Autor: M. Eugenia Martínez Galán
Título : Sintesis y reactividad de complejos dinucleares insaturados de molibdeno con interacciones M-H-C y M-H-P de tipo agóstico
Fecha lectura: 06/02/2009

Publicaciones:

1.- "M-P versus M=M Bonds as Protonation Sites in the Organophosphide-Bridged Complexes $[M_2Cp_2(\mu\text{-}PR_2)(\mu\text{-}PR'_2)(CO)_2]$, (M = Mo, W; R, R' = Ph, Et, Cy).". M. A. Alvarez, M. E. García, M. E. Martínez, A. Ramos, M. A. Ruiz , D. Sáez, J. Vaissermann. *Inorg. Chem.* **2006**, *45*, 6965.

2.- "Reactivity of the α-Agostic Methyl Bridge in the Unsaturated Complex $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}\eta^1\text{:}\eta^2\text{-}CH_3)(\mu\text{-}PCy_2)(CO)_2]$: Migratory Behavior and Methylidyne Derivatives.". M. A. Alvarez, D. García-Vivó, M. E. García, M. E. Martínez, A. Ramos, M. A. Ruiz.. *Organometallics* **2008**, *27*, 1973.

3.- "Reactions of the Unsaturated Complex $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}PEt_2)_2(CO)_2]$ with $[Au(PR_3)]^+$ Cations: Kinetic Preference of the Mo-P Bonds as the Site of Attack of the Gold(I) Electrophile.". M. A. Alvarez, M. E. García, D. García-Vivó, M. E. Martínez, M. A. Ruiz. *Inorg. Chem.* **2009**, *48*, 9767.

4.- "Migration and Insertion Processes in the Reactions of the Hydrocarbyl-Bridged Unsaturated Complexes $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}R)(\mu\text{-}PCy_2)(CO)_2]$ (R= Me, CH_2Ph, Ph) with CO and NO". M. A. Alvarez, M. E. García, M. E. Martínez, A. Ramos, M.A. Ruiz. *Organometallics* **2009**, *28*, 6293.

5.- "Heterometallic derivatives of the unsaturated methyl-bridged complex $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}CH_3)(\mu\text{-}PCy_2)(CO)_2]$. Photochemical generation of methylidyne clusters". M. A. Alvarez, M. E. García, M. E. Martínez, M. A. Ruiz. *Organometallics* **2010**, *29*, 904.

6.- "Dehydrogenative formation and reactivity of the unsaturated benzylidyne-bridged complex $[Mo_2Cp_2(\mu\text{-}CPh)(\mu\text{-}PCy_2)(\mu\text{-}CO)]$: C–C and C–P coupling reactions.". M. A. Alvarez, M. E. García, M. E. Martínez, S. Menéndez, M. A. Ruiz. *Organometallics* **2010**, *29*, 710.

7.- "Binuclear Carbyne and Ketenyl Derivatives of the Alkyl-Bridged Complexes $[Mo_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}CH_2R)(\mu\text{-}PCy_2)(CO)_2]$ (R = H, Ph)". M. A. Alvarez, M. E. García, D. García-Vivó, M. E. Martínez, Miguel A. Ruiz. *Organometallics* **2011**, *30*, 2189.

Autor: Roberto Morán Ramallal
Título: Aziridina-2-carboxamidas y derivados enantiopuros: preparación bacteriana y quimioenzimática, reacciones de apertura y procesos de expansión aparente de sus anillos
Fecha lectura: 23/04/2009

Publicaciones:

1.- "Bacterial preparation of unactivated aziridine-2-carboxamides and their transformation into enantiopure nonnatural amino acids and *vic*-diamines." R. Morán-Ramallal, R.Liz, V.Gotor. *Organic Letters* / 9 / **2007** / 521-524.

2.- "Regioselective and stereospecific synthesis of enantiopure 1,3-oxazilidin-2-ones by intramolecular ring opening of 2-(Boc-aminomethyl)aziridines. Preparation of antibiotic linezolid." R. Morán-Ramallal, R. Liz, V.Gotor. *Organic Letters* / 10 / **2008** / 1935-1938.

