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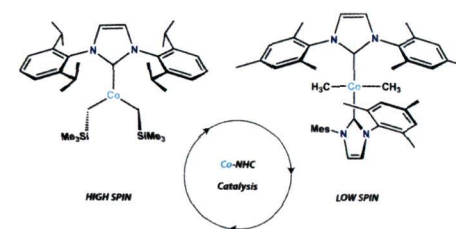
ON THE COVER: A shot of cobalt, like that found in the distinctive blue glass that bears its name, is known to catalyze C–C bond-forming reactions, such as Kumada couplings. The intimate mechanisms of these reactions are still not well-understood especially when compared to similar processes involving palladium. On pages 723–732 of this issue, Przyojski and coworkers shed light on the reactivity of possible catalytic intermediates by preparing and characterizing several alkyl complexes of cobalt(II) bearing N-heterocyclic carbene ligands. These compounds demonstrate unique geometries and spin states and allow for an examination of stoichiometric reactions relevant to cobalt catalysis.

Articles

 723 **S**
[dx.doi.org/10.1021/om3010756](https://doi.org/10.1021/om3010756)

NHC Complexes of Cobalt(II) Relevant to Catalytic C–C Coupling Reactions

Jacob A. Przyojski, Hadi D. Arman, and Zachary J. Tonzetich*

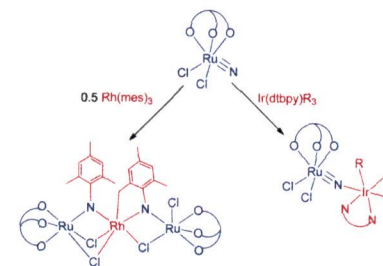


Communications

 733 **S**
[dx.doi.org/10.1021/om301114p](https://doi.org/10.1021/om301114p)

Reactions of a Ruthenium(VI) Nitride with Rhodium(III) and Iridium(III) Aryl Complexes. Insertion of the Ru≡N Group into the Rh–C Bonds of Trimesitylrhodium(III)

Enrique Kwan Huang, Wai-Man Cheung, Herman H. Y. Sung, Ian D. Williams, and Wa-Hung Leung*



Intramolecular Borylene Transfer Leading to the Formation of a μ_3 -BC₂ Ring on a Triruthenium Cluster

Takeshi Kaneko, Hitoshi Suwa, Toshiro Takao, and Hiroharu Suzuki*



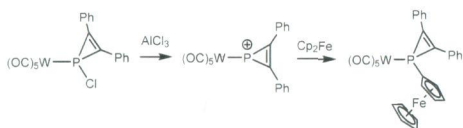
Synthesis and Characterization of Highly Water Soluble Ruthenium(II) and Osmium(II) Complexes Bearing Chelating Sulfonated N-Heterocyclic Carbene Ligands

Dominik Jantke, Mirza Cokoja, Alexander Pöthig, Wolfgang A. Herrmann, and Fritz E. Kühn*

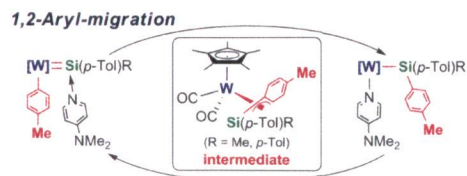


Facile Phosphorus–Carbon Bond Formation using a Tungsten-Coordinated Phosphirenyl Cation

Arumugam Jayaraman and Brian T. Sterenberg*

*(η*³- α -Silabenzyl) tungsten Complexes: An Isolable Intermediate for Interconversion between a Silylene Complex and a Silyl Complex through 1,2-Aryl Migration

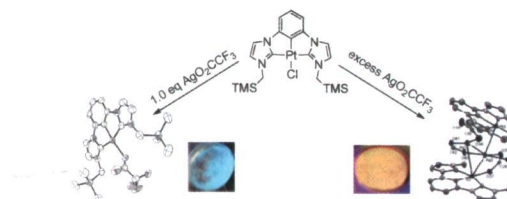
Eiji Suzuki, Takashi Komuro, Yuto Kanno, and Hiromi Tobita*



