

Abstract Submitted  
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**Site - Selective Ionization and Relaxation Dynamics in Heterogeneous Nano - Systems**<sup>1</sup> MATTHIAS HOENER, Western Michigan University, DANIEL ROLLES, MPA Study Group at CFEL, ALEJANDRO AGUILAR, Lawrence Berkeley National Lab, RENE BILODEAU, Western Michigan University, DAVID ESTEVES, University of Nevada, PAUL OLALDE VELASCO, UNAM, Mexico, EDDIE RED, Lawrence Berkeley National Lab, ZORAN PESIC, Institute of Physics, Belgrade, Serbia, NORA BERRAH, Western Michigan University — We investigated energy and charge transfer mechanisms as well as fragmentation dynamics in site-selectively ionized heterogeneous core-shell clusters using a high-resolution photoelectron - ion coincidence technique. We show that after inner-shell photoionization, energy or charge is transferred to neighboring atoms and that the subsequent charge localization depends on the site of ionization. Cluster bulk ionization leads to more distinct fragmentation channels than surface ionization. We attribute this to different electronic decay, charge localization and fragmentation times and conclude that charge transfer and fragmentation dynamics are strongly influenced by the environment of the initially ionized atom.

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