3.-"Enantiopure *trans*-3-arylaziridine-2-carboxamides: preparation by bacterial hydrolysis and ring-openings toward enantiopure, unnatural D-□-amino acids." R. Morán-Ramallal, R. Liz, V. Gotor. *The Journal of Organic Chemistry* / 75 / **2010** / 6614-6624

Autor: Carmen Simal Fernández
Título: Aplicaciones sintéticas de derivados organometálicos de samario y litio funcionarizados: Síntesis de (Z)-alquenos, ácidos ciclopropanocarboxílicos, aziridinas y β-aminoésters o -amidas
Fecha lectura: 24/04/2009

Publicaciones:

1.-" Photoinduced Metalation of Nonactivated C-Cl Bonds with Samarium Diiodide: Synthesis of Alkenes with High (Z)-Selectivity through β-Elimination Reactions." José M. Concellón, Humberto Rodríguez-Solla, Carmen Simal, Mónica Huerta. *Organic Letters* / 7 / **2005** / 5833-5835

2.-" A Convenient Synthesis of (Z)-Allylsilanes with High Stereoselectivity Promoted by Samarium Diiodide". José M. Concellón, Humberto Rodríguez-Solla, Carmen Simal, Cecilia Gómez. *Synlett* / **2007** / 75-78

3.-" The First Cyclopropanation Reaction of Unmasked α,β-Unsaturated Carboxylic Acids: Direct and Complete Stereospecific Synthesis of Cyclopropanecarboxylic Acids Promoted by Sm/CHI_3". José M. Concellón, Humberto Rodríguez-Solla, Carmen Simal. *Organic Letters* / 9 / **2007** / 2685-2688

4.-"Addition Reactions of Iodomethyllithium to Imines. A Direct and Efficient Synthesis of Aziridines and Enantiopure Amino Aziridines". *José M. Concellón*, Humberto Rodríguez-Solla, Carmen Simal. *Organic Letters* / 10 / **2008** / 4457-4460

5.-" General, Stereoselective Synthesis of (Z)-β,γ-Unsaturated Nitriles Promoted by Samarium Diiodide". José M. Concellón, Humberto Rodríguez-Solla, Carmen Simal, David Santos, Nieves R. Paz. *Organic Letters* / 10 / **2008** / 4549-4552

6.-"Addition Reactions of Chloro- or Iodomethyllithium to Imines. Synthesis of Enantiopure Aziridines and β-Chloroamines". José M. Concellón, Humberto Rodríguez-Solla, Pablo L. Bernad, Carmen Simal. *Journal of Organic Chemistry* / 74 / **2009** / 2452-2459

7.-"The Use of Samarium Enolates, A Novel Alternative in the Addition Reactions to Imines. Synthesis of 3-Aminoesters, Amides and Enantiopure 3,4-Diaminoesters". José M. Concellón, Humberto Rodríguez-Solla, Carmen Simal. *Adv. Synth. Catal*. / **2009** / 351 / 1238-1242

8.-" The Addition Reaction of Samarium Enolates and 2-Haloenolates Derived from Esters, and Amides to Imines. Totally Stereoselective Synthesis of Enantiopure 3,4-Diaminoesters or amides". José M. Concellón, Humberto Rodríguez-Solla, Carmen Simal, Vicente del Amo, Santiago García-Granda, M. Rosario Díaz. *Adv. Synth. Catal.* / **2009** / 351 / 2991-3000

9.-" Sequential Synthesis of (E)-α,β-Unsaturated Primary Amides with Complete Stereoselectivity". *Journal of Organic Chemistry* / 75 / **2010** / 2452-2459

10.-“Synthesis and Synthetic Applications of Samarium Enolates of Unmasked Amides: Efficient Synthesis of 3-Aminoamides, and 3-Amino-2-chloroamides”. José M. Concellón, Humberto Rodríguez-Solla, Carmen Concellón, Carmen Simal, Noemí Alvaredo. *Synlett* / **2010** / 2119-2121

Autor: Amadeo Fernández Miranda
Título: Nuevas reacciones en Cascada de ω-Alquinoles Catalizadas por Complejos de Oro y Platino
Fecha lectura: 29/04/2009

Publicaciones:

