

Autor: Pablo Barrio Fernández
Título: Reacción de intercambio Cromo(O)-Níquel(O): Nuevos modos de carbociclación de complejos de carbeno de Fischer con alquinos y allenos.
Fecha lectura: 12/01/2007

Publicaciones

1.- Nickel(0)-Mediated [3+2+2] and [2+2+2+1] Cyclization Reactions of Chromium Fischer Carbene Complexes and Alkynes

Barluenga, J.; Barrio, P.; López, L. A.; Tomás, M.; García-Granda, S.; Álvarez-Rúa, C.

Angew. Chem. Int. Ed. **2003**, 42, 3008

2.- Metal-Controlled Selective [3+2] Cyclization Reactions of Alkenyl Fischer Carbene Complexes and Allenes

Barluenga, J.; Vicente, R.; Barrio, P.; López, L. A.; Tomás, M.

J. Am. Chem. Soc. **2004**, 126, 5974

3.- Specific Synthesis of 1,2- and 1,3-Dialkylidenecycloheptanes by [3+2+2] Cyclization of Alkenyl Fischer Carbene Complexes and Allenes

Barluenga, J.; Vicente, R.; Barrio, P.; López, L. A.; Tomás, M.; Borge, J.

J. Am. Chem. Soc. **2004**, 126, 14354

4.- Copper-Catalyzed Dimerization of Chromium Fischer Carbene Complexes: Synthesis of Dialkoxytrienes and their Nazarov-type Cyclization to 2-Alkoxy-2-cyclopentenones

Barluenga, J.; Barrio, P.; Vicente, R.; López, L. A.; Tomás, M.

J. Organomet. Chem. **2004**, 689, 3793

5.- Nickel(0)-Mediated [2+2+1] Cyclization Reaction of Chromium Carbene Complexes and Internal Alkynes

Barluenga, J.; Barrio, P.; Riesgo, L.; López, L. A.; Tomás, M.

Tetrahedron **2006**, 62, 7547

6.- A General and Regioselective Synthesis of Cyclopentenone Derivatives through Nickel(0)-Mediated [3+2] Cyclization of Alkenyl Fischer Carbene Complexes and Internal Alkynes

Barluenga, J.; Barrio, P.; Riesgo, L.; López, L. A.; Tomás, M.

J. Am. Chem. Soc. **2007**, 129, 14422

Autor: Carmen Méjica Iglesias

Título: Reacciones altamente selectivas de eliminación, ciclopropanación promovidas por CrCl₂. Aplicaciones a la reacción de olefinación a la síntesis de compuestos insaturados enantiopuros.

Fecha lectura: 02/03/2007

Publicaciones

- 1.- “Synthesis of (*E*)- α,β -Unsaturated Esters with Total Diastereoselectivity by Using Chromium Dichloride”, J. M. Concellón, H. Rodríguez-Solla, C. Méjica, *Tetrahedron Lett.*, **2004**, 45, 2977-2979.
- 2.- “Synthesis of Enantiopure (*S*)-(E)-1-Haloalk-1-ene-3-amines with Total or Very High Diastereoselectivity by Halomethylenation of α -Amino Aldehydes promoted by CrCl₂”, J. M. Concellón, P. L. Bernad C. Méjica, *Tetrahedron Lett.*, **2005**, 46, 569-571.
- 3.- An Easy, Efficient and Completely Stereoselective Synthesis of (*E*)- α,β -Unsaturated Esters via Sequential Aldol-Type/Elimination Reactions Promoted by Samarium Diiodide or Chromium Dichloride”, J. M. Concellón, C. Concellón, C. Méjica, *J. Org. Chem.*, **2005**, 70, 6111-6113.
- 4.-“An Easy, Efficient and Completely Stereoselective Synthesis of (*E*)- α,β -Unsaturated Esters via Sequential Aldol-Type/Elimination Reactions Promoted by Samarium Diiodide or Chromium Dichloride”, J. M. Concellón, C. Concellón, C. Méjica, *J. Org. Chem.*, **2005**, 70, 6111-6113.
- 5.-“An Efficient Synthesis of (*E*)- α,β Unsaturated Ketones and Esters with Total Stereoselectivity by Using Chromium Dichloride”, J. M. Concellón, H. Rodríguez-Solla, C. Méjica, *Tetrahedron*, **2006**, 62, 3292-3300.
- 6.- “Stereospecific Cyclopropanation of Highly Substituted C-C Double Bonds Promoted by CrCl₂. Stereoselective Synthesis of Cyclopropanecarboxamides and Cyclopropyl Ketones”, J. M. Concellón, H. Rodríguez-Solla, C. Méjica, E. G. Blanco, *Org. Lett.*, **2007**, 9, 2981-2984.
- 7.-“Highly Selective Synthesis of Enantiopure (*S,E*)- α,β -Unsaturated γ -Amino Esters Through a Sequential Reaction of Ethyl Dibromoacetate with α -Amino Aldehydes Promoted by Chromium Dichloride”, J. M. Concellón, C. Méjica, *Eur. J. Org. Chem.*, **2007**, 5250-5255.
- 8.-“Stereospecific and Stereoselective Alkyl and Silylcyclopropanation of α,β -Unsaturated Amides”, J. M. Concellón, H. Rodríguez-Solla, Méjica, Elena G. Blanco, Santiago García-Granda, and M. Rosario Díaz, *Org. Lett.*, **2008**, 10, 349-352..
- 9.-“CrCl₂-Promoted Stereospecific and Stereoselective Alkyl and Silylcyclopropanation of α,β -Unsaturated Amides”, J. M. Concellón, H. Rodríguez-Solla, Méjica, Elena G. Blanco, Santiago García-Granda, and M. Rosario Díaz, *J. Org. Chem.*, **2008**, 73, 000

