELD PLACE: Gordon Research Conference; Renewable Energy: Solar Fuels
Organometallic chemistry: from theory to applications
DATES: 25th Jan - 2018 ***// Nº Order 76 // Nº Order Oral Presentation 52***

AUTHORS: C. Casadevall, V. Martin-Diaconescu, F. Franco, J. Benet-Buchholtz, B. Lasaille-kaiser, J. Lloret-Fillol*
TITLE: **Isolation and characterization of an elusive Ru(IV) peroxo: A missing link**
PARTICIPATION TYPE: Poster
HELD PLACE: Gordon Research Conference; Renewable Energy: Solar Fuels
Organometallic chemistry: from theory to applications
DATES: 5th Sept - 2018 ***// Nº Order 77***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Towards Light-Driven Reduction. From Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Key Note
HELD PLACE: Girona Seminar 2018; Predictive Catalysis, Transition-Metal Reactivity by Design
DATES: 3-6th Arpil- 2018 ***// Nº Order 78 // Nº Order Oral Presentation 53***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Light-driven Reductions Using Well-Defined Coordination Complexes; From Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Lecture
HELD PLACE: Donostia International Physics Center (DIPC) 25th May - 2018
DATES: 25h May- 2018 ***// Nº Order 79 // Nº Order Oral Presentation 54***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Light-driven Reductions Using Well-Defined Coordination Complexes; From Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: GDR Solar Fuels, Collège de France – Paris
DATES: 31-May-2018 ***// Nº Order 80 // Nº Order Oral Presentation 55***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Towards Light-Driven Reduction. From Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: University of Sevilla
DATES: 15th Junio - 2018 ***// Nº Order 81 // Nº Order Oral Presentation 56***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Mechanistic insights into water and CO_2 reduction chemistry by well-define cobalt complexes.**
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: Metting ECIR – Barcelona 2018
DATES: 11th Julio - 2018 ***// Nº Order 82 // Nº Order Oral Presentation 57***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial PhotosynthesisFrom Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Lecture – outreach activity
HELD PLACE: BIYSC – Tarragona – ICIQ - 2018
DATES: 16th Julio - 2018 ***// Nº Order 83 // Nº Order Oral Presentation 58***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Towards Light-Driven Reduction. From Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Key Note
HELD PLACE: ICCC2018 Sendai, Japan
DATES: 3th - Aug - 2018 ***// Nº Order 84 // Nº Order Oral Presentation 59***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Light-Driven Reductive Chemistry for Renewable Fuels and Chemicals.**
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: Fukuoka, Japan
DATES: 5th - Aug - 2018 ***// Nº Order 85 // Nº Order Oral Presentation 60***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Water Oxidation Catalysis with Well-defined Fe Complexes.**
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: Oita, Japan
DATES: 7th Agost - 2018 ***// Nº Order 86 // Nº Order Oral Presentation 61***

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis. From Solar Fuels to Solar Chemicals.**
PARTICIPATION TYPE: Tutorial
HELD PLACE: University of Otago, Dunedin, New Zealand.
DATES: 2019 4 Feb. / Nº Order 87 // Nº Order Oral Presentation 62

AUTHORS: Julio Lloret-Fillol*
TITLE: **From Well-defined Coordination Complexes towards Materials for Artificial Photosynthesis.**
PARTICIPATION TYPE: Key Note
HELD PLACE: Workshop On: Otago Future Fuels (OFF), Dunedin, New Zealand.
DATES: 2019 7 Feb. / Nº Order 88 // Nº Order Oral Presentation 63

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-Defined Catalysts for Reductive Transformations; From Fuels to Fine Chemicals.**
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: 9th International Conference on Advanced Materials and Nanotechnology (AMN9) Wellington, New Zealand
DATES: 2019 13 Feb.) / Nº Order 89 // Nº Order Oral Presentation 64

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-Defined Catalysts for Reductive Transformations; From Solar Fuels to Fine Solar Chemicals.**
PARTICIPATION TYPE: Plenary Lecture
HELD PLACE: ICIQ-RedINTECAT School "Technologies for Carbon Dioxide Conversion and Valorization
DATES: 2019 25-27 Sep. / Nº Order 90 // Nº Order Oral Presentation 65

