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论文

基于紫外光诱导血浆的三维同步荧光光谱共振能量转移及能量再吸收的分析

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摘要:

利用三维同步荧光光谱技术研究了不同浓度的血浆溶液在紫外光波段的同步荧光光谱.实验结果表明：血浆蛋白的主要的激发峰主要有三个,分别在257 nm、274 nm和280 nm附近,同步荧光光谱峰值大小随着血浆的浓度的变化而有所不同.通过改变Δλ值而获得的同步荧光光谱,表明血浆存在三个同步荧光峰,其Δλ值分别为90 nm、72 nm和44 nm,根据实验数据计算,表明血浆的各个内源荧光团之间存在着荧光共振能量转移以及二次光吸收现象.

关键词： 血浆 紫外同步荧光光谱 共振能量转移

Three-dimensional UV-induced Plasma Synchronous Fluorescence Spectrum Resonance Energy Transfer and Energy Analysis of Resorption

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Abstract:

Synchronous fluorescence spectra of different plasma solution concentrations in the UV wavelength are investigated using three-dimensional synchronous fluorescence spectroscopy.The results show that there are three main excitation peaks of plasma proteins(near 257 nm,274 nm and 280 nm),and the peak values change with different plasma solution concentrations.By changing the offset (that is Δλ) value of the synchronous fluorescence spectra obtained,there are three synchronous fluorescence peaks of plasma,of which the values are 90 nm,72 nm and 44 nm.According to the experimental data,it shows that the intrinsic fluorescence of the plasma in all groups exists the fluorescence resonance energy transfer and the second light absorption.

Keywords: Plasma UV synchronous fluorescence spectrum Resonance energy transfer

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