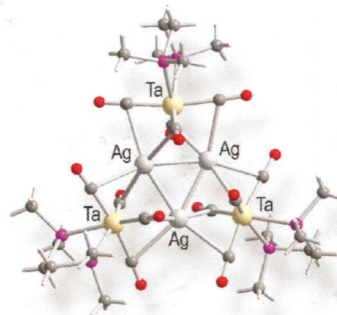
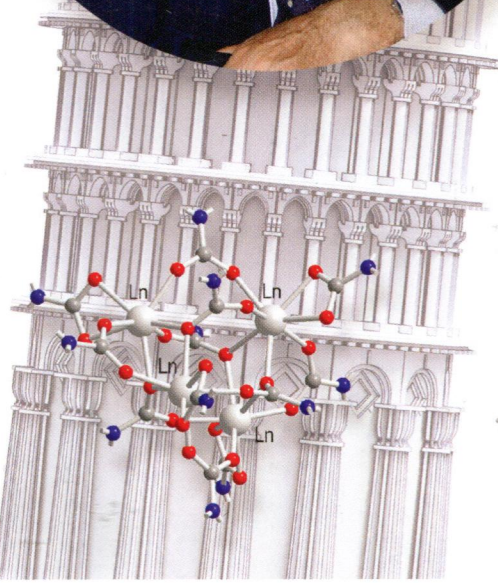
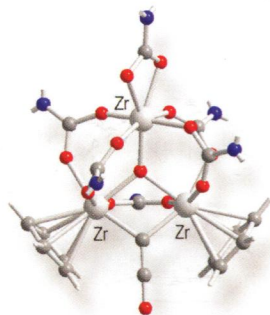
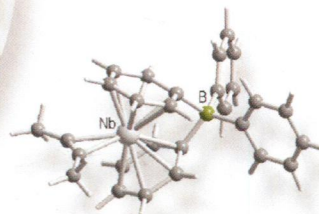
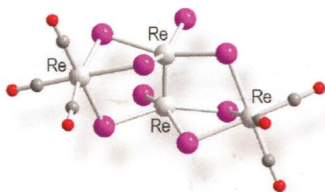
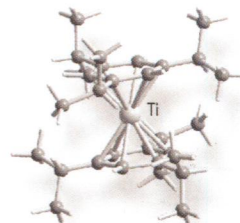
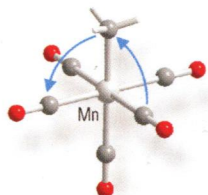
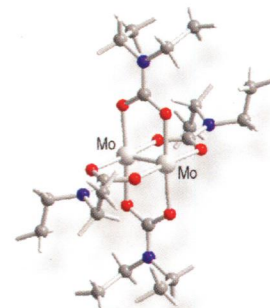
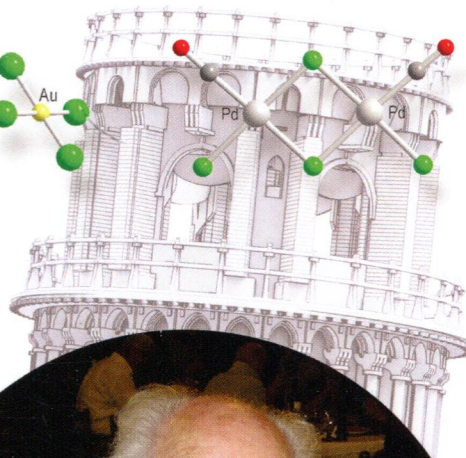
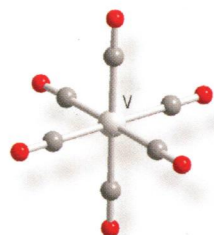


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DECEMBER 22, 2014 VOL. 33 • ISSUE 24

ORGANOMETALLICS



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ON THE COVER: This issue begins with an article in honor of Prof. Fausto Calderazzo (1930–2014), who played a major role in the development of modern organometallic chemistry, and nurtured its growth in Italy. The crystal structures depicted are examples of his many accomplishments in the areas of organo- Ti, V, Mn, Au, Nb, and -lanthanide chemistry, against a background of the famous Leaning Tower in Pisa, where he was Emeritus Professor of Inorganic Chemistry. See the paper by Maitlis and Belli Dell'Amico on pages 6989–7006.

