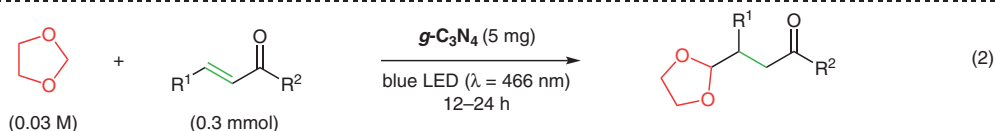
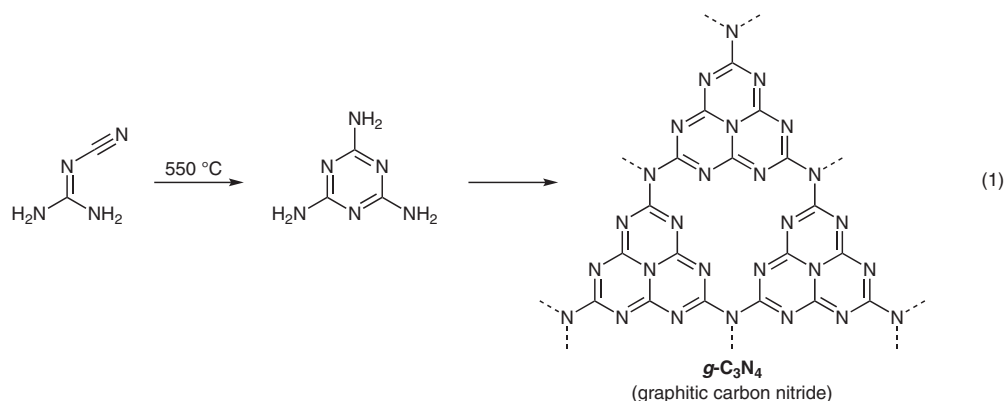
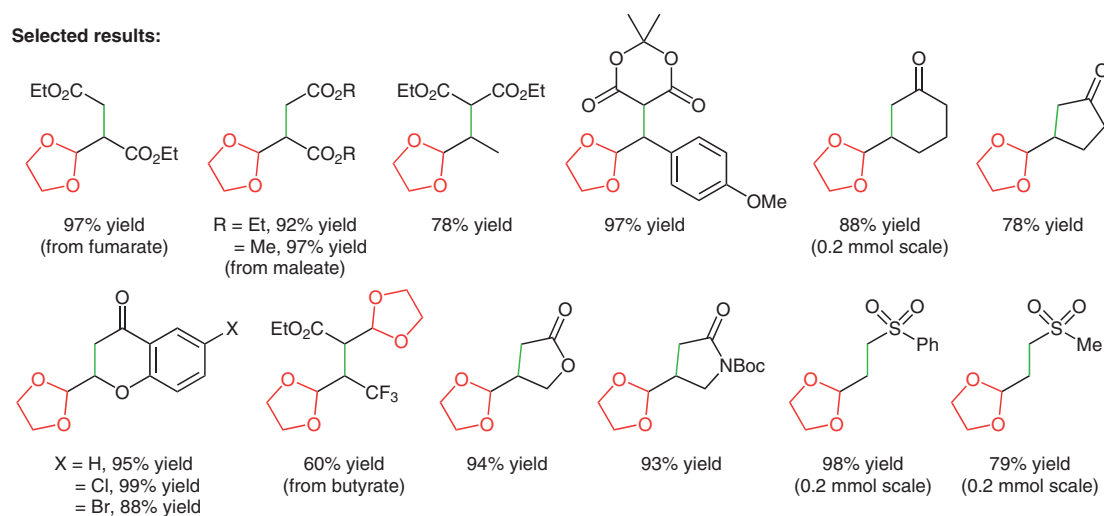


Photochemical Giese Reaction of Dioxolane and Vinyl Ketones on Graphitic Carbon Nitride



Selected results:



Significance: Graphitic carbon nitride ($\text{g-C}_3\text{N}_4$), prepared by thermal condensation of dicyandiamide (eq. 1), catalyzed the Giese reaction of 1,3-dioxolane with vinyl ketones under blue LED irradiation ($\lambda = 466\text{ nm}$) for 12–24 hours to give the corresponding products in $\leq 99\%$ yield (eq. 2).

Comment: In the Giese reaction of 1,3-dioxolane with diethyl fumarate, $\text{g-C}_3\text{N}_4$ was reused four times without a significant loss of its catalytic activity. SEM, FT-IR, XRD, UV/vis, and elemental (C, N, and H) analyses of the used catalyst revealed that its morphology remained intact during the reaction.