

PHOTOELECTRON SPECTRA OF 1,3-CYCLOHEXADIENE

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The photoelectron spectra of 1,3-cyclohexadiene (CHD) have been investigated to probe the electrocyclic ring opening reaction in the gas phase. The molecules are ionized by exciting through the intermediate 1B₂ state by ultraviolet femtosecond laser pulses. The observed features were explained based on two-photon and three-photon absorption processes. A doubly excited valence superexcited state is observed around 9eV. A detailed pump-probe experiment is underway to explore the dynamics of the observed superexcited state as well the isomerization reactions in CHD.