

Accepted Manuscript

Novel palladacycle *N*-Heterocyclic carbene complexes with bidentate [C,*M*] and terdentate [C,*N*,*M*] and [C,*N*,O] Schiff bases. Synthesis, characterization and crystal structure analysis

Leticia Naya, Digna Vázquez-García, Alberto Fernández, Margarita López-Torres, Ismael Marcos, Oscar A. Lenis, M. Teresa Pereira, José M. Vila, Jesús J. Fernández

PII: S0022-328X(14)00368-4

DOI: [10.1016/j.jorganchem.2014.07.018](https://doi.org/10.1016/j.jorganchem.2014.07.018)

Reference: JOM 18662

To appear in: *Journal of Organometallic Chemistry*

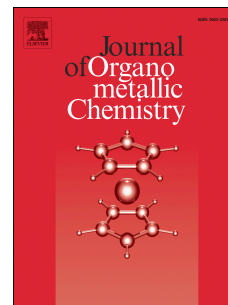
Received Date: 8 May 2014

Revised Date: 12 July 2014

Accepted Date: 24 July 2014

Please cite this article as: L. Naya, D. Vázquez-García, A. Fernández, M. López-Torres, I. Marcos, O.A. Lenis, M.T. Pereira, J.M. Vila, J.J. Fernández, Novel palladacycle *N*-Heterocyclic carbene complexes with bidentate [C,*M*] and terdentate [C,*N*,*M*] and [C,*N*,O] Schiff bases. Synthesis, characterization and crystal structure analysis, *Journal of Organometallic Chemistry* (2014), doi: [10.1016/j.jorganchem.2014.07.018](https://doi.org/10.1016/j.jorganchem.2014.07.018).

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Novel Palladacycle *N*-Heterocyclic Carbene Complexes with Bidentate [C,*N*] and Terdentate [C,*N,N*] and [C,*N,O*] Schiff Bases. Synthesis, Characterization and Crystal Structure Analysis

Leticia Naya^a, Digna Vázquez-García,^a Alberto Fernández,^a Margarita López-Torres,^a Ismael Marcos,^a Oscar A. Lenis,^a M. Teresa Pereira,^b José M. Vila^{*b} and Jesús J. Fernández^{*a}.

^a Departamento de Química Fundamental, Universidade da Coruña, 15071 A Coruña, Spain.

^b Departamento de Química Inorgánica, Universidad de Santiago de Compostela, 15782 Santiago de Compostela, Spain. *E-mail*: josemanuel.vila@usc.es. *Phone no.*: +34 881814255. *Fax no.*: + 34 981 597525.

Abstract

Schiff base palladacycles readily reacted with *N*-heterocyclic carbenes (NHCs) after deprotonation of the corresponding imidazolium salts with K[N(SiMe₃)₂] to give mononuclear cyclometallated complexes in which the NHC was coordinated *trans* to the imine nitrogen. The reaction of dinuclear acetate-, **1**, or chloro-bridged, **2**, **3**, complexes gave new monocuclear species, **4–9**, after the bridge-splitting reaction, inclusive of acetato/chloride exchange during the purification process. Treatment of the terdentate [C,*N,N*] metallacycles, **10**, **11**, with the NHCs gave **12–15** with substitution of the chloro or acetato ligands; the Pd–NMe₂ bond remains uncleaved. Reaction of the carbene ligands with the tetranuclear palladacycle, **16**, gave **17–20**, after splitting of the parent structure, but without ring opening of neither the Pd–N nor of the Pd–O bonds, hence retaining the metallated and coordination rings at the metal. The structures of **6**, **7** and **19** have been determined by single crystal X-ray diffraction.

Keywords: Palladacycles; Imidazolium salts; *N*-heterocyclic carbenes; Schiff base.

Download English Version:

<https://daneshyari.com/en/article/7757190>

Download Persian Version:

<https://daneshyari.com/article/7757190>

[Daneshyari.com](https://daneshyari.com)