



## Contents

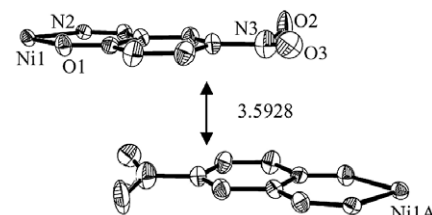
### Regular Papers

**Dao Zhang, Linhong Weng, Guo-Xin Jin**

*J. Organomet. Chem.* 695 (2010) 643

Structural characterization of nitro-substituted phenoxyiminato nickel complexes; inter-molecular  $\pi$ - $\pi$  interactions in the solid states and effect of the electron drawing groups on catalytic activity

Three phenoxyiminato nickel complexes [(L)Ni(PPh<sub>3</sub>)(Ph)] have been prepared by the introduction of the electron drawing Nitro substitutes on *ortho* or *para*-position of phenoxy and characterized by X-ray crystallography

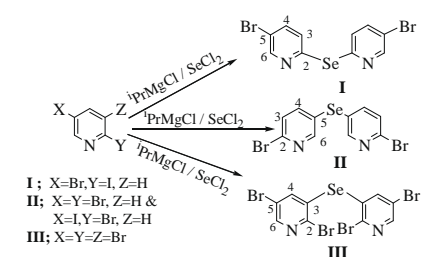


**K.K. Bhasin, Rishu, Sukhjinder Singh, H. Kumar, S.K. Mehta**

*J. Organomet. Chem.* 695 (2010) 648

A one-flask synthesis and characterization of novel symmetrical pyridyl monoselenides and X-ray crystal structure of bis(5-bromo-2-pyridyl) selenide and bis(2-bromo-5-pyridyl) selenide

The present work reports an efficient one-pot synthesis and characterization of symmetrical pyridyl monoselenides by the reaction of bromo-/iodopyridines with the isopropylmagnesium chloride, <sup>i</sup>PrMgCl followed by quenching with selenyl chloride, SeCl<sub>2</sub>. The current methodology constitutes a convenient synthesis of bis(5-bromo-2-pyridyl) selenide (**I**), bis(2-bromo-5-pyridyl) selenide (**II**) and bis(2,5-dibromo-3-pyridyl) selenide (**III**) under cryogenic conditions.

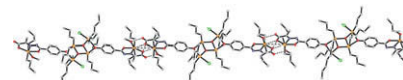


**Min Hong, Han-Dong Yin, Shao-Wen Chen, Da-Qi Wang**

*J. Organomet. Chem.* 695 (2010) 653

Synthesis and structural characterization of organotin(IV) compounds derived from the self-assembly of hydrazone Schiff base series and various alkyltin salts

Six new weak-bridged or zwitterionic organotin(IV) compounds derived from the hydrazone Schiff base ligand have been synthesized and characterized by X-ray diffraction, elemental analysis, IR, <sup>1</sup>H and <sup>119</sup>Sn NMR spectroscopy. Studies show that all hydrazone ligands coordinate to the Sn center in an enolic form.

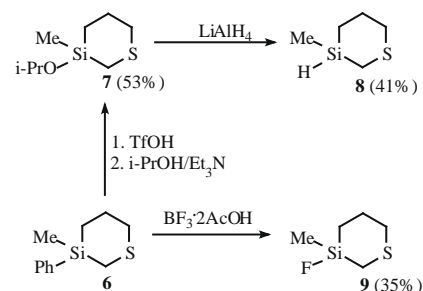


**Svetlana V. Kirpichenko, Aleksander I. Albanov**

*J. Organomet. Chem.* 695 (2010) 663

Preparation of sila-functional 3-sila-1-thiacyclohexanes

First sila-functional heterocycles **7** and **9** with Si and S atoms in 1,3-position bearing the reactive X group at silicon ( $X = i\text{-PrO}, \text{F}$ ) were prepared from the corresponding phenyl-protected cycle **6** in good yields via Ph-Si bond cleavage by electrophilic reagents. Treatment of the *i*-propoxy derivative **7** with  $\text{LiAlH}_4$  gave heterocycle **8** with Si-H bond.

