X. ZHAO, C. DENG, D. MENG, H. JI, C. CHEN, W. SONG\*, J. ZHAO (INSTITUTE OF CHEMISTRY, CHINESE ACADEMY OF SCIENCES, BEIJING, CHINA)

Nickel-Coordinated Carbon Nitride as a Metallaphotoredox Platform for the Cross-Coupling of Aryl Halides with Alcohols *ACS Catal.* **2020**, *10*, 15178–15185, DOI: 10.1021/acscatal.0c04725.

## Photoredox C–O Cross Coupling of Aryl Halides and Alcohols on Nickel-Coordinated Carbon Nitride

## Selected results:

**Significance:** Nickel-coordinated graphitic carbon nitride (Ni/g- $C_3N_4$ ), prepared according to Equation 1, catalyzed the C–O cross coupling of aryl bromides with alcohols under visible-light irradiation to give the corresponding aryl ethers in  $\leq$ 95% isolated yield.

**Comment:** The preparation of g-C<sub>3</sub>N<sub>4</sub> has been previously reported (X. Li et al. *J. Phys. Chem. Solids*, **2014**, 75, 441). In the C–O cross coupling of 4'-bromoacetophenone with MeOH, Ni/C<sub>3</sub>N<sub>4</sub> was recovered and reused four times without significant loss of its catalytic activity.

## Category

Polymer-Supported Synthesis

## Key words

nickel catalysis
carbon nitride
cross-coupling
photoredox catalysis
aryl halides
alcohols



**SYNFACTS Contributors:** Yasuhiro Uozumi, Ryoko Niimi Synfacts 2021, 17(03), 0309 Published online: 16.02.2021 **DOI:** 10.1055/s-0040-1706693; **Reg-No.:** Y00921SF