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Education, Qualifications, Research Experience and Awards

2000 Undergraduate Research Assistant. Universidad de Oviedo (Spain).
2000 B. S. in Chemistry (Inorganic Chemistry). Universidad de Oviedo (Spain).
2001-2005 Predoctoral Fellowship (F.P.I.-Ministerio de Ciencia y Tecnología, Spain).
2001 Honours Degree Thesis under the supervision of Prof. José Gimeno and Dr. Victorio Cadierno. "*Reactivity of the dimer $[\{RuCl(\mu-Cl)(\eta^3:\eta^3-C_{10}H_{16})\}_2]$ ($C_{10}H_{16}$ = 2,7-dimethylocta-2,6-dien-1,8-diyl) towards P/P-, P/O- and P/N- bidentate donor ligands: Synthesis and characterization of new bis(allyl) ruthenium(IV) complexes*". Universidad de Oviedo (Spain).
2004 Short stance for three months at the Instituto de Investigaciones Químicas (CSIC-Sevilla, Spain) under the supervision of Dr. Antonio Pizzano.
2005 Ph. D. in Organometallic Chemistry (*Cum Laude*) under the supervision of Prof. José Gimeno and Dr. Victorio Cadierno. Thesis entitled " *η^3 -allyl ruthenium(II) and ruthenium(IV) complexes as catalysts, precursors for transfer hydrogenation, propargylic substitution, and isomerization of allylic and propargylic alcohols reactions*". Universidad de Oviedo (Spain).
2006-2008 Postdoctoral Fellowship (M.E.C.-Ministerio de Educación y Ciencia, Spain). Participation for 24 months in the research project "*Synthesis of new polypeptides for transport of chloride anions through membranes*" under the supervision of Prof. Philip A. Gale. School of Chemistry, University of Southampton (Southampton, United Kingdom).
2006 San Alberto Magno Award to the best 2005 doctoral thesis.
2007 Extraordinary PhD. Award of 2005. Universidad de Oviedo (Spain).
2008 Contracted researcher. Universidad de Oviedo (Spain).
2009-2013 "Ramón y Cajal" Research Contract (Ministerio de Ciencia e Innovación, Spain). Universidad de Oviedo (Spain).
2014-present Assistant Professor of Inorganic Chemistry. Universidad de Oviedo (Spain).

