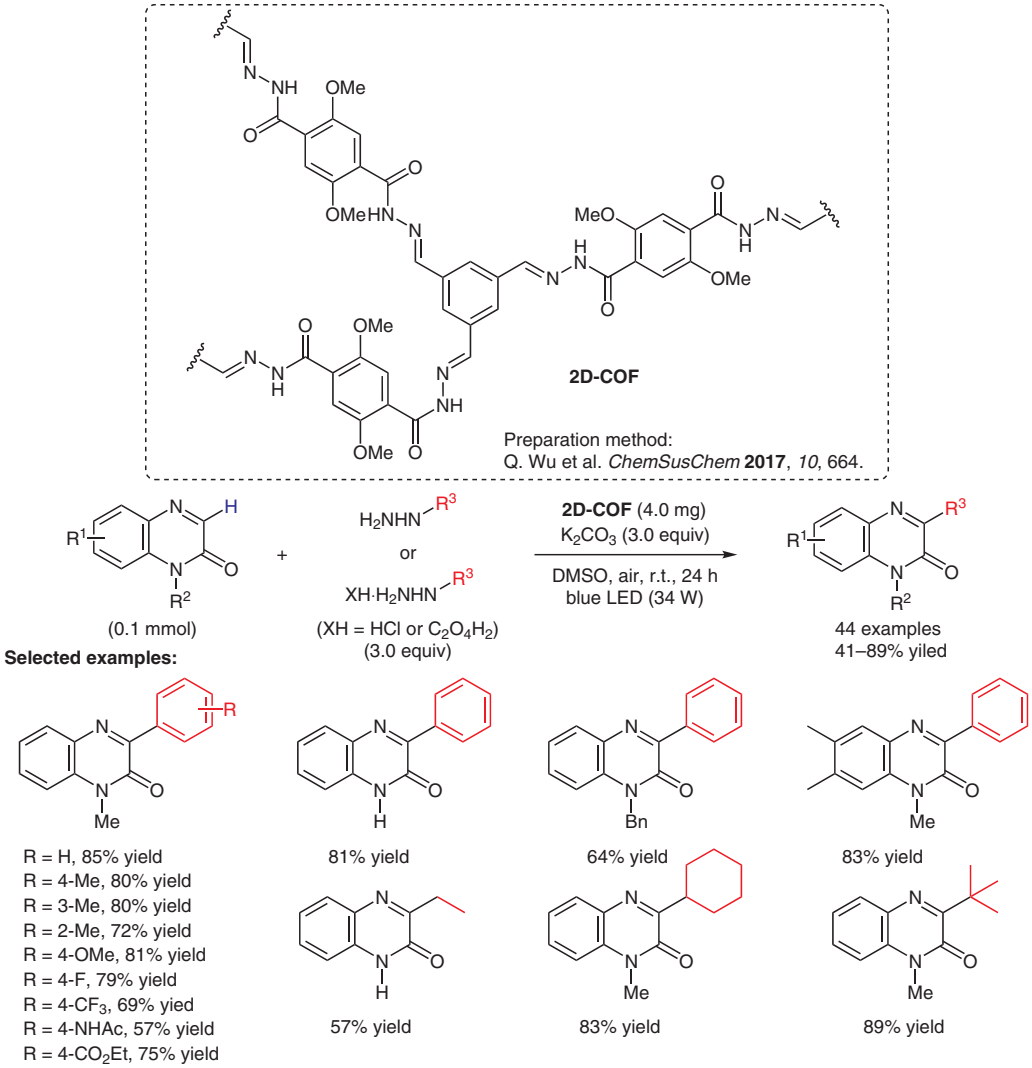
M. TIAN, S. LIU, X. BU, J. YU, X. YANG* (SHENYANG NORMAL UNIVERSITY, P. R. OF CHINA)

Covalent Organic Frameworks: A Sustainable Photocatalyst toward Visible-Light-Accelerated C3 Arylation and Alkylation of Quinoxalin-2(1*H*)-ones
Chem. Eur. J. **2020**, *26*, 369–373.

Photocatalytic C–H Alkylation of Quinoxalin-2-ones on a Covalent Organic Framework



Significance: A two-dimensional covalent organic framework (**2D-COF**) catalyzed the alkylation or arylation of quinoxaline-2-ones with alkyl- or arylhydrazines, respectively, under air with blue LED irradiation to give the corresponding C3-alkyl- or -arylquinoxaline-2-ones in ≤89% yield (44 examples). Primary, secondary, and tertiary alkyl and cycloalkyl hydrazines successfully gave the corresponding C3-alkylated products.

Comment: The authors have previously reported the use of **2D-COF** in other photocatalytic reactions (*Green Chem*. **2019**, *21*, 2905). In the reaction of 1-methylquinoxalin-2-one with cyclohexylhydrazine hydrochloride, the catalyst was reused five times without significant loss of its activity.

SYNFACTS Contributors: Yasuhiro Uozumi, Shun Ichii
Synfacts 2020, 16(04), 0439 Published online: 18.03.2020
DOI: 10.1055/s-0040-1707981; **Reg-No.:** Y02320SF