One-Pot Preparation of Hydroxyaryl- and (Hydroxyalkyl)aryltrifluoroborates

Significance: A simple one-pot synthesis of both potassium hydroxyaryl- and (hydroxyalkyl)aryltrifluoroborates was developed. The respective hydroxyl groups are protected in situ via deprotonation with $t$-BuLi. The hydroxylated trifluoroborates could be successfully subjected to Suzuki–Miyaura cross-coupling reactions where they are less subject to protodeboronation. Moreover, organotrifluoroborates are stable, crystalline solids that are easy to purify.

Comment: This method offers an easy one-pot access to various hydroxylated trifluoroborates. Organotrifluoroborates are often superior to their boronic acid or ester counterparts in Suzuki–Miyaura cross-coupling reactions where they are less subject to protodeboronation. Moreover, organotrifluoroborates are stable, crystalline solids that are easy to purify.