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Journal of Organometallic Chemistry

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Contents

REGULAR PAPERS

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Solmaz Karabulut, Bengi Özgün Öztürk, Yavuz İmamoğlu

J. Organomet. Chem. 695 (2010) 2161

The nucleophilic addition of carboxylic acids to both internal and terminal alkynes using Ru—CHPhCl₂(PCy)₃(IPr) afforded novel esters. The productivity and selectivity were found to depend on the nature of the carboxylic acid that was used.



Atsushi Kawachi, Hiroshi Morisaki, Masatoshi Zaima, Takuya Teranishi, Yohsuke Yamamoto

J. Organomet. Chem. 695 (2010) 2167

o-(Dihydrosilyl)(dimesitylboryl)benzenes **1**, which include a highly reactive

dihydrosilane moiety and a Lewis acidic borane moiety, were prepared from *o*-dibromobenzene via novel reactive intermediates, [*o*-(dimethoxysilyl)phenyl]lithiums, in 6 steps. The structures of **1** were determined by NMR spectroscopy and X-ray crystallographic analysis.



Yun-Fu Xie, Guang-Tong Zeng, Hai-Bin Song, Liang-Fu Tang

J. Organomet. Chem. 695 (2010) 2172

Upon treatment of functionalized ligands $Ph_3SnCH(SPh)(3,5-Me_2Pz)$ and $Ph_3SnCH(SPy)(3,5-Me_2Pz)$ (Pz = pyrazol-1-yl and Py = 2-pyridyl) with group 6 metal carbonyl complexes, markedly different reactions are observed. Only the substitution reaction of carbonyls takes place in the former, while

the oxidative addition reaction of the $Sn-C_{sp3}$ bond to the Mo(0) atom is observed in the latter. Additional treatment of the oxidative addition product with $P(OR)_3$ gives rise to the isomerization of the C–S bond to the C–N bond, generating the thione–S coordinated complex (R = Ph or Et).



Asami Kotera, Jun'ichi Uenishi, Motokazu Uemura

J. Organomet. Chem. 695 (2010) 2180

Gold(I)-catalyzed reaction of tricarbonylchromium complexes of *ortho*-alkynyl benzaldehyde and benzaldimine with nucleophiles gave stereoselectively 1-*anti*and *syn*-functionalized 1*H*-isochromene and dihydroisoquinoline chromium complexes depending on the nature of nucleophile.



Zhong-Lin Lu, Xue-Rui Wang, Bian-Bian Liu, Rui-Yao Wang

J. Organomet. Chem. 695 (2010) 2191

Palladacycles with C,N-bidentate and N,C, N'-tridentate ligands have been prepared and structurally characterized. Their catalytic proficiencies in promoting the

methanolysis of phosphorothionates were studied in detail.



R: alkyl; Ar: substituted phenyl; R': H, CF₃, N(CH₃)₂

E.A. Goreshnik, Z. Mazej, M.G. Mys'kiv

J. Organomet. Chem. 695 (2010) 2201

The Ag[C₃O₃(NC₃H₅)₃]BF₄·H₂O compound has been prepared by the reaction of AgBF₄ aqueous solution with 1,3,5-triallyl-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (TTT). The Ag⁺ cation is coordinated by two C=C

groups from different TTT molecules, one O atom from water molecule and one oxygen atom from triazine ring. Raman spectrum agrees well with the structural data.



Prashant Kumar, Ashish Kumar Singh, Rampal Pandey, Pei-Zhou Li, Sanjay Kumar Singh, Qiang Xu, Daya Shankar Pandey

J. Organomet. Chem. 695 (2010) 2205

The synthesis and characterization of five new cationic arene ruthenium complexes $[(\eta^6-C_{10}H_{14})RuCl(dpaH)]BF_4$, $[(\eta^6-C_6H_6)RuCl(dpaH)]BF_4$, $[(\eta^6-C_{10}H_{14})RuCl(bzdpa)]BF_4$, $[(\eta^6-C_{10}H_{14})RuCl(bzdpa)]PF_6.CH_3OH$ and

 $[(\eta^{6}-C_{6}H_{6})RuCl(bzdpa)]PF_{6} \qquad (\eta^{6}-arene = C_{6}H_{6} \text{ or } C_{10}H_{14}: dpaH = 2,2'-dipyridylamine and bzdpa = di-2-pyridylbenzylamine) are described. Reactivity of <math>[(\eta^{6}-C_{10}H_{14})RuCl(dpaH)]BF_{4}$, and $[(\eta^{6}-C_{10}H_{14})RuCl(bzdpa)]BF_{4}$,with various species have been examined and it has been shown that the complexes mentioned above moderately catalyze reduction of ketones into corresponding alcohol in absence of a base.



Ashok Kumar Singh, Sarita Yadav, Rashmi Srivastava, Jaya Srivastava, Shahla Rahmani

J. Organomet. Chem. 695 (2010) 2213

Kinetics and mechanism of oxidation of D (+) melibiose by *N*-bromoacetamide in acidic medium using chloro-complex of Pd (II) as homogeneous catalyst have been studied at 40 °C \pm 0.1 °C. The most reactive activated complex, $\begin{bmatrix} PdCl_3.S.OBr \\ | \\ Hg \end{bmatrix}$, formed

by the interaction of oppositely charged species, $[PdCl_4 \cdot S]^{2-}$ and Hg^{2+} .

