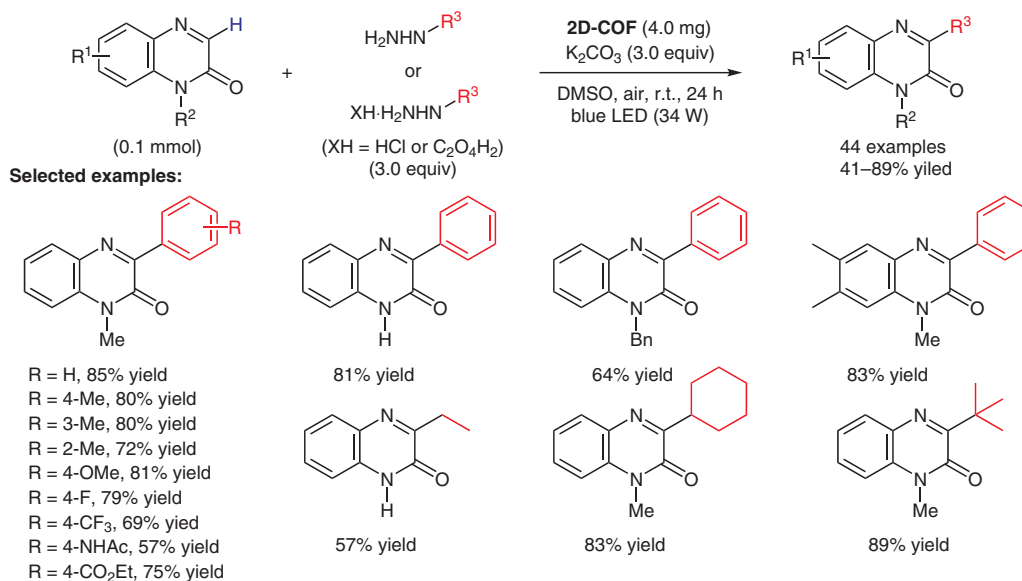
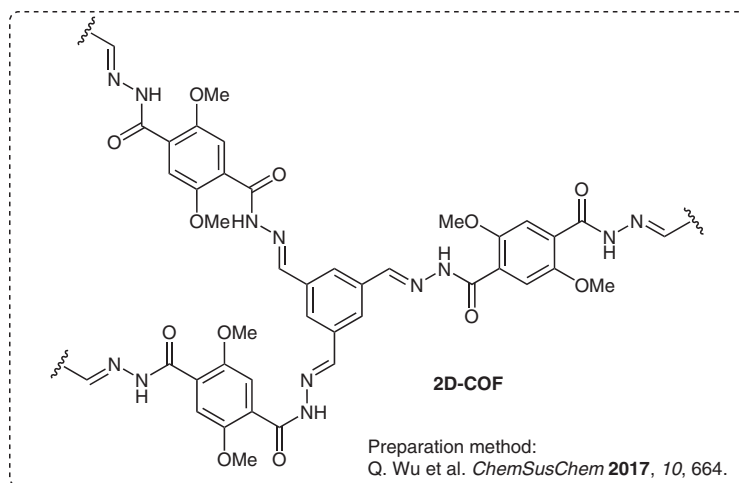


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Covalent Organic Frameworks: A Sustainable Photocatalyst toward Visible-Light-Accelerated C3 Arylation and Alkylation of Quinoxalin-2(1H)-ones

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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.

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