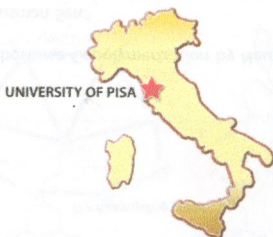
Reviews

6989

DOI: 10.1021/om5011963

Fausto Calderazzo: Pioneer in Mechanistic Organometallic Chemistry

Peter M. Maitlis* and Daniela Belli Dell'Amico



UNIVERSITY OF PISA

Communications

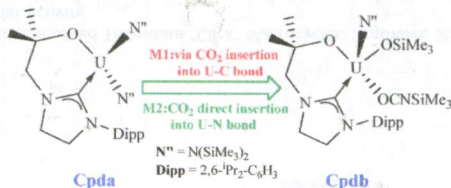
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DOI: 10.1021/om500797h

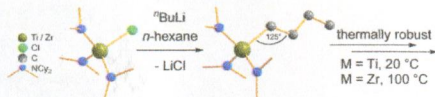
Does NHC Directly Participate in the CO₂ Insertion into the U^{III}–N Bond? A Density Functional Theory Study

Wanjian Ding* and Dongqi Wang*



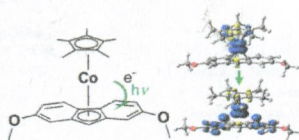
Remarkably Robust Mono-*n*-butyl Group IV Dicyclohexylamido Complexes $\{(Cy)_2N\}_3M(n\text{-butyl})$ (Cy: cyclohexyl $[C_6H_{11}]$, M: Ti, Zr)

Christian Adler, Gabriele Tomaschun, Marc Schmidtman, and Rüdiger Beckhaus*



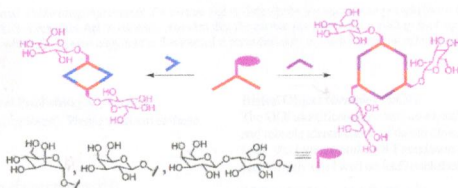
Syntheses, Structures, and Properties of Substituted $\text{Co}(\text{C}_5\text{Me}_5)(2,7\text{-di}(\text{OCH}_3)\text{fluorenyl})$ $\text{Co}(\text{II})$ and $\text{Co}(\text{III})$ Complexes

Bernhard E. C. Bugenhagen, Lisa Brinn, and Marc H. Prosenc*



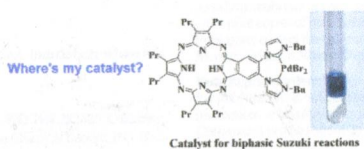
Saccharide-Functionalized Organoplatinum(II) Metallacycles

Fengyan Zhou,* Shijun Li,* Timothy R. Cook, Zuoli He, and Peter J. Stang*

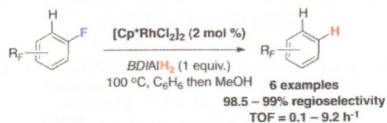


Color-Coded Ligands: Tracking the Catalyst using Highly Pigmented Porphyrazine Ligands in Biphasic Reactions

Mmboneni Tshivhase and D. Bradley G. Williams*



Rhodium Catalyzed, Carbon–Hydrogen Bond Directed Hydrodefluorination of Fluoroarenes
Olga Ekkert, Sebastian D. A. Strudley, Alisa Rozenfeld, Andrew J. P. White, and Mark R. Crimmin*



