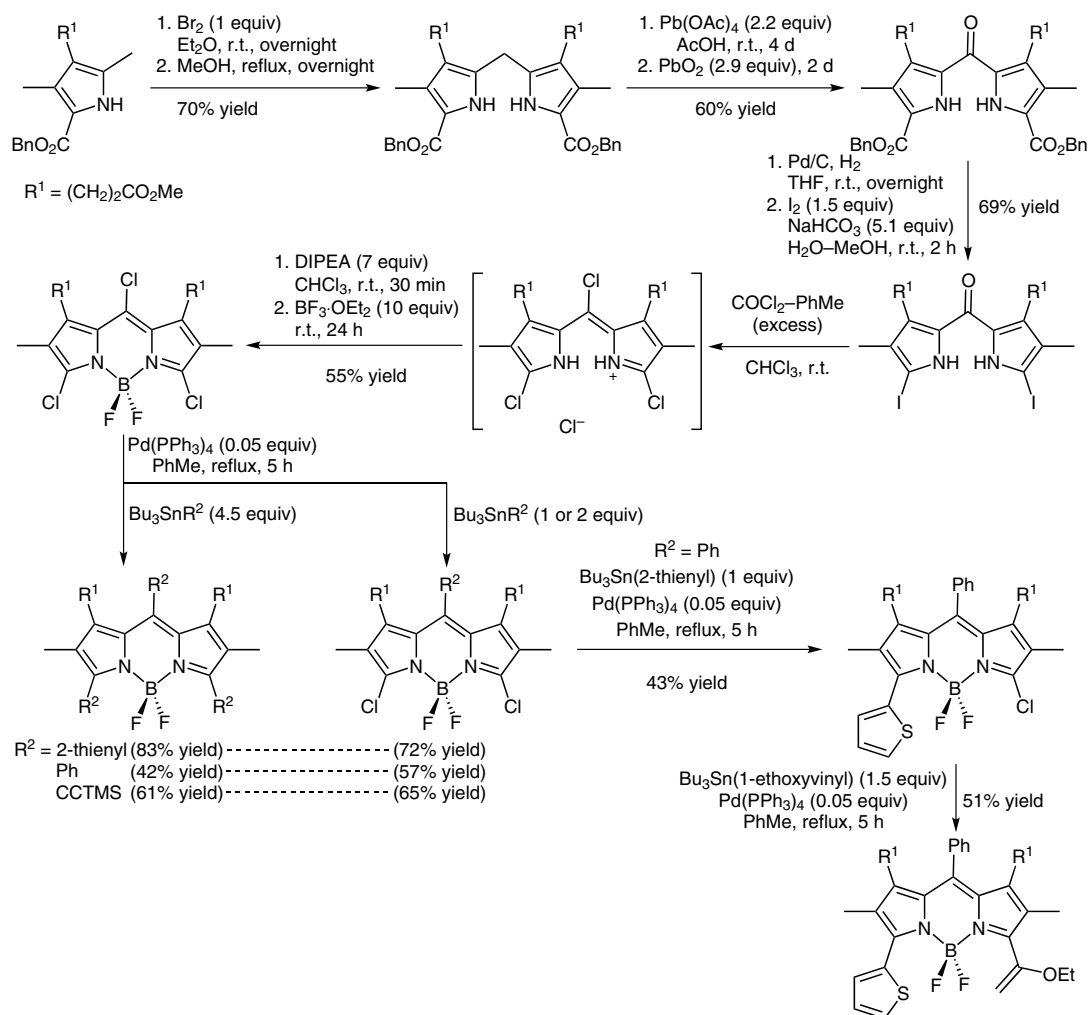


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Functionalization of 3,5,8-Trichlorinated BODIPY Dyes

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Phosgene as Key Reagent for Trifunctionalization of BODIPY Dyes



Significance: The functionalization of BODIPY fluorescent dyes allows the tuning of their photo-physical, hydrophobic, and charge-transfer properties. Smith and co-workers utilize phosgene to access a 3,5,8-trichlorinated BODIPY. Exploiting the higher reactivity of the vinylic chloride in Stille couplings, regioselectively functionalized BODIPY dyes are synthesized.

Comment: Starting from a trichlorinated BODIPY and performing mixed Stille couplings with only four different organotin reagents, 14 new BODIPY dyes are reported in this paper. Photophysical properties are tunable via substitution at the 3-, 5-, and 8-positions. A plethora of regioselectively functionalized BODIPY dyes should be accessible through this strategy.

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