

研究论文

## 环钯化二茂铁亚胺-膦配合物的电喷雾离子阱质谱研究

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**摘要** 采用电喷雾离子阱质谱法(ESI-MS)对10种环钯化二茂铁亚胺-膦配合物的质谱特征进行了研究, 获得了其结构碎片信息, 对其质谱裂解途径进行了解析. 结果表明, 在正离子检测方式下可以得到强的准分子离子峰[M-CI]<sup>+</sup>簇, 它们的(+) ESI-MS<sub>n</sub>(n=1~3)质谱主要产生碳-膦键断裂的碎片, 同时也能观察到Pd—P或Pd—C键的断裂, 这些特征为此类化合物及其结构类似物的结构推断提供了依据.

**关键词** [环钯化二茂铁亚胺-膦配合物](#) [电喷雾离子阱质谱](#) [裂解机理](#)

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## Studies on Cyclopalladated Ferrocenylimine-phosphine Complexes by Electrospray Ionization Trap Mass Spectrometry

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**Abstract** The mass spectrometric characteristics of ten cyclopalladated ferrocenylimine-phosphine complexes were investigated *via* electrospray ionization trap mass spectrometer(ESI-MS) in a multi-stage MS full scan mode. The mass spectra were interpreted according to the fragments of these compounds and their fragmentation patterns were proposed. The results indicate that the strong [M-Cl]<sup>+</sup> ion cluster was obtained in the positive mode. The positive ion produced by full scan ESI-MS<sub>n</sub>(n=1~3) of each compound gave characteristic fragment ions formed via the cleavages of the C—P bond and Pd—C bond in these molecules. These characteristic ions can be applied further to the elucidation of fragmentation of this analogue.

**Key words** [Cyclopalladated ferrocene derivative](#) [Electrospray ionization trap mass spectrometry](#) [Fragmentation mechanism](#)

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