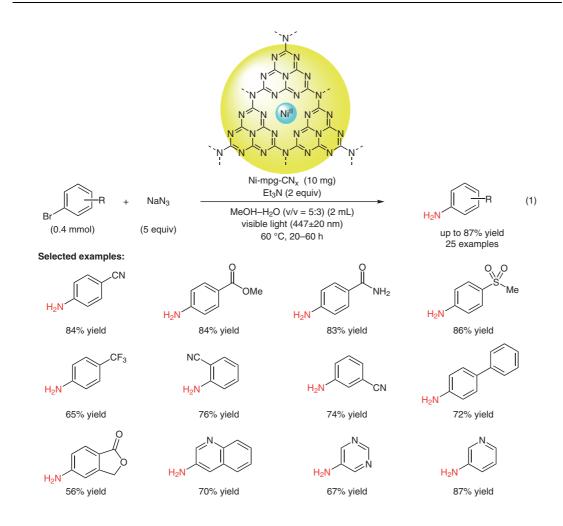
Photocatalytic Synthesis of Primary Aryl Amines from Aryl Halides and Sodium Azide by Ni on Carbon Nitride



Significance: A nickel-deposited mesoporous carbon nitride (Ni-mpg-CN_x) catalyzed the amination of aryl bromides with sodium azide in aqueous methanol in the presence of triethylamine as a base/electron donor under visible-light irradiation to give the corresponding primary aryl amines in ≤87% yield.

Comment: The authors have previously reported the preparation of Ni-mpg-CN_x and its application in the etherification of aryl halides with alcohols (Angew. Chem. Int. Ed. 2021, 60, 8494). In the reaction of 4-bromobenzonitrile, the catalyst was recovered by centrifugation and reused three times with a gradual loss of its catalytic activity (fresh: 84% yield; 4th run: 75% yield).

Category

Polymer-Supported Synthesis

Key words

photocatalysis nickel catalysis carbon nitride amination sodium azide aryl amines



SYNFACTS Contributors: Yasuhiro Uozumi, Teruki Takahashi Synfacts 2022, 18(09), 1003 Published online: 18.08.2022 **DOI:** 10.1055/s-0041-1738292; **Reg-No.**: Y07022SF