Papers in peer-reviewed journals

- 1.- "Reactivity of the bis(allyl)-ruthenium(IV) dimer $[\{\text{Ru}(\eta^3\text{-C}_{10}\text{H}_{16})(\mu\text{-Cl})\text{Cl}\}_2]$ ($\text{C}_{10}\text{H}_{16}$ = 2,7-dimethylocta-2,6-diene-1,8-diyl) towards dppf (dppf = $[\text{Fe}(\eta^5\text{-C}_5\text{H}_4\text{PPh}_2)_2]$) and dppfO (dppfO = $[\text{Fe}(\eta^5\text{-C}_5\text{H}_4\text{PPh}_2)(\eta^5\text{-C}_5\text{H}_4\text{P}(=\text{O})\text{Ph}_2)]$). V. Cadierno, S.E. García-Garrido, J. Gimeno. *J. Organomet. Chem.*, **2001**, 637-639, 767-771. (Invited manuscript for the special issue: 50th Anniversary of the discovery of ferrocene)
- 2.- "Ruthenium(II) and ruthenium(IV) complexes containing hemilabile heterodifunctional iminophosphorane-phosphine ligands $\text{Ph}_2\text{PCH}_2\text{P}(=\text{NR})\text{Ph}_2$ ". V. Cadierno, J. Díez, S.E. García-Garrido, S. García-Granda, J. Gimeno. *J. Chem. Soc., Dalton Trans.*, **2002**, 1465-1472.
- 3.- "Neutral and cationic (η^6 -arene)-ruthenium(II) complexes containing the iminophosphorane-phosphine ligand $\text{Ph}_2\text{PCH}_2\text{P}(=\text{N-}p\text{-C}_5\text{F}_4\text{N})\text{Ph}_2$: Influence of the arene ring in catalytic transfer hydrogenation of cyclohexanone". V. Cadierno, P. Crochet, J. García-Álvarez, S.E. García-Garrido, J. Gimeno. *J. Organomet. Chem.*, **2002**, 663, 32-39. (Invited manuscript for the special issue dedicated to Prof. Pascual Royo)
- 4.- "Reactivity of the dimer $[\{\text{Ru}(\eta^3\text{-C}_{10}\text{H}_{16})(\mu\text{-Cl})\text{Cl}\}_2]$ towards diphosphines and diphosphinemonoxides: Synthesis and characterization of novel (2,7-dimethylocta-2,6-diene-1,8-diyl)-ruthenium(IV) complexes". V. Cadierno, S.E. García-Garrido, J. Gimeno. *Inorg. Chim. Acta*, **2003**, 347, 41-48. (Invited manuscript for the special issue dedicated to Prof. Rafael Usón)
- 5.- "Ruthenium(II) and ruthenium(IV) complexes containing $\kappa^1\text{-P}$ -, $\kappa^2\text{-P,O}$ - and $\kappa^3\text{-P,N,O}$ iminophosphorane-phosphine ligands $\text{Ph}_2\text{PCH}_2\text{P}\{=\text{N}(\text{P}=\text{O})(\text{OR})_2\}\text{Ph}_2$ (R = Et, Ph): Synthesis, reactivity, theoretical studies, and catalytic activity in transfer hydrogenation of cyclohexanone". V. Cadierno, P. Crochet, J. Díez, J. García-Álvarez, S.E. García-Garrido, J. Gimeno, S. García-Granda, M.A. Rodríguez. *Inorg. Chem.*, **2003**, 42, 3293-3307.
- 6.- "Synthesis, reactivity and catalytic activity in transfer hydrogenation of ketones of ruthenium(II) and ruthenium(IV) complexes containing the novel *N*-thiophosphorylated iminophosphorane-phosphine ligands $\text{Ph}_2\text{PCH}_2\text{P}\{=\text{N}(\text{P}=\text{S})(\text{OR})_2\}\text{Ph}_2$ (R = Et, Ph)". V. Cadierno, P. Crochet, J. Díez, J. García-Álvarez, S.E. García-Garrido, S. García-Granda, J. Gimeno, M.A. Rodríguez. *Dalton Trans.*, **2003**, 3240-3249.
- 7.- "An easy entry to dimers $[\{\text{RuX}(\mu\text{-X})(\text{CO})(\text{P}^i\text{P})\}_2]$ (X = Cl, Br; P^iP = 1,1'-bis(diphenylphosphino)ferrocene, 1,1'-bis(diisopropylphosphino)ferrocene) from η^3 -allylruthenium(II) derivatives $[\text{RuX}(\eta^3\text{-2-C}_3\text{H}_4\text{R})(\text{CO})(\text{P}^i\text{P})]$ (R = H, Me): Efficient catalyst precursors in transfer hydrogenation of ketones". V. Cadierno, P. Crochet, J. Díez, S.E. García-Garrido, J. Gimeno, S. García-Granda. *Organometallics*, **2003**, 22, 5226-5234.
- 8.- "Dichloro(dodeca-2,6,10-triene-1,12-diyl)ruthenium(IV): A highly efficient catalyst for the isomerization of allylic alcohols into carbonyl compounds in organic and aqueous media". V. Cadierno, S.E. García-Garrido, J. Gimeno. *Chem. Commun.*, **2004**, 232-233. Featured as a "Hot Article". This paper has been highlighted in *Chemistry World* (January 2004), *Process Engineering* (February 2004) and *Anales de Química* (July-September 2004).
- 9.- "Efficient transfer hydrogenation of ketones catalyzed by the bis(isocyanide)-ruthenium(II) complexes *trans,cis,cis*- $[\text{RuX}_2(\text{CNR})_2(\text{dppf})]$ (X = Cl, Br; dppf = 1,1'-bis(diphenylphosphino)ferrocene): Isolation of active mono- and dihydride intermediates". V. Cadierno, P. Crochet, J. Díez, S.E. García-Garrido, J. Gimeno. *Organometallics*, **2004**, 23, 4836-4845.

10.- "Water-soluble ruthenium(II) catalysts $[\text{RuCl}_2(\eta^6\text{-arene})\{\text{P}(\text{CH}_2\text{OH})_3\}]$ for isomerization of allylic alcohols and alkyne hydration". V. Cadierno, P. Crochet, S.E. García-Garrido, J. Gimeno. *Dalton Trans.*, **2004**, 3635-3641.

11.- " $[\text{Ru}(\eta^3\text{-2-C}_3\text{H}_4\text{Me})(\text{CO})(\text{dppf})][\text{SbF}_6]$: A mononuclear $16e^-$ ruthenium(II) catalyst for propargylic substitution and isomerization of $\text{HC}\equiv\text{CCPh}_2(\text{OH})$ ". V. Cadierno, J. Díez, S.E. García-Garrido, J. Gimeno. *Chem. Commun.*, **2004**, 2716-2717.

12.- "Efficient one-pot synthesis of α,β -unsaturated carbyne complexes $\text{fac-}[\text{RuX}_3\{\equiv\text{CC}(\text{H})=\text{CR}_2\}(\text{dppf})]$ (X = Cl, Br; R = aryl, alkyl; dppf = 1,1'-bis(diphenylphosphino)ferrocene)". V. Cadierno, J. Díez, S.E. García-Garrido, J. Gimeno. *Organometallics*, **2005**, 24, 3111-3117.

