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SYNFACTS Highlights in Chemical Synthesis

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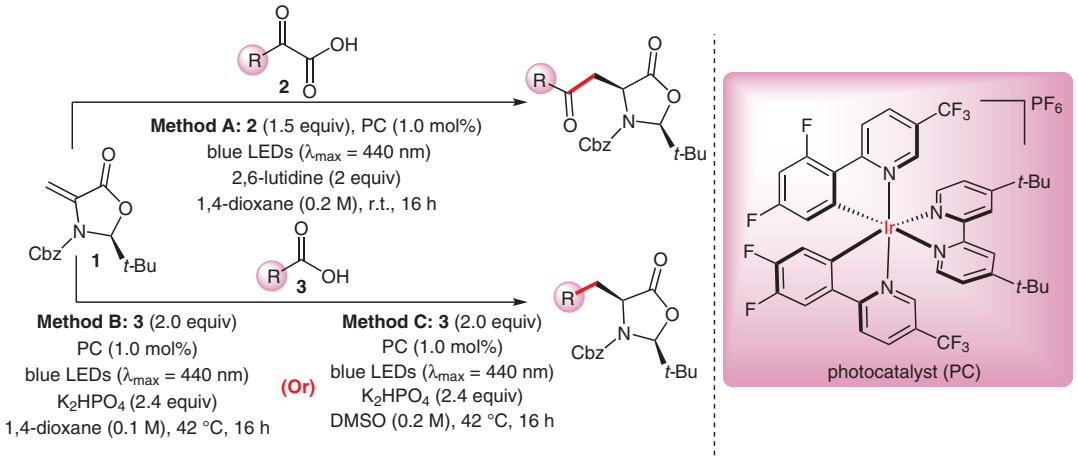
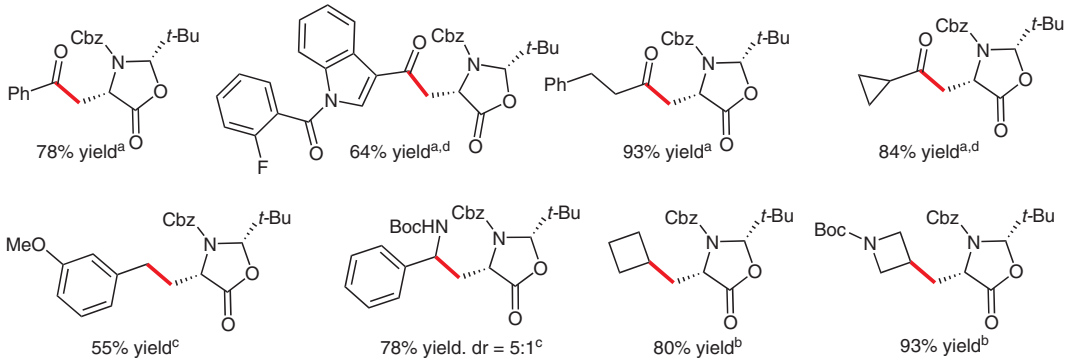
Synthesis of Unnatural α-Amino Acid Derivatives via Light-Mediated Radical Decarboxylative Processes
Adv. Synth. Catal. **2020**, *362*, 2354–2359.

Iridium-Photocatalyzed Synthesis of Nonnatural α-Amino Acids

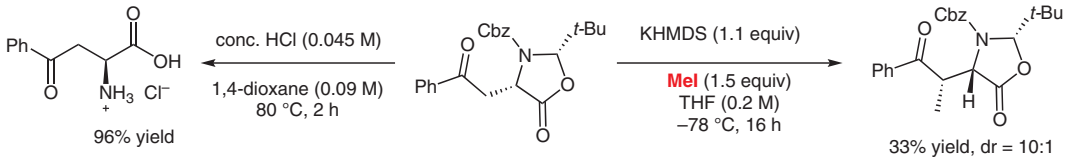


Selected examples



[a]Prepared by following method **A**. [b]Prepared by following method **B**. [c]Prepared by following method **C**. [d]2.5 equiv of acid and 3.3 equiv of 2.6-lutidine were used.

Synthetic utility of the protocol



Significance: Nonnatural amino acids are key building blocks for peptidomimetics and pharmaceuticals. In this context, visible light-mediated radical decarboxylative processes have been designed to permit access to nonnatural α-amino acid derivatives.

Comment: The iridium-catalyzed radical decarboxylation reaction proceeds smoothly to provide the desired α-amino acid derivatives in good yields. To showcase the synthetic utility of this protocol, the products were further transformed into deprotected and β-substituted amino acids.

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