

Ultrafast Spectroscopic Study of Photoinduced Chemical Reactions

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Abstract: *Ultrafast spectroscopic studies have become one of the most influential and enlightening methods for grasping the fundamental processes that follow photoinduced chemical reactions. These are reactions wherein the molecule's absorption of light leads to its change in the time range from femtoseconds (10^{-15} s) to picoseconds (10^{-12} s). At such short times, the movement of electrons and nuclei in a molecule is very vigorous and changes very quickly. In this way, traditional spectroscopic methods fail to capture transient intermediate species or transition states that constitute the core of a photochemical reaction*

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