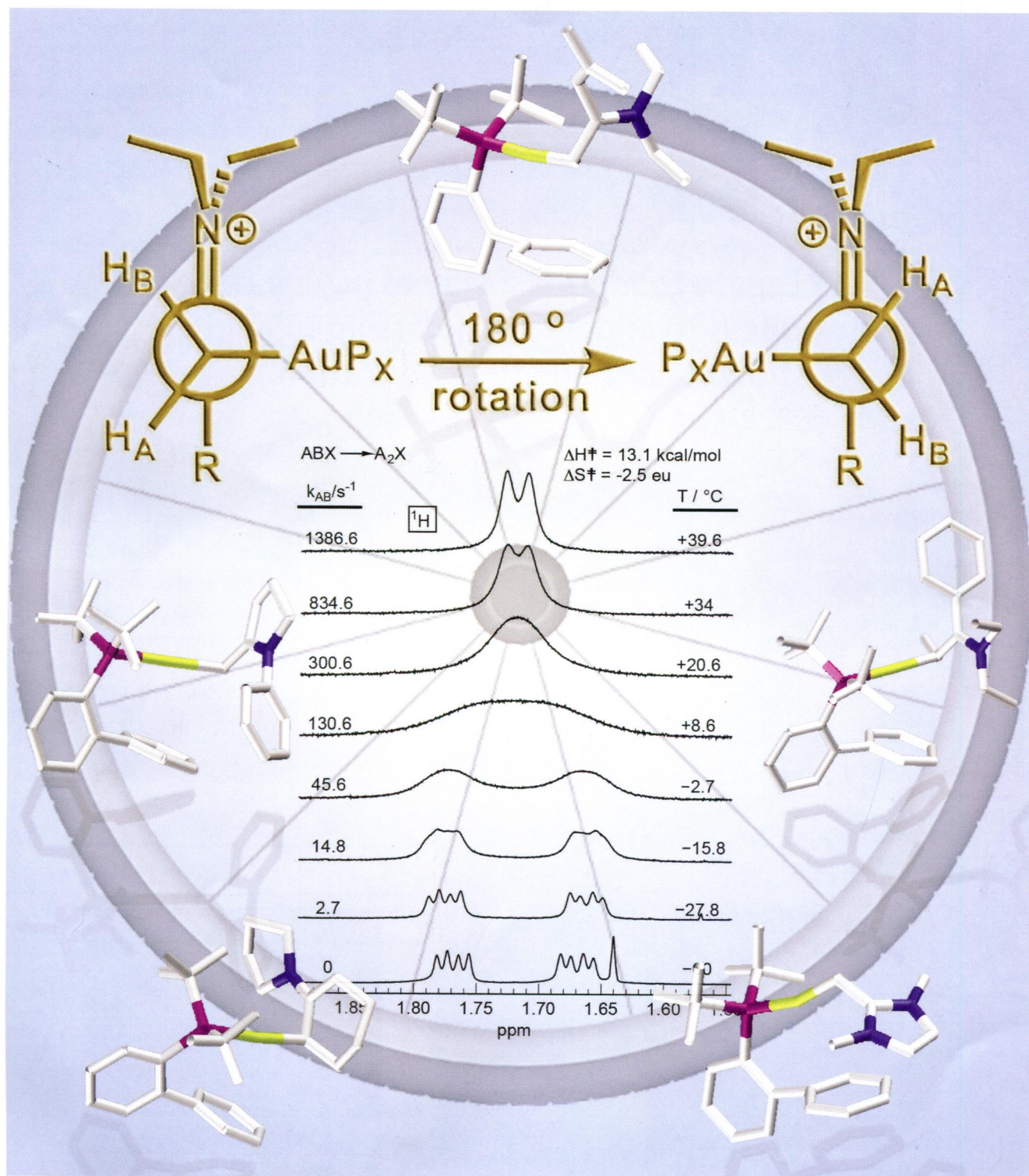


ORGANOMETALLICS



ON THE COVER: Like a bicycle wheel spinning on its axis, the carbon–gold bond in gold-coordinated enamines rotates easily around the former enamine C–C double bond. ^1H NMR spectra indicate this process quite clearly. At room temperature, the formerly distinct enamine hydrogen atoms are a single peak! At lower temperatures, the spinning slows, and the different protons distinguish themselves. A detailed structural study of a series of gold(I)-coordinated enamines is reported in this issue on pages 4157–4164. The coordination features revealed herein add insight into gold-catalyzed hydroamination processes and reactions involving enamines.

