

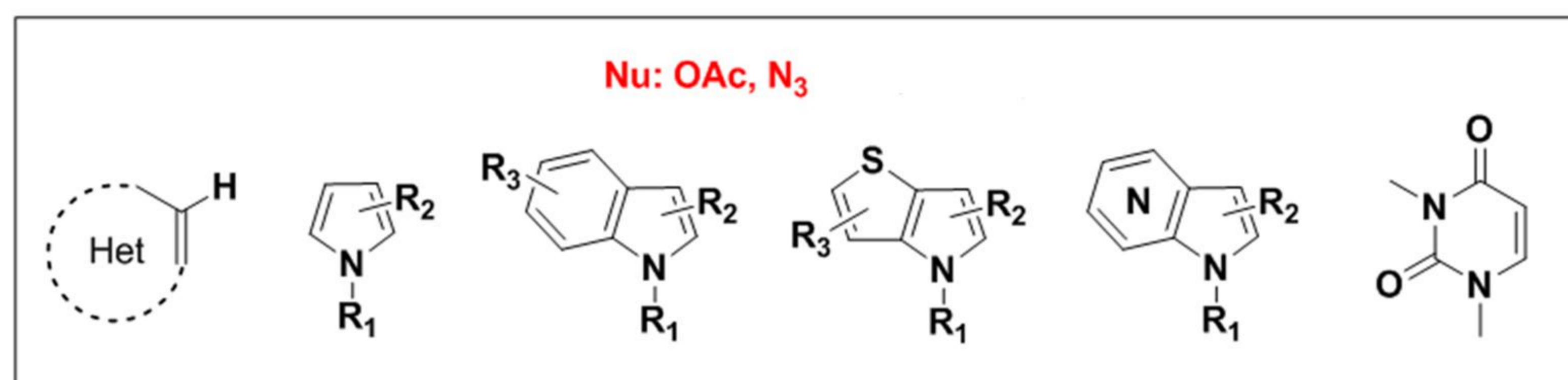
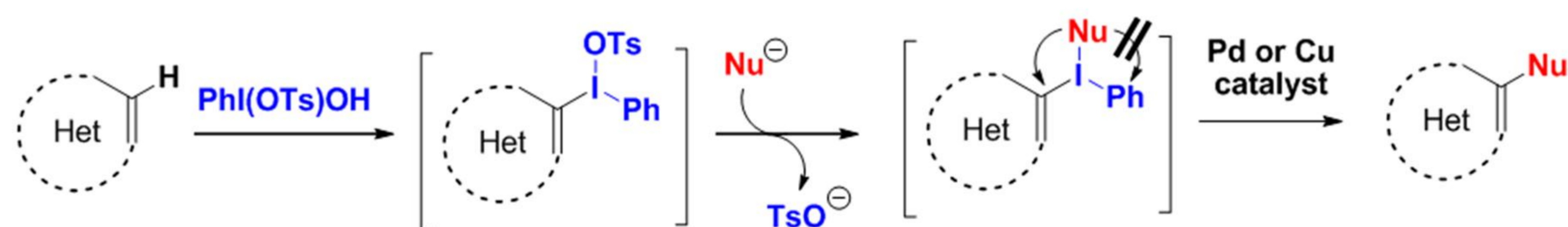


NON-SYMMETRIC IODONIUM SALTS AS KEY INTERMEDIATES IN FUNCTIONALISATION OF HETEROCYCLIC C-H BONDS

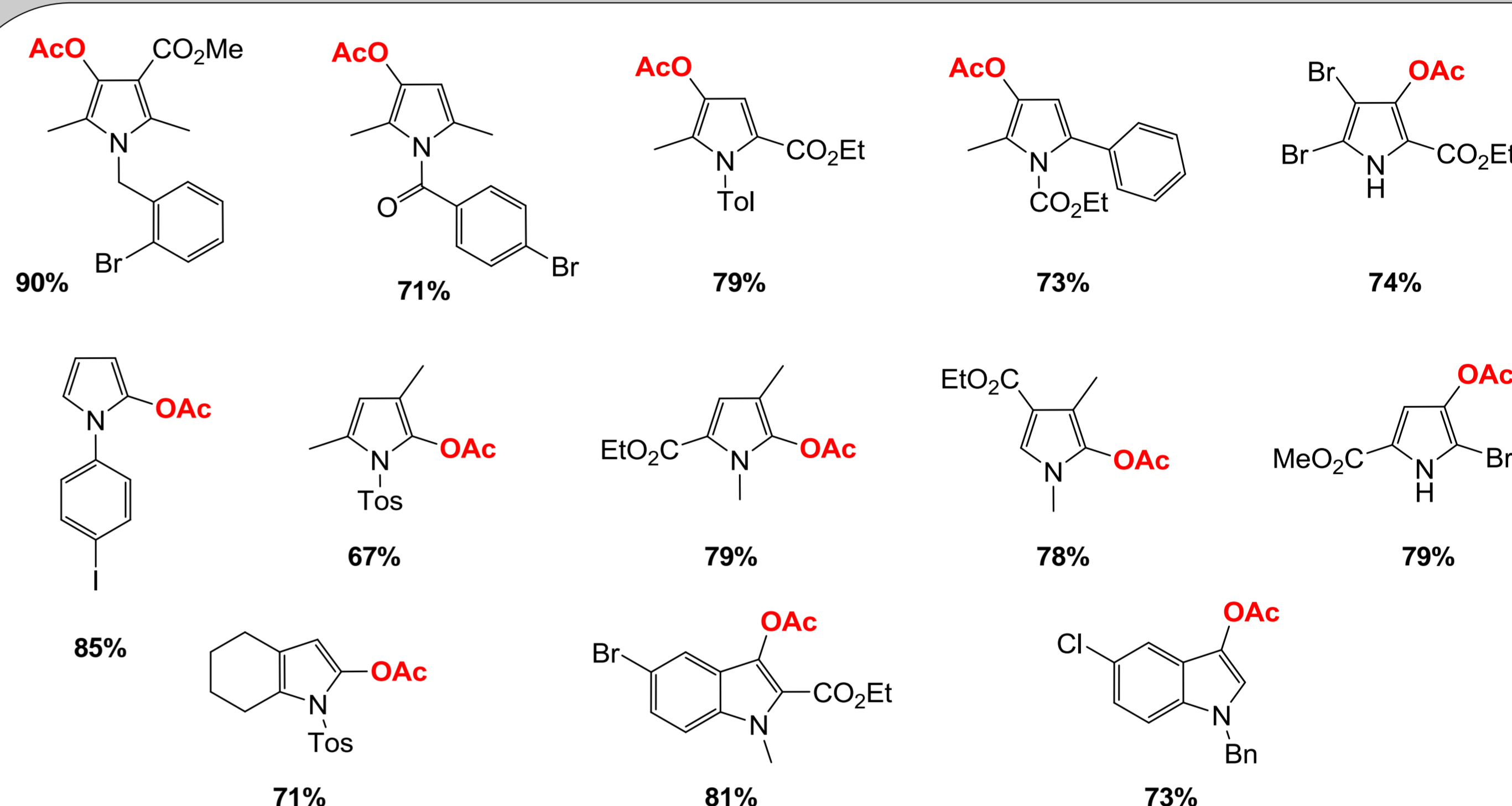
