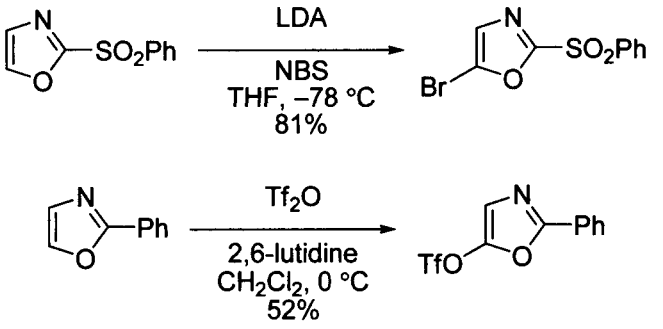

6.4.2 *Stille Coupling*

Preparation of stannyloxazoles

Oxazole can be lithiated with *n*-BuLi and quenched with either trimethyltin chloride or tributyltin chloride to prepare 2-stannyloxazoles.[67–69] Benzoxazole can be lithiated and trapped with trimethyltin chloride in a similar manner.[70] When the C2 and C5 positions of the oxazole ring are substituted, C4 can be lithiated and trapped with tributyltin chloride to provide the 4-stannyloxazole in good yield.[71] However, once prepared, the 4-stannyloxazole proved recalcitrant in the Stille coupling. The reaction can be coaxed into producing decent yields, however, when a stoichiometric amount of CuO is added. As long as the C2 position is substituted, lithiation of the oxazole ring and trapping with stannyl chlorides provides the 5-stannyloxazole. Both Williams and Miller showcase general methods for the preparation of C5-stannyloxazoles from their 2-phenylsulfonyloxazole[65] or 2-triisopropylsilyloxazole,[51] respectively.