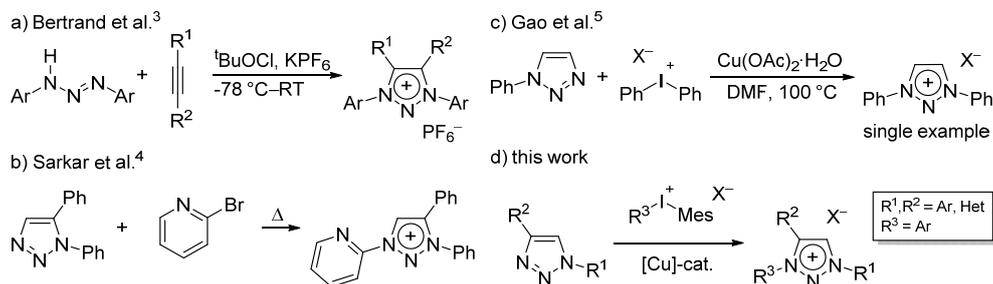


TOWARDS THE TRIARYLATED TRIAZOLIUM SALTS

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Triazolium salts are precursors for *N*-heterocyclic carbenes (NHCs). Abnormal carbenes derived thereof are termed mesoionic and have pronounced σ -donating character as compared to normal, imidazolylidene based carbene counterparts. They have found broad spectrum of applications in coordination chemistry, organic synthesis and catalysis as well as bioactive and medicinal aspects. Among those, triazolylidenes with additional heterocyclic substituents, i.e. pyridine, have displayed attractive catalytic properties when coordinated to transition metals. [1] Initially triazolium salts were prepared with alkylation of click triazoles. [2] Examples of triazolium salts with N-3 aryl substituent are rather limited to the procedure developed by Bertrand et al., however it has not been utilized to prepare heterocyclic derivatives. [3] Those were achieved by Sarkar in the arylation step with 2-bromopyridine. [4] To expand the scope of pyridine appended triazolium salts while exploiting the availability of click triazoles, we have developed an effective, robust, and selective arylation method employing hypervalent iodine reagents as aryating agents. This will enable for a facile preparation of a broad range of designer ligands for the fine-tunable carbenes, their coordination compounds with transition metals and (pre)catalysts with enhanced activity.



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