AUTHORS: Julio Lloret-Fillol*
TITLE: **Photo- and electro-catalytic transformations of small molecules using well-defined coordination complexes.**
PARTICIPATION TYPE: Invited Speaker
HELD PLACE: ACS-Spring-Orlando, (Florida, US)
DATES: 2019, March 31th – April 4th / Nº Order 91 // Nº Order Oral Presentation 66

AUTHORS: Julio Lloret-Fillol*
TITLE: **Design of Catalytic Systems for Artificial Photosynthesis: On the Way to Renewable Fuels and Chemicals.**
PARTICIPATION TYPE: Plenary Speaker
HELD PLACE: Advancing Chemistry in Spain: Early Carrier ERC Researchers, (Mallorca, Spain)
DATES: 2019, Nov. 21 – 22th / Nº Order 92 // Nº Order Oral Presentation 67

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-Defined Catalysts for Reductive Transformations; From Solar Fuels to Fine Solar Chemicals.**
PARTICIPATION TYPE: Plenary Speaker
HELD PLACE: HC3A, Heteroelements and Coordination Chemistry: from Concepts to Applications: (Toulouse, France)
DATES: 2020, January 16 – 17th / Nº Order 93 // Nº Order Oral Presentation 68

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-Defined Catalysts for Reductive Transformations; From Solar Fuels to Fine Solar Chemicals.**
PARTICIPATION TYPE: Plenary Speaker
HELD PLACE: 11a Trobada de Joves Investigadors: Vilanova i la Geltrú, Spain,
DATES: 2020, January 22-23 / Nº Order 94 // Nº Order Oral Presentation 69

AUTHORS: Julio Lloret-Fillol*
TITLE: **From well-defined Coordination Complexes Towards Materials for Artificial Photosynthesis.**
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: ICIQ-BASF Seminar, Tarragona, Spain.
DATES: 2020, February 25th / Nº Order 95 // Nº Order Oral Presentation 70

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-Defined Catalysts for Reductive Transformations. From Solar Fuels to Fine Solar Chemicals.**
PARTICIPATION TYPE: Invited Lecture
HELD PLACE: Nordic Consortium for CO_2 Conversion (NordCO_2)
DATES: 2021, Sept 24th / Nº Order 96 // Nº Order Oral Presentation 71

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis for the Synthesis of Fuels and Chemicals.**
PARTICIPATION TYPE: Invited Lecture (4 h of Lecture)
HELD PLACE: Workshop on Artificial Photosynthesis. Valladolid, Spain
DATES: 2021, December 20-21 / Nº Order 97 // Nº Order Oral Presentation 72

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis from Solar Fuels and to Solar Chemicals.**
PARTICIPATION TYPE: Outreach Lecture. Target audience: High School Students.
HELD PLACE: ICIQ, Tarragona, Spain
DATES: 2021, May 5th / Nº Order 98 // Nº Order Oral Presentation 73

AUTHORS: Julio Lloret-Fillol*
TITLE: **Introducción a los Electrolizadores Alcalinos.**
PARTICIPATION TYPE: Invited Lecture.
HELD PLACE: Ciclo de Webinars, "Introducción a la economía del H2 verde",
DATES: 2022, January 26th / Nº Order 99 // Nº Order Oral Presentation 74

AUTHORS: Julio Lloret-Fillol*
TITLE: **Water Oxidation Catalysis by Model Systems.**
PARTICIPATION TYPE: Plenary Lecture.
HELD PLACE: Metallocofactors, Gordon Research Conference, Newport, USA
DATES: 2022, June 9th / Nº Order 100 // Nº Order Oral Presentation 75

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-defined Complexes for Reductive Transformations.**
PARTICIPATION TYPE: Plenary Lecture.
HELD PLACE: International Conference of Hydrogen Atom Abstraction (iCHAT), Frascati, Italy
DATES: 2022, June 28th / Nº Order 101 // Nº Order Oral Presentation 76

