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Graphene Oxide Catalyzed C–H Bond Activation: The Importance of Oxygen Functional Groups for Biaryl Construction

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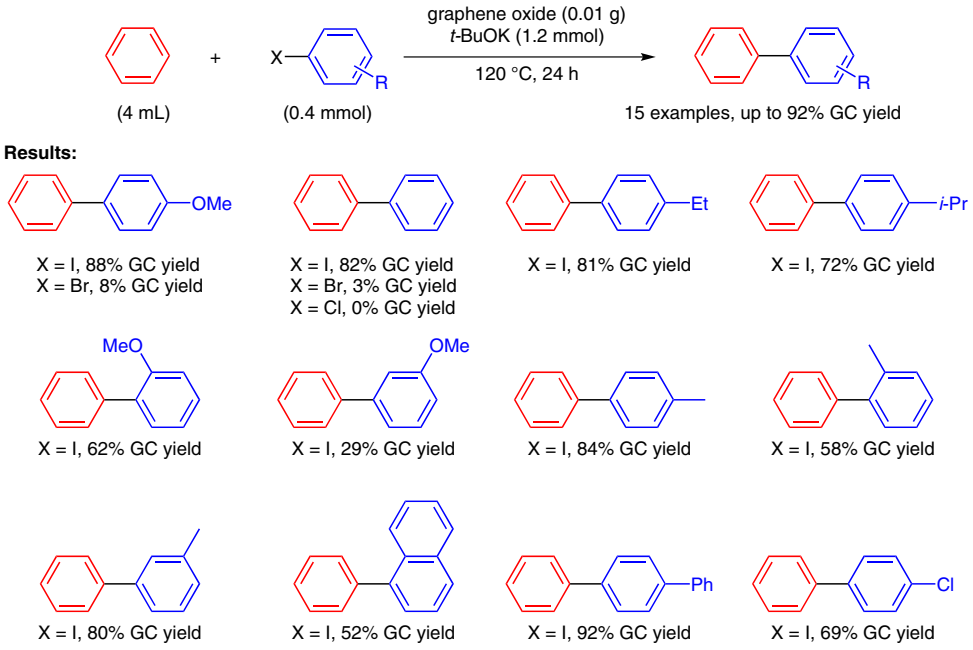
Graphene Oxide Promoted C–H Arylation of Benzene with Aryl Halides



Significance: Graphene oxide promoted the C–H arylation of benzene with aryl halides in the presence of *t*-BuOK to give the corresponding biaryls in ≤92% GC yield (15 examples).

Comment: The graphene oxide was characterized by TEM, AFM, Raman spectroscopy, XPS, SEM, and BET analyses. In the reaction of benzene with 4-iodoanisole, the catalytic activity of graphene oxide was superior to that of the other carbon materials (carbon nanotubes: 19% GC yield, active carbon: 11%, carbon black: 19%, natural graphite: 8%).

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Category

Polymer-Supported Synthesis

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graphene oxide
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biaryls