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## PROGRAM & ABSTRACTS

## Pt(IV) complexes: synthesis and reductive elimination

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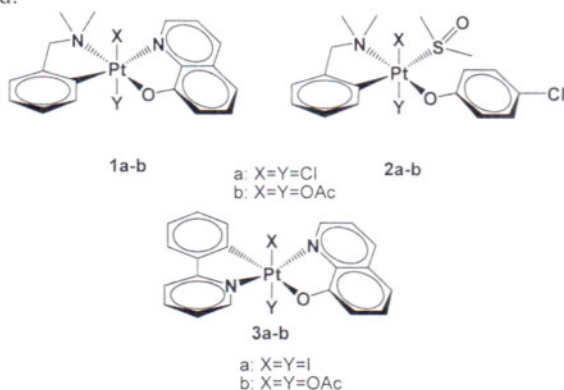
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Transition metals catalyzed C-H activation is useful methodology for construction of C-O bond in synthesis of aryl alkyl ethers. Surprisingly, synthesis of diaryl ethers via C-H activation approach has not been reported in the literature.

Aryl alkyl ethers are formed in a C-O bond forming reductive elimination from Pt(IV) complexes. Consequently, we aimed to synthesize a series of Pt(IV) complexes to study the diaryl ether reductive elimination. Different oxidizing reagents were screened to effect the oxidation of arylplatinum(II) aryloxy complexes with  $\text{PhICl}_2$ ,  $\text{PhI}(\text{OAc})_2$  and  $\text{I}_2$  being the most efficient.

All prepared Pt(IV) complexes **1-3** were characterized using  $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$  and  $^{195}\text{Pt-NMR}$  spectroscopy, as well as elemental analysis. The structure of complex **1a** was confirmed by X-ray crystallographic analysis.

Thermally induced reductive elimination from Pt(IV) complexes **1-3** has also been examined.



### References:

1. a) Desai, L. V.; Malik, H. A.; Sanford, M. S. *Org. Lett.* **2006**, *8*, 1141. b) Wang, G. W.; Yuan, T. T. *J. Org. Chem.* **2010**, *75*, 476.
2. Williams, B. S.; Goldberg, K. I. *J. Am. Chem. Soc.* **2001**, *123*, 2576.