

Resonant four wave mixing femtosecond spectroscopy as a probe of protein dynamics

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Femtosecond electronic spectroscopy has been used to characterize the fluctuations of many cofactor-containing proteins. Nonlinear methods such as photon echo spectroscopy provide the ability to measure the spectrum of motions on femtosecond through nanosecond timescales and beyond. I will introduce the photon echo technique, survey published work by a few groups, and draw as many connections as possible between nonlinear femtosecond experiments and other methods such as MD simulations and NMR relaxation measurements.