

## NOVEL SYNTHETIC APPLICATIONS OF N-AMINO HETEROCYCLES

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This talk will cover the novel synthetic utility of N-amino heterocycles in various reactions.

We have developed efficient *N*-heterocyclic carbene (NHC) mediated transformations of benzylideneaminobenzimidazoles with carbon disulfide and different heteroallenes, as well as the synthesis of spirodithiohydantoin. Moreover, 4-amino-1,2,4-triazole derived 1,2,4-triazolium *N*-nitroimides and 1,2,4-triazolium *N*-sulfonimides were found to be excellent reagents for novel Cu (I) mediated, regioselective synthesis of pyrazolo[5,1-*c*]-1,2,4-triazoles. Details of these key reactions, synthesis and unexpected behavior of spirodithiohydantoin as well as the regiochemical outcome of Cu (I) mediated reactions will be discussed.