

论文

用自旋标记ESR波谱研究光照、血卟啉同脂质体膜的相互作用

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摘要:

本文以卵磷脂脂质体作为膜体系,以白光、红外激光和紫外激光为光源,用脂肪酸自旋标记ESR波谱研究了光照血卟啉和脂质体膜的相互作用。实验发现,光照血卟啉可以使脂质体膜通透性明显增加,红外激光和紫外激光增加更明显,紫外激光比红外激光作用更大。光照血卟啉也可以使脂质体膜中的脂肪酸自旋标记的ESR信号减小,说明发生了电子转移。光照血卟啉还可以使脂质体膜磷脂分子的有序度略有下降。

关键词:

STUDY ON THE INTERACTION BETWEEN PHOTORADIATION-HEMATOPORPHYRIN DERIVATIVE AND LIPOSOME WITH SPIN LABEL AND ESR SPECTRUM

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Abstract:

The interaction between photoradiation-hematoporphrin derivative (HPD) and liposome was studied with fatty acid spin label and ESR spectrum by white light, infrared laser and ultraviolet laser. It was found that photoradiationHPD increased the permeability of the liposome largely. The effect of infrared and ultraviolet laser was found to be stronger than that of white light and the effect of ultraviolet was stronger than that of infrared laser. Photoradiation-HPD was shown to decrease the intensity of the ESR signal of the fatty acid spin label incorporated in this system. Photoradiation-HPD was also found to decrease the order of the phospholipid molecule in the liposome slightly.

Keywords: ESR Spin Label HPD

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