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Bay-Substitution of Perylene Bisimides with Bidentate Nucleophiles: The Case of Aryloxide Anions

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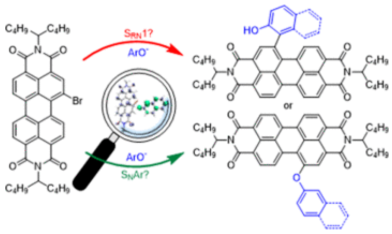
Abstract

In this study, we delve into the regioselectivity of nucleophilic reactions involving brominated perylene bisimides (PBIs) and various bidentate aryloxide anions, previously associated with an $S_{RN}1$ mechanism. We present herein a new perspective, suggesting that a single-electron-transfer aromatic nucleophilic substitution (SeT-S_NAr) mechanism is a more plausible scenario. Our study reveals the favorable impact of photostimulation on reaction yields, making our method a convenient approach for accessing *O*-arylated PBIs.



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