Available online at **www.joac.info**

ISSN: 2278-1862

Journal of Applicable Chemistry

2018, 7 (2): 417-425

(International Peer Reviewed Journal)

Synthesis and Characterization of a New *Ortho* Palladed Complex *Via* C-H Activation of Redox Non-Innocent 2-(Arylazo)-N-Phenyl Aniline

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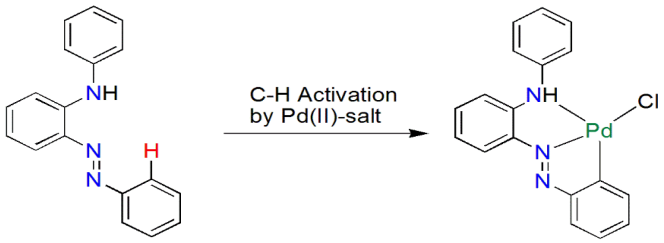
Accepted on 9th March 2018

ABSTRACT

*The new redox active 2-(arylazo)-N-phenyl aniline ligand **LH** has been prepared by the reaction between N-phenyl-ortho-phenylenediamine and nitrobenzene in the presence of NaOH. The room temperature reaction of equimolar amounts of **LH** and $[PdCl_2(CH_3CN)_2$ in methanol in the presence of triethylamine afforded ortho palladed complex $[Pd^{II}(\mathbf{L})Cl]$(**1**) in 63% yield, where the ligand is bound to the Pd(II) metal in tridentate (C,N,N) coordination. The complex **1** was characterized from spectroscopic data and its structure was confirmed by X-ray crystallographic analysis. The redox chemical behaviors of LH and complex **1** were studied.*

Graphical abstract



Keywords: Cyclopalladation; C-H Activation; Azobenzene; Redox-active.