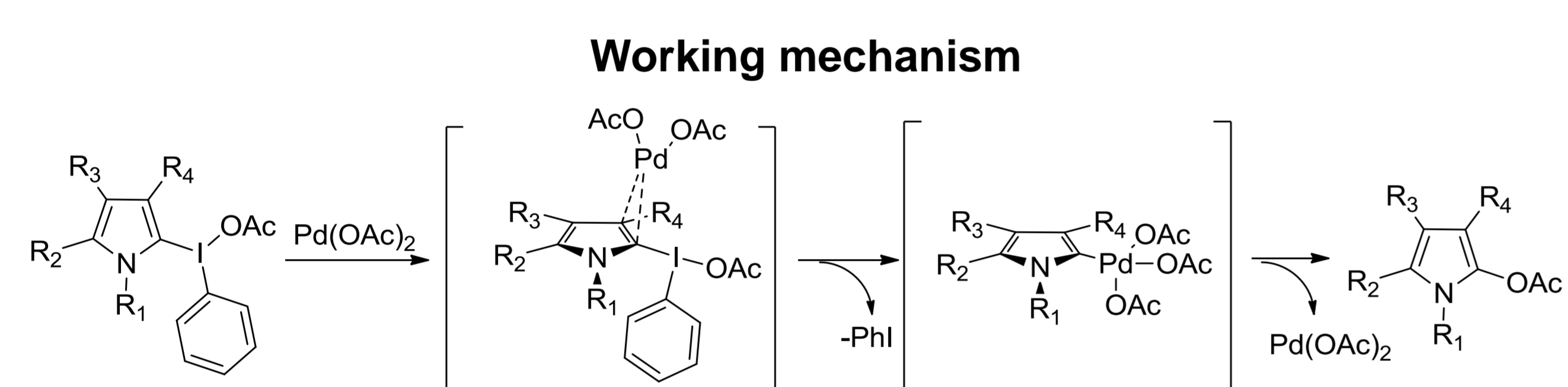
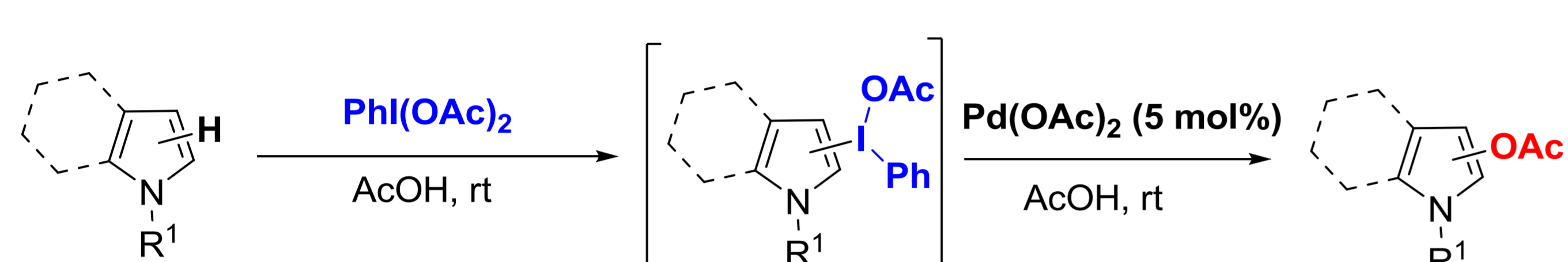
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GOAL: General and efficient transition-metal-catalyzed