13.- "Ru(IV)-catalyzed isomerization of allylamines in water: A highly efficient procedure for the deprotection of *N*-allylic amines". V. Cadierno, S.E. García-Garrido, J. Gimeno, N. Nebra. *Chem. Commun.*, **2005**, 4086-4088.

14.- "Bis(allyl)-ruthenium(IV) complexes as highly efficient catalysts for the redox isomerization of allylic alcohols into carbonyl compounds in organic and aqueous media: Scope, limitations and theoretical analysis of the mechanism". V. Cadierno, S.E. García-Garrido, J. Gimeno, A. Varela-Álvarez, J.A. Sordo. *J. Am. Chem. Soc.*, **2006**, 128, 1360-1370.

15.- "Isomerization of propargylic alcohols into α,β -unsaturated carbonyl compounds catalyzed by the sixteen-electron allyl-ruthenium(II) complex $[\text{Ru}(\eta^3\text{-2-C}_3\text{H}_4\text{Me})(\text{CO})(\text{dppf})][\text{SbF}_6]$ ". V. Cadierno, S.E. García-Garrido, J. Gimeno. *Adv. Synth. Catal.*, **2006**, 348, 101-110.

16.- "Efficient access to conjugated dienones and diene-diones from propargylic alcohols and enolizable ketones: A tandem isomerization/condensation process catalyzed by the sixteen-electron allylruthenium(II) complex $[\text{Ru}(\eta^3\text{-2-C}_3\text{H}_4\text{Me})(\text{CO})(\text{dppf})][\text{SbF}_6]$ ". V. Cadierno, J. Díez, S.E. García-Garrido, J. Gimeno, N. Nebra. *Adv. Synth. Catal.*, **2006**, 348, 2125-2132.

17.- "Efficient intermolecular $[2 + 2 + 2]$ alkyne cyclotrimerization in aqueous medium using a ruthenium(IV) precatalyst". V. Cadierno, S.E. García-Garrido, J. Gimeno. *J. Am. Chem. Soc.*, **2006**, 128, 15094-15095.

18.- "Anion recognition by *N*-confused calix[4]pyrrole- α -carbaldehyde and its Knoevenagel reaction derivatives". W. Dehaen, P.A. Gale, S.E. García-Garrido, M. Kostermans, M.E. Light. *New J. Chem.*, **2007**, 691-696.

19.- "Acridinone-based anion receptors and sensors". S.E. García-Garrido, C. Caltagirone, M.E. Light, P.A. Gale. *Chem. Commun.*, **2007**, 1450-1452.

20.- "Conformational Control of Selectivity and Stability in Hybrid Amide/Urea Macrocycles". S.J. Brooks, S.E. García-Garrido, M.E. Light, P.A. Cole, P.A. Gale. *Chem. Eur. J.*, **2007**, 3320-3329.

21.- "Octahedral ruthenium(II) complexes $\text{cis,cis-}[\text{RuX}_2(\text{CNR})(\text{CO})(\text{P}^{\wedge}\text{P})]$ and $\text{cis,cis,cis-}[\text{RuX}_2(\text{CO})_2(\text{P}^{\wedge}\text{P})]$ (X = Cl, Br; $\text{P}^{\wedge}\text{P}$ = 1,1'-bis(diphenylphosphino)ferrocene, 1,1'-bis(diisopropylphosphino)ferrocene): Synthesis and catalytic applications in transfer hydrogenation of acetophenone and cycloisomerization of *(Z)*-3-methylpent-2-en-4-yn-1-ol". J. Albers, V. Cadierno, P. Crochet, S.E. García-Garrido, J. Gimeno. *J. Organomet. Chem.*, **2007**, 692, 5234-5244.

22.- "Anion triggered electropolymerisation in ferrocene functionalised *ortho*-phenylenediamine based receptors". M. Arroyo, P.R. Birkin, P.A. Gale, S.E. García-Garrido, M.E. Light. *New J. Chem.*, **2008**, 1221-1227.