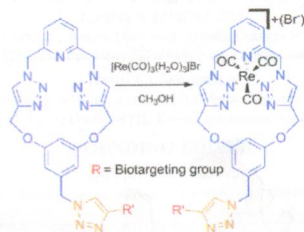
Articles

7031 **S**

DOI: 10.1021/om500664v

[Re(CO)₃]⁺ Complexes of *exo*-Functionalized Tridentate “Click” Macrocycles: Synthesis, Stability, Photophysical Properties, Bioconjugation, and Antibacterial Activity

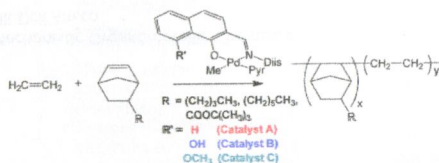
Asif Noor, Gregory S. Huff, Sreedhar V. Kumar, James E. M. Lewis, Brett M. Paterson, Christine Schieber, Paul S. Donnelly, Heather J. L. Brooks, Keith C. Gordon, Stephen C. Moratti, and James D. Crowley*

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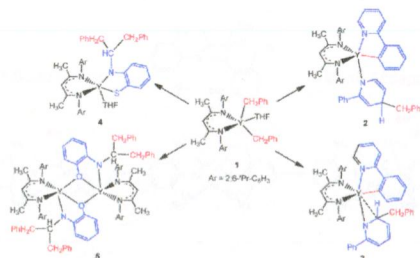
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Steric and Electronic Effects in Ethene/Norbornene Copolymerization by Neutral Salicylaldiminato-Ligated Palladium(II) Catalysts

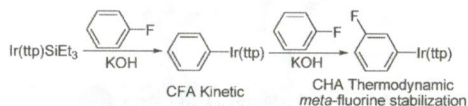
Frances Y. Pong, Sukhendu Mandal, and Ayusman Sen*



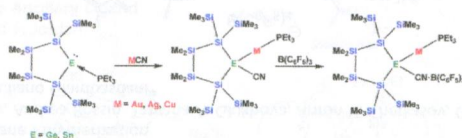
Versatile Reactivity of β -Diketiminato-Supported Yttrium Dialkyl Complex toward Aromatic N-Heterocycles
Yin Zhang, Jie Zhang,* Jianquan Hong, Fangjun Zhang, Linhong Weng, and Xigeng Zhou*



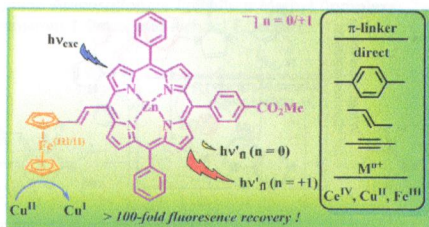
Consecutive Aromatic Carbon–Fluorine Bond and Carbon–Hydrogen Bond Activations by Iridium Porphyrins
Bao Zhu Li, Ying Ying Qian, Jianwen Liu,* and Kin Shing Chan*



Coordination Chemistry of Cyclic Disilylated Germynes and Stannylenes with Group 11 Metals
Johann Hlina, Henning Arp, Malgorzata Walewska, Ulrich Flörke, Klaus Zangger, Christoph Marschner,* and Judith Baumgartner*

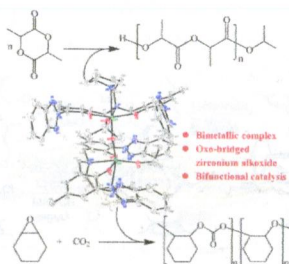


Synthesis, Electronic and Photophysical Characterization of π -Conjugated *meso*-Ferrocenyl-porphyrin Fluorescent Redox Switches
Yongzhu Zhou, Ken T. Ngo, Bao Zhang, Yaqing Feng,* and Jonathan Rochford*



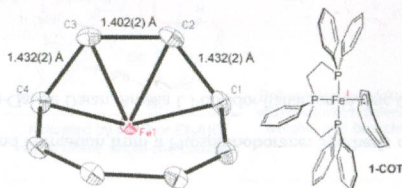
Oxo-Bridged Bimetallic Group 4 Complexes Bearing Amine-Bis(benzotriazole phenolate) Derivatives as Bifunctional Catalysts for Ring-Opening Polymerization of Lactide and Copolymerization of Carbon Dioxide with Cyclohexene Oxide