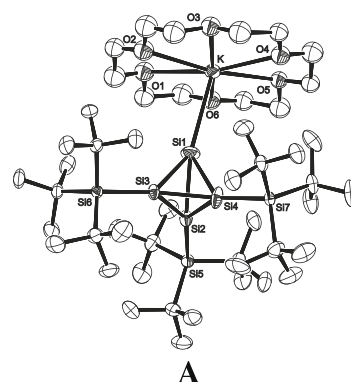


**Thomas M. Klapötke, Sham Kumar Vasisht, Gerd Fischer, Peter Mayer**

*J. Organomet. Chem.* 695 (2010) 667

A reactive  $\text{Si}_4$  cage:  $\text{K}(\text{Si}t\text{Bu}_3)_3\text{Si}_4$

$\text{KR}^*_3\text{Si}_4$ , ( $R^* = \text{Si}t\text{Bu}_3$ ), formed by the reaction of  $R^*_4\text{Si}_4$  with **2**  $\text{KC}_8$ , is a orange red solid which complexes with 18-crown-6 to form a red solid,  $R^*_3\text{Si}_4\text{K}$ (18-crown-6) **A**.

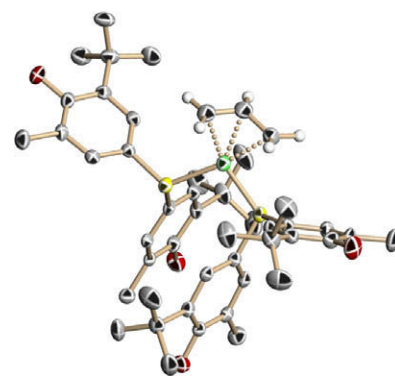


**Govindaswamy Padavattan, Christoph Jäkel, Tobias Steinke, Valentine Reimer, M. Belén Díaz-Valenzuela, Patrick Crewdson, Frank Rominger**

*J. Organomet. Chem.* 695 (2010) 673

Cationic  $\eta^3$ -allyl sulfide complexes of nickel(II) for the polymerization of butadiene in aqueous emulsion

Dimeric allyl-nickel chloro complex  $[\text{Ni}(\eta^3\text{-C}_3\text{H}_5)(\mu\text{-Cl})_2]$  reacts with sulfur donor ligands in the presence of  $\text{NaBAr}_4^{\text{F}}$  ( $\text{Ar}_4^{\text{F}} = 3,5\text{-(CF}_3)_2\text{C}_6\text{H}_3$ ) to give the corresponding cationic mononuclear complexes of the type  $[\text{Ni}(\eta^3\text{-C}_3\text{H}_5)(\text{L})_2]^+$  ( $\text{L} =$  diphenyl sulfide, 4,4'-thiodiphenol, 4,4'-thio-bis(6-*tert*-butyl-*o*-cresol), 4,4'-thio-bis(6-*tert*-butyl-*m*-cresol)). The use of these complexes as catalysts in aqueous emulsion polymerization was studied.



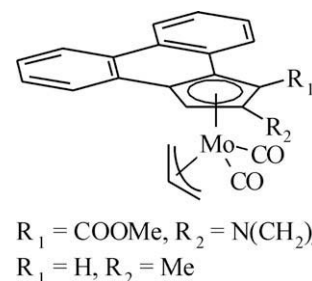
**Jan Honzík, Abhik Mukhopadhyay, Cecilia Bonifacio, Carlos C. Romão**

*J. Organomet. Chem.* 695 (2010) 680

Molybdenum complexes containing substituted cyclopenta[*l*]phenanthrenyl ligand

The synthesis of new cyclopenta[*l*]phenanthrenyl complexes  $[(\eta^5\text{-C}_{17}\text{H}_{10}\text{Me})(\eta^3\text{-C}_3\text{H}_5)\text{Mo}(\text{CO})_2]$  and  $[(\eta^5\text{-C}_{17}\text{H}_9(\text{COOMe})\text{N}(\text{CH}_2)_4)(\eta^3\text{-C}_3\text{H}_5)\text{Mo}(\text{CO})_2]$  is described. Although these compounds are structural analogues