- 23.-** “Ruthenium-catalyzed redox isomerization/transfer hydrogenation in organic and aqueous media: A one-pot tandem process for the reduction of allylic alcohols”. V. Cadierno, P. Crochet, J. Francos, S.E. García-Garrido, J. Gimeno, N. Nebra. *Green Chem.*, **2009**, *11*, 1992-2000.
- 24.-** “Novel push-pull butadienes derived from 1,1-diaryl-2-propyn-1-ols and 1,1,1,5,5,5-hexafluoro-2,4-pentanedione: Synthesis, absorption spectra and solvatochromic behaviour”. J. Borge, V. Cadierno, J. Díez. S.E. García-Garrido, J. Gimeno. *Dyes Pigm.*, **2010**, *87*, 209-217.
- 25.-** “Cationic rhodium(I)-diolefin complexes containing an optically active C₂-symmetric bis(sulfoximine) ligand: Synthesis and catalytic activity”. V. Cadierno, J. Díez, S.E. García-Garrido, J. Gimeno, A. Pizzano. *Polyhedron*, **2010**, *29*, 3380-3386.
- 26.-** “Chemistry by nano-catalysis: First example of a solid-supported RAPTA complex for organic reactions in aqueous medium”. S.E. García-Garrido, J. Francos, V. Cadierno, J.M. Basset, V. Polshettiwar. *ChemSusChem*, **2011**, *4*, 104-111.
- 27.-** “Ruthenium-catalyzed intermolecular [2 + 2 + 2] alkyne cyclotrimerization in aqueous media under microwave-irradiation”. V. Cadierno, J. Francos, S.E. García-Garrido, J. Gimeno. *Green Chem. Lett. Rev.*, **2011**, *4*, 55-61.
- 28.-** “Dimerization of terminal arylalkynes in aqueous medium by ruthenium and acid promoted (RAP) catalysis: Acetate-assisted (sp)C-(sp²)C bond formation”. A. Coniglio, M. Bassetti, S.E. García-Garrido, J. Gimeno. *Adv. Synth. Catal.*, **2012**, *354*, 148-158.
- 29.-** “Arene-ruthenium(II) and bis(allyl)-ruthenium(IV) complexes containing 2-(diphenylphosphanyl)pyridine ligands: Potential catalysts for nitrile hydration reactions?”. R. García-Álvarez, S.E. García-Garrido, J. Díez, P. Crochet, V. Cadierno. *Eur. J. Inorg. Chem.*, **2012**, 4218-4230.
- 30.-** “Characterization of a paramagnetic, mononuclear Pt(III)-alkyl complex intermediate in carbon-halogen bond coupling reactions”. O. Rivada-Wheelaghan, M.A. Ortuño, J. Díez, S.E. García-Garrido, C. Maya, A. Lledós, S. Conejero. *J. Am. Chem. Soc.*, **2012**, *134*, 15261-15264.
- 31.-** “Synthesis, characterization, and reactivity of ruthenium bis-allyl complexes with chiral phosphine-phosphite ligands”. M. Vaquero, S. Vargas, A. Suárez, S.E. García-Garrido, E. Álvarez, M. Mancera, A. Pizzano. *Organometallics*, **2012**, *31*, 3551-3564.
- 32.-** “Facile transmetalation of a pyridil-phosphine ligand from ruthenium to gold and silver”. E. Tomás-Mendivil, R. García-Álvarez, S.E. García-Garrido, J. Díez, P. Crochet, V. Cadierno. *J. Organomet. Chem.*, **2013**, *727*, 1-9.
- 33.-** “Highly Enantioselective Hydrogenation of 1-Alkylvinyl Benzoates: A Simple, Nonenzymatic Access to Chiral 2-Alkanols”. P. Kleman, P.J. González-Liste, S.E. García-Garrido, V. Cadierno, A. Pizzano. *Chem. Eur. J.*, **2013**, *19*, 16209-16212.
- 34.-** “A Stable, Mononuclear, Cationic Pt(III) Complex Stabilised by Bulky N-Heterocyclic Carbenes”. O. Rivada-Wheelaghan, M.A. Ortuño, S.E. García-Garrido, J. Díez, P.J. Alonso, A. Lledós, S. Conejero. *Chem. Commun.*, **2014**, *50*, 1299-1301.
- 35.-** “Asymmetric hydrogenation of 1-alkyl and 1-aryl vinyl benzoates: A broad scope procedure for the highly enantioselective synthesis of 1-substituted ethyl benzoates”. P. Kleman, P.J. González-Liste, S.E. García-Garrido, V. Cadierno, A. Pizzano. *ACS Catal.*, **2014**, *4*, 4398-4408.
- 36.-** “Easy entry to donor/acceptor butadiene dyes through a MW-assisted InCl₃-catalyzed coupling of propargylic alcohols with indan-1,3-dione in water”. J. Francos, J. Borge, J. Díez, S.E. García-Garrido, V. Cadierno. *Catal. Commun.*, **2015**, *63*, 10-14.

- 37.-** “Catalytic rearrangement of aldoximes to primary amides in environmentally friendly media under thermal and microwave heating: Another application of the bis(allyl)-ruthenium(IV) dimer $[\{\text{RuCl}(\mu\text{-Cl})(\eta^3:\eta^3\text{-C}_{10}\text{H}_{16})\}_2]$ ”. P.J. González-Liste, V. Cadierno, S.E. García-Garrido. *ACS Sustainable Chem. Eng.*, **2015**, 3, 3004-3011.
- 38.-** “Butadiene dyes based on 3-(dicyanomethylidene)indan-1-one and 1,3-bis(dicyanomethylidene)indane: Synthesis, characterization and solvatochromic behaviour”. J. Francos, S.E. García-Garrido, J. Borge, F.J. Suárez, V. Cadierno. *RSC Adv.*, **2016**, 6, 6858-6867.
- 39.-** “Highly Stereoselective Synthesis and Hydrogenation of (Z)-1-Alkyl-2-arylvinyl Acetates: a Wide Scope Procedure for the Preparation of Chiral Homobenzylic Esters”. P.J. González-Liste, F. León, I. Arribas, M. Rubio, S.E. García-Garrido, V. Cadierno, A. Pizzano. *ACS Catal.*, **2016**, 6, 3056-3060.

