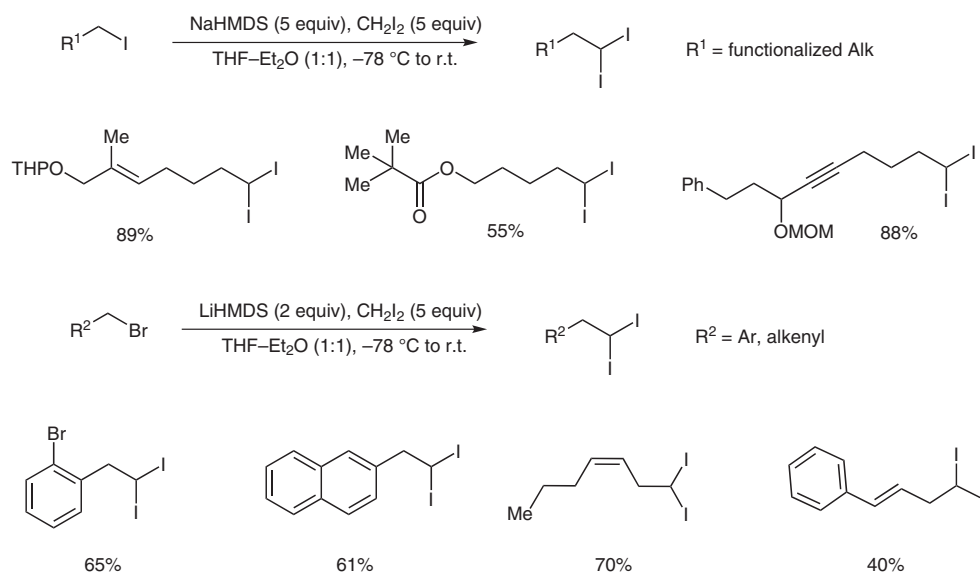


Improved Synthesis of *gem*-Diiodoalkanes



Significance: *gem*-Diiodoalkanes are useful precursors in several organic transformations like Simmons–Smith cyclopropanation and Takai olefination. This method allows a convenient preparation of *gem*-diiodides by the alkylation of diiodomethyl anion with alkyl iodides or benzylic and allylic bromides. A broad functional group tolerance is demonstrated for this reaction.

Comment: The alkylation of LiCHI₂ and NaCHI₂ proved to be rather difficult due to their instability toward elimination even at –78 °C. Thus, an excess of this salt is required. Secondary alkyl iodides gave low conversion (56% for *i*-PrI), which makes the purification of the final product practically impossible. Elimination of HI from sensitive products impairs the yields in some cases.