

THEORETICAL
AND EXPERIMENTAL STUDY
OF SPECTROSCOPIC CHARACTERISTICS
OF AROMATIC AMINO ACIDS

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S u m m a r y

Photoluminescence spectra of aromatic amino acids, which are prepared in the form of microcrystalline powders and their aqueous solutions and are excited by laser radiation, are studied. Luminescence spectral regions and the maxima of luminescence intensity are determined. The spectral dependences of the molar extinction coefficients are measured for the aqueous solutions of amino acids. The electronic absorption spectra of aromatic amino acids and the charge distribution in the corresponding molecules are calculated, by using the quantum-chemical Hartree–Fock method with the application of the semiempirical PM3 and ZINDO/S approximations. The electronic absorption spectra are analyzed.