

Abstract Submitted
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Synchrotron based measurements of the photoelectron spectrum of CdTe nanoparticles¹ A. NAQVI, U. Texas at Arlington, S. L. HULBERT, NSLS Brookhaven National Lab, W. CHEN, A. H. WEISS, U. Texas at Arlington — A nanoparticle solution of CdTe of size 585 nm was deposited on silicon substrates of approximately 1cm x 1 cm after etching the substrate with HF. The nanoparticles were exposed to soft x-rays of varying energy under ultra high vacuum, $\sim 10^{-10}$ torr using beam line U16B at the National Synchrotron Light Source (NSLS) at Brookhaven National Lab. We performed Auger electron spectroscopy measurements on the nanoparticles and identified the peaks through spectroscopic analysis and monitored the damage of the nanoparticles by observing their fluorescence by gradually increasing the photon energy. The nanoparticles were observed to exhibit a time dependent damage response. Future studies aimed at exploring the potential use of nanoparticles as radiation sensitizing agents for cancer treatment are proposed.

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