Abstract Submitted
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Laser Photodetachment Electron Spectroscopy of Zirconium Dimers[1] SRIVIDYA DUVVURI, AARON COVINGTON, VERNON DAVIS, ERIK EMMONS, RICHARD KRAUS, JEFFREY THOMPSON, Physics Department, University of Nevada, Reno — The electron affinity of the zirconium dimer has been measured using laser photodetachment electron spectroscopy (LPES). A photon beam emitted from a 532.2 nm CW laser crossed a 10 KeV beam of Zr_2^- ions at a 90° collision angle. The kinetic energies of the photodetached electrons were measured with a 160° spherical sector energy analyzer. The electron spectrometer was operated in the constant pass energy mode.Photoelectron spectra were used to determine the electron affinity of the Zr_2. Moreover, studies of photoelectron angular distribution measurements were also performed. Analysis of the angular distribution data is in process, and preliminary results will be presented.

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