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-defined Water Oxidation Catalysis.**
PARTICIPATION TYPE: Invited Lecture.
HELD PLACE: International Symposium on Activation of Dioxygen and Homogeneous Catalysis, Girona, Spain
DATES: 2022, September 4-7th / Nº Order 102 // Nº Order Oral Presentation 77

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-Defined Catalysts for Reductive Transformations. From Solar Fuels to Fine Solar Chemicals.**
PARTICIPATION TYPE: Invited Lecture.
HELD PLACE: International Conference on Coordination Chemistry, Symposium T7. (ICCC2022), Rimini, Italy.
DATES: 2022, August 28- September 2th / Nº Order 103 // Nº Order Oral Presentation 78

AUTHORS: Julio Lloret-Fillol*
TITLE: **Well-Defined Catalysts for Reductive Transformations. From Solar Fuels to Fine Solar Chemicals.**
PARTICIPATION TYPE: Invited Lecture.
HELD PLACE: Singapore International Chemistry Conference (SCII11), Singapore.
DATES: 2022, December 13th / Nº Order 104 // Nº Order Oral Presentation 79

AUTHORS: Julio Lloret-Fillol*
TITLE: **Principles of photocatalysis and photochemistry.**
PARTICIPATION TYPE: Invited Lecture, 5 hours workshop.
HELD PLACE: GEQO – School on photochemistry, Valladolid, Spain
DATES: 2023, Febrary 1-3 / Nº Order 105 // Nº Order Oral Presentation 80

AUTHORS: Julio Lloret-Fillol*
TITLE: **Oxidation and Reductive Transformations for Artificial Photosynthesis.**
PARTICIPATION TYPE: Plenary Lecture.
HELD PLACE: Frontiers in chemistry seminars, University of Padova (Italy).
DATES: 2023, March 23th / Nº Order 106 // Nº Order Oral Presentation 81

AUTHORS: Julio Lloret-Fillol*
TITLE: **TreeLlum Technologies.**
PARTICIPATION TYPE: Pitch. Finalist of the Innovation on the Barcelona metropolitan area.
HELD PLACE: Cornella (Spain).
DATES: 2023, March 29th / Nº Order 107 // Nº Order Oral Presentation 82

AUTHORS: Julio Lloret-Fillol*
TITLE: **From photo- & electro-catalysis to the development of new photoreactors and electrochemical cells.**
PARTICIPATION TYPE: Invited Lecture.
HELD PLACE: Forum 4th Edition of "*Aportando Valor al CO_2"* - Bilbao (Spain).
DATES: 2023, May 10-11th / Nº Order 108 // Nº Order Oral Presentation 83

AUTHORS: Julio Lloret-Fillol*
TITLE: **Catalysts for Artificial Photosynthesis and Beyond.**
PARTICIPATION TYPE: Invited Lecture.
HELD PLACE: Universitat Jaume I, Castellon (Spain).
DATES: 2023, April 11th / Nº Order 109 // Nº Order Oral Presentation 84

AUTHORS: Julio Lloret-Fillol*
TITLE: **TECNIO Success Cases: sinergias que resuelven retos tecnológicos en el sector químico.**
PARTICIPATION TYPE: Round Table at Expoquímia.
HELD PLACE: Barcelona (Spain).
DATES: 2023, May 30th / Nº Order 110 // Nº Order Oral Presentation 85

AUTHORS: Julio Lloret-Fillol*
TITLE: **Photosynthesis as Inspiration for Reactivity of Low Valent Metal Complexes.**
PARTICIPATION TYPE: Plenary.
HELD PLACE: Alcala de Henares (Spain).
DATES: 2023, October 20th / Nº Order 111 // Nº Order Oral Presentation 86

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis as Inspiration for New Synthetic Methodologies, and the Activation of Strong Csp3-Cl and Csp2-Cl Bonds**
PARTICIPATION TYPE: Lecture.
HELD PLACE: Cambridge University, Chemical department (UK).
DATES: 2023, November 14th / Nº Order 112 // Nº Order Oral Presentation 87

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis as Inspiration for New Synthetic Methodologies.**
PARTICIPATION TYPE: Lecture.
HELD PLACE: Rennes University, (France).
DATES: 2023, December 1st / Nº Order 113 // Nº Order Oral Presentation 88

