DEVELOPMENT OF FEMTOSECOND STIMULATED RAMAN SPECTROSCOPY AS A PROBE OF PHOTOISOMERIZATION DYNAMICS

RYAN D. KIEDA, ADAM D. DUNKELBERGER, JAEYOON SHIN, TRACY OUDENHOVEN, and F. FLEMING CRIM, *Department of Chemistry, Universtiy of Wisconsin-Madison, Madison, WI 53706*.

Femtosecond stimulated Raman spectroscopy (FSRS) has proven to be a reliable probe of condensed phase dynamics by simultaneously achieving both exceptional temporal and frequency resolution. We report on preliminary attempts to utilize FSRS as a probe of the photoisomerization of dMe-OMe-NAIP (N-alkylated indanylidene pyrroline Schiff base) which is a mimic of the chromophore in Rhodopsin. We implement a 400 nm Raman pump/continuum probe process following a 400 nm actinic pump pulse which initiates photoisomerization. This initial work appears to corroborate previous transient absorption studies of NAIP while granting a vibrational mode specific look at the dynamics involved in relaxation from its excited state and subsequent vibrational relaxation.