

Notes

新型二硅桥连二环戊二烯基四羰基二铁类化合物的分离及 $[\eta^5, \eta^5\text{-C}_5\text{H}_4\text{SiMe(SiMePh}_2\text{)C}_5\text{H}_4\text{]Fe}_2(\text{CO})_2(\mu\text{-CO})_2$ 的分子结构

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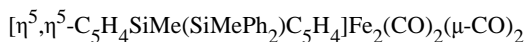
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摘要

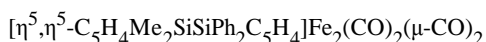
用改进的方法合成了1,2-二苯基-1,2-二甲基二硅桥连二环戊二烯基化合物



(1), 首次分离到以前难以得到的其反式异构体(1b). 更有趣的是, 在上述过程中还意外得到了两个新的位置异构体



(2) 和



(3), 它们的新颖结构为进一步研究这类含有硅硅键的过渡金属化合物提供了新的方向. 利用X-射线衍射法确定了化合物2的分子结构.

关键词 [二亚硅基](#) [铁铁键](#) [环戊二烯基](#) [羰基](#)

分类号

Isolation of New Disilanylene-bridged Bis(cyclopentadienyl)-tetracarbonyldiiron Complexes and Molecular Structure of $[\eta^5, \eta^5\text{-C}_5\text{H}_4\text{SiMe(SiMePh}_2\text{)C}_5\text{H}_4\text{]Fe}_2(\text{CO})_2(\mu\text{-CO})_2$

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Abstract 1,2-Diphenyl-1,2-dimethyldisilanylene-bridged bis-cyclopentadienyl complex $[\eta^5, \eta^5\text{-C}_5\text{H}_4\text{PhMeSiSiMePhC}_5\text{H}_4\text{]Fe}_2(\text{CO})_2(\mu\text{-CO})_2$ (**1**) was synthesized by a modified procedure, from which the *trans*-isomer **1b** that was previously difficult to obtain has been isolated for the first time. More interestingly, two new regio-isomers $[\eta^5, \eta^5\text{-C}_5\text{H}_4\text{SiMe(SiMePh}_2\text{)C}_5\text{H}_4\text{]Fe}_2(\text{CO})_2(\mu\text{-CO})_2$ (**2**) and $[\eta^5, \eta^5\text{-C}_5\text{H}_4\text{Me}_2\text{SiSiPh}_2\text{C}_5\text{H}_4\text{]Fe}_2(\text{CO})_2(\mu\text{-CO})_2$ (**3**) were occasionally obtained during above process, the novel structures of which opened up new options for further study of this type of Si—Si bond-containing transition metal complexes. The molecular structure of **2** has been determined by the X-ray diffraction method.

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