1.-"Gold or Platinum- Catalyzed Tandem Cycloisomerization/Prins Type Cyclization Reactions". J. Barluenga, A. Diéguez, A. Fernández, F. Rodríguez, F. J. Fañanás. *Angewandte Chemie International Edition* / **2006** / 45 / 2091-2093

2.-"Tandem intramolecular hydroalkoxylation-hydroarylation reactions: synthesis of enantiopure benzofused cyclic ethers from the chiral pool". J. Barluenga, A. Fernández, A. Satrustegui, A. Diéguez, F. Rodríguez, F.J. Fañanás. *Chemistry. A European Journal* / **2008** / 14 / 4153-4156.

3.-"Synthesis of bi(indolyl)alkanes by a site-selective gold-catalyzed addition of indoles to butynol derivatives". J. Barluenga, A. Fernández, F. Rodríguez, F.J. Fañanás. *Journal of Organometallic Chemistry* / **2009** / 694 / 546-550

4.-"An expeditious síntesis of Bruguierol A". F.J. Fañanás, A. Fernández, D. Cevik, F. Rodríguez. *Journal of Organic Chemistry* / **2009** / 74 / 932-934.

5.-"A Gold-Catalyzed Cascade Reactions Involving an Inusual Intramolecular Redox Process". J. Barluenga, A. Fernández, F. Rodríguez, F.J. Fañanás. . *A European Journal* / **2009** / 15 / 8121-8123

6.-"Gold- or Platinum-Catalyzed Cascade Processes of Alkynol Derivatives Involving Hydroalkoxylation Followed by Prins-Type Cyclizations". J. Barluenga, A. Fernández, A. Diéguez, F. Rodríguez, F.J. Fañanás. *Chemistry. A European Journal* / **2009** / 15 / 11660-11667.

Autor: Inmaculada Amor García
Título: Comportamiento químico de complejos dinucleares de molibdeno con ligandos supermesitil y ciclopentadienilidenfosfinideno
Fecha lectura: 05/06/2009

Publicaciones:

1.- "Formation and Cleavage of P-C, Mo-C, and C-H Bonds Involving Arylphosphinidene and Cyclopentadienyl Ligands at Dimolybdenum Centers.". I. Amor, M. E. García, M. A. Ruiz, D. Sáez, H. Hamidov, J. C. Jeffery. *Organometallics* **2006**, *25*, 4857.

2.- "Formation of P-H, P-C, and C-H Bonds by Hydride Attack on a Electrophilic Phosphide-Bridged Dimolybdenum Complex. Trapping the Phosphinidene Ligand with Borane". I. Amor, D. García-Vivó, M. E. García, M. A. Ruiz, D. Sáez, H. Hamidov, J. C. Jeffery. *Organometallics* **2007**, *26*, 466.

3.- "Carbene- and Carbyne-like Behavior of the Mo–P Multiple Bond in a Dimolybdenum Complex Inducing Trigonal Pyramidal Coordination of a Phosphinidene Ligand M. A. Alvarez, I. Amor, M. E. García, D. García-Vivó, Miguel A. Ruiz. *Inorg. Chem.* **2007**, *46*, 6230.

4.- "Aurophilic Self-Assembly of a Mo_4Au_2 Phosphinidene Complex with an Unprecedented H-Shaped Planar Metal Core M. A. Alvarez, I. Amor, M. E. García, M. A. Ruiz. *Inorg. Chem*. **2008**, *47*, 7963.

5.- "Structure, Bonding and Reactivity of Binuclear Complexes having Asymmetric Trigonal Phosphinidene Bridges: Addition of 16-electron Metal Carbonyl Fragments to the Dimolybdenum Compounds $[Mo_2Cp(\mu\text{-}\kappa^1\text{:}\kappa^1,\eta^5\text{-}PC_5H_4)(CO)_2L]$ and $[Mo_2Cp_2(\mu\text{-}PH)(CO)_2L]$ ($L = \eta^6\text{-}1,3,5\text{-}C_6H_3{}^tBu_3$)". M. A. Alvarez, I. Amor, M. E. García, D. García-Vivó, M. A. Ruiz, J. Suarez *Organometallics* **2010**, *29*, 4384.