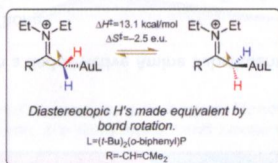
Articles

Cover Paper

 4157 **S**
dx.doi.org/10.1021/om500670z

Structure and Dynamic Behavior of Phosphine Gold(I)-Coordinated Enamines: Characterization of α -Metalated Iminium Ions

Madhavi Sriram, Yuyang Zhu, Andrew M. Camp, Cynthia S. Day, and Amanda C. Jones*

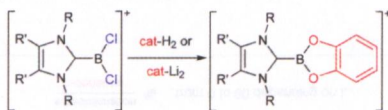


Communications

 4165 **S**
dx.doi.org/10.1021/om500434r

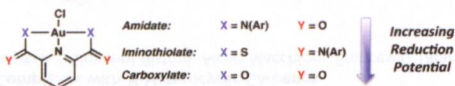
Synthesis of N-Heterocyclic Carbene Stabilized Catecholoborenum Cations by Ligand Substitution

Dinh Cao Huan Do, Senthilkumar Muthaiah, Rakesh Ganguly, and Dragoslav Vidović*


 4169 **S**
dx.doi.org/10.1021/om500663m

Synthesis of Stable Gold(III) Pincer Complexes with Anionic Heteroatom Donors

Miles W. Johnson, Antonio G. DiPasquale, Robert G. Bergman,* and F. Dean Toste*

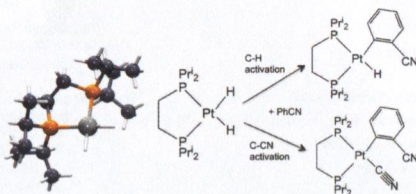


4173 **S**

dx.doi.org/10.1021/om500094e

C–CN vs C–H Activation: Actual Mechanism of the Reaction between [(dippe)Pt]₂ and Benzonitrile Evidenced by a DFT Computational Investigation

Gian Pietro Miscione* and Andrea Bottoni

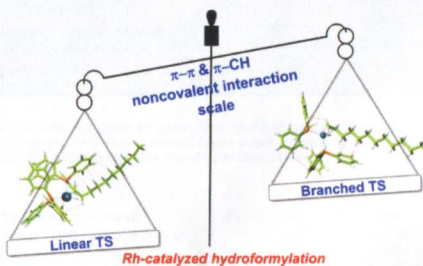


4183 **S**

dx.doi.org/10.1021/om500196g

Ligand Effects on the Regioselectivity of Rhodium-Catalyzed Hydroformylation: Density Functional Calculations Illuminate the Role of Long-Range Noncovalent Interactions

Manoj Kumar,* Raghunath V. Chaudhari, Bala Subramaniam, and Timothy A. Jackson*

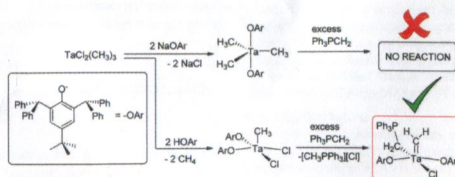


4192 **S**

dx.doi.org/10.1021/om500197k

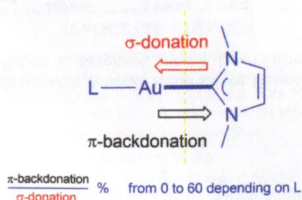
A Tantalum Methylidene Complex Supported by a Robust and Sterically Encumbering Aryloxide Ligand

