Steric-Controlled para-C–H Borylation of Common Arene Building Blocks

Significance: The authors report a highly para-selective C–H borylation of common arene building blocks, including phenols and anilines. So far, the majority of borylation methods have favored ortho or meta functionalization. The most common procedure includes a prior transformation of the substrates into sulfate of sulfamate salts, which is essential for the regioselectivity.

Comment: Phipps and co-workers avoid the use of complex ligands. Alternatively, they use steric blockage of the ortho or meta position to selectively achieve the desired para functionalization. There, the ammonium cation of the preformed sulfate salt plays a key role. Detailed studies showed that the length of the alkyl chains is of crucial importance to achieve a high selectivity.