Refereed review articles and accounts

- 1.-** “Bis(allyl)-ruthenium(IV) complexes: Promising precursors for catalytic organic synthesis”. V. Cadierno, P. Crochet, S.E. García-Garrido, J. Gimeno. *Curr. Org. Chem.*, **2006**, 10, 165-183.
- 2.-** “Anion receptors based on organic frameworks: highlights from 2005 and 2006”. P.A. Gale, S.E. García-Garrido, J. Garric, *Chem. Soc. Rev.*, **2008**, 37, 151-190.
- 3.-** “Atom-economic transformations of propargylic alcohols catalyzed by the 16-electron allylruthenium(II) complex $[\text{Ru}(\eta^3\text{-2-C}_3\text{H}_4\text{Me})(\text{CO})(\text{dppf})][\text{SbF}_6]$ (dppf = 1,1'-bis(diphenylphosphino)ferrocene)”. V. Cadierno, S.E. García-Garrido, J. Gimeno, N. Nebra. *Inorg. Chim. Acta*, **2010**, 363, 1912-1934.
- 4.-** “Metal-catalyzed transformations of propargylic alcohols into α,β -unsaturated carbonyl compounds: From the Meyer-Schuster and Rupe rearrangements to redox isomerization”. V. Cadierno, P. Crochet, S.E. García-Garrido, J. Gimeno. *Dalton Trans.*, **2010**, 39, 4015-4031.
- 5.-** “Metal-catalyzed isomerization of allylic and propargylic alcohols in aqueous media”. J. García-Álvarez, S.E. García-Garrido, P. Crochet, V. Cadierno. *Curr. Top. Catal.*, **2012**, 10, 35-56.
- 6.-** “Iminophosphorane-phosphines: Versatile ligands for homogeneous catalysis”. J. García-Álvarez, S.E. García-Garrido, V. Cadierno. *J. Organomet. Chem.*, **2014**, 751, 792-808.
- 7.-** “Water-tolerant bis(allyl)-ruthenium(IV) catalysts: An account of their applications”. J. Francos, S.E. García-Garrido, J. García-Álvarez, P. Crochet, J. Gimeno, V. Cadierno. *Inorg. Chim. Acta*, **2017**, 455, 398-414

Book Chapters

- 1.-** “Alkyne cyclotrimerizations in environmentally benign media: Current state of the art”. V. Cadierno, P. Crochet, S.E. García-Garrido. In *Green Chemistry Research Trends*; J.T. Pearlman Ed.; Nova Science Publishers, New York: USA; **2009**, Chapter 3, 97-130.
- 2.-** “All-carbon-substituted allenylidene and related cumulenylidene ligands”. V. Cadierno, S.E. García-Garrido. In *Transition Metal Complexes of Neutral η^1 -Carbon Ligands*; R. Chauvin & Y. Canac Eds.; Springer-Verlag, Berlin/Heidelberg: Germany; **2010**, 151-218 (*Top. Organomet. Chem.* vol. 30).

- 3.- "Heteroatom-conjugated allenylidene and related cumulenylidene ligands". V. Cadierno, S.E. García-Garrido. In *Transition Metal Complexes of Neutral η^1 -Carbon Ligands*; R. Chauvin & Y. Canac Eds.; Springer-Verlag, Berlin/Heidelberg: Germany; **2010**, 219-252 (*Top. Organomet. Chem.* vol. 30).
- 4.- "Metal-catalyzed reactions in water under MW irradiation". V. Cadierno, P. Crochet, S.E. García-Garrido. In *Aqueous Microwave Assisted Chemistry: Synthesis and Catalysis*; V. Polshettiwar & R.S. Varma Eds.; RSC Publishing, Cambridge: UK; **2010**, Chapter 2, 10-54.
- 5.- "Catalytic rearrangements and allylation reactions in water". V. Cadierno, J. García-Álvarez, S.E. García-Garrido. In *Metal-Catalyzed Reactions in Water*, P.H. Dixneuf & V. Cadierno Eds.; Wiley-VCH, Weinheim: Germany; **2013**, Chapter 7, 243-289.
- 6.- "Nano-Catalysts for Rearrangement Reactions". J. García-Álvarez, S.E. García-Garrido, V. Cadierno. In *Nanocatalysis: Synthesis and Applications*; V. Polshettiwar & T. Asefa Eds.; John Wiley & Sons, Hoboken: New Jersey; **2013**, Chapter 8, 251-285.
- 7.- "Catalytic Dimerization of Alkynes". S.E. García-Garrido. In *Modern Alkyne Chemistry – Catalytic and Atom Economic Transformations*; B.M. Trost & C.-J. Li Eds.; Wiley-VCH, Weinheim: Germany; **2015**, Chapter 11, 301-363.

