

Ultrafast Studies of Isomerization and Proton Transfer in Photoactive Fluorescent Proteins

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Photoswitchable fluorescent proteins play a key role in super-resolution microscopy, yet many details of the switching mechanism remain unresolved. In this presentation we will review some of the tools which are currently shedding new light on this problem, and then present a detailed report on the photoswitching mechanism of the prototypical photoswitch protein dronpa using transient IR spectroscopy. The measurements reveal relaxation dynamics occurring on multiple time-scales.