

Full Papers

铋(III)配合物 **Bi(1,10-phen)[S₂CN(CH₃)₂]₂(NO₃)₃**,

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摘要 合成了三个铋(III)配合物 **Bi(1,10-phen)[S₂CN(CH₃)₂]₂(NO₃)₃**,

{Bi(S₂COCH₃)[S₂CNC₆H₅(CH₃)₂]₂}和 **[Bi(S₂CNBU₂)₂(CH₃OH)(NO₃)]**

_∞。通过元素分析和红外光谱对其结构进行了表征,并用X射线单晶衍射测定了它们的晶体结构。

关键词 [铋\(III\)配合物, 氨基羧酸, 黄原酸酯, 晶体结构](#)

分类号

Synthesis and Crystal Structure of Bismuth(III) Complexes **Bi(1,10-phen)[S₂CN(CH₃)₂]₂(NO₃)₃,**

{Bi(S₂COCH₃)[S₂CNC₆H₅(CH₃)₂]

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Abstract Three bismuth(III) complexes **Bi(1,10-phen)[S₂CN(CH₃)₂]₂(NO₃)₃** (**1**), **{Bi(S₂COCH₃)[S₂CNC₆H₅(CH₃)₂]₂}** (**2**) and **[Bi(S₂CNBU₂)₂(CH₃OH)(NO₃)]_∞** (**3**) were synthesized and characterized by elemental analysis and IR spectra.

Their crystal structures were determined by X-ray single crystal diffraction analysis. Studies show that complex **1** has a monomeric structure with the central bismuth atom eight-coordinated in a capped distorted pentagonal bipyramidal geometry. The complex **2** takes centrosymmetric dimeric structure and the bismuth atoms are seven-coordinated in distorted pentagonal bipyramidal geometry. In complex **3**, the bismuth atoms are seven-coordinated in distorted pentagonal bipyramidal geometry by bridging nitrate O atoms and the resulting structure is one-dimensional infinite chain polymer.

Key words [bismuth\(III\) complex](#) [dithiocarbamate](#) [xanthate](#) [crystal structure](#)

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