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

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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 vibrational relaxation on the ground electronic state of cyclohexane. We implement a 400 nm Raman pump/probe process following an IR actinic pump pulse which excites the C-H stretch overtone. Progress toward the use of FSRS as a tool alongside transient absorption measurements in vibrationally mediated photoisomerization experiments will also be discussed.