6.- "A Thiophosphinidene Complex as a Vehicle in Phosphinidene Transmetallation: Easy Formation and Cleavage of a P–S Bond". B. Alvarez, M. A. Alvarez, I. Amor, M. E. García, Miguel A. Ruiz. *Inorg. Chem*. **2011**, *50*, 10561.

7.- "Dimolybdenum Cyclopentadienyl Complexes with Bridging Chalcogenophosphinidene Ligands". B. Alvarez, M. A. Alvarez, I. Amor, M. E. García, D. García-Vivó, J. Suarez, Miguel A. Ruiz. *Inorg. Chem*. **2012**, *51*, 7810.

Autor: José Antonio Fernández López
Título: Tesis: Materiales Porosos de Carbono en Supercondensadores
Fecha lectura: 26/06/2009

Publicaciones:

1.-"Correlation between capacitances of porous carbons in acidic and aprotic EDLC electrolytes". T.A. Centeno, M. Hahn, J.A. Fernández, R. Kötz, F. Stoeckli. *Electrochemistry Communications* / 9 / **2007** / 1242-1246

2.-"Performance of mesoporous carbons derived from poly (vinyl alcohol) in electrochemical capacitors". T.A. Centeno, J.A. Fernández, F. Stoeckli. *Journal of Power Sources* / 175 / **2008** / 675-679.

3.-"Correlation between heats of immersion and limiting capacitances in porous carbons". T.A. Centeno, J.A. Fernández, F. Stoeckli. *Carbon* / 46 / **2008** / 1025-1030.

4.-"EDLC performance of carbide-derived carbons in aprotic and acidic electrolytes". J.A. Fernández, M. Arulepp, J. Leis, F. Stoeckli, T.A. Centeno. *Electrochimica Acta* / 53 / **2008** / 7111-7116

5.-"Cherry stones as precursor of activated carbons for supercapacitors". M. Olivares-Marín, J.A. Fernández, M.J. Lázaro, C.Fernández-González, A. Macías-García, V. Gómez-Serrano, F. Stoeckli, T.A. Centeno. *Materials Chemistry and Physics* / 114 / **2009** /323-327

6.-"Effect of mesoporosity on specific capacitance of carbons". J.A. Fernández, S. Tennison, O.Kozynchenko, F. Rubiera, F. Stoeckli, T.A. Centeno. *Carbon* / 47 / **2009** /1598-1604.

7.-"Poly(ethylene terephthalate)-based carbons as electrode material in supercapacitors". M. Domingo-García, J.A. Fernández, M. C. Almazán-Almazán, F. J. López-Garzón, F. Stoeckli, T.A. Centeno. *Journal of Power Sources* / 195 / **2010** / 3810–3813

Autor: Bernabé Fernández Perandones
Título: Generación y Reactividad de Ligandos Carbeno N-Heterocíclicos y Diaminocarbenos en Complejos de Manganeso(I).
Fecha lectura: 03/07/2009

Publicaciones:

1.-"Generation of N-Heterocyclic Carbenes by Metal-Mediated Coupling of Propargylamine and Isocyanides". J. Ruiz, G. García, M. E. G. Mosquera, B. F. Perandones, M. P. Gonzalo, M. Vivanco. *Journal of The American Chemical Society* /127/ **2005**/ 8584-8585.

2.-"Synthesis of N-Heterocyclic Carbene Complexes of Manganese(I) by Coupling Isocyanide Ligands with Propargylamines and Propargylic Alcohols". J. Ruiz, B. F. Perandones, G. García, M. E. G. Mosquera. *Organometallics*/ 26/ **2007**/ 5678-5695.

3.-"Base-Promoted Tautomerization of Imidazole Ligands to N-Heterocyclic Carbenes and Subsequent Transmetalation Reaction". J. Ruiz, B. F. Perandones . *Journal of the American Chemical Society* /129/ **2007**/ 9299-9300.

4.-"Acyclic Diamino Carbene Complexes of Manganese(I): Synthesis, Deprotonation, and Subsequent Multiple Insertion Reaction of Alkynes. J. Ruiz, B. F. Perandones, G. García, M. E. G. Mosquera. *Organometallics* /28/ **2009**/ 830-836.

