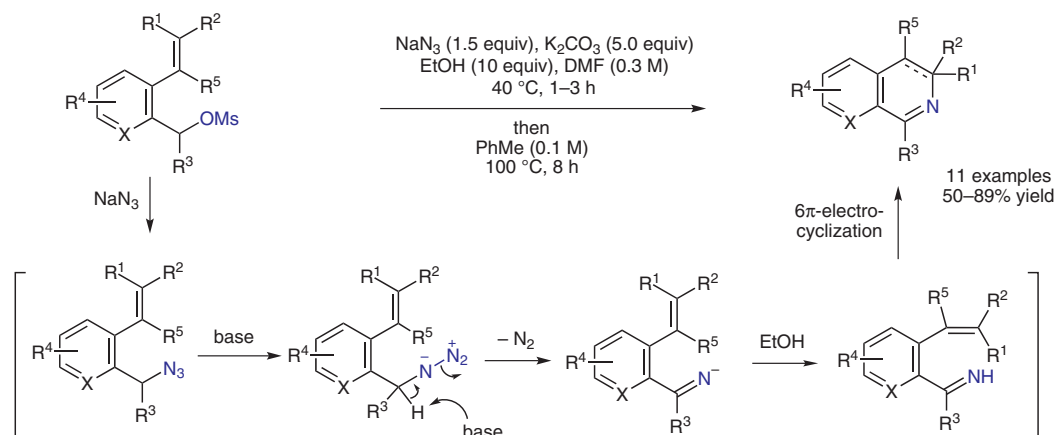
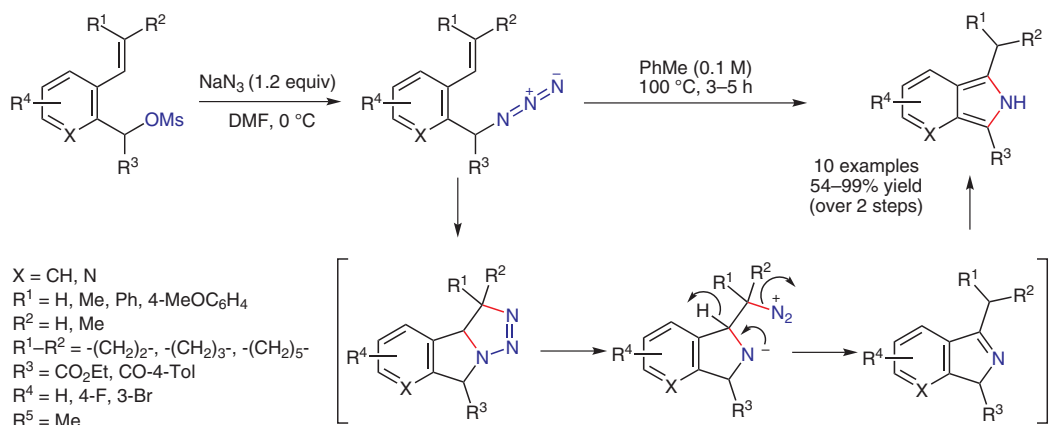


Synthesis of Isoindoles and Isoquinolines via 1,3-Dipolar Cycloaddition and Electrocyclization



Significance: Reported is a two-step sequence for the synthesis of isoindoles from α -azido carbonyl compounds containing a 2-alkenylaryl unit via 1,3-dipolar cycloaddition of azide onto the tethered alkene. It was also realized that the synthesis of dihydroisoquinolines can be achieved from the same starting mesylate by reacting it with NaN_3 , then with base (K_2CO_3) in EtOH (as proton source) followed by 6π -electrocyclization under dilution in toluene. Some of the dihydroisoquinolines gave the corresponding isoquinoline derivatives under aerial oxidation.

Comment: Due to their high fluorescent and electroluminescent properties, isoindoles and their derivatives are important for light-emitting devices (B.-X. Mi et al. *Chem. Mater.* **2003**, *15*, 3148). They also serve as highly reactive dienophiles for cycloaddition reactions (S. Duan, D. K. Sinha-Mahapatra, J. W. Herndon *Org. Lett.* **2008**, *10*, 1541). The substitution pattern is very well studied, but the starting material (mesylate) was prepared through a four-step sequence which could be a drawback of this method.