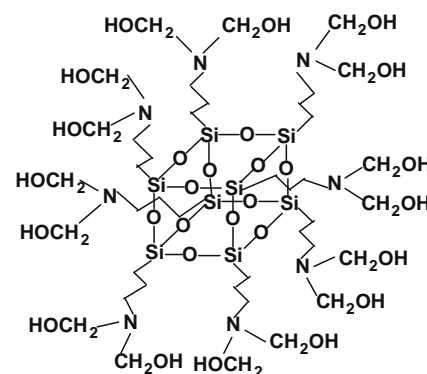
their reactivity is different. Protonation of  $[(\eta^5\text{-C}_{17}\text{H}_{10}\text{Me})(\eta^3\text{-C}_3\text{H}_5)\text{Mo}(\text{CO})_2]$  gives a stable ionic compound  $[(\eta^5\text{-C}_{17}\text{H}_{10}\text{Me})\text{Mo}(\text{CO})_2(\text{NCMe})_2][\text{BF}_4]$  while  $[(\eta^5\text{-C}_{17}\text{H}_9(\text{COOMe})\text{N}(\text{CH}_2)_4)(\eta^3\text{-C}_3\text{H}_5)\text{Mo}(\text{CO})_2]$  decomposes at the same conditions.  $[(\eta^5\text{-C}_{17}\text{H}_{10}\text{Me})\text{Mo}(\text{CO})_2(\text{NCMe})_2][\text{BF}_4]$  is an appropriate building block for an assembly of  $\text{CpCp}'\text{Mo}$  moiety.



**Kongliang Xie, Yanli Zhang, Si Chen***J. Organomet. Chem.* 695 (2010) 687

Synthesis and characterization of reactive polyhedral oligomeric silsesquioxanes (R-POSS) containing multi-*N*-methylol groups

The chemical structure of R-POSS is characterized by FT-IR,  $^1\text{H}$  NMR,  $^{29}\text{Si}$  NMR. Nano-structure of R-POSS is observed by field emission scanning electro microscope (FSEM) and AFM. R-POSS monomer imparts a nano-sized inorganic core and organic corner with multi-*N*-methylol groups. R-POSS as novel POSS reagent may be utilized for preparation of nano-composite materials and functional biomaterials.

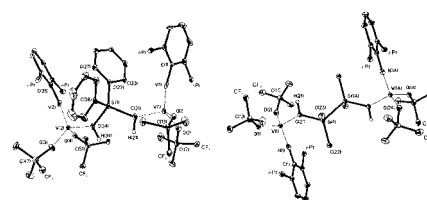


**Andrey L. Bochkarev, Galina V. Basova, Irina K. Grigorieva, Natalia E. Stolyarova, Irina P. Malysheva, Georgii K. Fukin, Evgenii V. Baranov, Yurii A. Kurskii, Leonid N. Bochkarev, Gleb A. Abakumov**

*J. Organomet. Chem.* 695 (2010) 692

Synthesis and structures of bimetallic silicon-containing imido alkyldiene complexes of tungsten  $(\text{R}'\text{O})_2(\text{ArN})\text{W}=\text{CH}-\text{SiR}_2-\text{CH}=\text{W}(\text{NAr})(\text{OR}')_2$  ( $\text{R} = \text{Me}$ ,  $\text{Ph}$ ) and  $(\text{R}'\text{O})_2(\text{ArN})\text{W}=\text{CH}-\text{SiMe}_2\text{SiMe}_2-\text{CH}=\text{W}(\text{NAr})(\text{OR}')_2$

Bimetallic alkyldiene complexes of tungsten  $(\text{R}'\text{O})_2(\text{ArN})\text{W}=\text{CH}-\text{SiR}_2-\text{CH}=\text{W}(\text{NAr})(\text{OR}')_2$  ( $\text{R} = \text{Me}$  (**1**),  $\text{Ph}$  (**2**)) and  $(\text{R}'\text{O})_2(\text{ArN})\text{W}=\text{CH}-\text{SiMe}_2\text{SiMe}_2-\text{CH}=\text{W}(\text{NAr})(\text{OR}')_2$  (**3**)  $2,6\text{-Pr}_2\text{C}_6\text{H}_3$ ;  $\text{R}' = \text{CMe}_2\text{-CF}_3$ ) have been synthesized and structurally characterized. Compounds **1–3** were found to be active initiators for ROMP of cyclooctene and led to the formation of high molecular weight polyoctenamers with predominant *trans*-units content in the case of **1** and **3** and predominant *cis*-units content in the case of **2**.