Ching-Kai Su, Hui-Ju Chuang, Chen-Yu Li, Chun-Yue Yu, Bao-Tsan Ko,* Jhy-Der Chen, and Ming-Jen Chen



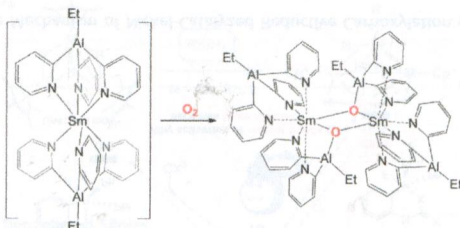
A New Spin on Cyclooctatetraene (COT) Redox Activity: Low-Spin Iron(I) Complexes That Exhibit Antiferromagnetic Coupling to a Singly Reduced η^8 -COT Ligand

Tufan K. Mukhopadhyay, Marco Flores, Russell K. Feller, Brian L. Scott, R. Dean Taylor, Moshe Paz-Pasternak, Neil J. Henson, Francisca N. Rein, Nathan C. Smythe,* Ryan J. Trovitch,* and John C. Gordon*



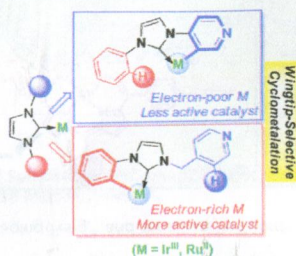
Formation of a Heterometallic Al^{III}/Sm^{III} Complex Involving a Novel [EtAl(2-py)₂O]₂²⁻ Ligand (2-py = 2-Pyridyl)

Raúl García-Rodríguez,* Hayley R. Simmonds, and Dominic S. Wright



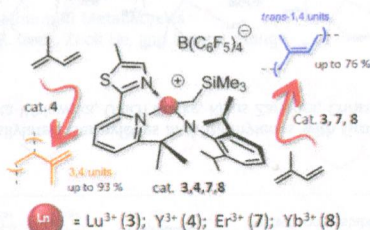
Wingtip-Dictated Cyclometalation of N-Heterocyclic Carbene Ligand Framework and Its Implication toward Tunable Catalytic Activity

Shrivats Semwal, Debasish Ghorai, and Joyanta Choudhury*



Organolanthanide Complexes Supported by Thiazole-Containing Amidopyridinate Ligands: Synthesis, Characterization, and Catalytic Activity in Isoprene Polymerization

Lapo Luconi, Dmitrii M. Lyubov, Andrea Rossin, Tatyana A. Glukhova, Anton V. Cherkasov, Giulia Tuci, Georgy K. Fukin, Alexander A. Trifonov,* and Giuliano Giambastiani*



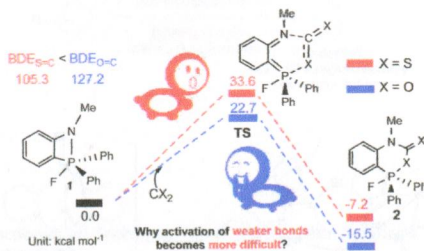
Formation and Reactivity of Gold Carbene Complexes in the Gas Phase

Christopher A. Swift and Scott Gronert*



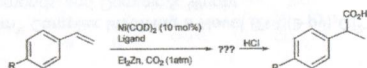
Why Does Activation of the Weaker C=S Bond in CS₂ by P/N-Based Frustrated Lewis Pairs Require More Energy Than That of the C=O Bond in CO₂? A DFT Study

Ke An and Jun Zhu*



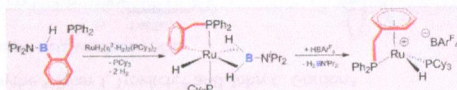
Computational Insight into the Mechanism of Nickel-Catalyzed Reductive Carboxylation of Styrenes using CO₂

