

Autor: Pamela Díaz García
Título : El manganeso, un reactivo alternativo al SmI₂ o CrCl₂ para promover procesos secuenciales de adición/β-eliminación, y aperturas de oxiranos y aziridinas con elevada selectividad
Fecha lectura: 27/04/2010

Publicaciones:

1.- Synthesis of (E)-α,β-Unsaturated Ketones with Complete Stereoselectivity via Sequential Aldol-Type/Elimination Reactions Promoted by Samarium Diiodide or Chromium Dichloride

José M. Concellón, Humberto Rodríguez-Solla, Carmen Concellón, Pamela Díaz
Synlett **2006**, 837-840

2.- The First Sequential Reaction Promoted by Manganese: Complete Stereoselective Synthesis of (E)-α,β-Unsaturated Esters from 2,2-Dichloroesters and Aldehydes

José M. Concellón, Humberto Rodríguez-Solla, Pamela Díaz, Ricardo Llavona
J. Org. Chem. **2007**, 72, 4396-4400

3.- Sequential Reactions Promoted by Manganese: Completely Stereoselective Synthesis of (E)-α,β-Unsaturated Amides, Ketones, Aldehydes and Carboxylic Acids

José M. Concellón, Humberto Rodríguez-Solla, Pamela Díaz
J. Org. Chem. **2007**, 72, 7974-7979

4.- Stereoselective Synthesis of (Z)-α-Halo-α,β-Unsaturated Esters, and Amides from Aldehydes and Trihaloesters or Amides Promoted by Manganese

José M. Concellón, Humberto Rodríguez-Solla, Pamela Díaz
Org. Biomol. Chem. **2008**, 6, 451-453

5.- Stereoselective Synthesis of (Z)-α-Haloacrylic Acid Derivatives, and (Z)-Haloallylic Alcohols from Aldehydes and Trihaloesters or Amides Promoted by Rieke Manganese

José M. Concellón, Humberto Rodríguez-Solla, Pamela Díaz
Org. Biomol. Chem. **2008**, 6, 2934-2940

6.- Stereoselective Olefination Reactions Promoted by Rieke Manganese

José M. Concellón, Humberto Rodríguez-Solla, Vicente del Amo, Pamela Díaz
Synthesis **2009**, 2634-2645

7.- Manganese-Promoted Regioselective Ring-Opening of 2,3-Epoxyacid Derivatives: A New Route to α-Hydroxyacid Derivatives

José M. Concellón, Pablo L. Bernad, Humberto Rodríguez-Solla, Pamela Díaz
Adv. Synth. Catal. **2009**, 351, 2178-2184

8.- Total Regioselective Transformation of Aromatic Aziridine 2-Carboxamides into 2-Aminoamides Promoted by Active Manganese

José M. Concellón, Humberto Rodríguez-Solla, Vicente del Amo, Pamela Díaz
J. Org. Chem. **2010**, 75, 2407-2410

9.- Chromium-Mediated Stereoselective Synthesis of Carbohydrate-Derived (E)- α,β -Unsaturated Esters or Amides

Humberto Rodríguez-Solla, Carmen Concellón, Elena G. Blanco, Juan I. Sarmiento, Pamela Díaz, Raquel G. Soengas

J. Org. Chem. **2011**, 76, 5461-5465

Autor: Lorena Riesgo Canal
Título : Nuevos modos de activación catalítica de ésteres propargílicos y de alquenildiazoacetatos con metales de transición
Fecha lectura: 13/05/2010

Publicaciones:

1.- Rearrangement of Propargylic Esters: Metal-Based Stereospecific Synthesis of (E)- and (Z)-Knoevenagel Derivatives

José Barluenga, Lorena Riesgo, Rubén Vicente, Luis A. López, Miguel Tomás
J. Am. Chem. Soc. **2007**, *129*, 7772-7773

2.- Cu(I)-Catalyzed Regioselective Synthesis of Polysubstituted Furans from Propargylic Esters via Postulated (2-Furyl)carbene Complexes

José Barluenga, Lorena Riesgo, Rubén Vicente, Luis A. López, Miguel Tomás
J. Am. Chem. Soc. **2008**, *130*, 13528-13529

3.- Discrimination of Diazo Compounds Toward Carbenoids: Copper(I)-Catalyzed Synthesis of Substituted Cyclobutenes

José Barluenga, Lorena Riesgo, Luis A. López, Eduardo Rubio, Miguel Tomás
Angew. Chem. Int. Ed. **2009**, *48*, 7569