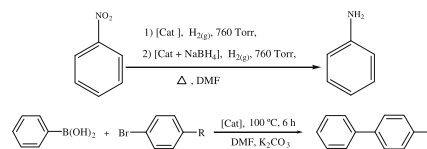


**Ahmet Kilic, Dilek Kilinc, Esref Tas, Ismail Yilmaz, Mustafa Durgun, Ismail Ozdemir, Sedat Yasar**

*J. Organomet. Chem.* 695 (2010) 697

The orthopalladation dinuclear  $[\text{Pd}(\text{L}_1)(\mu\text{-OAc})_2]$ ,  $[\text{Pd}(\text{L}_2)(\mu\text{-OAc})_2]$  and mononuclear  $[\text{Pd}(\text{L}_3)_2]$  complexes with  $[\text{N}, \text{C}, \text{O}]$  or  $[\text{N}, \text{O}]$  containing ligands: Synthesis, spectral characterization, electrochemistry and catalytic properties

We described the synthesis of the five new salicylalimine ligands and their orthopalladation dinuclear  $[\text{Pd}(\text{L}_1)(\mu\text{-OAc})_2]$ ,  $[\text{Pd}(\text{L}_2)(\mu\text{-OAc})_2]$  and mononuclear  $[\text{Pd}(\text{L}_3)_2]$  metal complexes. The compounds have been identified by a combination of  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra, FT-IR spectra, UV-Vis spectra, elemental analysis, molar conductivity measurements, and electrochemical techniques. The Pd(II) complexes exhibited catalytic activity in Suzuki-Miyaura coupling reactions and the hydrogenation of nitrobenzene and cyclohexene.

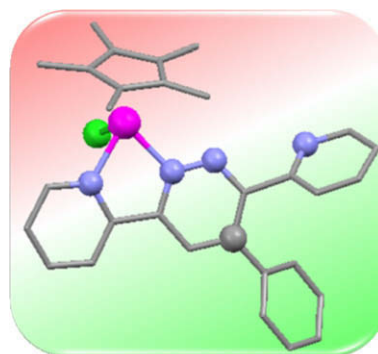


**Kota Thirumala Prasad, Gajendra Gupta, A.K. Chandra, M. Phani Pavan, Kollipara Mohan Rao**

*J. Organomet. Chem.* 695 (2010) 707

Spectral, structural and DFT studies of platinum group metal 3,6-bis(2-pyridyl)-4-phenylpyridazine complexes and their ligand bonding modes

New mononuclear half-sandwich platinum group metal (Ru, Rh and Ir) complexes were obtained by the reaction of arene or pentamethylcyclopentadienyl metal (Ru, Rh and Ir) complexes with 3,6-bis(2-pyridyl)-4-phenylpyridazine ( $\text{L}^{\text{ph}}$ ), yielding two sets of complexes. In one set (*type-A*), the metal bonds to the N1 and N2 atoms of the ( $\text{L}^{\text{ph}}$ ) ligand, and in the other (*type-B*), the metal bonds to the N3 and N4 atoms. The structures of these complexes were confirmed through X-ray crystallography and density functional theory calculations.

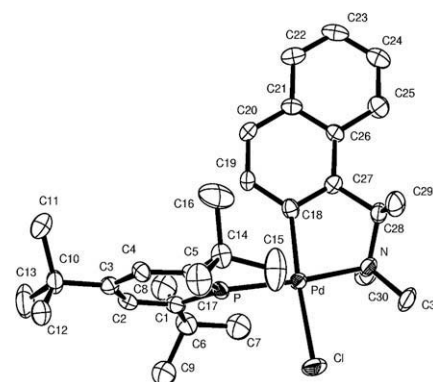
Complex  $[(\eta^5\text{-C}_5\text{Me}_5)\text{Rh}(\text{L}^{\text{ph}})(\text{Cl})]\text{PF}_6$  (**4**)

**Scott B. Clendenning, Peter B. Hitchcock, Gerard A. Lawless, John F. Nixon, Christopher W. Tate**

*J. Organomet. Chem.* 695 (2010) 717

Differences in the  $\eta^1$ -ligating properties of 2,4,6-tritertiarybutyl-phosphabenzene,  $\text{PC}_5\text{H}_2\text{Bu}_3^t$  and 2,4,6-tritertiarybutyl-1,3,5-triphosphabenzene,  $\text{P}_3\text{C}_3\text{Bu}_3^t$

Differences in the coordination behaviour of a mono- and triphosphabenzene are described.