Ruming Yuan and Zhenyang Lin*



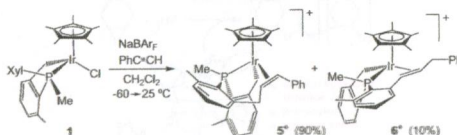
B–C Bond Cleavage and Ru–C Bond Formation from a Phosphinoborane: Synthesis of a Bis-σ Borane Aryl-Ruthenium Complex

Audrey Cassen, Laure Vendier, Jean-Claude Daran, Amalia I. Poblador-Bahamonde, Eric Clot, Gilles Alcaraz,* and Sylviane Sabo-Etienne



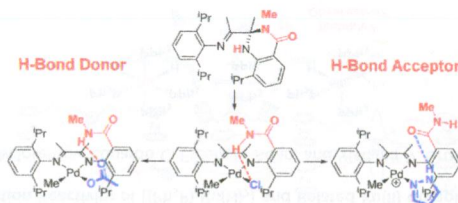
Reactivity of a Cationic (C₅Me₅)Ir^{III}-Cyclometalated Phosphine Complex with Alkynes

María F. Espada, Manuel L. Poveda, and Ernesto Carmona*



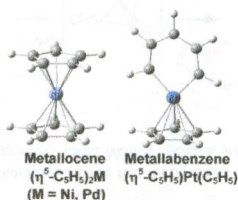
Hydrogen Bonding Behavior of Amide-Functionalized α -Diimine Palladium Complexes

Feng Zhai and Richard F. Jordan*



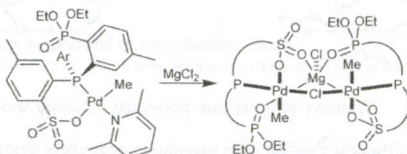
Metallocene versus Metallabenzene Isomers of Nickel, Palladium, and Platinum

Yi Zeng, Hao Feng,* R. Bruce King,* and Henry F. Schaefer III



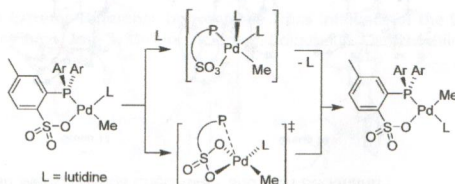
Lewis Acid Modification and Ethylene Oligomerization Behavior of Palladium Catalysts That Contain a Phosphine-Sulfonate-Diethyl Phosphonate Ancillary Ligand

Nathan D. Contrella and Richard F. Jordan*

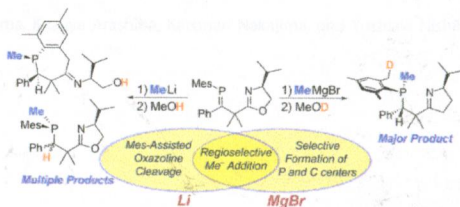


cis/trans Isomerization of *o*-Phosphino-Arenesulfonate Palladium Methyl Complexes

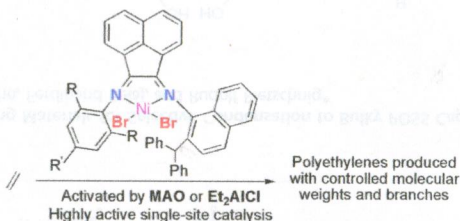
Xiaoyuan Zhou, Ka-Cheong Lau, Benjamin J. Petro, and Richard F. Jordan*



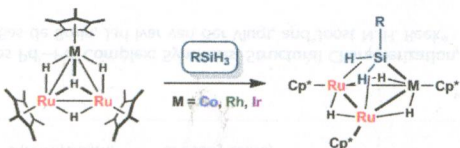
Reaction of an Enantiomerically Pure Phosphaalkene-Oxazoline with MeM Nucleophiles (M = Li and MgBr): Stereoselectivity and Noninnocence of the P-Mesityl Substituent
 Spencer C. Serin, Brian O. Patrick, Gregory R. Dake,* and Derek P. Gates*