5.-"Metal-induced tautomerization of oxazole and thiazole molecules to heterocyclic carbenes". J. Ruiz, B. F. Perandones. *Chemical Communications* /**2009**/ 2741-2743.

6.- "NHC-manganese(I) complexes as carbene transfer agents". J. Ruiz, A. Berros, B. F. Perandones, M. Vivanco. *Dalton Transactions* /**2009**/ 6999-7007.

7.- "On the Existence of an N-Metalated N-Heterocyclic Carbene: A Theoretical Study". J. Ruiz, B. F. Perandones, J. F. Van der Maelen, S. García-Granda. *Organometallics* /29/ **2010**/ 4639-4642.

8.- "A Fischer Carbene within an Arduengo Carbene". J. Ruiz, L. García, B. F. Perandones, M. Vivanco. *Angewandte Chemie International Edition* **2011**, *50*, 3010.

Autor: Leire Zubizarreta Sáenz de Zaitegui
Título: Síntesis de materiales carbonosos dopados para el almacenamiento de H_2
Fecha lectura: 10/07/2009

Publicaciones:

1.-"Development of microporous carbon xerogels by controlling synthesis conditions". L. Zubizarreta, A. Arenillas, A. Domínguez, J.A. Menendez, J.J. Pis. *Journal of Non-Crystalline Solids* / 354 / **2008** / 817-825.

2.- "Growth of nanofilaments on carbon based materials from microwave-assisted decomposition of CH4". B. Fidalgo, Y. Fernández, L. Zubizarreta, A. Arenillas, A. Domínguez, J.J. Pis, J.A. Menéndez. *Applied Surface Science* / 254 / **2008** / 3553–3557.

3.-" Preparation of Ni doped carbon nanospheres with different surface chemistry and controlled pore structure". L. Zubizarreta, A. Arenillas, J.J. Pis. *Applied Surface Science* / 254 / **2008** / 3993-4000.

4.-" Tailoring the textural properties of activated carbon xerogels by chemical activation with KOH". : L. Zubizarreta, A. Arenillas, J.P. Pirard, J.J. Pis, N. Job.*Microporous & Mesoporous Materials* / 115 / **2008** / 480-490

5.-" H2 storage in carbon materials". L. Zubizarreta, E.I. Gómez, A. Arenillas, C.O. Ania, J.B. Parra, J.J. Pis. *Adsorption* / 14 / **2008** / 557-566

6.-" Microwave drying as an effective method to obtain porous carbon xerogels". L. Zubizarreta, A. Arenillas, J.A. Menéndez, J.J. Pis, J.P. Pirard, N. Job. *Journal of Non-Crystalline Solids* / 354 / **2008** / 4024-4026

7.- "Carbon Materials for H_2 storage". L. Zubizarreta, A. Arenillas, J.J. Pis. *International Journal of Hydrogen Energy* / 34 / **2009** / 4575-4581

8.-" Effect of carbon support on kinetic behaviour of a metal hydride electrode". J. Thomas, G. Andreasen, A. Arenillas, L. Zubizarreta, P. Barath, M. Sedlarikova, J. Vondrak, A. Visintin. *Electrochimica Acta* / 54 / **2009 /** 2010-2017

9.-" Improving hydrogen storage in Ni doped carbon nanospheres". L. Zubizarreta, J.A. Menéndez, J.J. Pis, A. Arenillas. *International Journal of Hydrogen Energy* / 34 / **2009** / 3070-3076

10.-" Studying chemical activation in carbon xerogels". L. Zubizarreta, A. Arenillas, J.J. Pis, J.P. Pirard, N. Job. *Journal of Materials Science* / 44 / **2009** / 6583-6590.

