

论文

四聚体手性配合物 { [Cu(C<sub>20</sub>H<sub>26</sub>N<sub>4</sub>O<sub>2</sub>)Cl] Cl·4H<sub>2</sub>O }<sub>4</sub>的合成及晶体结构

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摘要:

将L-苯丙氨酸与乙二胺通过一定反应双缩得到具有手性结构的N,N'-双(L-苯丙氨酸)缩乙二胺, 此配体与氯化铜发生配位, 生成一种四聚体手性Cu(II)配合物, 将此配合物溶在甲醇中培养出单晶. 通过X射线衍射分析测得其分子结构. 此配合物单晶属于四方晶系, 空间群I4. 晶胞参数为a=2.504 4(4) nm, b=2.504 4(4) nm, c=0.870 7(3) nm, V=5.461(2) nm<sup>3</sup>, Dc=1 365 g/cm<sup>3</sup>, Z=8.

关键词: L-苯丙氨酸; 乙二胺; 双酰胺; 手性配合物; 晶体结构

Synthesis and Crystal Structure of a Tetramer Chiral Complex { [Cu(C<sub>20</sub>H<sub>26</sub>N<sub>4</sub>O<sub>2</sub>)Cl] Cl·4H<sub>2</sub>O }<sub>4</sub>

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Abstract:

N,N'-bis(L-phenylalanyl)ethane-1,2-diamine was prepared by using L-phenylalanine and ethanediamine. The synthetic process was improved. The ligand reacted with copper dichloride to form the chiral coordination compound. The single crystal was obtained in methanol solution. It is shown by X-ray structural studies that the crystal belongs to the tetragonal system and the space group is I4. The lattice parameters are as follows: a=2.504 4(4) nm, b=2.504 4(4) nm, c=0.870 7(3) nm, V=5.461(2) nm<sup>3</sup>, Dc=1.365 g/cm<sup>3</sup>, Z=8. In the structure of the complex, the Cu(II) cation is coordinated by two nitrogen atoms, two oxygen atoms and one chlorine atom.

Keywords: L-Phenylalanine; Ethanediamine; Bisamide; Chiral complex; Crystal structure

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