AUTHORS: Julio Lloret-Fillol*
TITLE: **Artificial Photosynthesis as Inspiration for New Synthetic Methodologies.**
PARTICIPATION TYPE: Keynote speaker.
HELD PLACE: Valencia University, (Spain).
DATES: 2023, December 13st / Nº Order 114 // Nº Order Oral Presentation 89

LARGE EQUIPMENT THAT YOU USE OR HAVE USED

CODE : R= responsible, UA = frequent user, UO = occasional user

Equipment: RMN (Desde 200 MHz to 600 MHz con criosonda) **Code:** Usuario Asiduo

Equipment: ESI-MS y CrioESI-HRTOF **Code:** Usuario Asiduo

Equipment: UV-VIS **Code:** Usuario Asiduo

Equipment: cw-EPR, pulse-EPR **Code:** Usuario ocasional

Equipment: GC-MS **Code:** Usuario Asiduo

Equipment: HPLC-MS **Code:** Responsable

Equipment: Caixa anaeròbica - tècniques de treball en atmosfera inert **Code:** Responsable

Equipment: IR-ATR **Code:** Usuario Asiduo -

Equipment: Analisis Elemental C, H, N, S **Code:** Usuario Asiduo

Equipment: Difración X-Ray **Code:** Usuario Asiduo

Equipment: Resonancia Raman **Code:** Usuario ocasional

Equipment: Supercomputadores (Mare Nostrum) **Code:** Usuario Asiduo

Equipment: Dinamyc Light Scatering (DLS) **Code:** Usuario Ocasional

Equipment: Natural Tranking Analysis of Nanoparticles (NTA) **Code:** Usuario Ocasional

Equipment: Laser Absortion Espectrometry y Fluorimetro **Code:** Usuario Ocasional

Equipment: Radiación de Sincrotrón en (XANES, EXAFS) **Code:** Usuario Ocasional

Equipment: Mösbauher (Colaboración U. Minnesona) **Code:** Usuario Ocasional

DOCTORAL THESES IN THE REALIZATION PHASE

1.- TITLE: Iron and Iridium molecular complexes for water oxidation catalysis

PHD: ZOEL CODOLÁ DUCH
PHD PROGRAM: Ciencias Experimentales y Sostenibilidad. (Con Mención de Calidad)
UNIVERSITY: University de Girona FACULTAD/ESCUELA: Ciencias/Química
DEFENCE DATE: 2014-06-11
FUNDING OF THE DOCTORAL THESIS: Contrato a cargo del proyecto FP7
Convocatoria: 2010; Organismo Financiador: FP7
Tipo de concurrencia (competitiva): No

2.- TITLE: Water Reduction Catalysts Based Coordination Complexes with on 1st row Transition Metals

PHD: ARNAU CALL
PHD PROGRAM: Ciencias Experimentales y Sostenibilidad. (Con Mención de Calidad)
UNIVERSITY: University de Girona FACULTAD/ESCUELA: Ciencias/Química
DEFENCE DATE: 2016-05
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador (FPU)
Convocatoria: 2012; Organismo Financiador: MINECO
Tipo de concurrencia (competitiva): Si

3.- TITLE: Theoretical study of water oxidation and reduction mechanisms by aminopyridine first row transition metal catalysts.

PHD: FERRAN ACUÑA
PHD PROGRAM: Ciencias Experimentales y Sostenibilidad. (Con Mención de Calidad)
UNIVERSITY: University de Girona FACULTAD/ESCUELA: Ciencias/Química
DEFENCE DATE: 20-07-2016
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador
Convocatoria: 2012; Organismo Financiador: University de Girona
Tipo de concurrencia (competitiva): Si

4.- TITLE: High-valent iron complexes supported with tetradentate and pentadentate ligands based on the triazacyclononane scaffold .

