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## Visible Light Photoalkylation of 2-Arylimidazo[1,2-a]pyridines on C3 Position via EDA Complex Formation with Katritzky Salts

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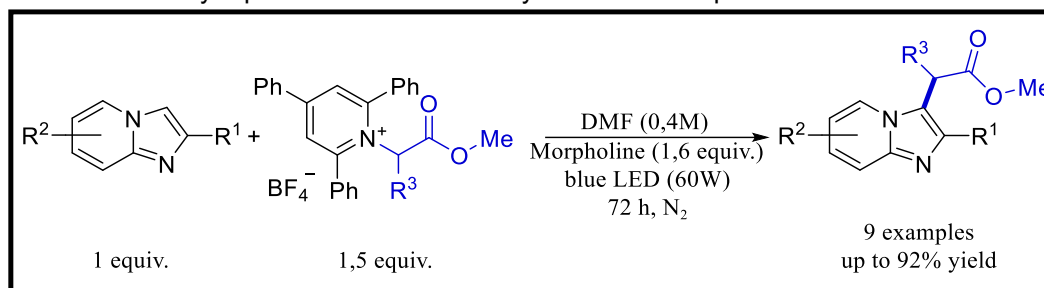
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### ABSTRACT

The use of visible light-driven photochemical reactions has become increasingly frequent in organic synthesis, as it usually allows for good selectivity, safety and mild conditions. Unfortunately, most organic systems do not absorb visible light<sup>1,2</sup> requiring the addition of a photocatalyst or the formation of an Electron Donor-Acceptor (EDA) complex as a way of activating the system<sup>3</sup>. The formation of EDA complexes alters the region in which the organic compounds absorb, making it possible for them to be activated by visible light<sup>4</sup>. In the present study we explored the C3-alkylation<sup>5</sup> of 2-arylimidazo[1,2-a]pyridines derivatives in the presence of Katritzky salts and morpholine under visible light. Optimization of the reaction conditions was conducted and substrate scope valuation is ongoing, with 9 examples accomplished so far, with up to 92% yield. Among the compounds obtained is a known precursor of Zolpidem<sup>6,7</sup>, a sedative-hypnotic drug<sup>8</sup>. This may represent an alternative synthesis for this pharmaceutical.



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