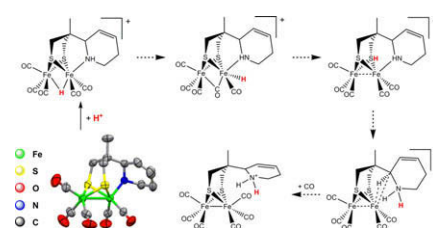


**Zhiyin Xiao, Fenfen Xu, Li Long, Yinqiu Liu, Giuseppe Zampella, Luca De Gioia, Xirui Zeng, Qiuyan Luo, Xiaoming Liu**

*J. Organomet. Chem.* 695 (2010) 721

Influence of the basicity of internal bases in diiron model complexes on hydrides formation and their transformation into protonated diiron hexacarbonyl form

Basicity of the internal base of the model complexes correlates positively to their protonation chemistry. But the conversion of their bridging hydride into their corresponding protonated hexacarbonyl complexes via intramolecular migration mechanism was not solely dictated by this basicity. Instead, behaviours of the bridging hydrides in solution were concertedly governed by basicity, protophilicity, and lability of the coordination between the diiron centre and the base as revealed by experimental and theoretic investigations.

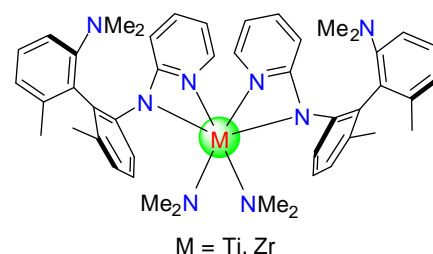


**Guofu Zi, Furen Zhang, Xue Liu, Lin Ai, Haibin Song**

*J. Organomet. Chem.* 695 (2010) 730

Synthesis, structure, and catalytic activity of titanium(IV) and zirconium(IV) amides with chiral biphenyldiamine-based ligands

A new series of chiral organo-titanium and zirconium amides have been prepared. The zirconium amides are active catalysts for the asymmetric hydroamination/cyclization of aminoalkenes, affording cyclic amines in good to excellent yields with moderate ee values.

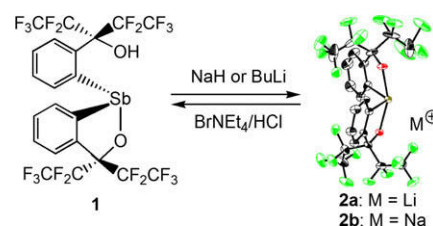


**Xin-Dong Jiang, Yohsuke Yamamoto**

*J. Organomet. Chem.* 695 (2010) 740

Synthesis, structure, and reaction of tricoordinate stibine and tetracoordinate stiborane

Tricoordinate stibine **1** and tetracoordinate stiborane **2a** were synthesized by utilizing  $\text{SbCl}_3$ . The structure of tetracoordinate stiborane **2a** was confirmed by X-ray analysis. The interconversion between **1** and **2** was achieved by  $\text{BrNET}_4$  and  $\text{NaH}$  or  $\text{BuLi}$ . By using **1**, the pentacoordinate stiborane **6** was synthesized.

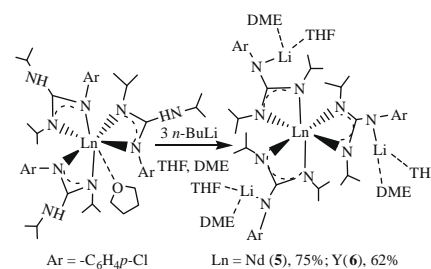


**Cunwei Qian, Xingmin Zhang,  
Yong Zhang, Qi Shen**

*J. Organomet. Chem.* 695 (2010) 747

Heterobimetallic complexes of lanthanide and lithium metals with dianionic guanidinate ligands: Syntheses, structures and catalytic activity for amidation of aldehydes with amines

The first heterobimetallic complexes of lanthanide and lithium metals with dianionic guanidinate ligands  $[\text{Li}(\text{THF})(\text{DME})]_3\text{-Ln}[\mu\text{-}\eta^2\eta^1\text{-}(\text{tPrN})_2\text{C}(\text{NC}_6\text{H}_4\text{p-Cl})]_3$  (Ln = Nd and Y) were synthesized and fully characterized. The Nd complex was found to be an efficient catalyst for amidation of aldehydes with amines under mild conditions with a wide scope of substrates including pyrrolidine, piperidine and morpholine.

