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有机锡氧羧酸簇合物**[PhCH_2Sn(O)(O_2CCH=CHAr)]_6**的合成、表征和**[PhCH_2Sn(O)(O_2CCH=CHPh)]_6**的晶体结构

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摘要　利用(PhCH_2)_3Sn]_2O与ArCH=CHCO_2H反应，合成6个新的[PhCH_2Sn(O) (O_2CCH=CHAr)]_6簇合物。通过元素分析、红外光谱和X射线单晶衍射对其结构进 行了表征。用X射线单晶衍射测定了[PhCH_2Sn(O)(O_2CCH=CHPh)]_6的晶体结构， 结果表明，该簇合物为三斜晶系，空间群P1, a = 1.6771(3) nm, b = 1.8020(4) nm, c = 2.1073(4) nm, α = 108.111(3)°β = 103.614(3)°,γ = 104.679 (3)°,Z = 2, V = 5.5033(18) nm~3, D_c = 1.350 g/cm~3, μ = 1.396 mm~(-1) , F(000) = 2208, R = 0.0606, wR = 0.698。该化合物为鼓型簇状结构，锡原子呈畸变的八面体构型。

关键词　有机锡化合物　簇状化合物　晶体结构　元素分析　红外分光光度法　X射线衍射分析　X射线衍射分析　氧化合物　羧酸

分类号　0621

Synthesis and Characterization of Drum Organooxotin Cluster [PhCH_2Sn(O) (O_2CCH=CHAr)]_6 and Crystal Structure of [PhCH_2Sn(O) (O_2CCH=CHPh)]_6

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Abstract　The six novel drum organooxotin clusters [PhCH_2Sn(O) (O_2CCH= CHAr)]_6 were synthesized by the reaction of [(PhCH_2)_3Sn]_2O with ArCH= CHCO_2H in 1 -2 molar ratio. The crystal structure of [PhCH_2Sn(O)-(O_2C CH=GHPh)]_6 was determined by X-ray single crystal diffraction study. The crystal belongs to triclinic with space group PI, a = 1. 6771(3) nm, 6 = 1.8020(4) nm, c =2.1073(4) nm, α = 108.111(3)°, β = 103.614 (3)°, γ = 104.679 (3)°, Z = 2, 7 = 5.5033(18) nm~3, D_c = 1. 350 g/cm~3, μ. = 1.396 mm~(-1), F(000) =2208, R = 0.0606, wR = 0. 0698. The structure shows a distorted octahedron configuration with six coordination for the central tin atoms.

Key words　ORGANO TIN COMPOUNDS　CLUSTER COMPOUND　CRYSTAL STRUCTURE　ELEMENTAL ANALYSIS　IR　XRD　OXYGEN COMPOUNDS　CARBOXYLIC ACID

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