Autor: Carmen Peña González

Título: Síntesis de receptores nitrogenados enantiopuros. Aplicaciones en reconocimiento molecular quiral.

Fecha lectura: 13/04/2007

Publicaciones

1.- Peña, C.; Alfonso, I.; Volker, N.; Gotor, V. *Tetrahedron Lett* **2005**, 46, 2783-2787

“Solvent dependent selective alkylation of a bis(sulfonamide) for the synthesis of a DNA-binding chiral polyamine”

2.- Peña, C.; Alfonso, I.; Gotor, V. *Eur. J. Org. Chem.* **2006**, 3887-3897.

“Conformationally base selective alkylation of *trans*-cyclohexanediyl-1,2-bis(sulfonamide) asisted by solvent-tuned protecting groups. Applications to the synthesis of a large sized optically active polyazamacrocycle”

3.- Peña,C., Alfonso, I., Tooth, B., Voelcker, N.H.,Gotor, V. *J. Org. Chem.*, **2007**, 72, 1924-1930

“Synthesis and stereoselective DNA binding abilities of new optically active open chain polyamines”

4.- Peña, C., González Sabin, J., Rebolledo, F., Gotor V. *Tetrahedron:*

Assymmetry **2008** 18,1981-1985

“New Pincer-like Receptor as Chiral Shift Reagent for Carboxilic Acids”

5.- Peña, Carmen; González Sabin, Javier; Rebolledo, Francisca; Alfonso, Ignacio; Gotor, Vicente. *Tetrahedron* **2008**, 64, 7709-7717

“N Cycloalkane 1,2-diamines as Chiral solvating agents. Study of structural variable controlling the NMR enantiodiscrimination of chiral Carboxilic Acids”.

Autor: Oliver Torre González
Título: Reacciones enzimáticas de aminólisis y de adición tipo Michael catalizadas por lipasas en disolventes orgánicos.
Fecha lectura: 27/04/2007

Publicaciones

- 1.-Oliver Torre Gónzalez. 1. “Lipase catalysed Michael addition of secondary amines to acrylonitrile”. O. Torre, I. Alfonso, V. Gotor, *Chem. Commun.* **2004**, 1724-1725.
- 2.- Oliver Torre Gónzalez. 2. “Study of the chemoselectivity in the aminolysis reaction of methyl acrylate catalysed by lipase B from *Candida antarctica*”. O. Torre, V. Gotor-Fernández, I. Alfonso' L. F. García-Allés, V. Gotor, *Adv. Synth. Catal.* **2005**, 347, 1007-1014.
- 3.-Oliver Torre Gónzalez. 3. “Lipase-catalyzed resolution of chiral 1,3-aminoalcohols. Application in the asymmetric synthesis of (S)-Dapoxetine”. O. Torre, V. Gotor-Fernández, V. Gotor, *Tetrahedron: Asymmetry* **2006**, 17, 880-886.
- 4.-Oliver Torre Gónzalez. 4. “Enzymatic preparation of novel aminoalkyl-pyridines using lipases in organic solvents”. O. Torre, E. Bustos, V. Gotor-Fernández, V. Gotor, *Adv. Synth. Catal.* **2007**, 349, 1481-1488

