

REMPI AND DOUBLE RESONANCE SPECTROSCOPY OF L- β -HOMOTRYPTOPHAN IN GAS PHASE

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Resonance enhance multiphoton ionization (REMPI) and UV-UV double resonance spectra of L- β -homotryptophan (HTrp) was obtained. Hydrochloride salt of HTrp was applied on a lateral surface of a graphite disk, desorbed by 1064 nm nanosecond laser pulses, and subsequently cooled down by expanding gas from a pulsed valve. Formation of neutral HTrp by laser-desorption was confirmed by its mass spectrum. The REMPI spectrum shows several peaks in a UV region similar to that of tryptophan. UV-UV hole-burning spectrum was obtained and compared with quantum mechanical calculation. Based on the experimental and computational results, conformation preference of HTrp is discussed.