PHD: GERAND SABEÑA
PHD PROGRAM: Ciencias Experimentales y Sostenibilidad. (Con Mención de Calidad)
UNIVERSITY: University de Girona FACULTAD/ESCUELA: Ciencias/Química
DEFENCE DATE: 23-06-2017
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador
Convocatoria: 2012; Organismo Financiador: FP7
Tipo de concurrencia (competitiva): No

5.- TITLE: MECHANISTIC STUDIES OF WATER OXIDATION CATALYZED BY HOMOGENEOUS IRON AND RUTHENIUM COMPLEXES AND LIGHT-DRIVEN ORGANIC REDUCTIONS WITH A DUAL COBALT/COPPER CATALYTIC SYSTEM

PHD: CARLA CASSADEVALL SERRANO
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2019-07-22
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador,
Convocatoria: 2014; Organismo Financiador: ICIQ-CELLEX / FPU
Tipo de concurrencia (competitiva): Si

6.- TITLE: DEVELOPMENT OF VISIBLE LIGHT PHOTOREDOX METHODOLOGIES TOWARDS THE ACTIVATION OF CARBON-HALOGEN BONDS

PHD: MIGUEL CLAROS
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2020-10-06
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador
Convocatoria: 2016; Organismo Financiador: ICIQ-CELLEX
Tipo de concurrencia (competitiva): No

7.- TITLE: ORGANIC TRANSFORMATIONS USING TRANSITION METALS AND PHOTOREDOX CATALYSTS.

PHD: KLAUDIA MICHALISZYN
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2022-04-27
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador
Convocatoria: 2016; Organismo Financiador: ERC
Tipo de concurrencia (competitiva): No

8.- TITLE: DEVELOPMENT AND MECHANISTIC STUDY OF WELL-DEFINED CATALYSTS FOR THE CO2 AND H2O REDUCTION REACTIONS.

PHD: SERGIO FERNANDEZ
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2022-07-13
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador
Convocatoria: 2016; Organismo Financiador: MINECO – FPU – Fellowship.
Tipo de concurrencia (competitiva): No

9.- TITLE: DEVELOPMENT AND MECHANISTIC STUDY OF SINGLE SITES IN 2D-COVALENT ORGANIC FRAMEWORKS FOR CO2 ELECTROREDUCTION.

PHD: GEYLA CARIDAD DUBEB
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2022-11-22
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador
Convocatoria: 2017; Organismo Financiador: ERC.
Tipo de concurrencia (competitiva): No

10.- TITLE: VISIBLE-LIGHT METALLAPHOTOREDOX STRATEGIES FOR ORGANIC TRANSFORMATIONS THROUGH THE CLEAVAGE OF CSP3-CL BONDS.

PHD: JORDI ARAGON
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2022-06-23
FUNDING OF THE DOCTORAL THESIS: Beca de formación de personal investigador
Convocatoria: 2017; Organismo Financiador: MINECO – FPI – Fellowship.
Tipo de concurrencia (competitiva): Si

11.- TITLE: METAL-ORGANIC FRAMEWORKS AND COVALENT ORGANIC FRAMEWORKS AS SINGLE-SITE CATALYSTS FOR ORGANIC TRANSFORMATIONS.

PHD: Luis Gutiérrez Victoriano
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2023-01-20
FUNDING OF THE DOCTORAL THESIS: ERC-ICIQ
Tipo de concurrencia (competitiva): No

12.- TITLE: PHOTOREDOX CATALYSIS MEDIATED BY TRANSITION METAL COMPLEXES. TOWARDS CHALLENCHING ORGANIC REDUCTIONS.

PHD: David Pascual Gascón
PHD PROGRAM: Doctorado de Ciencia y Tecnología Química*. (Con Mención de Calidad)*
UNIVERSITY: University Roviri i Virgili FACULTAD/ESCUELA: Ciencias/Química
CONVENIO: Institut Català d'Investigació Química (ICIQ)
DEFENCE DATE: 2023-02-22
FUNDING OF THE DOCTORAL THESIS: ERC-ICIQ
Tipo de concurrencia (competitiva): No

Other merits and scientific summary

Scientific contributions: I hold an ICREA Research professor and a Group Leader position at the ICIQ. The research lines since I have started the research group at the ICIQ are:

- *High Valent State Metals and Water Oxidation Catalysis (WOC).* Water is the most appealing global-scale source of electrons that can be used to store energy into chemical bonds. However, our understanding is limited (**CCR 2017**, 334, 2; **AOC 2019**, 71, 1; **AIC 2019**, 74, 151).

