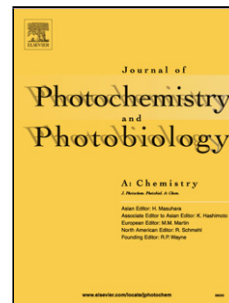


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Authors: Yuwei He, Haoguo Chen, Linyong Li, Jun Huang, Tiebo Xiao, Devireddy Anand, Lei Zhou



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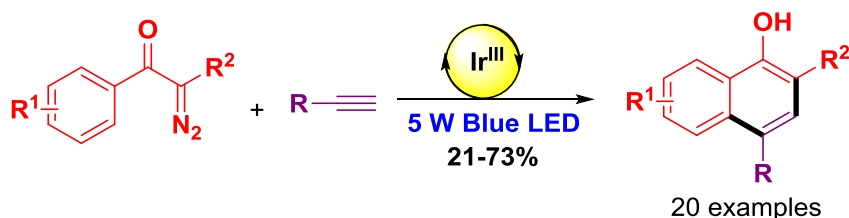
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Visible Light-promoted Radical Benzannulation of Diazoketones with Alkynes Leading to Polysubstituted Naphthols

Yuwei He, Haoguo Chen, Linyong Li, Jun Huang, Tiebo Xiao, Devireddy Anand, Lei Zhou*

School of Chemistry, Sun Yat-Sen University, 135 Xingang West Road, Guangzhou 510275, China

Graphic Abstract



Abstract: A visible light-promoted radical benzannulation of diazoketones and alkynes for the synthesis of polysubstituted naphthols was developed. Unlike the classic Danheiser benzannulation of diazoketones and alkynes *via* vinylcarbene intermediates, the reaction proceeds through a radical process, affording various polysubstituted naphthols with different regioselectivity. It represents a rare example of the activation of diazoketones by visible light photoredox catalysis, which generates enolated vinyl radical ions under mild and environmentally friendly conditions.

Keywords: diazo compound; radical; benzannulation; naphthol; visible light

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