

Abstract Submitted
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Time-resolved imaging of isolated molecular dynamics with a MHz repetition-rate relativistic electron probe¹ BRANDON GRIFFIN, University of Nevada, Reno, DANIEL SLAUGHTER, DANIELE FILIPPETTO, FUHAO JI, Lawrence Berkeley National Laboratory, XIAOJUN WANG, MARTIN CENTURION, University of Nebraska Lincoln, JOSHUA WILLIAMS, University of Nevada, Reno — Developments in the time-resolved imaging capabilities of isolated molecules at the Advanced Photo-injector Experiment facility at LBNL have been made. We report on progress in ultrafast, 750 keV, electron diffraction measurements from gas-phase molecules (GUED) with sub-Å spatial and 200 fs temporal resolution. Headway towards first direct-observations of photo-driven molecular dynamics via impulsive alignment using the High Repetition-rate Electron Scattering beamline will be discussed. Upgrades to the GUED apparatus will be presented accompanied by recent experimental results.

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