

Abstract Submitted
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Core-shell resonant Auger-decay induced fragmentation of glycine molecule¹ LI FANG, Center for High Energy Density Science, University of Texas at Austin, HUI XIONG, Physics Department, University of Connecticut, TIMUR OSIPOV, LCLS, SLAC, VLADIMIR PETROVIC, MARKUS GUEHRE, PULSE, SLAC, NORA BERRAH, Physics Department, University of Connecticut — We investigated the fragmentation of glycine molecular ions induced by resonant Auger decay with synchrotron light source. We measured the charge distribution and the kinetic energies of various fragment ions with photon energies at the oxygen and the carbon 1s electron excitation resonance, as well as at photon energies above the K-edge of the oxygen and carbon atoms. We studied the fragmentation pathways using ion-ion coincidence measurement with a velocity map imaging spectrometer. We observed closure of certain fragmentation pathways at the on-resonance photon energy and the opening-up of certain fragmentation pathways by ionization of certain atomic sites. We will present that resonant Auger leads to unique dissociation patterns.

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