

Abstract Submitted
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Coincidence Measurements of the Auger Cascade Process in MnO, Ag and Pd.¹ R. SUNDARAMOORTHY, A.H. WEISS, University of Texas at Arlington, S.L. HULBERT, NSLS, Brookhaven National Lab, R.A. BARTYNSKI, Rutgers University — The Auger spectra associated with Auger cascade processes provides a probe of many-electron phenomena, the effects of screening and correlation in the intermediate and final many hole states. Here we present the first direct measurements of the energy spectra of electrons emitted in the later steps of Auger cascade processes in MnO, Pd and Ag performed using Auger-Auger coincidence spectroscopy (AACS). The Auger spectra resulting from the decay of core holes generated by a previous Auger cascade step (as measured by AACS) are shown to be broadened and shifted as compared to the Auger spectra resulting from the direct photo excitation of the corresponding core holes as measured by Auger photoelectron coincidence (APECS). The large differences between the Auger spectra resulting from the different origins of the core hole excitation are discussed in terms of the correlation effects in many hole excited states.

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