Keith Searles, Balazs Pinter, Chun-Hsing Chen, and Daniel J. Mindiola*



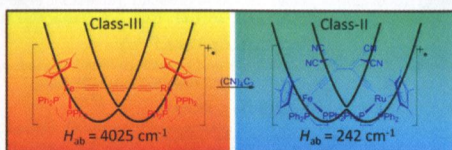
The Chemical Bond in Gold(I) Complexes with N-Heterocyclic Carbenes

Demian Marchione, Leonardo Belpassi,* Giovanni Bistoni, Alceo Macchioni, Francesco Tarantelli, and Daniele Zuccaccia*



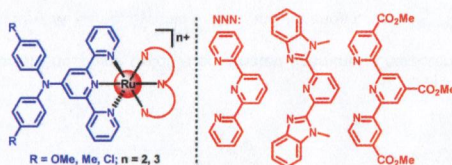
From Molecular Wires to Molecular Resistors: TCNE, a Class-III/Class-II Mixed-Valence Chemical Switch

Alexandre Burgun, Benjamin G. Ellis, Thierry Roisnel, Brian W. Skelton, Michael I. Bruce,* and Claude Lapinte*



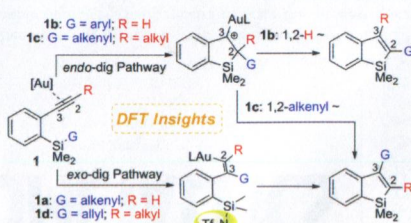
Bis-Tridentate Ruthenium Complexes with a Redox-Active Amine Substituent: Electrochemical, Spectroscopic, and DFT/TDDFT Studies

Bin-Bin Cui, Jiang-Yang Shao, and Yu-Wu Zhong*



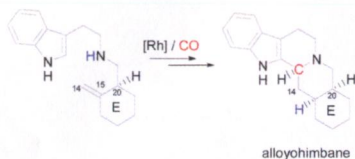
Substrate-Dependent Mechanisms for the Gold(I)-Catalyzed Cycloisomerization of Silyl-Tethered Enynes: A Computational Study

Tao Zhou and Yuanzhi Xia*



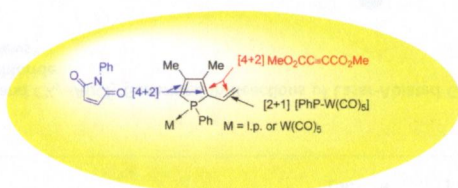
Rhodium-Catalyzed Hydrocarbonylation of a Homoallylamine via N–H Activation and Application for Synthesis of Yohimbane Alkaloids

Wen-Hua Chiou,* Yu-Wei Wang, Chien-Lun Kao, Po-Chou Chen, and Chen-Chang Wu



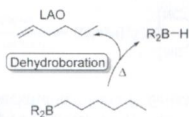
Modifying the Chemistry of the Phosphole Dienic System by α -Vinylation

Kim Hong Ng, Yongxin Li, Rakesh Ganguly, and Francois Mathey*



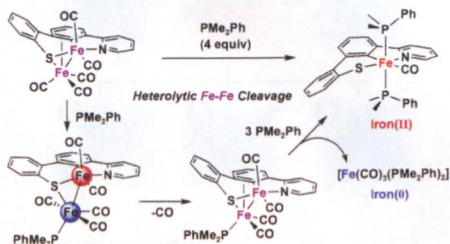
Thermal Dehydroboration: Experimental and Theoretical Studies of Olefin Elimination from Trialkylboranes and Its Relationship to Alkylborane Isomerization and Transalkylation

Nandita M. Weljange, David S. McGuinness,* and Jim Patel



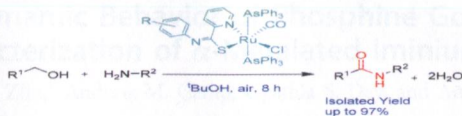
Diiron Carbonyl Complexes Bearing an N,C,S-Pincer Ligand: Reactivity toward Phosphines, Heterolytic Fe–Fe Cleavage, and Electrocatalytic Proton Reduction

