

Palladium (II) complex of pyridine-oxazoline-type ligand as a homogeneous/heterogeneous catalyst for enantioselective addition of arylboronic acids to cyclic ketimines

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The use of palladium catalyst for an asymmetric addition of arylboronic acids to cyclic ketimines was for the first time reported by Zhang [1]. In this work we present the Pd(TFA)₂ complex with (*S*)-4-(*tert*-butyl)-2-(5-(trifluoromethyl)pyridin-2-yl)-4,5-dihydrooxazole as a new one catalyst for an enantioselective addition of arylboronic acids to cyclic ketimines, which provides excellent results in homogeneous reaction conditions. Such ligand was designed and prepared with various spacers, which allow immobilization on solid carriers. The advantage of our immobilization strategy is a cheap and commercially available starting compound, which can be elegantly immobilized in three reaction steps.

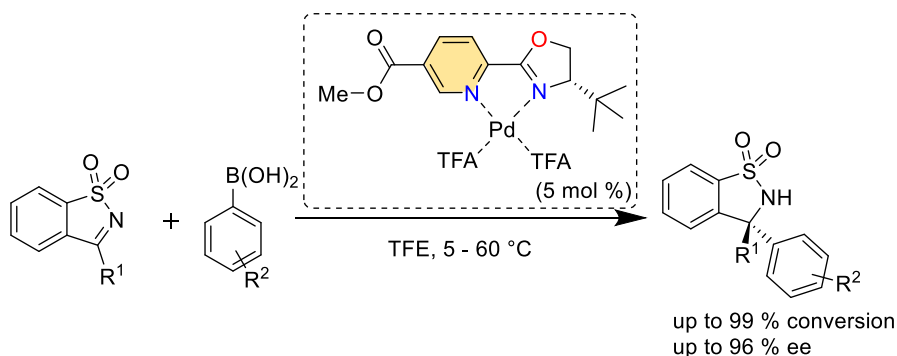


Figure 1. Addition of arylboronic acids to cyclic ketimines catalysed by Pd(TFA)₂ complex of pyridine-oxazoline [1].

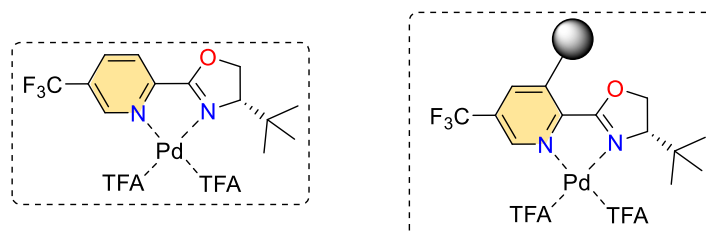


Figure 2. The Novel homogeneous and heterogeneous catalyst for enantioselective addition of arylboronic acids to cyclic ketimines.

Acknowledgement: This work has been supported by the Czech Ministry of Education Youth and Sports (project number SGS_2022_003)

References:

[1] Yang, G.; Zhang, W. A Palladium-Catalyzed Enantioselective Addition of Arylboronic Acids to Cyclic Ketimines. *Angew. Chem.* **2013**, *125*, 7688–7692.