11.- "Microwave heating processes involving carbon materials". J.A. Menéndez, A. Arenillas, B. Fidalgo, Y. Fernández, L. Zubizarreta, E.G. Calvo, J.M. Bermúdez. *Processing Technology* / 91 / **2010** / 1-8

12.-“ Ni-doped carbons as carbon support for metal hydride electrodes”. J.E. Thomas, R.M. Humana, L. Zubizarreta, A. Arenillas, J.A. Menéndez, H.L. Corso, A. Visintin. *Energy & Fuels* / 24 / **2010** / 3302-3306

13.- “Synthesis of carbon-supported nickel catalysts for the dry reforming of CH4”. B. Fidalgo, L Zubizarreta, J.M. Bermúdez, A. Arenillas, J.A. Menéndez. *Fuel Processing Technology* / 91 / **2010** / 765-769

14.-“ Exploring new routes in the synthesis of carbon xerogels for their application in electric doublelayer capacitors”. E.G. Calvo, C.O. Ania, L. Zubizarreta, J.A. Menéndez, A. Arenillas. *Energy & Fuels* / 24 / **2010** / 3334-3339.

15.-“ Ni-doped carbon xerogels for H_2 storage”. L. Zubizarreta, J.A. Menéndez, N. Job, J.P. Marco-Lozar, J.P. Pirard, J.J. Pis, A.Linares Solano, D. Cazorla-Amorós, A. Arenillas. *Carbon* / 48 / **2010** / 2722-2733

16.-“ A comparison of physical activation of carbon xerogels with carbon dioxide with chemical activation using hydroxides. M.S. Contreras, C.A. Paez, L. Zubizarreta, A. Leonard, S. Blacher, C.G. Olivera-Fuentes, A. Arenillas, J.P. Pirard, N. Job. *Carbon* / 48 / **2010** / 3157-3168.

Autor: Tatiana Rodríguez Pérez
Título: Síntesis quimioenzimática de pronucleótidos y precursores de oligonucleotidos
Fecha lectura: 21/07/2009

Publicaciones:

1.-" Novel and Efficient Chemoenzymatic Synthesis of D-Glucose 6-Phosphate and Molecular Modeling Studies on the Selective Biocatalysis". T. Rodríguez-Pérez, I. Lavandera, S. Fernández, Y. S. Sanghvi, M. Ferrero, V. Gotor. *Eur. J. Org. Chem.* / **2007** / 2769-2778

2. -" Preparation of Nucleoside-Carbohydrate Phosphodiester Prodrug Analogues by Chemoenzymatic Procedure". T. Rodríguez-Pérez, S. Fernández, Y. S. Sanghvi, V. Gotor, M. Ferrero. *Nucleic Acids Symp. Ser. / 52* / **2008** / 101-102

3**.** -"Improved Synthesis and Isolation of 2'-*O*-Methyladenosine: Effective and Scalable Enzymatic Separation of 2'/3'-*O*-Methyladenosine Regioisomers".
S. Martínez-Montero, S. Fernández, T. Rodríguez-Pérez, Y. S. Sanghvi, K. Wen, V. Gotor, M. Ferrero. *Eur. J. Org. Chem.* / **2009** / 3265-3271

4. -" Chemoenzymatic Synthesis of 3'-*O*-Acetal-Protected 2'-Deoxynucleosides as Building Blocks for Nucleic Acid Chemistry". T. Rodríguez-Pérez, S. Fernández, S. Martínez-Montero, T. González-García, Y. S. Sanghvi, V. Gotor, M. Ferrero. *Eur. J. Org. Chem.* / **2010** / 1736-1744

5**.** -" Chemoenzymatic Syntheses and Anti-HIV-1 Activity of Glucose-Nucleoside Conjugates as Prodrugs". T. Rodríguez-Pérez, S. Fernández, Y. S. Sanghvi, M. Detorio, R. F. Schinazi, V. Gotor, M. Ferrero. *Bioconjugate Chem.* / *21* / **2010** / 2239-2249

Autor: Benjamín Eduardo Busto García
Título: Síntesis quimioenzimática de derivados enantioméricamente puros de 4-(*N*,*N*-dimetilamino)piridina, aminoalcoholes y diaminas ópticamente activas: aplicaciones en organocatálisis
Fecha lectura: 18/09/2009

Publicaciones:

1.-" Computational Study of the Lipase-Mediated Desymmetrisation of 2-Substituted-Propane-1,3-Diamines". Garcia-Urdiales, Eduardo; Busto, Eduardo; Rios-Lombardia, Nicolas; Gotor-Fernandez, Vicente; Gotor, Vicente. *ChemBioChem*/ 10/ **2009**/ 2875-2883

