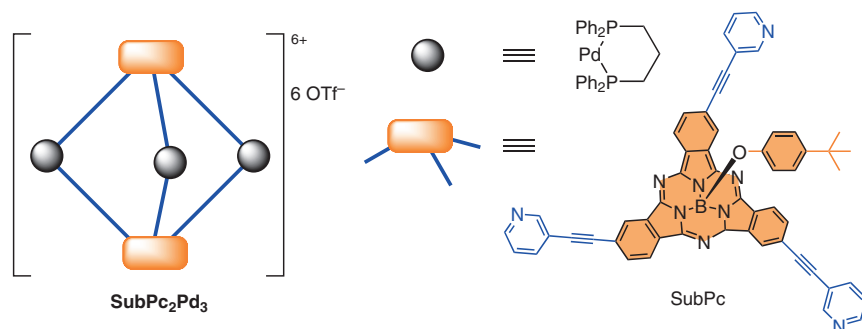
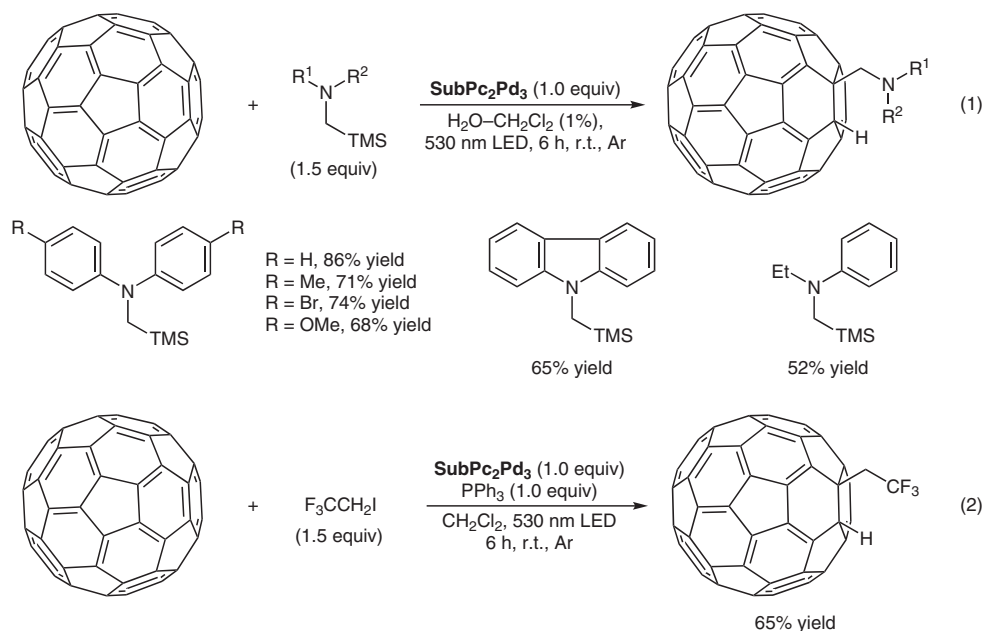


Amination and Trifluoroethylation of Fullerenes Promoted by Subphthalocyanine Capsules



Results:



Significance: A dimeric subphthalocyanine (SubPc) capsule ($\text{SubPc}_2\text{Pd}_3$) promoted the amination of C_{60} fullerene with aromatic (trimethylsilyl)amines in $\text{H}_2\text{O}/\text{CH}_2\text{Cl}_2$ and the trifluoroethylation with $\text{CF}_3\text{CH}_2\text{I}$ in CH_2Cl_2 under green-light irradiation to give the corresponding products in up to 86% yield (eqs. 1 and 2).

Comment: $\text{SubPc}_2\text{Pd}_3$ was prepared according to a previously reported method (*J. Am. Chem. Soc.* 2013, 135, 10503). It showed a much higher activity than monomeric SubPc in both reactions, indicating that the formation of host–guest complexes between $\text{SubPc}_2\text{Pd}_3$ and the fullerene accelerates the reactions.