A VERSATILE KETONE FORMATION VIA HIGHLY ACTIVE PRECATALYST "POXAP": APPLICATION TO THE SYNTHESIS OF ISOPREKINAMYCIN

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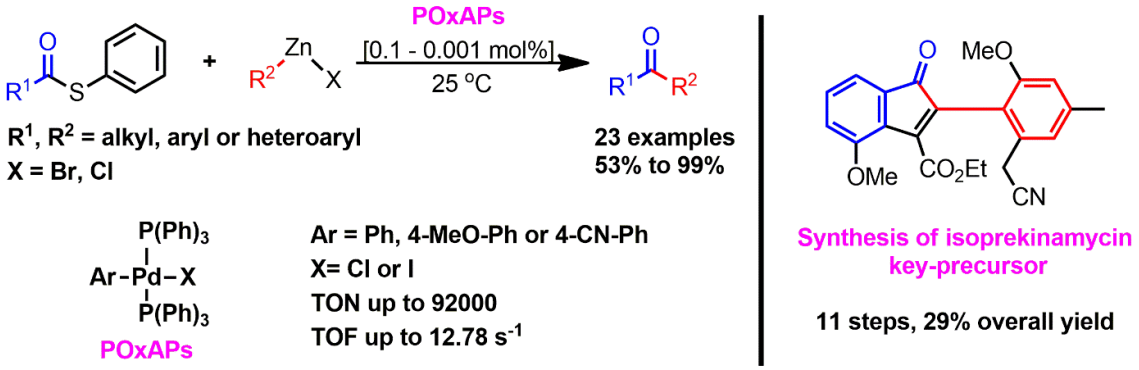
A series of efficient and user-friendly palladium(II) precatalysts named "POxAPs" (post-oxidative-addition precatalyst) were identified for use in Fukuyama cross-coupling reaction[1]. These POxAPs, of generic formula $PdX(Ar)(PPh_3)_2$, can be easily prepared from the oxidative addition of Pd(0) with ArX, and stored under air at ambient temperature. With turnover number of ~90 000, 10 ppm of POxAP are enough to catalyze the reaction between thioesters and organozinc reagents to afford a large diversity of ketones with yields up to 99%. This method was particularly efficient for the synthesis of very bulky ketones. As proof of efficacy, an alternative approach was developed for the synthesis of a key precursor of the natural product isoprekinamycin[1,2].



[1] Tang et al. *Org. Lett.* (**2019**) 21, 3, 844-48 ; [2] Liu et al. *Org. Lett.* (**2007**) 9, 2915-18