Autor: Facundo Andina Menéndez

Título: Estudio de reactividad de carbenos de Fischer a,b insaturados: Síntesis de 3,4-dihidrocumarinas y carbociclos condensados.

Fecha lectura: 15/06/2007

Publicaciones

1.- Unprecedented Reactivity Pattern of Chromium Fischer Carbene Complexes. Direct Application to One-Pot Synthesis of 4-Aryl-3,4-Dihidrocumarins on a Multigram Scale.

José Barluenga, Facundo Andina, and Fernando Aznar

Organic Letter, 8, 2703-2706, **2006**

2.- New cascade processes on Group 6 Fischer-Type Carbene Complexes: Cyclopropanation and Metathesis Reactions.

José Barluenga, Facundo Andina, Fernando Aznar, and Carlos Valdés

Organic Letter, 9, 4143-4146, **2007**

3.- Intramolecular Alkyne Insertions on Dialkynyl Fischer Carbene Complexes: Cascade reactions Oriented to the Synthesis of Functionalized Polycycles.

José Barluenga, Martín Fañanás-Mastral, Facundo Andina, Fernando Aznar and Carlos Valdés.

Chem. Eur. J. Enviado para su publicación

Autor: Gabriela Sánchez Vega
Título: Clusters carbonílicos de Rutenio y Osmio con carbenos heterociclos: síntesis y reactividad
Fecha lectura: 28/06/07

Publicaciones

- 1.-Easy activation of two C-H bonds of an N-heterocyclic carbene N-methyl group.
J.A. Cabeza, I. del Río, D. Miguel and M.G. Sánchez-Vega, *Chem. Commun.*, **2005**, 3956-3958.
- 2.-Dichlorobis[(R)-2,3,5,6-tetrahydro-6-phenylimidazo[2,1-*b*]thiazole]nickel(II).
J.A. Cabeza, I. del Río, M. G. Sánchez-Vega and S. García-Granda, *Acta Crystallogr., Sect. E*, **2005**, 61, 1984-1985.
- 3.-Methyl levamisolium triflate as a precursor to a chiral bifunctional N-heterocyclic carbene-thiolate ligand: Palladium(II) complexes.
J.A. Cabeza, I. del Río, M.G. Sánchez-Vega and M. Suárez, *Organometallics*, **2006**, 25, 1831-1834.
- 4.-Triruthenium and triosmium carbonyl clusters containing chiral bidentate NHC-thiolate ligands derived from levamisole.
J.A. Cabeza, I. da Silva, I. del Río, and M.G. Sánchez-Vega, *Dalton Trans.*, **2006**, 3966-3971.
- 5.-Reactivity of N-heterocyclic carbenes with [Ru₃(CO)₁₂] and [Os₃(CO)₁₂]. Influence of ligand volume and electronic effects.
J.A. Cabeza, I. del Río, D. Miguel, E. Pérez-Carreño and M.G. Sánchez-Vega, *Organometallics*, **2008**, 27, 211-217.
- 6.- From an N-methyl N-heterocyclic carbene to carbyne and carbide ligands via multiple C–H and C–N bond activations.
J.A. Cabeza, I. del Río, D. Miguel and M.G. Sánchez-Vega, *Angew. Chem. Int. Ed.*, **2008**, 47, 1920-1922.
- 7.-Activation of two C–H bonds of NHC N–methyl groups on triosmium and triruthenium carbonyl clusters.
J.A. Cabeza, I. del Río, D. Miguel, E. Pérez-Carreño and M.G. Sánchez-Vega, *Dalton Trans.*, **2008**, 1937-1942.
8. A simple preparation of pyridine-derived N-heterocyclic carbenes and their transformation into bridging ligands by orthometalation.
J.A. Cabeza, I. del Río, E. Pérez-Carreño, M.G. Sánchez-Vega and D. Vázquez-García, *Angew. Chem. Int. Ed.*, **2009**, 48, 555-558; *Angew. Chem.*, **2009**, 121, 563-566.
9. Reactivity of protons, tertiary stannanes, and alkynes with a triruthenium dihydrido cluster containing a face-capping NHC ligand.
J.A. Cabeza, I. del Río, J.M. Fernández-Colinas and M.G. Sánchez-Vega, *Organometallics*, **2009**, 28, 1243-1247.