4.- Copper(I)-Catalyzed [3+1] Cycloaddition of Alkenyldiazoacetates and Iminoiodinanes: Easy Access to Substituted 2-Azetines

José Barluenga, Lorena Riesgo, Giacomo Lonzi, Miguel Tomás, Luis A. López,
Chem. Eur. J. **2012**, *18*, 921-924

Autor: Cristina Rodríguez González
Título : Empleo de nuevas Baeyer-Villiger monooxigenasas como biocatalizadores en la síntesis de compuestos oxigenados ópticamente activos
Fecha lectura: 21/05/2010

- 1.- “Enzymatic kinetic resolution of racemic ketones catalysed by Baeyer–Villiger monooxygenases”. C. Rodríguez, G. de Gonzalo, M. W. Fraaije, V. Gotor. *Tetrahedron: Asymmetry* **2007**, *18*, 1338-1344.
- 2.- “Selective Baeyer–Villiger oxidation of racemic ketones in aqueous–organic media catalyzed by phenylacetone monooxygenase”. C. Rodríguez, G. de Gonzalo, D. E. Torres Pazmiño, M. W. Fraaije, V. Gotor. *Tetrahedron: Asymmetry* **2008**, *19*, 197-203.
- 3.- “Baeyer–Villiger monooxygenase-catalyzed kinetic resolution of racemic α -alkyl benzyl ketones: enzymatic synthesis of α -alkyl benzylketones and α -alkyl benzylesters”. C. Rodríguez, G. de Gonzalo, D. E. Torres Pazmiño, M. W. Fraaije, V. Gotor. *Tetrahedron: Asymmetry* **2009**, *20*, 1168-1173.
- 4.- “Investigating the coenzyme specificity of phenylacetone monooxygenase from *Thermobifida fusca*”. H. M. Dudek, D. E. Torres Pazmiño, C. Rodríguez, G. de Gonzalo, V. Gotor, M. W. Fraaije. *Appl. Microbiol. Biotechnol.* **2010**, *88*, 1135-1143.
- 5.- “Ionic liquids for enhancing the enantioselectivity of isolated BVMO-catalysed oxidations”. C. Rodríguez, G. de Gonzalo, M. W. Fraaije, V. Gotor. *Green Chem.* **2010**, *12*, 2255-2260.
- 6.- “BVMO-catalysed dynamic kinetic resolution of racemic benzyl ketones in the presence of anion exchange resins”. C. Rodríguez, G. de Gonzalo, A. Rioz-Martínez, D. E. Torres Pazmiño, M. W. Fraaije, V. Gotor. *Org. Biomol. Chem.* **2010**, *8*, 1121-1125.
- 7.- “Improvement of the biocatalytic properties of one phenylacetone monooxygenase mutant in hydrophilic organic solvents”. G. de Gonzalo, C. Rodríguez, A. Rioz-Martínez, V. Gotor. *Enzyme Microb. Technol.* **2012**, *50*, 43-49.
- 8.- “Optimization of oxidative bioconversions catalyzed by phenylacetone monooxygenase from *Thermobifida fusca*”. C. Rodríguez, G. de Gonzalo, V. Gotor. *J. Mol. Catal. B: Enzym.* **2012**, *74*, 138-143.
- 9.- “Recent Advances in Cofactor Regeneration Systems Applied to Biocatalyzed Oxidative Processes”. C. Rodríguez, I. Lavandera, V. Gotor. *Curr. Org. Chem.* **2012**, *16*, 2525-2541.

Autor: Sergio Andrés Alatorre Santamaría
Título : Desarrollo de procesos enzimáticos catalizados por lipasas para la preparación de compuestos nitrogenados ópticamente activos
Fecha lectura: 25/06/2010

Publicaciones:

1) AUTORES/AS (p.o. de firma): S. Alatorre, C. M. de Mattos, V. Gotor-Fernández, V. Gotor

TÍTULO: Efficient Synthesis of 7-Aza-2-substituted-indole Derivatives via Pd-catalyzed Coupling and C-N Cyclization

REF. REVISTA/LIBRO: Synthesis **2007**, 2149-2152

CLAVE: A

2) AUTORES/AS (p.o. de firma): S. Alatorre-Santamaría, M. Rodríguez-Mata, M. C. de Mattos, V. Gotor-Fernández, F. J. Sayago, A. I. Jiménez, C. Cativiela, V. Gotor

TÍTULO: Efficient access to enantiomerically pure cyclic α -amino esters through a lipase-catalyzed kinetic resolution