2.- **"**Development of a chemoenzymatic strategy for the synthesis of optically active and orthogonally protected polyamines". Busto, Eduardo; Gotor-Fernandez, Vicente; Montejo-Bernardo, Jose; Garcia-Granda, Santiago; Gotor, Vicente. *Tetrahedron/* 65/ **2009**/ 8393-8401

3.-" Chemoenzymatic synthesis of optically active pyridine derivatives". Gotor-Fernandez, Vicente; Busto, Eduardo; Gotor, Vicente. *Targets in Heteocycic Chemistry*/ 12/ **2008**/ 414-437

4.-"Chemoenzymatic Synthesis of Rivastigmine Based on Lipase-Catalyzed Processes". Mangas-Sanchez, Juan; Rodriguez-Mata, Maria; Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente**.** *Journal of Organic Chemistry*/ 74/ **2009**/ 5304-5310.

5.-" Enzymatic Desymmetrization of Prochiral 2-Substituted-1,3-Diamines: Preparation of Valuable Nitrogenated Compounds". Rios-Lombardia, Nicolas; Busto, Eduardo; Garcia-Urdiales, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente. *Journal of Organic Chemistry*/ 74/ **2009/** 2571-2574

6.-" Enzymatic Desymmetrization of 1,3-Propanodiamine Derivatives. New Routes for the Preparation of Enantiomerically Pure Amines". Busto, Eduardo; Gotor-Fernandez, Vicente; Montejo-Bernardo, Jose; Garcia-Granda, Santiago; Gotor, Vicente. *Organic Letters* / 9/ **2007**/ 4203-4206

7.-" Simple and straightforward synthesis of novel enantiopure ionic liquids via efficient enzymatic resolution of (±)-2-(1H-imidazol-1-yl)cyclohexanol". Busto, Eduardo; Gotor-Fernandez, Vicente; Rios-Lombardia, Nicolas; Garcia-Verdugo, Eduardo; Alfonso, Ignacio; Garcia-Granda, Santiago; Menendez-Velazquez, Amador; Burguete, M. Isabel; Luis, Santiago V.; Gotor, Vicente .*Tetrahedron Letters* / 48/ **2007**/ 5251-5254

8.-" Enzymatic preparation of novel aminoalkylpyridines using lipases in organic solvents". Torre, Oliver; Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente. *Advanced Synthesis & Catalysis*/ 349/ **2007**/ 1481-1488

9.-"Enantioselective synthesis of 4-(dimethylamino)pyridines through a chemical oxidation-enzymatic reduction sequence. Application in asymmetric catalysis".

Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente. *Advanced Synthesis & Catalysis*/ 348/ **2006**/ 2626-2632.

10.-" Kinetic resolution of 4-chloro-2-(1-hydroxyalkyl)pyridines using Pseudomonas cepacia lipase". Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente . *Nature Protocols*/ 1/ **2006**/ 2061-2067

11.-" Candida antarctica lipase B: an ideal biocatalyst for the preparation of nitrogenated organic compounds" .Gotor-Fernandez, Vicente; Busto, Eduardo; Gotor, Vicente. *Advanced Synthesis & Catalysis*/ 348/ **2006**/ 797-812

12.-" Biocatalytic preparation of optically active 4-(N,N-dimethylamino)pyridines for application in chemical asymmetric catalysis" Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente. *Tetrahedron: Asymmetry*/ 17/ **2006**/ 1007-1016

13.-"Chemoenzymatic synthesis of chiral 4-(N,N-dimethylamino)pyridine derivatives" . Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente. *Tetrahedron: Asymmetry*/ 16/ **2005**/ 3427-3435

14.- "Efficient synthesis of chiral homodimeric 4-(*N*,*N*-dimethylamino)pyridine carbamate derivatives", Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente. *Arkivoc* **2010**, *iii*, 114-123.

15.- "From Salts to Ionic Liquids by Systematic Structural Modifications: A Rational Approach Towards the Efficient Modular Synthesis of Enantiopure Imidazolium Salts". Ríos-Lombardía, Nicolás, Busto, Eduardo, Gotor-Fernández, Vicente, Gotor, Vicente, Porcar, Raúl, García-Verdugo, Eduardo, Luis, Santiago Vicente, Alfonso, Ignacio, García-Granda, Santiago, Menéndez-Velázquez, Amador. *Chemistry: A European Journal* **2010**, *16*, 836-847.