Patents

- 1.- "Procedimiento de síntesis enantioselectiva de ésteres quirales, producto obtenido y utilización". A. Pizzano, P. Kleman, V. Cadierno, S.E. García-Garrido, P.J. González-Liste. Número de solicitud: P201330935 (21/6/2013). Patente española.
- 2.- "Procedimiento de síntesis enantioselectiva de ésteres quirales, producto obtenido y utilización". A. Pizzano, P. Kleman, V. Cadierno, S.E. García-Garrido, P.J. González-Liste. Registration number: PCT/ES2014/070508 (20/06/2014). Patente internacional.

Research Presentations

- 1.- 3rd International School of Organometallic Chemistry (Camerino, Italy, September 2001). "Reactivity of the bis(allyl)-ruthenium(IV) dimer $[\{\text{Ru}(\eta^3\text{-C}_{10}\text{H}_{16})(\mu\text{-Cl})\text{Cl}\}_2]$ ($\text{C}_{10}\text{H}_{16}$ = 2,7-dimethylocta-2,6-diene-1,8-diyl) towards diphosphines and heterodifunctional phosphorus-oxygen and phosphorus-nitrogen ligands". Poster presentation.
- 2.- 13th International Symposium on Homogeneous Catalysis (Tarragona, Spain, September 2002). "Rhodium and iridium complexes containing optically active C_2 -symmetric bis(sulfoximine) ligands". Poster presentation.
- 3.- 13th International Symposium on Homogeneous Catalysis (Tarragona, Spain, September 2002). " $(\eta^6\text{-arene})$ -ruthenium(II) complexes containing iminophosphorane-phosphine and imino-phosphine ligands: Synthesis, reactivity and catalytic activity in transfer hydrogenation of ketones". Poster presentation.
- 4.- XX Reunión del Grupo Especializado de Química Organometálica (San Sebastián, Spain, July 2002). "Síntesis, reactividad y actividad catalítica de complejos de rutenio conteniendo ligandos de tipo fosfina-fosfinimina". Poster presentation.
- 5.- XX Reunión del Grupo Especializado de Química Organometálica (San Sebastián, Spain, July 2002). "Diseño de nuevos ligandos hemilábiles [P,N,O]- y [P,N,S]-dadores: Estudio de su coordinación en fragmentos de rutenio(II) y rutenio(IV)". Poster presentation.

- 6.- XXIX Reunión Bienal de la Real Sociedad Española de Química (Madrid, Spain, July 2003). “[Ru(η^3 : η^3 -C₁₀H₁₆)(μ -Cl)Cl]₂] (C₁₀H₁₆ = 2,7-dimetilocta-2,6-dien-1,8-diilo): Un catalizador eficiente para la isomerización de alcoholes alílicos en medio acuoso”. Poster presentation.
- 7.- GECOM-CONCOORD 2004 (Bayonne, France, June 2004). “Transfert d’hydrogène à cétones catalysée par des complexes bis(isocyanure) de ruthénium(II)”. Poster presentation.
- 8.- GECOM-CONCOORD 2004 (Bayonne, France, June 2004). “Isomérisation dans l’eau d’alcools allyliques en produits carbonylés catalysée par des complexes bis(allyl)-ruthénium(IV)”. Poster presentation.
- 9.- 14th International Symposium on Homogeneous Catalysis (Munich, Germany, July 2004). “Synthesis, reactivity and catalytic activity in propargylic substitution reactions of the 16e⁻ derivative [Ru(η^3 -2-C₃H₄Me)(CO)(dppf)][SbF₆].” Poster presentation.
- 10.- XXII Reunión del Grupo Especializado de Química Organometálica (Ciudad Real, Spain, July 2004). “Transferencia de hidrógeno a cetonas catalizada por los complejos bis(isocianuro) de rutenio(II) *trans,cis,cis*-[RuX₂(CNR)₂(dppf)]”. Poster presentation.
- 11.- XVI FEChem Conference on Organometallic Chemistry (Budapest, Hungary, September 2005). “Efficient procedure for the deprotection of *N*-allylic substrates catalyzed by Ru(IV) complexes in water”. Poster presentation.
- 12.- XXX Reunión Bienal de la Real Sociedad Española de Química (Lugo, Spain, September 2005). “Una metodología sintética eficiente para la desprotección de *N*-alil aminas utilizando catalizadores de Ru(IV) en agua”. Poster presentation.
- 13.- XXX Reunión Bienal de la Real Sociedad Española de Química (Lugo, Spain, September 2005). “[Ru(η^3 -2-C₃H₄Me)(CO)(dppf)][SbF₆]: Un catalizador eficiente para la isomerización de alcoholes propargílicos en compuestos carbonílicos α,β -insaturados”. Poster presentation.
- 14.- XXII International Conference on Organometallic Chemistry-ICOMC 2006 (Zaragoza, Spain, July 2006). “Efficient reduction of allylic alcohols in organic and aqueous media: A tandem isomerization/transfer hydrogenation process catalyzed by ruthenium(IV) complexes”. Poster presentation.
- 15.- XXII International Conference on Organometallic Chemistry-ICOMC 2006 (Zaragoza, Spain, July 2006). “Efficient access to conjugated dienones from propargylic alcohols and enolizable ketones: A tandem isomerization/aldol condensation process catalyzed by ruthenium(II) complexes”. Poster presentation.
- 16.- UK Macrocycles & Supramolecular Chemistry Group and Coordination Chemistry Group (Belfast, North Ireland, December 2006). “A comparison of anion-binding modes in macrocyclic and acyclic hybrid amide/urea anion receptors”. Poster presentation.
- 17.- XXIII International Conference on Organometallic Chemistry-ICOMC 2008 (Rennes, France, July 2008). “The ruthenium(IV) dimer [Ru(η^3 : η^3 -C₁₀H₁₆)(μ -Cl)Cl]₂] (C₁₀H₁₆ = 2,7-dimetilocta-2,6-diene-1,8-diyl): A promising precursor for catalytic organic synthesis in aqueous media”. Poster presentation.
- 18.- XXVI Reunión del Grupo Especializado de Química Organometálica (Santiago de Compostela, Spain, September 2008). “[Ru(η^3 : η^3 -C₁₀H₁₆)(μ -Cl)Cl]₂] (C₁₀H₁₆ = 2,7-dimetilocta-2,6-dien-1,8-diilo): Un catalizador eficiente para la ciclotrimerización [2+2+2] de alquinos asistida por irradiación con microondas en medio acuoso”. Poster presentation.