REF. REVISTA/LIBRO: Tetrahedron: Asymmetry **2008**, 19, 1714-1719

CLAVE: A

3) AUTORES/AS (p.o. de firma): S. Alatorre-Santamaría, V. Gotor-Fernández, V. Gotor

TÍTULO: Stereoselective chemoenzymatic synthesis of enantiopure 1-(heteroaryl)ethanamines via lipase-catalyzed kinetic resolutions

REF. REVISTA/LIBRO: European Journal of Organic Chemistry **2009**, 2533-2538

CLAVE: A

4) AUTORES/AS (p.o. de firma): S. Alatorre-Santamaría, V. Gotor-Fernández,* V. Gotor

TÍTULO: Stereoselective synthesis of optically active cyclic α - and β -amino esters through lipase-catalyzed transesterification or interesterification processes

REF. REVISTA/LIBRO: Tetrahedron: Asymmetry **2010**, 21, 2307-2312

CLAVE: A

5) AUTORES/AS (p.o. de firma): S. Alatorre-Santamaría, V. Gotor-Fernández,* V. Gotor

TÍTULO: Chemoenzymatic Synthesis of Optically Active *cis*- and *trans*-2-(1H-Imidazol-1-yl)cycloalkanamines

REF. REVISTA/LIBRO: European Journal of Organic Chemistry **2011**, 1057-1063

CLAVE: A

Autor: María Panera Castro
Título: Síntesis de complejos de Cobre (I) con ligandos pybox. Aplicaciones en catálisis asimétrica.
Fecha lectura: 15/07/2010

Publicaciones:

1.- Título: Tetra-, Di-, and Mononuclear Copper(I) Complexes Containing (S,S)-ⁱPr-pybox and (R,R)-Ph-pybox Ligands

Autores. Josefina Díez, M. Pilar. Gamasa, and María Panera

Publicación: *Inorg. Chem.* **2006**, 45, 10043-10045

2.- Título: Synthesis of Copper(I) Complexes Containing Enantiopure Pybox Ligands. First Assays on Enantioselective Synthesis of Propargylamines Catalyzed by Isolated Copper(I) Complexes

Autores: María Panera, Josefina Díez, Isabel Merino, Eduardo Rubio, M. Pilar Gamasa

Publicación: *Inorg. Chem.* **2009**, 48, 11147–11160

3.- Título: Reactivity of Dinuclear Copper(I)/pybox Complexes towards Isocyanides and Phosphanes

Autores: María Panera, Josefina Díez, Isabel Merino, Eduardo Rubio, M. Pilar Gamasa

Publicación : *Eur. J. Inorg. Chem.* **2011**, 393–404

Autor: Fabricio Román Bisogno
Título : Procesos tándem o en cascada catalizados por oxidorreductasas. Preparación de compuestos enantioméricamente enriquecidos
Fecha lectura: 23/07/2010

1.- “Tandem Concurrent Processes: One-Pot Single-Catalyst Biohydrogen Transfer for the Simultaneous Preparation of Enantiopure Secondary Alcohols”. F. R. Bisogno, I. Lavandera, W. Kroutil, V. Gotor. *J. Org. Chem.* **2009**, 74, 1730-1732.

2.- “Simple and Quick Preparation of α -Thiocyanate Ketones in Hydroalcoholic Media. Access to 5-Aryl-2-imino-1,3-oxathiolanes”. F. R. Bisogno, A. Cuetos, I. Lavandera, V. Gotor. *Green Chem.* **2009**, 11, 452-454.

3.- “Promiscuous Substrate-Binding Explains the Enzymatic Stereo- and Regiocontrolled Synthesis of Enantiopure Hydroxy Ketones and Diols”. M. Kurina-Sanz, F. R. Bisogno, I. Lavandera, A. A. Orden, V. Gotor. *Adv. Synth. Catal.* **2009**, 351, 1842-1848.

4.- “Biocatalysed Concurrent Production of Enantioenriched Compounds through Parallel Interconnected Kinetic Asymmetric Transformations”. A. Rioz-Martínez, F. Bisogno, C. Rodríguez, G. de Gonzalo, I. Lavandera, D. E. Torres Pazmiño, M. W. Fraaije, V. Gotor. *Org. Biomol. Chem.* **2010**, 8, 1431-1437.

5.- “Oxidoreductases Working Together: Concurrent Obtaining of Valuable Derivatives by Employing PIKAT Methodology”. F. R. Bisogno, A. Rioz-Martínez, C. Rodríguez, I. Lavandera, G. de Gonzalo, D. E. Torres Pazmiño, M. W. Fraaije, V. Gotor. *ChemCatChem* **2010**, 2, 946-949.

