

Publications

2017

Alkyl-(Hetero)Aryl Bond Formation via Decarboxylative Cross-Coupling: A Systematic Analysis. Sandfort, F.*; O'Neill, M. J.*; **Cornella, J.**; Wimmer, L.; Baran, P. S. *Angew. Chem. Int. Ed.* **2017**, *56*, 3319. (equal contribution)

Visible-Light-Promoted Atom Transfer Radical Cyclization of Unactivated Alkyl Iodides. Y. Shen; **Cornella, J.**; F. Julia-Hernandez; Martin, R. *ACS Catal.*, **2017**, *7*, 409.

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Redox-Active Esters in Fe-catalyzed Cross-Coupling. Toriyama, F.*; **Cornella, J.***; Wimmer, L.; Chen, T. –G.; Dixon, D. D.; Creech, G.; Baran, P. S. *J. Am. Chem. Soc.* **2016**, *138*, 11132. (*equal contribution)

Nickel-catalyzed Cross-coupling of Redox-Active Esters with Boronic Acids. Wang, J.; Qin, T.; Chen, T. –G.; Wimmer, L.; Edwards, J. T.; **Cornella, J.**; Vokits, B.; Shaw, S. A.; Baran, P. S. *Angew. Chem. Int. Ed.* **2016**, *55*, 9676.

A General Alkyl-Alkyl Cross-Coupling Enabled by Redox-Active Esters and Alkylzinc Reagents. Qin, T.*; **Cornella, J.***; Li, C.*; Malins, L. R.; Edwards, J. T.; Kawamura, S.; Maxwell, B. D.; Eastgate, M. D.; Baran, P. S. *Science.* **2016**, *352*, 801. (*equal contribution)

Practical Ni-Catalyzed Aryl-Alkyl Cross-Coupling of Secondary Redox-Active Esters. **Cornella, J.***; Edwards, J. T.*; Qin, T.; Kawamura, S.; Wang, J.; Pan, C. –M.; Gianatassio, R.; Schmidt, M.; Eastgate, M. D.; Baran, P. S. *J. Am. Chem. Soc.* **2016**, *138*, 2174. (*equal contribution)

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Ni-catalyzed Enantioselective C–C Bond Formation via C(sp²)–O Cleavage in Aryl Esters. **Cornella, J.** Jackson, E. P.; Martin, R. *Angew. Chem. Int. Ed.* **2015**, *54*, 4075.

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Ligand-controlled Regiodivergent Ni-catalyzed Reductive Carboxylation of Allyl Esters with CO₂. Moragas, T.*; **Cornella, J.***; Martin, R. *J. Am. Chem. Soc.* **2014**, *136*, 17702. (*equal contribution)

The ortho-Substituent Effect on the Ag-catalysed Decarboxylation of Benzoic Acids. Grainger, R.; **Cornella, J.**; Blakemore, D. C.; Larrosa, I.; Campanera, J. –M. *Chem. –Eur. J.* **2014**, *20*, 16680.

Ni-catalyzed Carboxylation of Unactivated Primary Alkyl Bromides and Sulfonates with CO₂. Liu, Y.; **Cornella, J.**; Martin, R. *J. Am. Chem. Soc.* **2014**, *136*, 11212.

Metal-catalyzed Activation of Ethers via C–O Bond Cleavage: A New Strategy for Molecular Diversity. **Cornella, J.**; Zarate, C.; Martin, R. *Chem. Soc. Rev.* **2014**, *43*, 8081.

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Ni-catalyzed Stereoselective Arylation of Inert C–O bonds at Low Temperatures. **Cornella, J.**; Martin, R. *Org. Lett.* **2013**, *15*, 6298.

A Combined Experimental and Theoretical Study on the Reductive Cleavage of Inert C–O Bonds with Silanes: Ruling

out a Classical Ni(0)/Ni(II) Catalytic Couple and Evidence for Ni(I) Intermediates. **Cornella, J.**; Gomez-Bengoa, E.; Martin, R. *J. Am. Chem. Soc.* **2013**, 135, 1997.

Nickel-Catalyzed Decarboxylative C–H Coupling Reactions: A Strategy for Preparing Bis(Heteroaryl) Backbones. Correa, A.; **Cornella, J.**; Martin, R. *Angew. Chem. Int. Ed.* **2013**, 52, 2.

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Silver-Catalyzed Protodecarboxylation of Heteroaromatic Carboxylic Acids. Lu, P. F.; Sanchez, C.; **Cornella, J.**; Larrosa, I. *Org. Lett.* **2009**, 11, 5710.

Intermolecular Decarboxylative Direct C-3 Arylation of Indoles with Benzoic Acids. **Cornella, J.**; Lu, P. F.; Larrosa, I. *Org. Lett.* **2009**, 11, 5506.

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Conferences

Sustainable Catalysis: New Horizons for Organic Chemistry – **Max-Planck-Gesellschaft, Harnack-Haus** – January 2017, Berlin, Germany.

Redox-Active Esters in Cross-Coupling Reactions – **School of Chemistry, University of Manchester** – October 2016, Manchester, UK.

Redox-Active Esters in Cross-Coupling Reactions. – **École Polytechnique Fédéral de Lausanne (EPFL)** – October 2016, Lausanne, Switzerland.

Redox-Active Esters in Cross-Coupling Reactions – **Max-Planck Institute für Kohlenforschung** – September 2016, Mülheim and der Ruhr, Germany.

Nickel Catalysts for the Activation of C–O Bonds and CO₂: From Mechanistic Studies to Synthetic Applications – **Universitat de Girona** – Prof. Xavi Ribas Research Seminar – April 2015, Girona.

A Combined Experimental and Theoretical Study on the Reductive Cleavage of Inert C–O Bonds with Silanes: Ruling out a Classical Ni(0)/Ni(II) Catalytic Couple and Evidence for Ni(I) Intermediates – **University of California at Irvine** – Research Seminar Prof. Vy Dong's Research Seminar – April 2014, Irvine, USA.

A Combined Experimental and Theoretical Study on the Reductive Cleavage of Inert C–O Bonds with Silanes: Ruling out a Classical Ni(0)/Ni(II) Catalytic Couple and Evidence for Ni(I) Intermediates – **California Institute of Technology** – Prof. Theodor Agapie's Research Seminar – April 2014, Pasadena, USA.

A Combined Experimental and Theoretical Study on the Reductive Cleavage of Inert C–O Bonds with Silanes: Ruling out a Classical Ni(0)/Ni(II) Catalytic Couple and Evidence for Ni(I) Intermediates – **Biennal de Química Santander** – September 2013, Santander, Spain.

A Combined Experimental and Theoretical Study on the Reductive Cleavage of Inert C–O Bonds with Silanes: Ruling out a Classical Ni(0)/Ni(II) Catalytic Couple and Evidence for Ni(I) Intermediates – **Gordon Research Conference: Organometallics** – July 2013, Salve Regina University, Newport, USA.

Towards an Understanding of the Mechanism of the Ni-catalyzed C–OMe Cleavage of Aryl Ethers using Silanes – **Nobel Prize Campus Tarragona** – July 2012, Tarragona, Spain.

New Decarboxylative Transformations – **A Symposium for Postgraduates in Inorganic Chemistry (ASPIC)** – May 2011, University College London, UK.

New Decarboxylative Transformations – **22nd SCI Regional Graduate Symposium on Novel Organic Chemistry** – May 2011, University of Bath, UK.

New Decarboxylative Transformations – **Postgraduate Symposium Queen Mary University of London** – February 2011, Queen Mary University of London, UK.