Articles

Synthesis, Characterization, Photoluminescence, and Simulations of a CCC-NHC-Supported Pt₂Ag₂ Mixed-Metal Cluster Containing a PtAg₂ Metallacyclopropane

Xiaofei Zhang, Bei Cao, Edward J. Valente, and T. Keith Hollis*

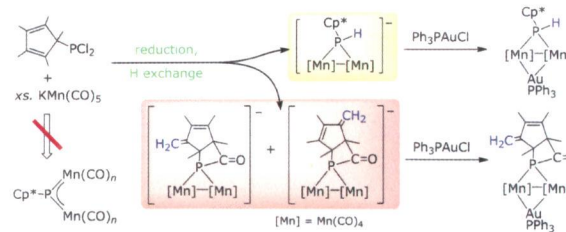
Reactivity Studies of (Phenylethynyl)germylene LGe \equiv CPh (L = HC[C(Me)N-2,6-*i*Pr₂C₆H₃]₂) toward Pentafluorophenyl-copper(I), -silver(I), and -gold(I) Complexes

Na Zhao, Jinyuan Zhang, Ying Yang, Guifang Chen, Hongping Zhu,* and Herbert W. Roesky



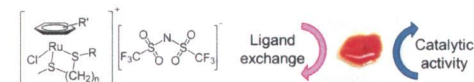
Transformation of a Phosphorus-Bound Cp* Moiety in the Coordination Sphere of Manganese Carbonyl Complexes

Nikolay A. Pushkarevsky,* Sergey N. Konchenko, Alexander V. Virovets, and Manfred Scheer*



Organometallic Ionic Liquids from Cationic Arene–Ruthenium Complexes

Shotaro Mori and Tomoyuki Mochida*



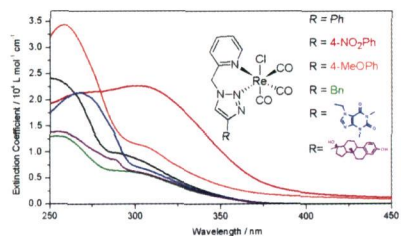
788

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dx.doi.org/10.1021/om300868k

fac-Re(CO)₃Cl Complexes of [2-(4-R-1H-1,2,3-Triazol-1-yl)methyl]pyridine Inverse "Click" Ligands: A Systematic Synthetic, Spectroscopic, and Computational Study

Christopher B. Anderson, Anastasia B. S. Elliott, C. John McAdam, Keith C. Gordon, and James D. Crowley*



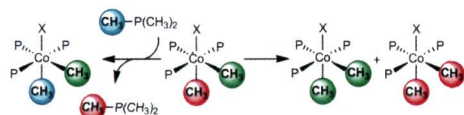
798

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dx.doi.org/10.1021/om3009537

Intermolecular Methyl Group Exchange and Reversible P–Me Bond Cleavage at Cobalt(III) Dimethyl Halide Species

Hongwei Xu, Paul G. Williard, and Wesley H. Bernskoetter*



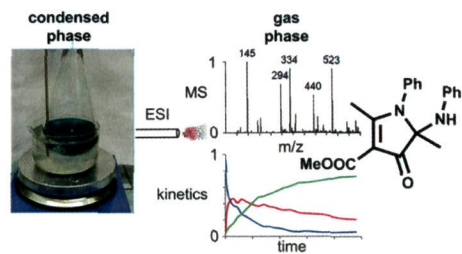
807

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dx.doi.org/10.1021/om3010417

Electrospray Ionization Mass Spectrometry Reveals an Unexpected Coupling Product in the Copper-Promoted Synthesis of Pyrazoles

Jakub Hyvl,* Divya Agrawal, Radek Pohl, Mamta Suri, Frank Glorius, and Detlef Schröder



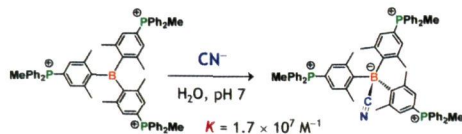
817

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dx.doi.org/10.1021/om3010542

Synthesis and Anion Binding Properties of Multi-phosphonium Triarylboranes: Selective Sensing of Cyanide Ions in Buffered Water at pH 7

