

Visible Light Photocatalysis: New Strategies in Bond Construction

Speaker:

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Venue: E104 room, School of Science



Recent advances in chemical synthesis are driven by the need for new tools which improve the efficiency of synthesis and the challenge to discover new reactions that are of broad strategic value. Within this context visible light photoredox catalysis has led to recognizable innovations in the practice of synthetic organic chemistry and continues to play a vital role in the discovery of novel reactivity, enabling carbon-carbon and carbon-heteroatom bond formation without the restrictions encountered with traditional bond construction. Recent advances from our group in which visible light photoredox catalysis is harnessed for new reaction development will be discussed. This lecture will examine the discovery of general approaches for C–H arylation and halogenation of C(sp³)–H-rich substrates at ambient conditions via palladium photoredox catalysis. Furthermore, new visible light photocatalytic methodology to access pharmaceutically relevant N-heterocycles is presented.

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