functionalisation of heteroaryl C-H bonds

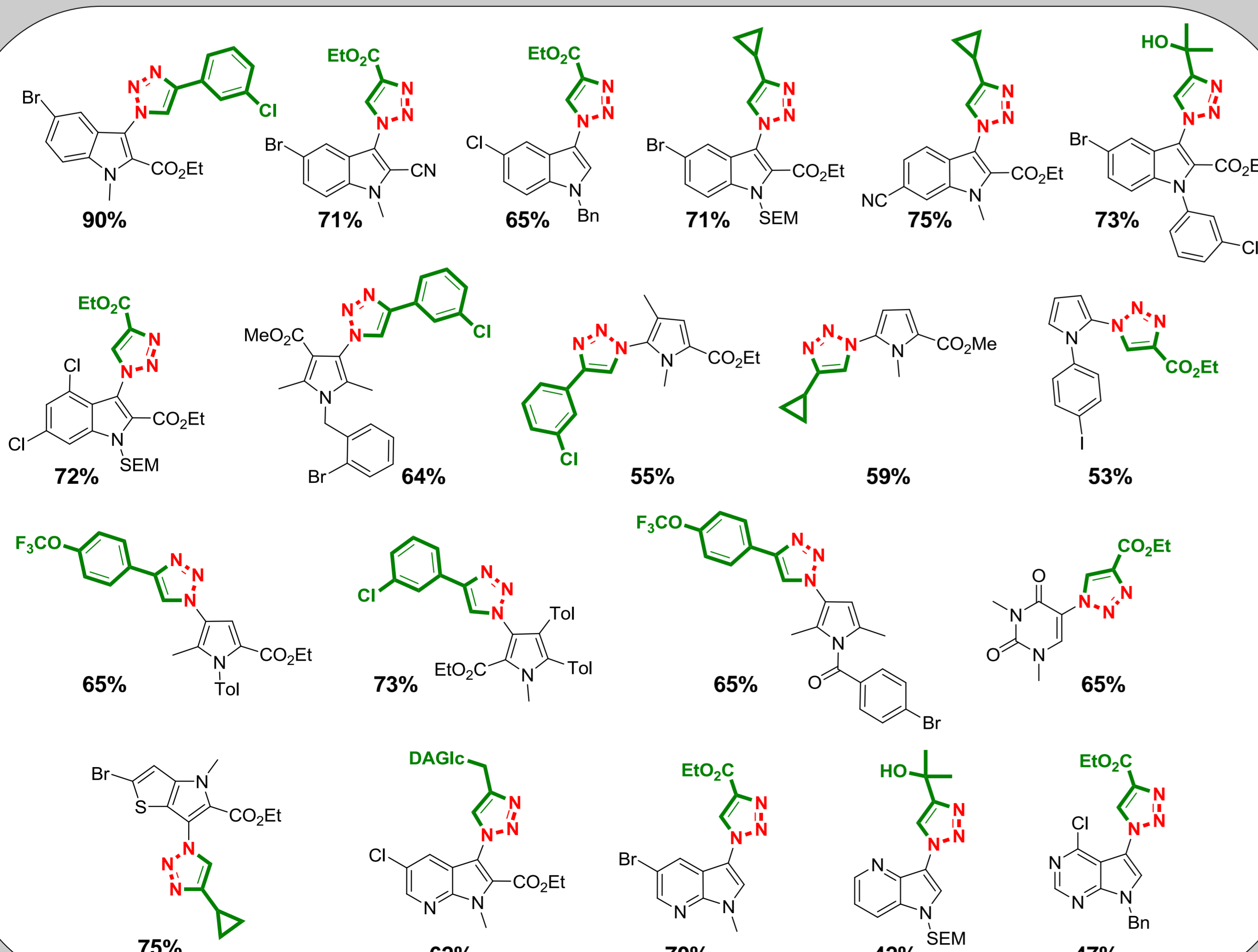
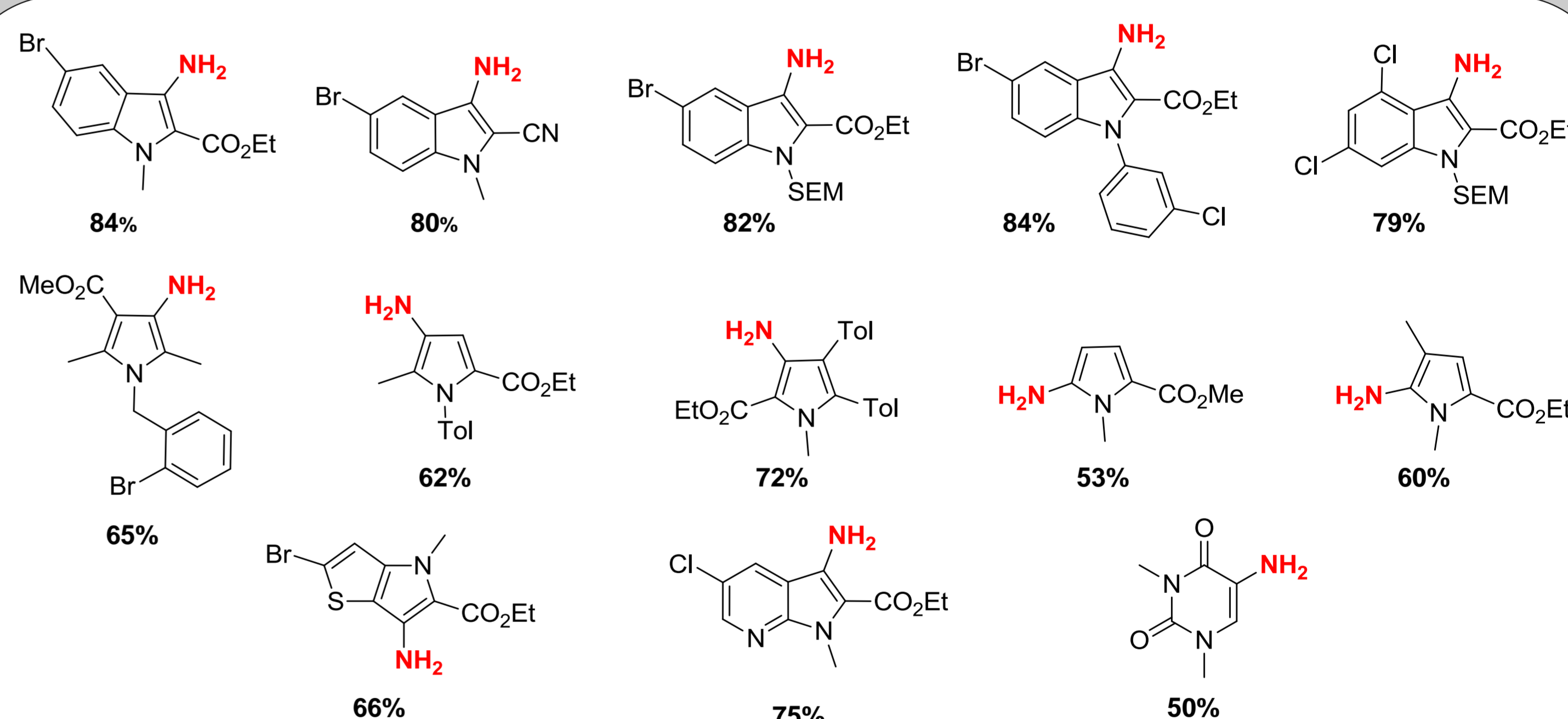
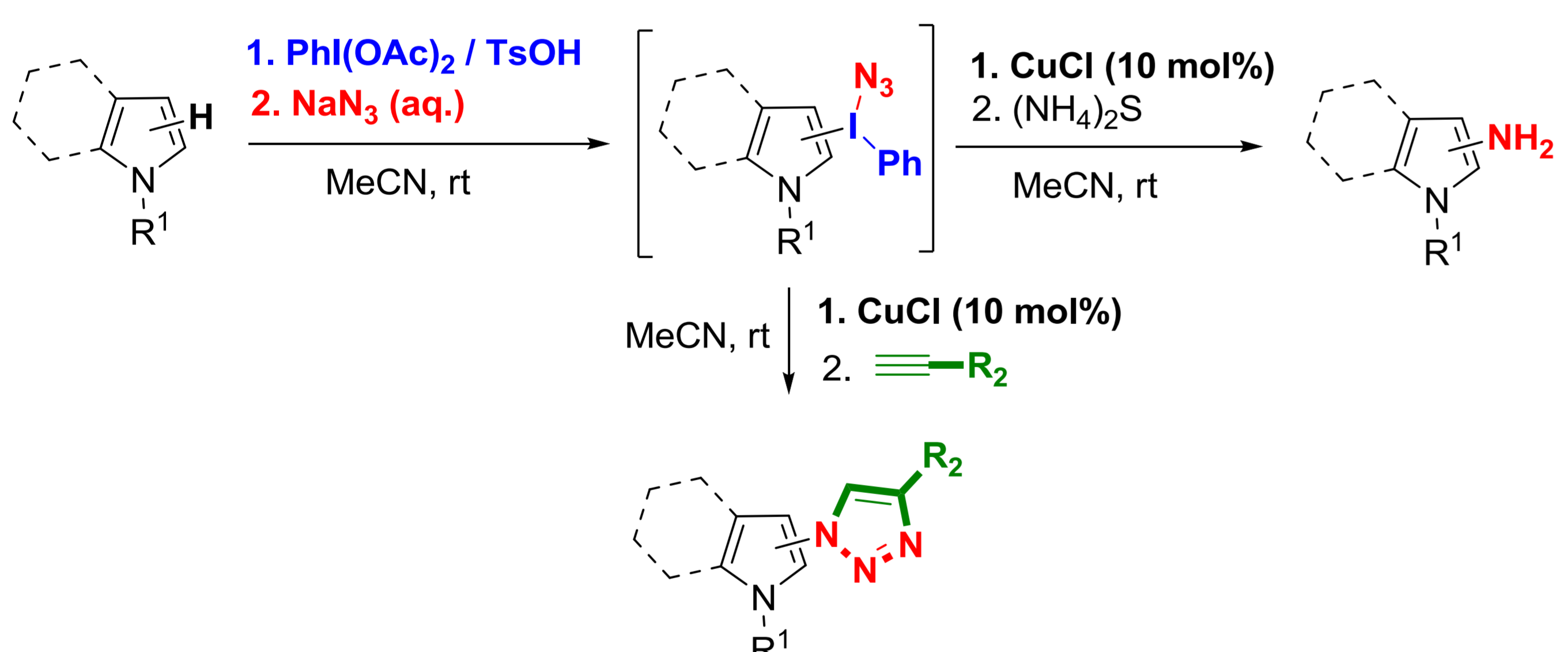


Pd-catalyzed regioselective one-pot acetoxylation of heterocycles

