

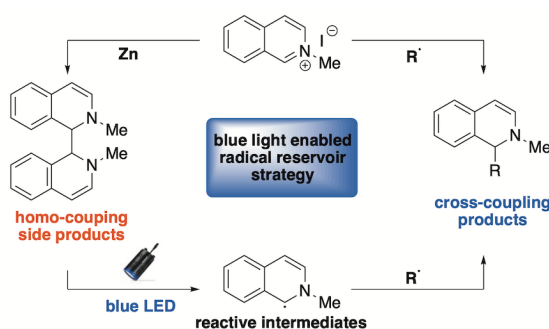
Blue Light Enabled C—C Bond Cleavage in Heteroarene Dimers. Dearomative Alkylation Heteroarenenium Salts.

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Nitrogen heterocycles are a common motive in bioactive compounds.¹ Dearomatization of heteroarenes is an efficient strategy towards synthesis of substituted nonaromatic heterocycles.² This work presents a method for dearomatization of nitrogen heterocycles via cross electrophile coupling. The method uses N-alkyl salts and alkyl halides as coupling partners. Wide variety of substrates are explored. Mechanistic studies are performed to understand the nature of the reactivity.



Proposed mechanism involves a homolytic C—C bond cleavage in heteroarene homocoupling products. The resulting radicals are then trapped by alkyl radicals to form the target products.³

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- (3) Garayev, A.; Drake, E. E.; Miliordos, E.; Karimov, R. R. Dearomative Alkylation of Heteroarenenium Salts via Blue Light Enabled Homolytic C-C Bond Cleavage. *Org. Lett.* **2025**, 27 (7), 1644-1649..