化学学报 1990 48 (11): 1141-1146 ISSN: 0567-7351 CN: 31-1320/06

醋酸乙烯酯基桥连铁硫配合物**(σ,π-μ-CH3CO2C=CH2)(μ-RS)Fe2CO)6**的制备及结构鉴定

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收稿日期 修回日期 网络版发布日期 接受日期

摘要 本文报道乙酰氯同[μ-CO)(μ-RS)Fe2(CO]Et3NH相作用生成了标题化合物, 除用碳氢分析, IR, 'HNMR及X衍射技术表征这类配合物的结构和构象外, 还对形成此类产物的过程进行了初步讨论。

关键词 晶体结构测定 反应机理 红外分光光度法 X射线衍射分析 铁络合物 酰氯 质子磁共振谱法 质子磁共振谱法 乙酸乙烯酯 硫络合物 乙酰基 桥环化合物

分类号 0611.662

A novel preparation of route and structural characterization of Fe-S complexes with bridging vinylidene acetate (σ,π-μ-CH3CO2C=CH2)(μ -RS)Fe2(co)6

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Abstract Unexpectedly, a class of Fe-S complexes containing a bridging vinylidene acetate ligand, i.e. (s,p-m-CH3CO2C:CH2)(m-RS)Fe2(CO)6 (I, R = Et, Me3C, Ph), were prepared by reaction of acetyl chloride with an active salt of [(m-CO)(m-RS)Fe2(CO)6]Et3NH formed from Fe3(CO)12, RSH, and Et3N. The structures and conformations of these complexes were characterized by elemental anal., IR, 1H NMR, and x-ray diffraction techniques and the mechanism of their formation was discussed briefly. The crystal structure of I (R = Ph) was determine A kind of s-interaction occurs between the carbon atom bearing the acetate group and one iron atom whereas a p-interaction occurs between carbon-carbon double bond and another iron atom. The Fe-Fe bond length is 2.553(1) ?

Key words CRYSTAL STRUCTURE DETERMINATION REACTION MECHANISM INFRARED SPECTROPHOTOMETRY X-RAY DIFFRACTION ANALYSIS IRON COMPLEX ACYL CHLORIDES PROTON MAGNETIC RESONANCE SPECTROMETRY PROTON MAGNETIC RESONANCE SPECTROMETRY ACETIC ACID ETHENYL ESTER SULFIDE COMPLEX ACETYL GROUP BRIDGE COMPOUNDS

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