GAS-PHASE SPECTROSCOPY OF TYROSINE BY LASER DESORPTION SUPERSONIC JET TECHNIQUE - STABILIZATION MECHANISM OF THE MOST STABLE CONFORMER

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Gas-phase spectroscopy of tyrosine, which is one of the aromatic amino acids, has been reported by many researchers, however, their conclusions of the number of conformers and the assignments of their structures do not consistent with each other. In this work, electronic and infrared spectra of tyrosine were measured by laser desorption supersonic jet technique, and number of the conformers and their structures were reassigned by comparison with quantum chemical calculations. It was found that electrostatic interaction between phenolic OH and amino-acid chain is specifically enhanced in the most stable conformer.