Silver-Mediated Trifluoromethylation–Iodination of Arynes

Significance: The authors report the silver-mediated trifluoromethylation–iodination of various arynes using iodophenylacetylene as the iodinating agent, TMP (2,2,6,6-tetramethylpiperidine) as the ligand and AgCF₃ as the trifluoromethyl source, leading to the difunctionalized aromatics in high yield.

Comment: Mechanistic studies reveal that TMP on the one hand shows a strong halogen-bonding interaction with iodophenylacetylene and on the other hand coordinates the silver–aryl–CF₃ intermediate, thus suppressing the formation of protonated species (e.g., PhCF₃).