Ki Cheol Song, Kang Mun Lee, Nguyen Van Nghia, Woo Young Sung, Youngkyu Do,* and Min Hyung Lee*



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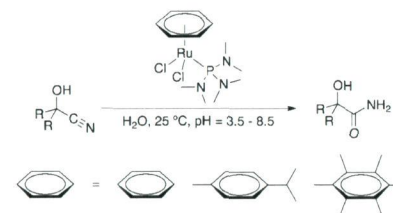
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dx.doi.org/10.1021/om301079u

Mechanistic Investigations and Secondary Coordination Sphere Effects in the Hydration of Nitriles with [Ru(η^6 -arene)Cl₂PR₃]₂ Complexes

Spring Melody M. Knapp, Tobias J. Sherbow, Robert B. Yelle, Lev N. Zakharov, J. Jerrick Juliette, and David R. Tyler*



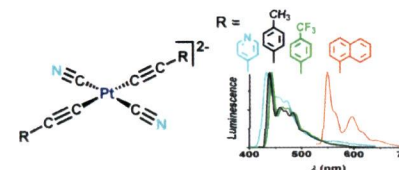
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dx.doi.org/10.1021/om301134k

New Trans-Configured Acetylide–Cyanide Platinum(II) Anions: Spectroscopic and Optical Studies

Jesús R. Berenguer, Julio Fernández,* Elena Lalinde,* and Sergio Sánchez



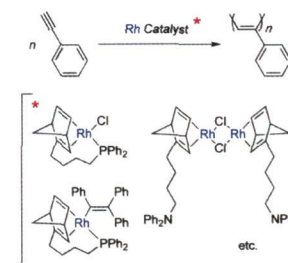
846

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dx.doi.org/10.1021/om301147n

Polymerization of Phenylacetylenes Using Rhodium Catalysts Coordinated by Norbornadiene Linked to a Phosphino or Amino Group

Naoya Onishi, Masashi Shiotsuki,* Toshio Masuda, Natsuhiko Sano, and Fumio Sanda*



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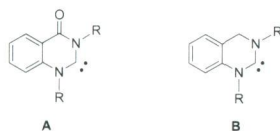
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dx.doi.org/10.1021/om301152n

A New Mixed Amino–Amido N-Heterocyclic Carbene Based on Anthranilic Acid

Abdelaziz Makhlofi, Michaela Wahl, Walter Frank, and Christian Ganter*



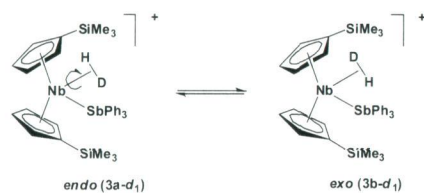
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dx.doi.org/10.1021/om301171j

Synthesis and Reactivity of New Niobocene Hydride-Stibine and Hydride-Stilbene Complexes. X-ray Crystal Structure of $[\text{Nb}(\eta^5\text{-C}_5\text{H}_4\text{SiMe}_3)_2(\text{H})(\text{trans-}\eta^2\text{-C,C-PhCH=CHPh})]$

Antonio Antiñolo,* Juan-Carlos Pérez-Flores, María Jesús Hervás, Santiago García-Yuste,* María Isabel López-Solera, Antonio Otero,* Ana Rodríguez Fernández-Pacheco, and María Teresa Tercero-Morales



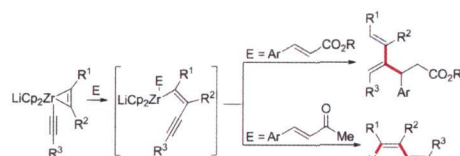
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dx.doi.org/10.1021/om301176e

Reactivity of Alkynylzirconate toward α,β -Unsaturated Carbonyl Compounds

Xiaoyu Yan, Yiqing Zhou, and Chanjuan Xi*



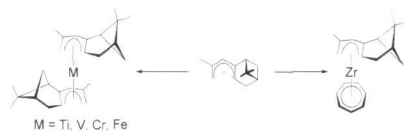
874

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dx.doi.org/10.1021/om301189g

Synthesis and Coordination Chemistry of an Enantiomerically Pure Pentadienyl Ligand

