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金属-血清白蛋白的结构研究**II. Cu(II)-BSA**和**Ni(II)-BSA**的四 方锥-四方平面 结构

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摘要 本文用紫外光谱研究Cu(II)-BSA和Ni(II)-BSA配合物的结构随BSA浓度的变化,发现当浓度增大并>2×10^-^4～3×10^-^4mol.dm^-^3时,这两种配合物从五配位的四方锥构型转变成四配位的四方平面构型,首次提供了BSA的Asp羧基氧参与同Cu(II)和Ni(II)配位的证据。计算并讨论了Cu(II),Ni(II)和有关配体轨道的光学电负性。

关键词 平面结构 结构研究 血清白蛋白 金属 紫外分光光度法 四配位

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Structure studies of metal-serum albumin II. The square pyramid- square planar structure of Cu(II)-BSA and Ni(II)-BSA

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Abstract The structural change of Cu(II)-BSA and Ni(II)-BSA complexes with BSA concentration has been investigated by means of UV spectrophotometry. We have found that the configuration of these complexes transforms from a pentaccordinated square-pyramid into a tetracoordinated square-planar as the BSA concentration increases over 2× 10^-^4～3×10^-^4mol.dm^-^3. This finding confirmed the involvement of the Asp carboxyl oxygen in the coordination of Cu (II) and Ni(II) in the case of BSA for the first time. The optical electronegativities of Cu(II), Ni(II), and relevant ligand orbitals also have been calculated and discussed.

Key words PLANAR STRUCTURE SERUM ALBUMIN METAL ULTRAVIOLET SPECTROPHOTOMETRY TETRACOORDINATE

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