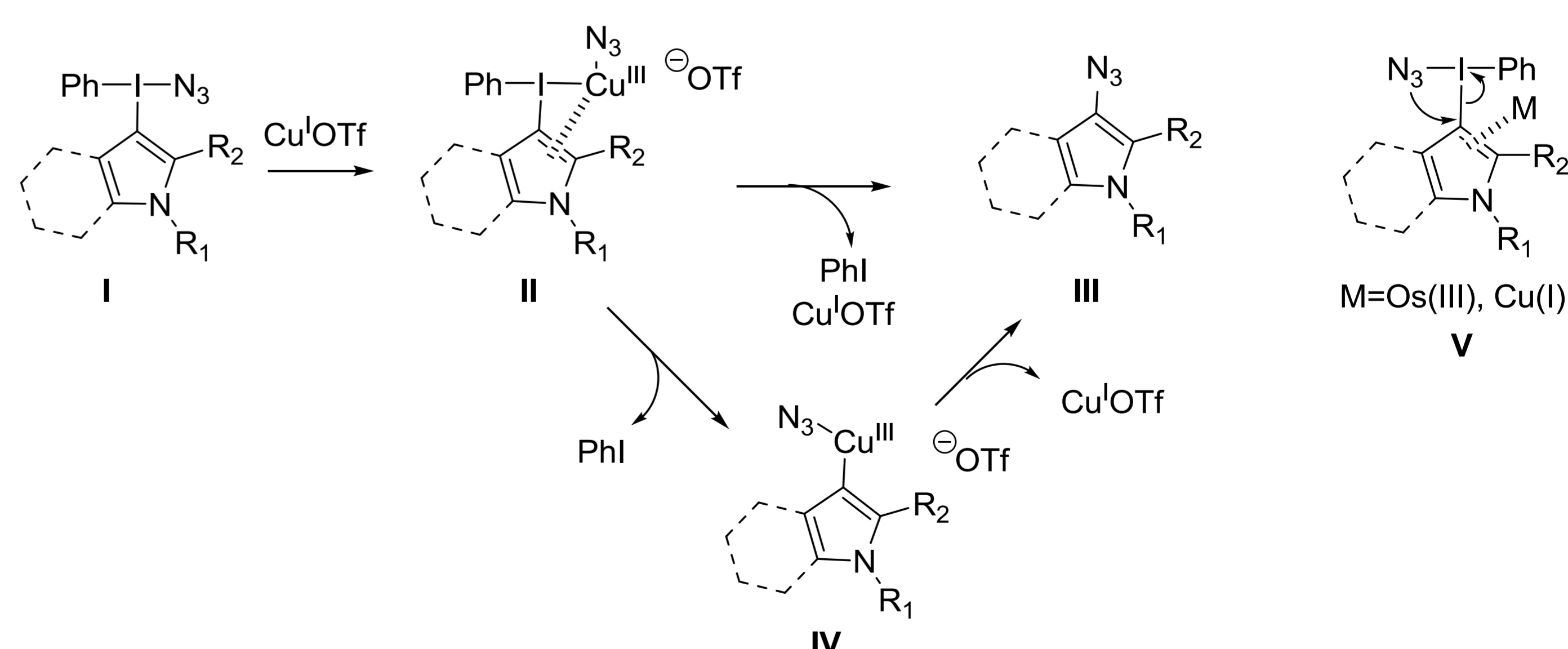


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Cu-catalyzed regioselective one-pot sequential amination of heterocyclic C-H bonds



Working mechanism



- Catalytic cycle of azides formation involves Cu(I)/Cu(III) sequence
- Radical chain process was excluded by experiments with addition of radical scavengers
- Regioselectivity of nucleophile attack presumably is controlled by transient π -complex II between heterocycle and highly electrophilic Cu(III) species. This is supported by a successful application of π -acidic Os(III) complex V

Manuscript submitted