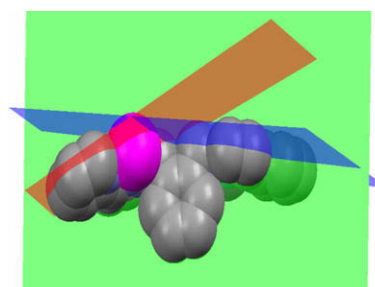


**Gajendra Gupta, Bruno Therrien,  
Kollipara Mohan Rao**

*J. Organomet. Chem.* 695 (2010) 753

Half sandwich platinum group metal complexes containing tetradentate N-donor ligand bearing two pyrazolyl-pyridine units linked by an aromatic spacer

Reaction of half-sandwich platinum group metal complexes with the bis-bidentate ligand, 1,3-bis((3-(pyridin-2-yl)-1H-pyrazol-1-yl)methyl)benzene (NN $\cap$ NN), containing two chelating pyrazolyl-pyridine units connected by an aromatic spacer with platinum group metal complexes results in a series of nine cationic binuclear complexes.



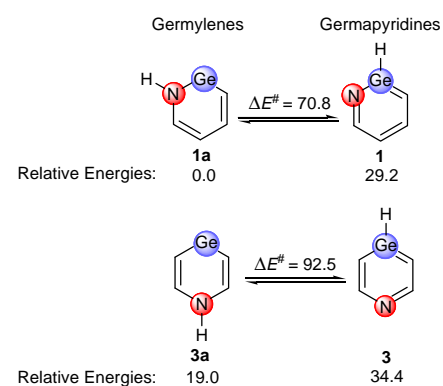
Space filling model of compound 6

**M.Z. Kassaei, M.R. Momeni, F.A. Shakib,  
M. Ghambarian**

*J. Organomet. Chem.* 695 (2010) 760

Pyridine derived N-heterocyclic germynes: A density functional perspective

Two novel germynes, **1a** and **3a**, are found 29.2 and 15.4 kcal/mol more stable than their corresponding aromatic germapyridine isomers. From a kinetic viewpoint, the calculated energy barrier for the 1,2-*H* shift of **1a** to **1** is 70.8 kcal/mol compared to more prohibitive 92.5 kcal/mol for the 1,4-*H* shift of **3a** to **3**. No minimum dimer is found for **1a** and that of **3a** is 11.2 kcal/mol less stable than the two separate monomers.

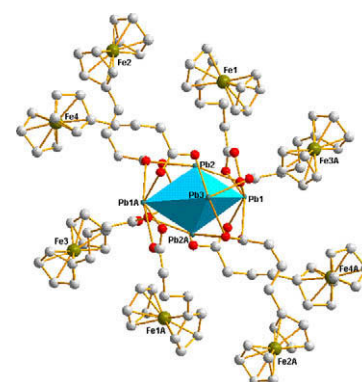


**Xiangru Meng, Wan Zhou, Yongfang Qi,  
Hongwei Hou, Yaoting Fan**

*J. Organomet. Chem.* 695 (2010) 766

Syntheses, structures, and electrochemical properties of four complexes based on 4-ferrocenylbutyrate ligand

Two 1D helical complexes, one 1D linear complex and one hexanuclear complex with nano-scale wheel-like framework have been synthesized and characterized. The electrochemical properties of the ferrocenylbutyrate ligand and the four complexes have been studied by cyclic voltammetry method.



**Zhi-Bing Dong, Wei-Hua Zhu, Zhi-Guang Zhang, Min-Zhi Li***J. Organomet. Chem.* 695 (2010) 775

An efficient and mild *ortho*-zincation of aromatics and heterocycles by using  $\text{TMP}_2\text{Mg}\cdot 2\text{LiCl}$  in the presence of  $\text{ZnCl}_2$

A variety range of functionalized aryl and heteroaryl zinc reagents were efficiently generated by using  $\text{TMP}_2\text{Mg}\cdot 2\text{LiCl}$  (TMP = 2,2,6,6-tetramethylpiperamidyl) in the presence of  $\text{ZnCl}_2$ . The subsequently functionalization gave after reaction with electrophiles the expected polyfunctionalized products in good yields. A detailed study concerned on the point how we found the protocol and how we optimized it was depicted.