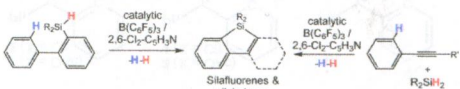
Tailoring Polyethylenes by Nickel Complexes Bearing Modified 1-(2-Benzhydrylnaphthylimino)-2-phenylimino-
 acenaphthylene Derivatives
 Chunyan Wen, Shifang Yuan,* Qisong Shi, Erlin Yue, Diansheng Liu, and Wen-Hua Sun*



Trinuclear μ_3 -Silyl Complexes of Ruthenium and Group 9 Metals Having 3c-2e Interactions and Transformation of a μ_3 -Silyl
 Complex of Ru₂Ir into μ -Silyl and μ_3 -Silylene Complexes
 Masahiro Nagaoka, Takanori Shima, Toshiro Takao,* and Hiroharu Suzuki

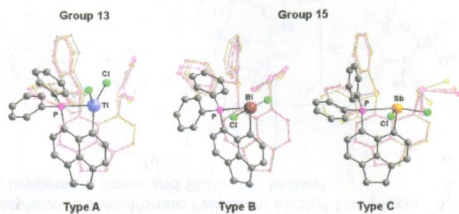


B(C₆F₅)₃-Catalyzed Synthesis of Benzofused-Siloles
 Liam D. Curless and Michael J. Ingleson*



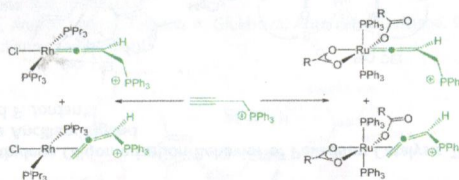
Probing Donor–Acceptor Interactions in *peri*-Substituted Diphenylphosphinoaceneptyl–Element Dichlorides of Group 13 and 15 Elements

Emanuel Hupf, Enno Lork, Stefan Mebs, Lilianna Chęcińska,* and Jens Beckmann*



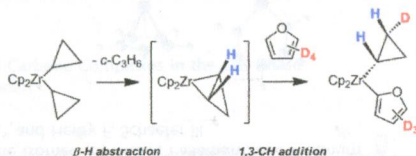
Synthesis of Phosphonium-Substituted Vinylidene Complexes from $[\text{HC}\equiv\text{CCH}_2\text{PPh}_3]^+$: Exploring the Competition between Allene and Vinylidene Formation.

Elizabeth J. Smith, Natalie E. Pridmore, Adrian C. Whitwood, and Jason M. Lynam*



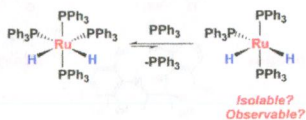
β -H Abstraction/1,3-CH Bond Addition as a Mechanism for the Activation of CH Bonds at Early Transition Metal Centers

Yimu Hu, Nuria Romero, Chiara Dinio, Laure Vendier, Sonia Mallet-Ladeira, John E. McGrady, Abel Locati, Feliu Maseras, and Michel Etienne*



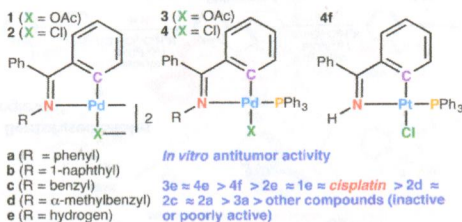
Solid-State Structure and Solution Reactivity of $[(\text{Ph}_3\text{P})_4\text{Ru}(\text{H})_2]$ and Related Ru(II) Complexes Used in Catalysis: A Reinvestigation

Hamidreza Samouei, Fedor M. Miloserdov, Eduardo C. Escudero-Adán, and Vladimir V. Grushin*

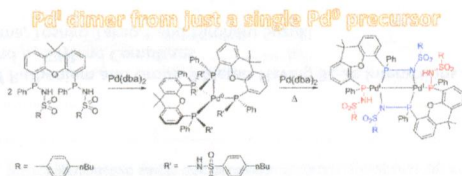


Cyclopalladated Benzophenone Imines: Synthesis, Antitumor Activity, Cell Accumulation, DNA Interaction, and Cathepsin B Inhibition

