## **Accepted Manuscript**

Unsymmetrical Palladium(II) N,N,O,O-Schiff Base Complexes: Efficient Catalysts for Suzuki Coupling Reactions

Maryam Sedighipoor, Ali Hossein Kianfar, Gholamhossein Mohammadnezhad, Helmar Görls, Winfried Plass

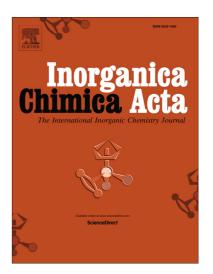
PII: S0020-1693(17)31636-5

DOI: https://doi.org/10.1016/j.ica.2018.02.007

Reference: ICA 18117

To appear in: Inorganica Chimica Acta

Received Date: 26 October 2017 Revised Date: 31 January 2018 Accepted Date: 4 February 2018



Please cite this article as: M. Sedighipoor, A.H. Kianfar, G. Mohammadnezhad, H. Görls, W. Plass, Unsymmetrical Palladium(II) N,N,O,O-Schiff Base Complexes: Efficient Catalysts for Suzuki Coupling Reactions, *Inorganica Chimica Acta* (2018), doi: https://doi.org/10.1016/j.ica.2018.02.007

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.

ACCEPTED MANUSCRIPT

Unsymmetrical Palladium(II) N,N,O,O-Schiff Base Complexes: Efficient Catalysts for

**Suzuki Coupling Reactions** 

Maryam Sedighipoor<sup>a</sup>, Ali Hossein Kianfar<sup>1a</sup>, Gholamhossein Mohammadnezhad<sup>a</sup>, Helmar

Görls<sup>b</sup> and Winfried Plass<sup>b</sup>

<sup>a</sup>Department of Chemistry, Isfahan University of Technology, Isfahan, Iran, 84156-83111

<sup>b</sup>Institute of Inorganic and Analytical Chemistry, Chair of Inorganic Chemistry II, Friedrich

Schiller University Jena, Humboldtstr. 8, 07743 Jena, Germany

**Abstract** 

Palladium offers various applications in the field of fine chemicals. As one of the most widely

used catalytic metals, due to its high activity and selectivity, there are many possibilities for

carbon-carbon bond formation in the organic synthesis. This study focused on the condensation

reaction between the selected aldehyde or ketone, and 1, 2-Phenylenediamine; as a result, two

different Schiff base ligands were prepared. The reaction between palladium(II) acetate and

Schiff base ligand, in a molar ratio of 1:1, resulted in the formation of palladium(II) Schiff base

complexes  $PdL^1$  and  $PdL^2$  ( $L^1 = N-2$ -hydroxyacetophenon-N'-2, 4-dihydroxbenzaldehyde-1,2

phenylenediimine, and  $L^2 = N-2$ -hydroxyacetophenon-N'-2-hydroxynaphthaldehyde-1,2

phenylenediimine), as identified by elemental analysis, FT-IR, UV-Vis and <sup>1</sup>H NMR

spectroscopies. The X-ray analysis of PdL<sup>2</sup> also showed that the Schiff base acted as a

tetradentate ligand which, through both phenolic O and azomethine N atoms, could be

coordinated to the Pd atom with the square planar geometry. By using GC, the catalytic activity

<sup>1</sup> Ali Hossein Kianfar, E-mail: akianfar@cc.iut.ac.ir

Tel: +98-31-33913251 Fax: +98-31-33912350

1

## Download English Version:

## https://daneshyari.com/en/article/7750504

Download Persian Version:

https://daneshyari.com/article/7750504

<u>Daneshyari.com</u>