(a) We discovered highly efficient homogeneous Fe WO catalysts (Nat. Chem. 2011, 807), extended the reactivity to organic oxidations (CEJ 2012, 18, 13269) and predicted an exotic {Fe-O-Ce} intermediate (CEJ 2013, 19, 8042, *ACIE-Highlighted and Frontispiece*). Later, we characterized the {Fe-O-Ce} intermediate (Nat.Commun. 2015 NCOMMS-14-03271A). Our mechanistic studies (CEJ 2014, 20, 5696 and Inorg. Chem 2014, 53, 5474) and characterization of high valent Fe(V)-oxo and -nitrido systems (**JACS 2017**, 139, 9168, **JACS 2018**, 140, 3916) led us to design highly active homogenous WOC by deuteration of oxidation-sensitive sites (**JACS 2019**, 141, 323) showing the molecularity together with electrochemical studies (**ACS Cat 2021**, 11, 2583). We elucidated the WO mechanism of equivalent Ru complexes (**CEJ 2016**, 22, 20111, **Nat. Chem. 2021** 13, 800, ***ChemElectroChem* 2021**, 8, 10.1002/celc.202101271, Cover).

(b) To find highly efficient OER, we Initially explored imidazolate-based Co-Metal-Organic Frameworks (MOFs), demonstrating that they displayed low overpotentials (319 mV at 10 mA·cm-2) for Oxygen Evolution Reaction (OER) and extraordinarily stability even when used as a catalyst for overall water splitting (both OER and HER) without any sign of fatigue after > 120 h. Interestingly, the MOF was converted fast to a more active Co(O)OH phase during electrocatalytic oxygen evolution. (***ACS Appl. Energy Mater.* 2019**, 2, 8930). Then, we searched directly for doped metal oxides since they are highly efficient and robust OER catalysts. We developed NiM'Ox (M = Fe, Co, Mn, Zn) mixed metal oxides by solution combustion that produced among the best catalytic systems described in the literature (η < 190 mV at 10 mA·cm-2 at pH 13, **J. Mater. Chem. A, 2021,** 9, 12700) and served as a model to understand the OER (**J. Am. Chem. Soc. 2022,** 144, 7622). This in-situ catalyst growing (ICG) method to fabricate self-supported OER catalytic electrodes was also patent-protected since it provides a single, fast, and low-temperature fabrication step that facilitates automatisation at reduced costs. Notably, the in-situ catalyst growing (ICG) technology for the specific application of electrodes for Alkaline Hydrogen Production Electrolyzers is under development by the Spin-Off JOLTECH SOLUTIONS (**JOLT**).

- *Reductive chemistry for the synthesis of fine chemicals and fuels.* I was awarded as a Consolidator Grant of the European Research Council to develop this project.

(a) We developed modular HER active Co complexes under photo- and electrochemical conditions (>8500 TON, 52000 TON/h) (*ChemSci* **2018**, *9*, 2609; *Editors' Choice*, *ACS Cat* **2019**, *9*, 5837).

(b) We elucidated the CO_2-to-CO mechanism for the same cobalt complexes (**JACS 2020**, 142, 120), developed NHCs Mn electrocatalyst for CO_2-to-CO reduction, with a TOF of $3 \cdot 10^5$ s^{-1} (*ACIE* **2018**, *57*, 4603) and the first electroactive COFs based on {$Mn(CO)_3$} (*ACS Cat* **2021**, *11*, 7210, *Cover*) and Fe complexes (*ACS Cat* **2021** *11*, 615 & *11*, 15212).

(c) Beyond Artificial Photosynthesis: We hypothesised that by using catalysts previously developed for HER and CO2RR in combination with the reductive enough photosensitisers, we could catalyse other reducing transformations using water as a source of H2 and light as the driving source. For instance, the system presents an unprecedented selectivity for reducing acetophenone versus aliphatic aldehydes (**ChemSci 2017,** 8, 4739, Cover picture & highlighted in chemistry world & chemistry views and **ChemComm 2018,** 9643). The same catalytic system can reduce olefins (**ChemSci 2022,** 13, 4270). We also found that developed catalysts activate challenging inert chloroalkanes under mild conditions yielding cross-coupling transformations (**Angew Chem Int Ed 2019,** 58, 1869; and **Angew Chem Int Ed 2022,** 61, e202114365, Cover).