- 19.-** III Scuola Nazionale sui Materiali Molecolari per Fotonica ed Electronica (Tortoli, Italia, June 2009). "Dimerization of terminal alkynes in aqueous media catalyzed by $[\{\text{RuCl}(\mu\text{-Cl})(\eta^6\text{-Arene})\}_2]/\text{AcOH}$ (Arene = *p*-Cymene, Hexamethylbenzene) complexes. An efficient entry to water-soluble π -conjugated systems". Poster presentation.
- 20.-** 9th International Conference on Heteroatom Chemistry ICHAC-9 (Oviedo, Spain, July 2009). "Efficient access to α,β -unsaturated bis(trifluoroacetyl) compounds: A tandem isomerization/aldol condensation process catalyzed by ruthenium(II) complexes". Poster presentation.
- 21.-** 2nd School on Organometallic Chemistry Marcial Moreno Mañas (Valencia, Spain, July 2009). "Efficient access to α,β -unsaturated bis(trifluoroacetyl) compounds: A tandem isomerization/aldol condensation process catalyzed by ruthenium(II) complexes". Poster presentation.
- 22.-** 7th International School of Organometallic Chemistry (Camerino, Italy, September 2009). "Dimerization of terminal alkynes in aqueous media by ruthenium-acid-promoted catalysis (RAP)". Poster presentation.
- 23.-** XXXII Reunión Bial de la Real Sociedad Española de Química (Oviedo, Spain, September 2009). "Síntesis de derivados bis(trifluoroacetilo) α,β -insaturados a través de un proceso tandem isomerización/condensación aldohólica catalizado por complejos de rutenio(II)". Oral presentation (Sergio E. García-Garrido).
- 24.-** III School on Organometallic Chemistry "Marcial Moreno Mañas" (Oviedo, Spain, July 2010). "Ruthenium complexes supported on magnetic nanoparticles as highly efficient catalysts in aqueous media". Poster presentation.
- 25.-** III School on Organometallic Chemistry "Marcial Moreno Mañas" (Oviedo, Spain, July 2010). "Dimerization of terminal alkyne catalyzed by ruthenium complexes in aqueous media". Poster presentation.
- 26.-** III School on Organometallic Chemistry "Marcial Moreno Mañas" (Oviedo, Spain, July 2010). "Bis-allyl ruthenium complexes containing phosphine-phosphite ligands: Synthesis, structure and applications in ROMP". Poster presentation.
- 27.-** XXVIII Reunión del Grupo Especializado de Química Organometálica (Punta Umbría, Spain, September 2010). "Complejos de rutenio soportados en nanopartículas magnéticas como catalizadores altamente eficientes en medio acuoso". Oral presentation (Sergio E. García-Garrido).
- 28.-** XXVIII Reunión del Grupo Especializado de Química Organometálica (Punta Umbría, Spain, September 2010). "Complejos alílicos de rutenio con ligandos fosfina-fosfito quirales: Síntesis, estructura y aplicación en hidrogenación enantioselectiva". Poster presentation.
- 29.-** IV School on Organometallic Chemistry "Marcial Moreno Mañas" (Santiago de Compostela, Spain, June 2011). "Microwave-assisted InCl_3 -catalyzed synthesis in aqueous media and spectroscopic properties of novel push-pull butadiene dyes". Poster presentation.
- 30.-** 9th Green Chemistry Conference (Alcalá de Henares, Spain, September 2011). "Microwave-assisted InCl_3 -catalyzed synthesis in aqueous media and spectroscopic properties of novel push-pull butadiene dyes". Poster presentation.
- 31.-** XXX Reunión del Grupo Especializado en Química Organometálica (Castellón, Spain, June 2012). "Complejos de rutenio como catalizadores eficientes en la isomerización de aldoximas en amidas en una mezcla glicerol/agua". Poster presentation.
- 32.-** XXX Reunión del Grupo Especializado en Química Organometálica (Castellón, Spain, June 2012). "Estudio de la reactividad de complejos alílicos de rutenio con ligandos fosfina-fosfito". Poster presentation.

