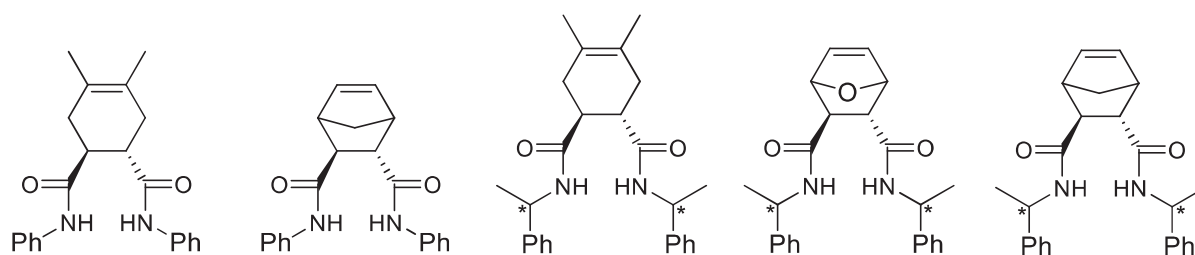


Synthesis of new NN-type ligands and Palladium(II) complexes; Catalytic studies on the Heck C-C coupling reactions of the synthesized complexes

Özgür Yılmaz, Mustafa Kemal Yılmaz

Department of Chemistry, Faculty of Arts and Sciences, Mersin University, 33343,
Mersin, Turkey
E-mail: yilmazozgur@mersin.edu.tr

NN-type bidentate ligands are important molecules having many application fields.¹ Besides the high catalytic properties of these molecules, they have been studied by many researchers in recent years due to their used in drug structures, important complexes and for chiral syntheses.² Ligands of the type NN have been synthesized with reaction of the some simple or chiral amines and acyl chloride derivatives.³⁻⁵ In addition, we synthesized palladium(II) complexes with all of NN-type ligands that obtained. Also the catalytic activities of the palladium(II) complexes were investigated for the Heck C-C coupling reaction between bromo benzene and styrene and the effect of different bases, temperatures, and substrate to catalyst ratio were investigated to optimized the conditions. Then, we used these conditions to evaluate the effect of substituted aryl bromides in the Heck C-C coupling reaction with styrene. Our catalyst system is highly efficient and selective for the Heck coupling reaction of activated and sterically hindered aryl bromides with styrene in reasonable reaction times.



Scheme 1. Some examples of the synthesized NN-type ligands

Acknowledgement: This study was supported by the Research Fund of Mersin University in Turkey with Project Number: 2017-1-AP1-2188.

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