6.- “Chemo- and Stereodivergent Preparation of Terminal Epoxides and Bromohydrins through *One-Pot* Biocatalysed Reactions: Access to Enantiopure Five- and Six-Membered *N*-Heterocycles”. F. R. Bisogno, A. Cuetos, A. A. Orden, M. Kurina-Sanz, I. Lavandera, V. Gotor. *Adv. Synth. Catal.* **2010**, 352, 1657-1661.

7.- “Ketone-Alcohol Hydrogen Transfer Equilibria: Is the Biooxidation of Halohydrins Blocked?”. F. R. Bisogno, E. García-Urdiales, H. Valdés, I. Lavandera, W. Kroutil, D. Suárez, V. Gotor. *Chem. Eur. J.* **2010**, 16, 11012-11019.

8.- “Biocatalytic Concurrent Processes”. F. R. Bisogno, I. Lavandera, y V. Gotor. En *Kirk-Othmer Encyclopedia of Chemical Technology*; Seidel, A., Ed.; John Wiley & Sons: Hoboken, **2011**; pp. 1-20.

Autor: María Piedrafita Monreal
Título Procesos de hidro- y de yodoarilación de alenos: Reacciones de ciclación 5- y 6-endo.
Fecha lectura: 1/10/2010

Publicaciones:

1.- “Gold-Catalyzed Annulations of 1-(2,3-Butadienyl)-1*H*-Indole Derivatives,”. J. Barluenga, M. Piedrafita, A. Ballesteros, A. L. Suárez-Sobrino, J. M. González. *Chem. Eur. J.* **2010**, 16, 11827.

2.- “Phosphite-Gold(I) Catalyzed [2+2] Intermolecular Cycloaddition of Enol Ethers with *N*-Allenylsulfonamides”. S. Suárez-Pantiga, C. Hernández-Díaz, M. Piedrafita, E. Rubio, J. M. González. *Adv. Synth Catal.* **2012**, *aceptado*.

Autor: Miguel Angel Huertos Mansilla
Título : Desprotonación de ligandos N-heterocíclicos coordinados a fragmentos organometálicos: nuevos patrones de reactividad
Fecha lectura: 17/12/2010

Publicaciones:

- 1.- "Pyridine ring opening at room temperature at a rhenium tricarbonyl bipyridine complex". M. A. Huertos, J. Pérez, L. Riera. *J. Am. Chem. Soc.* **2008**, *130*, 5662-5663.
- 2.- "From N-alkylimidazole ligands at a rhenium center: ring-opening or formation of NHC complexes." M. A. Huertos, J. Pérez, L. Riera, A. Menéndez-Velázquez.. *J. Am. Chem. Soc.* **2008**, *130*, 13530-13531.
- 3.- "Effect of the Nature of the substituent in N-alkylimidazole ligands on the Outcome of the Deprotonation: Ring opening vs. the Formation of N-Heterocyclic Carbene Complexes." M. A. Huertos, J. Pérez, L. Riera, J. Díaz, R. López. *Chem. Eur. J.* **2010**, *16*, 8495-8507.
- 4.- "From Bis(N-Alkylimidazole) to Bis(NH-NHC) in Rhenium Carbonyl Complexes". M. A. Huertos, J. Pérez, L. Riera, J. Díaz, R. López. *Angew. Chem. Int. Ed.* **2010**, *49*, 6409-6412.
- 5.- "Organometallic Complexes with Terminal Imidazolato Ligands and Their Use as Metalloligands". E. Gómez, M. A. Huertos, J. Pérez, L. Riera, A. Menéndez Velázquez. *Inorg. Chem.* **2010**, *49*, 9527-9534.
- 6.- "Imidazole to NHC rearrangements at molybdenum carbonyl centers. An experimental and theoretical study". M. Brill, M. A. Huertos, J. Pérez, L. Riera, J. Díaz, R. López. *Chem. Eur. J.* **2011**, *17*, 8584-8595.
- 7.- "Double activation of an N-alkylimidazole". M.A. Huertos, L. Riera, J. Pérez. *Chem. Eur. J.* **2012**, *18*, 9530-9533
- 8.- "Re-mediated C-C coupling of pyridines and imidazoles". M. Espinal Viguri, M. A. Huertos, J. Pérez, L. Riera and I. Ara. *J. Am. Chem. Soc.* **2012**, *134*, 20326-20329.