Masakazu Hirotsu,* Kiyokazu Santo, Chiaki Tsuboi, and Isamu Kinoshita



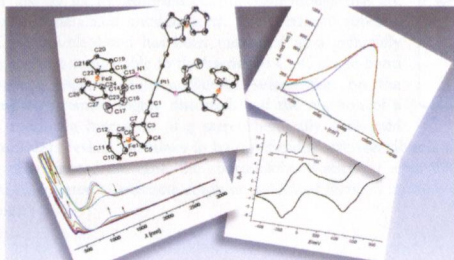
Direct Synthesis of Amides from Coupling of Alcohols and Amines Catalyzed by Ruthenium(II) Thiocarboxamide Complexes under Aerobic Conditions

Elangovan Sindhuja, Rengan Ramesh,* Sundarraman Balaji, and Yu Liu



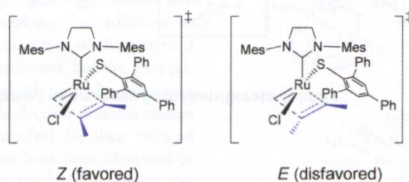
From Ferrocenecarbonitriles to Ferrocenylimines: Synthesis, Structure, and Reaction Chemistry

Frank Strehler, Alexander Hildebrandt, Marcus Korb, Tobias Rüffer, and Heinrich Lang*

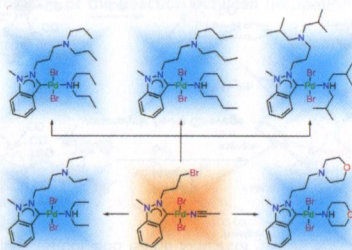


Mechanism of Z-Selective Olefin Metathesis Catalyzed by a Ruthenium Monothiolate Carbene Complex: A DFT Study

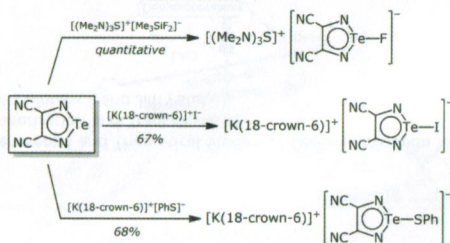
John W. Nelson, Lara M. Grundy, Yanfeng Dang, Zhi-Xiang Wang,* and Xiaotai Wang*



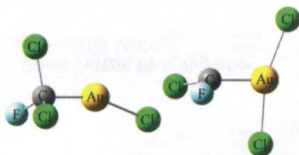
Amine-Functionalized Indazolin-3-ylidene Complexes of Palladium(II) by Postmodification of a Single Precursor
Jan C. Bernhammer, Harvenjit Singh, and Han Vinh Huynh*



Coordination of Halide and Chalcogenolate Anions to Heavier 1,2,5-Chalcogenadiazoles: Experiment and Theory
Nikolay A. Semenov, Anton V. Lonchakov, Nikolay A. Pushkarevsky, Elizaveta A. Suturina, Valery V. Korolev, Enno Lork, Vladimir G. Vasiliev, Sergey N. Konchenko, Jens Beckmann,* Nina P. Gritsan,* and Andrey V. Zibarev*

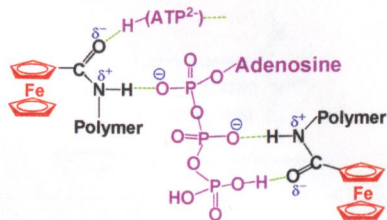


Infrared Spectra of CX_3-AuCl and CX_2-AuCl_2 Generated in Reactions of Laser-Ablated Gold Atoms with Chlorofluoromethanes and Carbon Tetrachloride
Han-Gook Cho and Lester Andrews*



Living Ring-Opening Metathesis–Polymerization Synthesis and Redox-Sensing Properties of Norbornene Polymers and Copolymers Containing Ferrocenyl and Tetraethylene Glycol Groups

Haibin Gu, Amalia Rapakousiou, Patricia Castel, Nicolas Guidolin, Noël Pinaud, Jaime Ruiz, and Didier Astruc*



Notes

A Novel Boron Heterocycle Comprised of an Inner Boronium/Borate Adduct

Günter Seidel and Alois Fürstner*

