

Abstract Submitted
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Auger-Photoelectron Coincidence Measurements of the Low Energy Tail of Cu MVV and Ag NVV Auger Spectra¹ K. SHASTRY, Univ of Texas at Arlington, S.L. HULBERT, Q.Y. DONG, Brookhaven National Labs, R.A. BARTYNSKI, Rutgers University, A.H. WEISS, Univ of Texas at Arlington — We present the results of measurements in which Auger photoelectron coincidence spectroscopy (APECS) was used to obtain the energy distribution of electrons emitted as a result of the MVV transition in Cu over the range of 0eV-81eV and the NVV transition in Ag over the range 0eV - 100 eV. A novel differences technique was used together with APECS to eliminate all backgrounds from inelastic processes not directly related to the selected Auger transitions. The measurements reveal a well formed auger peak at 40 and 60 eV for Cu and Ag respectively accompanied by a significant spectral weight in a low energy tail of that extends to 0eV with a characteristic cascade like bump at low energies. We posit that the LET in the Cu and Ag spectrum is due to both extrinsic processes in which Auger electrons emitted with the full energy of the Auger transition lose energy as they propagate to the sample surface, as well as intrinsic mechanisms in which multi- electron Auger processes distribute the transition energy to multiple electrons

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