TPP. Mechanistic experiments suggest the

Daniel Strand, Tobias Rein

J. Organomet. Chem. 695 (2010) 2220

The chiral Re–BINAP complex **1** is an efficient catalyst for olefination of functionalized aldehydes in the presence of EDA and reaction to proceed via *in-situ* formation of a Wittig-ylide.



Gregory S. Smith

J. Organomet. Chem. 695 (2010) 2225

Several mono, di and tetranuclear cyclopalladated complexes were synthesized through the C–H activation reaction of aryl-derived thiosemicarbazones ligands with K_2 [PdCl₄]. Selected palladium complexes showed moderate antiplasmodial activity, with the biologically active palladium complexes showing greater activity than the corresponding free, uncomplexed ligand.

Kamlesh Kumar, B.D. Gupta

J. Organomet. Chem. 695 (2010) 2233

Nine aryl cobaloximes, ArCo(dioxime)₂Py, containing different aryl groups (phenyl, 1-naphthyl, 2-naphthyl) and equatorial dioximes (dmgH, dpgH, gH) have been

synthesized and characterized. The electronic and steric effects of the aryl ring and the equatorial dioxime affect the NMR as well as the X-ray structural parameters.









AbdelRahman A. Dahy, Nobuaki Koga

J. Organomet. Chem. 695 (2010) 2240

Theoretical calculations on the reaction of HCN as well as CF₃CN with cobaltacyclopentadiene were made. The reactions follow a two-state reactivity mechanism through an azacobaltacycloheptatriene intermediate, different from the reaction of MeCN.



Hai-Bo Zhao, Yong-Qing Qiu, Chun-Guang Liu, Shi-Ling Sun, Yan Liu, Rong-Shun Wang

J. Organomet. Chem. 695 (2010) 2251

The second-order polarizabilities of metal complexes within their four different states exhibit excellent NLO switching characters.

Thus, this kind of metal complexes has a possibility to be excellent switching second-order NLO materials. Among four states of the metal complexes, the radical **PtL**• and hydroxylamine **PtLH** species are nonlinearity "on", while the one-electronoxidized ³**PtL**⁺ and one-electron-reduced ³**PtL**⁻ species are nonlinearity "off".



Yong-Joo Kim, Hyung-Tak Jeon, Kyung-Eun Lee, Soon W. Lee

J. Organomet. Chem. 695 (2010) 2258

The bis(silyl) palladium(II) complex [Pd (SiHPh₂)₂(dmpe)] reacted with organic iso-thiocyanates R-NCS (R = Ph, ⁱPr, allyl) to give

a dithiocarbonimidato [Pd(S₂C=N-Ph) (dmpe)], a diphenylsilanedithiolato [Pd (S₂SiPh₂)(dmpe)], or a π -allyl [(η^3 -allyl)Pd] (NCS) palladium complex, depending on the isothiocyanate type and reaction conditions.



Elena Klimova, Tatiana Klimova, Marcos Flores-Alamo, Leon V. Backinowsky, Miguel A. González-Fuentes, Luis Ortiz-Frade, Marcos Martínez García

J. Organomet. Chem. 695 (2010) 2264

Diethyl 2-(ferrocenylmethylidene)malonate undergoes linear dimerization with formation of tetraethyl 2,3diferrocenylbutane-1,1,4,4-tetracarboxylate when treated with EtMgBr in the presence of Ti($O^{i}Pr$)₄. Under similar conditions, ethyl (*E*)-2-(ferrocenylmethylidene) benzoylacetate and ethyl (*E*,*Z*)-2-(ferrocenylmethylidene)acetoacetate afford linear dimerization products (*vic*-diferrocenyladipic acid derivatives) and intramolecular cyclization products of the latter (*vic*diferrocenylcyclopentanol derivatives).



Elvan Üstün, Cemal Kaya

J. Organomet. Chem. 695 (2010) 2273

The maximum value of the sum of the interaction constants is used as an additional constraint to solve the CO-factored force fields of tricarbonyl complexes with C_s symmetry. The solution obtained led to

the equations by which carbonyl stretching force constants and the CO-factored force constants and the C–O stretching frequencies of $^{13}C^{16}O$ -substituted species were calculated for Fe(CO)₃ and Fe(C₄H₆) (CO)₃. The results obtained were found to be very close agreement with those obtained from isotopic enrichment studies.



NOTE

Reinout Meijboom

J. Organomet. Chem. 695 (2010) 2277

Asymmetric alkylmethyl zirconocene derivatives were readily synthesised from Cp₂ZrCl(CH₃), and the appropriate

alkyllithium reagent. The alkyl groups contain a silyl functionality on the β -position. These asymmetric dialkyl zirconocenes were successfully activated by B (C₆F₅)₃, selectively abstracting the methyl group.





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