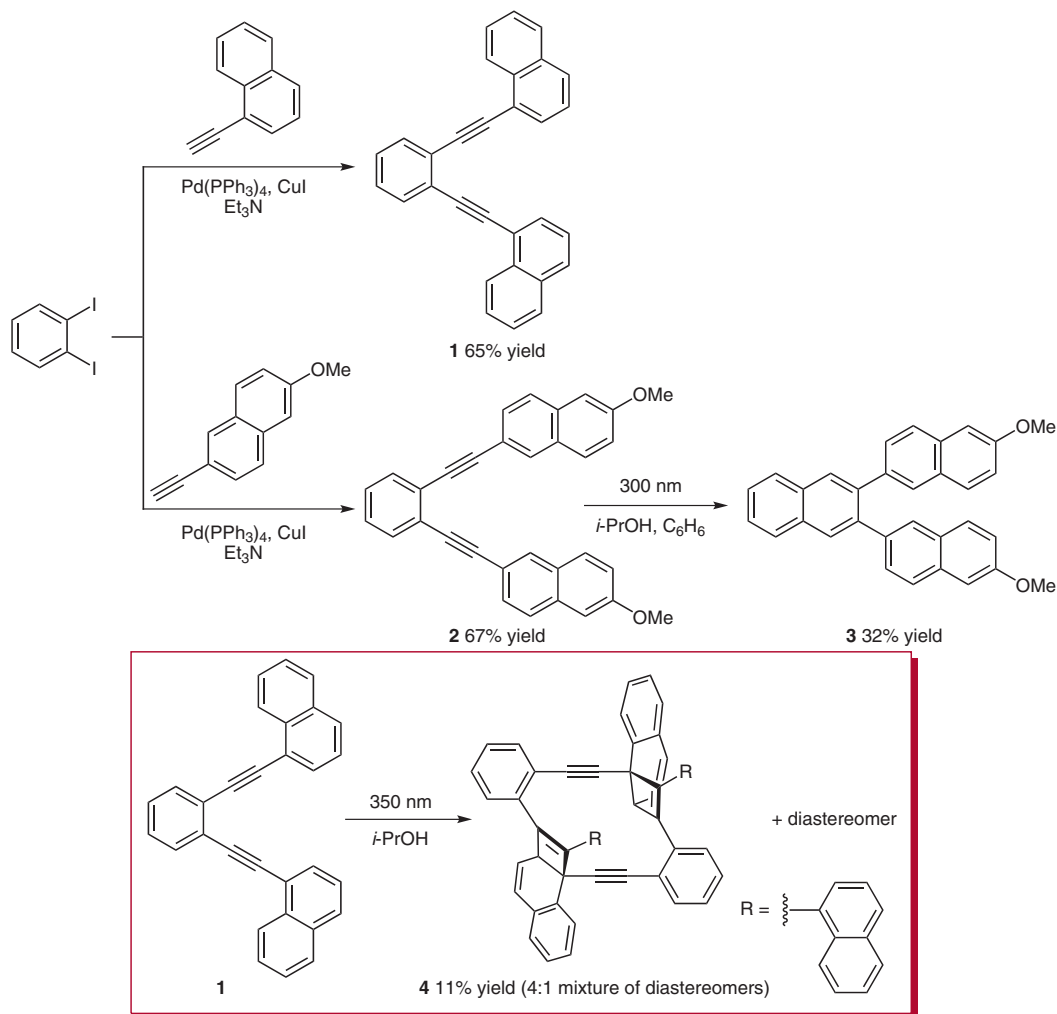


Photodimerization of Arenediynes



Significance: Cyclic enediynes as well as terminal acyclic enediynes are well known to undergo photochemical $\text{C}^1\text{-C}^6$ cycloaromatization. The authors explored the reactivity of naphthalenyl-substituted arenediynes (**1** and **2**). While the methoxy-substituted derivative **2** undergoes a photo-Bergman cyclization upon irradiation at 300 nm, **1** shows no formation of $\text{C}^1\text{-C}^6$ or $\text{C}^1\text{-C}^5$ under these conditions. Irradiation of **1** at 350 nm, however, yields a photodimerized product (**4**).

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Comment: The tandem [2+2] photocyclization yields two products in a 4:1 ratio. The structure of the major product (**4**) was determined by X-ray crystallographic analysis. Based on NMR studies, the authors suggest that the minor product is a diastereomer of **4**.