- 33.-** V School on Organometallic Chemistry “Marcial Moreno Mañas” (Jaca, Spain, July 2012). “Efficient isomerization of aldoximes to amides catalyzed by ruthenium(IV) complexes in a glycerol/water mixture”. Poster presentation.
- 34.-** XXXIV Reunión Bienal de la Real Sociedad Española de Química (Santander, Spain, September 2013). “Síntesis, caracterización y propiedades espectroscópicas de los primeros complejos *meso*-tetra(vinilideno)porfirina de rutenio”. Poster presentation.
- 35.-** XXXIV Reunión Bienal de la Real Sociedad Española de Química (Santander, Spain, September 2013). “Síntesis y reactividad de ligandos tipo *meso*-tetrakis[4-(difenilfosfinoacetileno)fenil]porfirina”. Poster presentation.
- 36.-** VII School on Organometallic Chemistry “Marcial Moreno Mañas” (Barcelona, Spain, June 2014). “Highly enantioselective hydrogenation of 1-alkylvinyl benzoates: A simple, nonenzymatic access to chiral 2-alkanols”. Oral presentation.
- 37.-** VII School on Organometallic Chemistry “Marcial Moreno Mañas” (Barcelona, Spain, June 2014). “Synthesis of homo- and heterobimetallic porphyrin-acetylide complexes: potential precursors for *tandem* catalysis”. Poster presentation.
- 38.-** VII School on Organometallic Chemistry “Marcial Moreno Mañas” (Barcelona, Spain, June 2014). “Stabilization of unusual platinum complexes in +2, +3 and +4 oxidation states by N-heterocyclic carbene ligands”. Poster presentation.
- 39.-** XXXII Reunión del Grupo Especializado en Química Organometálica (Tarragona, Spain, September 2014). “Synthesis of homo- and heterobimetallic porphyrin-acetylide complexes: Potential precursors for *tandem* catalysis”. Poster presentation.
- 40.-** VIII School on Organometallic Chemistry “Marcial Moreno Mañas” (Sevilla, Spain, June 2015). “Addition of carboxylic acids to 1-iodoalkynes catalyzed by gold(I) complexes: Regio- and stereoselective synthesis of non-symmetrical internal enol-esters”. Poster presentation.
- 41.-** VIII School on Organometallic Chemistry “Marcial Moreno Mañas” (Sevilla, Spain, June 2015). “Enantioselective hydrogenation of α,β disubstituted enol esters”. Poster presentation.
- 42.-** VIII School on Organometallic Chemistry “Marcial Moreno Mañas” (Sevilla, Spain, June 2015). “Synthesis of bis(allyl)ruthenium(IV) complexes containing guanidiniumphenylphosphines as ligands: Efficient precursors for the isomerization of allylic alcohols in aqueous media”. Poster presentation.
- 43.-** 18th IUPAC International Symposium on Organometallic Chemistry Directed Towards Organic Synthesis (OMCOS 18) (Sitges, Barcelona, Spain, June 2015). “Synthesis of enol esters by addition of carboxylic acids to internal alkynes catalyzed by gold(I) complexes in water and under MW irradiation”. Poster presentation.
- 44.-** IX School on Organometallic Chemistry “Marcial Moreno Mañas” (San Sebastián, Spain, July 2016). “Intermolecular hydroacyloxylation of internal alkynes: A new and efficient Au(I) catalytic system on water”. Oral presentation.
- 45.-** XXXIV GEQO Congress Organometallic Chemistry Group (Girona, Spain, September 2016). “New water-soluble gold(I) complexes containing guanidiniumphenylphosphine ligands: Efficient precursors for the hydroacyloxylation of internal alkynes in aqueous media”. Poster presentation.