- *Catalysis with Reticular Materials.* Reticular Materials for Catalysis: Site isolation of unstable catalytic species within a reticular material is an appealing strategy for mitigating catalyst decomposition while creating catalysts with improved activity and robustness. In this regard, we found that this strategy works for COFs. For instance, we developed the first 2D-COF electroactive based on {Mn(CO)3}, showing higher catalytic activity and low overpotential (c.a. 300 mV) in water at pH 7.5 for the synthesis of syngas than its molecular counterpart. Moreover, by a homemade ATR-IR-Spectroelectrochemical cell, we studied the mechanism, proposing that the mechanical constraint of the COF avoids the deleterious formation of the Mn-Mn dimer (***ACS Catal* 2021**, cover picture). As a result, current densities for CO2-to-CO improve in flow cells (75 $mA \cdot cm^{-2}$, Fig 2). Moreover, we have also developed a 2D-COF based on single cobalt sites coordinated (COFbpyCo) exploiting the isolated nature of the cobalt sites to stabilise low-valent single sites and catalyse the hydroboration of olefins. Indeed, the COF shows excellent reactivity while the corresponding molecular complex is inactive. Experimental and computational studies suggested the {(bpy•–)CoI(THF)2} moiety as the active

catalytic species within the COF. The mechanism follows oxidative boryl migration, isomerisation, and reductive elimination to form the boronate ester (***ACS Catal.*** **2023**, *13*, 3044).

In summary, +106 scientific publications in the most prestigious international journals (+56 publications since 2015 (49 as ICREA): 1 Nature Chem., 2 Nature Comm., 4 Angew. Chem. Int. Ed., 7 JACS, 5 Chem. Sci., among others), 3 book chapters and +100 communications in international forums and conferences and +80 invited lectures. To remark are talks in the University of Cambridge, Padua, Michigan, Arizona, and Minnesota (about top 20 USA universities in the Shanghai ranking) Gordon Research Conference and the International School of Organometallic Chemistry.

Technology contributions, transference, and industrial collaborations: My research has delivered in 8 Spanish/International patents, the creation of 3 spin-offs: Treellum technologies (CSO and co-founder, http://treellumtechnologies.com/) from ICIQ and Gioxcat (co-founder, http://gioxcat.com/), from Girona University and also co-founder and Chief Scientist Officer (CSO) of a new spin-off "JOLT TECHNOLOGIES, https://jolt-solutions.com/", thanks to the COLLIDER program (success rate ≈ 1% of 260 proposals), and a 450K pre-seed funding (company valuation in 30 million EUR) we will exploit the technology for producing electrodes for Alkaline Electrolyzers for H_2 production.

Outreach Activities: Contributions to the Science Museum of London (Artificial photosynthesis), "CaixaForum 2017, 2018 and 2019", Radio Cataluña (Link), TV3 (Link), among others. In addition, I have lectured the topic of Artificial photosynthesis on seminars and schools for PhD students in Mexico, Germany, Italy, France, New Zealand and Spain.

Mentoring, 14 Post-Docs, 12 PhD theses and 7 are ongoing, all former members are successful in their current positions. Highlighting Prof. A. casitas at the Philipps-Universität Marburg and Dr C. Casadevall, a formal PhD student that after a successful PostDoct in Cambridge, secured a Junior Leader la Caixa fellowship and Ramon y Cajal position, which allow her to be independent. Dr A. Call, a formal PhD student, also secured a Ramon y Cajal position. Dr F. Franco recently obtained a position at Trieste Univ. as Assistant Professor. Prof. Lloret also mentored Dr Fabio Juliá as Junior Leader la Caixa in his research group. Now, Dr Juliá is Ramon y Cajal at the Univ. Murcia and has been awarded the ERC-St-Grant.