Ann Christin Fecker, Andreas Glöckner, Constantin G. Daniliuc, Matthias Freytag, Peter G. Jones, and Marc D. Walter*



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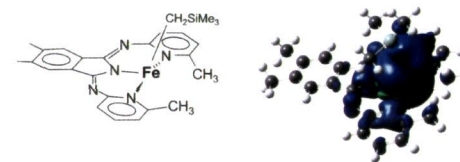
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dx.doi.org/10.1021/om301198b

Spin Density Distribution in Iron(II) and Cobalt(II) Alkyl Complexes Containing 1,3-Bis(2-pyridylimino)isindolate Ligands

Désirée C. Sauer, Matthias Kruck, Hubert Wadeplol, Markus Enders,* and Lutz H. Gade*



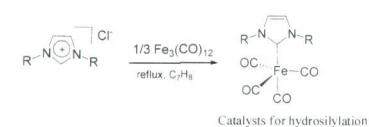
893

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dx.doi.org/10.1021/om3012085

Direct Synthesis of Iron(0) N-Heterocyclic Carbene Complexes by Using $\text{Fe}_3(\text{CO})_{12}$ and Their Application in Reduction of Carbonyl Groups

Svenja Warratz, Lorena Postigo, and Beatriz Royo*



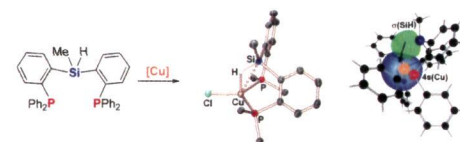
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dx.doi.org/10.1021/om301211c

 σ -SiH Complexes of Copper: Experimental Evidence and Computational Analysis

Maximilian Joost, Sonia Mallet-Ladeira, Karinne Miqueu,* Abderrahmane Amgoune,* and Didier Bourissou*



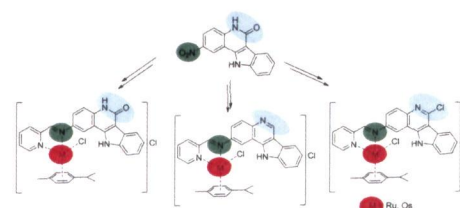
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dx.doi.org/10.1021/om3012272

Metal–Arene Complexes with Indolo[3,2-c]-quinolines: Effects of Ruthenium vs Osmium and Modifications of the Lactam Unit on Intermolecular Interactions, Anticancer Activity, Cell Cycle, and Cellular Accumulation

Lukas K. Filak, Simone Göschl, Petra Heffeter, Katia Ghannadzadeh Samper, Alexander E. Egger, Michael A. Jakupec, Bernhard K. Keppler, Walter Berger, and Vladimir B. Arion*



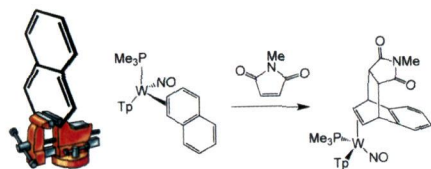
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915 **S** dx.doi.org/10.1021/om301238q

Exploiting the *o*-Quinodimethane Nature of Naphthalene: Cycloaddition Reactions with η^2 -Coordinated Tungsten–Naphthalene Complexes

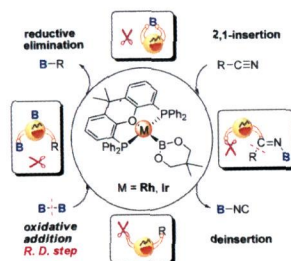
Laura Strausberg, Mengxun Li, Daniel P. Harrison, William H. Myers, Michal Sabat, and W. Dean Harman*



926 **S** dx.doi.org/10.1021/om301263s

Mechanistic Study of Borylation of Nitriles Catalyzed by Rh–B and Ir–B Complexes via C–CN Bond Activation

Yuan-Ye Jiang, Hai-Zhu Yu, and Yao Fu*



Notes

937 **S** dx.doi.org/10.1021/om301235d

Zirconium Hydrazinediido Complexes Derived from Cyclic Hydrazines and Their Role in the Catalytic Synthesis of 1,7-Annulated Indoles

Solveig A. Scholl, Hubert Wadepohl, and Lutz H. Gade*

