

Abstract Submitted
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Development of Multi-Color Time-Resolved Spectroscopy Methods for Investigating Molecular Systems¹ KIRK LARSEN, ELIO CHAMPENOIS, TRAVIS WRIGHT, JAMES CRYAN, NIRANJAN SHIVARAM, DIPANWITA RAY, TYLER TROY, BISWAJIT BANDYOPADHYAY, OLEG KOSTKO, BRUCE RUDE, MUSA AHMED, ALI BELKACEM, DAN SLAUGHTER, Lawrence Berkeley Natl Lab — Ultrafast transient absorption spectroscopy facilitates the study of a systems electronic excited state dynamics. Employing a multi-color technique, the time evolution of excited states of a given target can be investigated in great detail. We have developed methods for performing multi-color experiments using a femtosecond UV (266nm) pulse obtained from a frequency tripled IR (800nm) pulse, in conjunction with soft x-rays from the synchrotron at the Advanced Light Source (ALS). We are additionally working towards developing similar techniques with multi-color, multi-pulse schemes using extreme ultraviolet light from a high harmonic generation (HHG) source as a probe. We also present reflectivity measurements of different mirror coatings, that allow us to select relevant energies from the HHG source.

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