

Shining light on the Hammond Postulate

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The Hammond postulate has been used for decades for approximating the energy and the structure of transition states.¹ It was however meant for predicting the fate of thermal reactions, and this model has been so far very successful. But what about photochemical reactions? The model becomes more questionable, as different energy surfaces are involved. So far, there are no systematic studies on the validity of the Hammond postulate for photochemical reactions. In this seminar, we will discuss our approach to probe the Hammond postulate using the stereospecificity of a photochemical reaction as a proxy for the position of the transition state and/or the conical intersection.²

References:

- [1] Hammond, G. S. A Correlation of Reaction Rates. *Journal of the American Chemical Society* **1955**, 77 (2), 334–338. <https://doi.org/10.1021/ja01607a027>.
- [2] Bochet, C. G.; Harvey, F. M. Is There a Photochemical Hammond Postulate? *Chem. Sci.* **2021**, 12, 599–605. <https://doi.org/10.1039/D0SC04370B>.