Investigation on Photodeprotection Mechanisms of Selected Photolabile Protecting Groups

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Abstract

Anthraquinone (AQ) compounds have been used as photolabile protecting groups (PPGs) to protect alcohols, carboxylic acids and ketones. However, due to the lack of direct spectroscopic information for the transient species and intermediates related with the deprotection reaction(s), the photorelease mechanism(s) of these systems are still largely unknown. Recently, time-resolved transient absorption and time-resolved resonance Raman spectroscopic experiments and density functional theory computations are done for the mechanistic investigation of selected photolabile protecting groups using AQ compounds.123

Fig. 1: The study on the photodeprotection mechanisms of AQ-PPG.

Keywords: ultrafast transient absorption, time-resolved resonance Raman, photodeprotection reaction, anthraquinone

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