16.- "Hydrolases: catalytically promiscuous enzymes for non-conventional reactions in organic synthesis". Busto, Eduardo; Gotor-Fernandez, Vicente; Gotor, Vicente. *Chemical Society Reviews* **2010**, *39*, 4504-4523.

17.- "Optically active macrocyclic hexaazapyridinophanes decorated at the periphery: synthesis and applications in the NMR enantiodiscrimination of carboxylic acids". Busto, Eduardo, González-Álvarez, Almudena, Gotor-Fernandez, Vicente; Alfonso, Ignacio, Gotor, Vicente.

Autor: Rocío González Alvarez
Título: Sintesis y reactividad de complejos binucleares de hierro con ligandos fosfinideno
Fecha lectura: 11/12/2009

Publicaciones:

1.- "High-yield Synthesis and Reactivity of Stable Diiron Complexes with Bent-Phosphinidene Bridges". C. M. Alvarez, M. A. Alvarez, M. E. García, R. González, M. A. Ruiz, H. Hamidov y J. C. Jeffery. *Organometallics* **2005**, *24*, 5503.

2.- "Nucleophilic and Electrophilic Behavior of the Phosphinidene-Bridged Complex $[Fe_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}PCy)(\mu\text{-}CO)(CO)_2]$". M. A. Alvarez, M. E. García, R. González, M. A. Ruiz.. *Organometallics* **2008**, *27*, 1037.

3.- "Chemical and Structural Effects of Bulkness on Bent-Phosphinidene Bridges: Synthesis and Reactivity of the Diiron Complex $[Fe_2Cp_2\{\mu\text{-}P(2,4,6\text{-}C_6H_2tBu_3)\}(\mu\text{-}CO)(CO)_2]$". M. A. Alvarez, M. E. García, R. González, A. Ramos, M. A. Ruiz. *Organometallics* **2010**, *29*, 1875.

4.- "Reactions of the Phosphinidene-Bridged Complexes $[Fe_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}PR)(\mu\text{-}CO)(CO)_2]$ (R = Cy, Ph, 2,4,6-$C_6H_2{}^tBu_3$) with Diazoalkanes. Formation and Rearrangements of Phosphadiazadiene-Bridged Derivatives.". M. A. Alvarez, M. E. García, R. González, Miguel A. Ruiz. *Organometallics* **2010**, *29*, 5140.

5.- "Synthesis and Decarbonylation Reactions of Diiron Cyclopentadienyl Complexes with Bent-Phosphinidene Bridges". M. A. Alvarez, M. E. García, R. González, A. Ramos, Miguel A. Ruiz. *Organometallics* **2011**, *30*, 1102.

6.- "Heterometallic Derivatives of $[Fe_2Cp_2(\mu\text{-}PCy)(\mu\text{-}CO)(CO)_2]$. Rational Synthesis of Polynuclear Complexes from Neutral Precursors Having Pyramidal-Phosphinidene Bridges". M. A. Alvarez, M. E. García, R. González, A. Ramos, Miguel A. Ruiz. *Inorg. Chem.* **2011**, *50*, 7894.

7.- "Synthesis and Decarbonylation Reactions of the Triiron Phosphinidene Complex $[Fe_3Cp_3(\mu\text{-}H)(\mu_3\text{-}PPh)(CO)_4]$: Easy Cleavage and Formation of P–H and Fe–Fe Bonds". C. M. Alvarez, M. A. Alvarez, M. E. García, R. González, A. Ramos, Miguel A. Ruiz. *Inorg. Chem.* **2011**, *50*, 10937.

8.- "Reactions of the Phosphinidene-Bridged Complexes $[Fe_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}PR)(\mu\text{-}CO)(CO)_2]$ (R = Cy, Ph) with Electrophiles Based on p-Block Elements". M. A. Alvarez, M. E. García, R. González, Miguel A. Ruiz. *Dalton Trans.* **2012**, *41*, 14498.