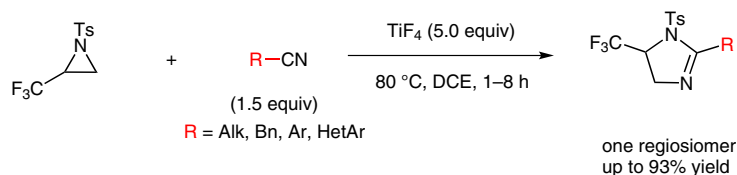
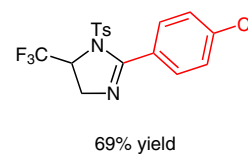
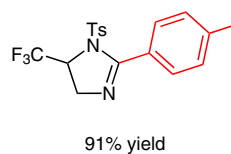
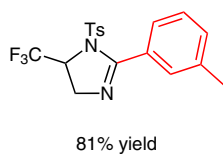
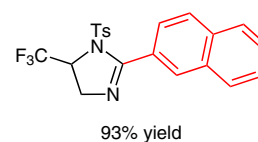
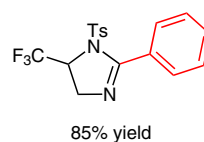
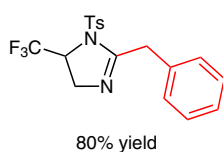


M. YOSHIKAI, R. ISHIBASHI, Y. YAMADA, T. HANAMOTO\* (SAGA UNIVERSITY, JAPAN)  
 TiF<sub>4</sub>-Mediated Regioselective Cycloaddition of 2-(Trifluoromethyl)-*N*-tosylaziridine to Nitriles  
*Org. Lett.* **2014**, *16*, 5509–5511.

## Titanium-Mediated Cycloaddition



### Selected examples:



**Significance:** The authors describe a mild and efficient [3+2] cycloaddition of 2-(trifluoromethyl)-*N*-tosylaziridine to various nitriles using TiF<sub>4</sub> as a Lewis acid, to give the corresponding 4-(trifluoromethyl)-1,3-imidazoles in good yields and excellent regioselectivity.

**Comment:** From a mechanistic point of view, the authors assume that the aziridine is activated by TiF<sub>4</sub>, which is then attacked by the nitrile to afford the betaine intermediate, which collapses to form the 1,3-imidazole.