Joan Albert,* Jaume Granell, Romana Qadir, Josefina Quirante, Carme Calvis, Ramon Messeguer, Josefa Badía, Laura Balmadà, Mercè Font-Bardia, and Teresa Calvet

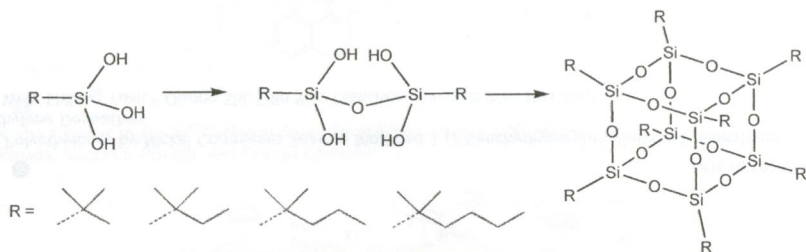
Well-Defined BisMETAMORPhos Pd^I-Pd^I Complex: Synthesis, Structural Characterization, and Reactivity

Sander Oldenhof, Martin Lutz, Bas de Bruin, Jarl Ivar van der Vlugt, and Joost N. H. Reek*



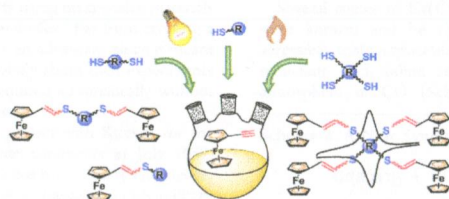
Silanetriols as Powerful Starting Materials for Selective Condensation to Bulky POSS Cages

Natascha Hurkes, Clemens Bruhn, Ferdinand Belaj, and Rudolf Pietschnig*



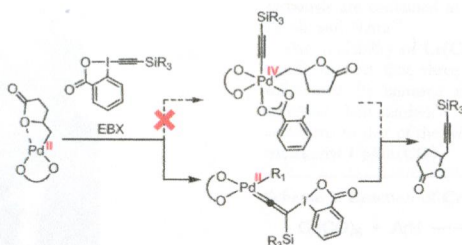
Efficient Thiol–Yne Click Chemistry of Redox-Active Ethynylferrocene

Alejandra Enríquez, Ana Ma. González-Vadillo,* Ignacio Martínez-Montero, Sonia Bruña, Laura Leemans, and Isabel Cuadrado*



Computational Mechanistic Study of Palladium(II)-Catalyzed Carboxyalkynylation of an Olefin Using an Iodine(III) Oxidant Reagent

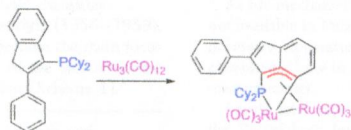
Alireza Ariafard*



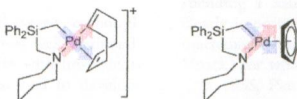
Notes

Indenyl Ruthenium Complexes with an Unusual η^3 Coordination Mode

Jia Yuan, Zhi-Jun Han, Hui Peng, Yun-Xiao Pi, You Chen, Sheng-Hua Liu, and Guang-Ao Yu*

Structural Consequences of an Extreme Difference between the *Trans* Influence of the Donor Atoms in a Palladacycle

Stephan G. Koller, Raquel Martín-Romo, José S. Melero, Victoria P. Colquhoun, Daniel Schildbach, Carsten Strohmann,* and Fernando Villafañe*



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DOI: 10.1021/om5011676

Correction to Synthesis and Reactivity of Ruthenium Complexes Bearing Arsenic-Containing Arsenic-Nitrogen-Arsenic-Type Pincer Ligand

Yoshiaki Tanabe, Shogo Kuriyama, Kazuya Arashiba, Kazunari Nakajima, and Yoshiaki Nishibayashi*