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Phenanthrenequinone Photoclick Chemistry

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Stellingen

Behorende bij het proefschrift

Phenanthrenequinone Photoclick Chemistry

door

Youxin Fu

1. Photoclick reactions, a unique blend of photochemistry and click chemistry, provide an ideal platform for selective product formation, high conversion rates, rapid kinetics, diverse functional group compatibility and mild conditions. (*This thesis*)
2. The reaction rate is often emphasized as a crucial parameter for evaluating photoclick reactions, while the true importance of the photoreaction quantum yield in this process is frequently overlooked. (*J. Am. Chem. Soc.*, **2018**, 140, 14, 4860–4868, *This thesis*, Chapter 3 and 4)
3. Pay attention to every small parameter during experiments, as sometimes even minor changes can yield surprising outcomes. (*This thesis*, Chapter 4)
4. When disparities arise between your observations and the literature, remain calm. Uphold your confidence in your own results, recognizing that there are occasions when the literature itself could harbor inaccuracies. (*J. Phys. Chem. A*, **2015**, 119, 10147–10157, *This thesis*, Chapter 4)
5. “In many air-equilibrated organic solvents the amount of oxygen present in solution is in the range 0.002 to 0.003 M (0.0005 M in water), which is high enough to quench more than 90% of long lived triplets.” (*Handbook of Synthetic Photochemistry*. John Wiley & Sons, **2010**). Therefore, deoxygenation sometimes provides a manner of increasing the reaction rate of photoclick reactions. (*This thesis*)
6. Triggering a photoclick reaction with near-infrared (NIR) light is an art of its own. (*This thesis*, Chapter 6)
7. Exploring a new research field in a team brings challenges from its uncharted nature, countered by the joy of discovery and contributing to knowledge expansion.
8. As a PhD student, particularly if married, the pressure invariably arises from both academic and family. Thus, it becomes paramount to establish a delicate equilibrium between work and personal life to navigate these demands effectively.
9. After an exhausting workday, Chinese noodles are a reliable go-to dinner option – easy to prepare and impressively time-efficient, much like an ultrafast photoclick reaction.