

THE ZEKE SPECTRA OF C_3H_3 and C_3H_5

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The high-resolution zero kinetic energy photoelectron spectra of two important hydrocarbon radicals, propargyl (C_3H_3) and allyl (C_3H_5), were measured using both non-resonant and resonant excitation schemes. Accurate values for the ionization energies and cationic vibrational frequencies could be derived from the recorded data. In addition, information on the intermediate state vibronic coupling in allyl was obtained. The spectra of both species seem to agree well with the Franck-Condon principle.