Commissions of Trust: Regular reviewer for EEUU, Spanish, French, Italian and New Zealand research agencies, European programs, and scientific journals (Science, Nat. Chem., Nat. Catal., Chem, JACS, ACIE among others). Member of the RSEQ (since 2003-) and the American Chemical Society (ACS, 2009-). Advisory board of Chemical Science (2023 -). Associated Editor of RSC Advances (2016) and Advisory board of Hydrogen (2019 -). PhD thesis jury in 20 occasions.

Awards and Prices

- Fellow of the Royal Society of Chemistry 2023 -
- RSEQ - GEQO Award on Excellence GEQO Award for Research Excellence.
- Ramón Areces Grant Award 2022.
- Thieme Chemistry Journals Award 2019.
- Young Academy of Europe since 2017
- Young Researcher RSEQ Award 2015 (Premio RSEQ a Jóvenes Investigadores)
- **ERC-Consolidation Grant** GREENLIGHT_REDCAT (1.999.063 €)
- Positive evaluation in the Spanish Tenure Track Program I3
- Shortlisted for Chem Soc Rev Emerging Investigator Lectureship 2014
- Young researcher GEQO Award 2014 (Premio GEQO a Jóvenes Investigadores)
- Habilitation "Profesor Agregat" by the *"Agencia para la Cualidad del SisTOPIC Universitario Catalán"*
- I have passed the 1er stage of the ERC starting grant (2012-2013)
- Marie Curie Reintegration Grant 2010. (WaterSplit) (Researcher Score 4.7/5. Total Score 91.4/100)
- Ramón y Cajal program (MICINN-RYC) 2009.
- Marie Curie IEF 2007. (CHIRGOLD) (Researcher Score 4.6/5. Total Score 88.9/100)
- Post-Doctoral Fellowship Grant from MEyC Spanish Government 2006.
- PhD Fellowship Mobility Grant 2005 from MEyC, Univ. of Heidelberg, Germany (Prof. L. H. Gade)
- PhD Fellowship Mobility Grant 2004 from MEyC, Univ. of Joensuu, Finland (Prof. T.A. Pakkanen)
- MEyC PhD Fellowship Grant 2002 of the Spanish Government (Prof. P. Lahuerta)
- PhD Fellowship Grant 2002 "Fundación Jose y Ana Royo" (Prof. P. Lahuerta)
- Erasmus Fellowship Grant 2001 from MEyC, Spanish government at Univ. Loughborough, UK

Others

- 2023 - Advisory Board of Chemical Science
- Member of the COST CM1205 action CARISMA, WG 3
- 2013-2014. University of Girona (Spain) Lecture of Catalysis apply to the energy production (30 hours/year).
- 2010- at present - University of Girona (Spain) Assistant professor (average of 50 hours/year).
- Reviewer in the "*Petroleum Research Foundation of the American Chemical Society"* and "*programa de investigación fundamental no orientada del ministerio de Educación y Ciencia*" programs.
- Selected as reviewer in the *Marie Curie Career integration grants* (FP7-PEOPLE-2012-CIG and H2020-MSCA-IF-2014) and Ramón y Cajal (2013) programs.
- External review (Expert) of the French National Research Agency (ANR) December (2016) (15 projects)
- Associated editor of RSC Advance (2016-2017)

- Collaborations in Europe

Prof. Dr. Beatriz Royo (ITQB at the Univ. Nova de Lisboa), Dr W. R. Browne (Univ. of Groningen), Prof. Dr. Julia Pérez-Prieto (Univ. of Valencia), Prof. Miquel Costas (Univ. of Girona), Dr. Josep M. Lluis (Univ. of Girona), Dr. Olaf Rüdinger (Max Plank Institute Mulheim, Germany), Prof. Serena DeBeer (Max Plank Institute Mulheim, German), Prof. James H. Durrant (Imperial College), Prof. Dennis Hetterscheid (Uni. Leiden).

- Collaborations with the rest of the world

Prof. Dr. L. Que (Univ. of Minnessota), Prof. Dr. E. Münck (Carnegie Mellon University), Prof. Dr. G Ghirlanda (Arizona State University), Prof. Dr. A. Miller (Univ. Chapel Hill, North Carolina).