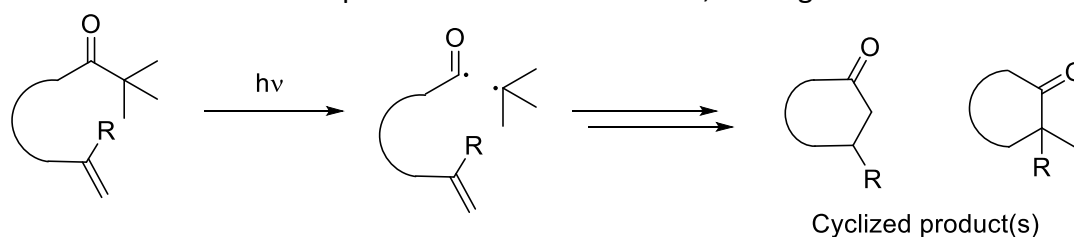


## Photoinduced intramolecular cyclization via Norrish I reaction

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In the last decades, photochemistry has become more important in synthesis, with the wish to develop greener and more sustainable chemistry. Applying this chemistry to the synthesis of natural products leads to new possibilities in terms of transformations and bond formation. In this project, the idea is to use a photochemical reaction, the Norrish type I, to afford cores bearing multiple rings via an intramolecular cascade reaction. Norrish reactions were described for the first time by Norrish in 1932<sup>1</sup> and were widely studied, and as well applied in the synthesis of natural products.<sup>2</sup> Nevertheless, it was, to the best of our knowledge, never used to form multi-ring systems via an intramolecular cascade reaction. In this work, the focus stands in the study of short chain irradiations. By performing several modifications on the substrates, as well as screening different conditions, the change in the ratio between desired products and Paternó-Büchi products could be observed, leading toward the desired cycles.



Looking at those promising results, achieving the desired cyclization on longer chains could lead to the formation of cores using a simple irradiation. Those could further be used in the synthesis of natural products.

[1] Norrish, R. G. W.; Kirkbride, F. W., *J. Chem. Soc.* **1932**, 1518

[2] Albini, A., *Photochem Photobiol Sci* **2021**, 20 (1), 161–181