10. Reactivity of $[\text{Ru}_4(\mu\text{-H})_4(\text{CO})_{12}]$ with N-heterocyclic carbenes.
J.A. Cabeza, I. del Río, J.M. Fernández-Colinas, E. Pérez-Carreño, M.G. Sánchez-Vega and D. Vázquez-García, *Organometallics*, **2009**, 28, 1832-1837.
- 11.- Reactivity of $[\text{Os}_3(\mu\text{-H})_2(\text{CO})_{10}]$ with N-heterocyclic carbenes: A combined experimental and DFT computational study.
J. A. Cabeza, I. del Río, J. M. Fernández-Colinas, E. Pérez-Carreño, M. G. Sánchez-Vega, D. Vázquez-García
Organometallics **2010**, 29, 3828-3836
- 12.- Trapping of pyrid-2-ylidenes by $[\text{Ru}_3(\text{CO})_{12}]$: Orthometalated pyrid-2-ylidenes in triruthenium clusters.
: J. A. Cabeza, I. del Río, E. Pérez-Carreño, M. G. Sánchez-Vega, D. Vázquez-García
Organometallics **2010**, 29, 4464-4471

Autor: Antonio Morán Ramallal
Título: Reacciones orgánicas selectivas: estudio del mecanismo de procesos estequiométricos y catalíticos
Fecha lectura: 14/09/2007

Publicaciones

1.-Autores (p.o. de firma): Antonio Morán Ramallal, Fernando López Ortiz, Javier González

Título: Ionic vs. Pericyclic transition states for the cyclization reactions of C_α-N anions derived from amides and phosphinamides. Ref. X

revista: *Organic Letters* Clave: A Volumen: 6 Páginas: 2141 inicial, final: 2144 Fecha: 2004

2.-Autores (p.o. de firma): Antonio Morán Ramallal, Ignacio Fernández, Fernando López Ortiz, Javier González

Título: Mechanism of anionic dearomatizing reactions of diphenylphosphinamide derivatives: A theoretical and experimental study.

Ref. X revista: *Chemistry. A European Journal* Clave: A Volumen: 11 Páginas, inicial: 3022 final: 3031 Fecha: 2005

3.-Autores (p.o. de firma): Alberto Macías, Antonio Morán Ramallal, Eduardo Alonso, Carlos del Pozo, Javier González

Título: Synthesis of Enantiopure Pyrrolidine-Derived Peptidomimetics and Oligo-β-peptides via Nucleophilic Ring-opening of β-lactams.

Ref. X revista: *Journal of Organic Chemistry* Clave: A Volumen: 71 Páginas, inicial: 7721 final: 7730 Fecha: 2006

4.-Autores (p.o. de firma): Santos Fustero, Gema Chiva, Julio Piera, Alessandro Volonterio, Matteo Zanda, Javier González, Antonio Morán Ramallal

Título: The Role of Fluorine in the Stereoselective Tandem Aza-Michael Addition to Acrylamide Acceptors: An Experimental and Theoretical Mechanistic Study

Ref. X revista: *Chemistry. A European Journal* Clave: A Volumen: 13 Páginas, inicial: 8530 final: 8542 Fecha: 2007

Autor: Héctor Martínez García

Título: Reacciones de transferencia de grupos Carbeno y Nitreno catalizadas por nuevos complejos de cobre con ligandos N-dadores

Fecha lectura: 11/10/2007

Publicaciones

1.- Título: Calix[4]pyrrole as a Promoter of the CuCl-Catalyzed Reaction of Styrene and Chloramine-T.

Autores: Martinez-Garcia, Hector; Morales, Dolores; Perez, Julio; Coady, Daniel J.; Bielawski, Christopher W.; Gross, Dustin E.; Cuesta, Luciano; Marquez, Manuel; Sessler, Jonathan L. *Organometallics* **2007**, *26*, 6511

2.- Título: Synthesis of new copper (I) complexes with tris(2-pyridyl) ligands. Applications to carbene and nitrene transfer reactions.

