

苯二胺双电荷离子的电荷分离和电子捕获诱导解离谱研究

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摘要 本工作用电荷分离(CS)谱和电子捕获诱导解离(ECID)

谱研究了三种苯二胺异构体的双电荷分子离子在气相中的结构和反应。三种异构体双电荷离子的电荷分离反应和电子捕获诱导解离反应有相同的反应通道。通过测量不同反应通道的动能释放,推测出了双电荷离子解反应过渡状态的结构。另外,三种异构体可用ECID谱来区分。

关键词 异构体 苯二胺 电荷分离 双电荷离子 电子捕获诱导解离

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## A study of charge separation and electron capture induced decomposition spectra of phenylenediamine isomers

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**Abstract** The structures and decomposition reactions of doubly charged phenylenediamines were studied by means of charge separation (CS) and electron capture induced decomposition (ECID)spectra. The deisomerization of the threeisomers is prior to the metastable decompositions of doubly charged ions. Several different structures of transition states were postulated by measuring the translational energy releases of different charge separation channels of the doubly charged ions. The proudct ions of charge separation are also dominated in the ECID spectra, However the ECIC spectrum is obviously a reliable method to differentiate the three isomers which are difficult to be distinguished using the normal mass spectrometric methods.

**Key words** ISOMER BENZENEDIAMINE DOUBLE-CHARGE ION

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