INDIRECT C–H FUNCTIONALIZATION OF ELECTRON-RICH HETEROCYCLES

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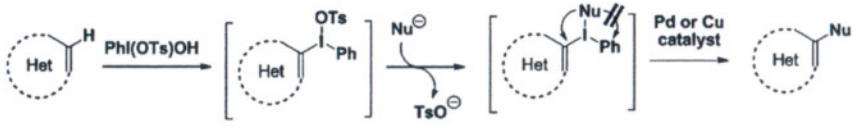
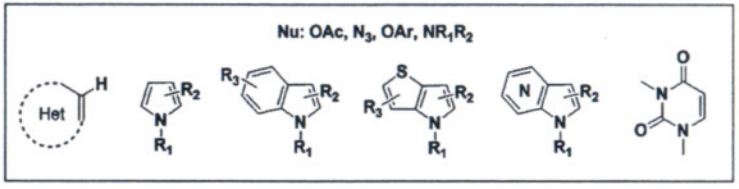
Development of methodologies for functionalization of heterocycles is of highest importance both in medicinal and in process chemistry, because heterocycles are among the most frequently encountered scaffolds in drugs and pharmaceutically relevant substances.

Our approach is based on functionalization of aromatic and heterocyclic C–H bonds by the *in situ* formation of unsymmetrical heteroaryl-λ^3-iodanes, followed by their regioselective fragmentation in the presence of transition metal (Pd, Cu) catalyst.





The developed methodology effects transformation of electron-rich heterocyclic C–H bonds into C–O bonds and C–N bonds in an operationally simple one-pot sequential multistep process.

References:

1) Lubriks, D.; Sokolovs, I.; Suna, E. *Org. Lett.* **2011**, *13*, 4324.
2) Lubriks, D.; Sokolovs, I.; Suna, E. *J. Am. Chem. Soc.* **2012**, *134*, 15436.

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