Autores: Pérez Julio; Morales, Dolores; García-Escudero, Luis A.; Martinez-Garcia, Hector; Miguel, Daniel; Bernad, Pablo. *Dalton Trans.* **2009**, 375.

3.-Título: 1,3,5-Tris(thiocyanatomethyl)mesitylene as a ligand.

Pseudooctahedral molybdenum, manganese, and rhenium carbonyl complexes and copper and silver dimers. Copper-catalyzed carbene- and nitrene-transfer reactions.

Autores: H. Martínez-García, D. Morales, J. Pérez, M. Puerto, D. Miguel. *Inorg. Chem.* **2010**, *49*, 6974.

4.-Título: Hydrogen-bonded adducts between neutral molecules and $[Mo(h^3\text{-methylallyl})(CO)_2(HOC(py)_3)]^+$: snapshots of a deprotonation.

Autores: D. Morales, J. Pérez, H. Martínez-García, M. Puerto, I. del Río. *Cryst. Eng. Commun.* **2011**, *13*, 60-62.

Autor Laura Sánchez Abella

Título: Síntesis de análogos 6-s-cis y 6-s-trans 2-sustituidos de la 1^a-25-dihidroxi-19-nor vitamina D₃ a partir de los ácidos químico y psiquímico.
Estudio de su actividad biológica.

Fecha lectura: 20/12/2007

Publicaciones

1.- Sánchez-Abella, L., Fernández, S., Verlinden, L., Verstuyf, A., Ferrero, M., Gotor, V. *Bioorg. Med. Chem.* **2007**, 15, 4193-4202

Synthesis and biological evaluation of new 6-s-cis locked 1,2,25-trihydroxyprevitamin D₃ analogues

2.- Sánchez-Abella, L.; Fernández, S.; Verstuyf, A.; Verlinden, L.; Ferrero, M.; Gotor, V. *Bioorg. Med. Chem.* **2007**, 4193-4202.

Synthesis and biological evaluation of new 6-s-cis locked 1,2,25-trihydroxyprevitamin D₃ analogues.

3.- Sánchez-Abella, L.; Fernández, S.; Verstuyf, A.; Verlinden, L.; Gotor, V.; Ferrero, M. *Bioorg. Med. Chem.* **2008**, 16, 10244-10250.

Synthesis and biological activity of previtamin D₃ analogues with A-ring modifications

4.- L. Sánchez-Abella, S. Fernández, A. Verstuyf, L. Verlinden, K. V. Gotor, M. Ferrero *J. Med. Chem.* **2009**, 52, 6158-6162

Synthesis, Conformational Analysis, and Biological Evaluation of 19-nor-Vitamin D₃ Analogues with A-Ring Modifications

Autor: Georgiana Laura Ion

Título: Síntesis de nuevos receptores para reconocimiento de aniones

Fecha lectura: 21/12/2007

Publicaciones

1.- Título: Ruthenium biimidazole complexes as anion receptors.

Autores: Ion, Laura; Morales, Dolores; Perez, Julio; Riera, Lucia; Riera, Victor; Kowenicki, Richard A.; McPartlin, Mary.

Revista: *Chemical Communications* Año: **2006** Volumen: Página inicial: 91.

2.- Título: Biimidazole and Bis(amide)bipyridine Molybdenum Carbonyl Complexes as Anions Receptors.

Autores: Ion, Laura; Morales, Dolores; Nieto, Sonia; Perez, Julio; Riera, Lucia; Riera, Victor; Miguel, Daniel; Kowenicki, Richard A.; McPartlin, Mary.

Revista: *Inorganic Chemistry* Año: **2007** Volumen: 46 Página inicial: 2846.

3.-Título: Second-sphere interaction of anions with a weakly binding metal complex host: probing the effect of counteranions.

Autores: Perez, Julio; Riera, Lucia; Ion, Laura; Riera, Victor; Anderson, Kirsty M.; Steed, Jonathan W.; Miguel, Daniel. Revista: *Dalton Transactions* Año: **2008**, Volumen: Página inicial: 878.