

FULL PAPERS

碳纳米管为基质对氨基酸的MALDI-FT MS分析

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摘要 本文用碳纳米管作为基质, 成功地对氨基酸进行MALDI-MS分析, 没有背景干扰也没有碎片产生。此方法也适于分析氨基酸的混合物。试验表明碳纳米管有很大的比表面积和很强的紫外吸收, 前者有利于基质很好的分散样品, 防止分子簇和(或)减弱分子间相互作用, 后者可以增强吸收和传递能量的效率。这个方法在氨基酸快速灵敏分析方面有很大的应用前景。

关键词 [氨基酸](#), [MALDI-FTMS](#), [碳纳米管](#)

分类号

Amino Acids Analysis by MALDI Mass Spectrometry Using Carbon Nanotube as Matrix

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Abstract Twenty common amino acids have been analyzed successfully by matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS) using carbon nanotubes as matrix. From the spectra, little or no background interference or fragmentation of the analytes has been observed. This method was also applied to the analysis of amino acid mixture successfully. Carbon nanotubes have some features such as large surface area to disperse the analyte molecules sufficiently and prevent the sample aggregation and strong ultraviolet absorption to transfer energy easily to the analyte molecules. The present method has potential application for the rapid and sensitive analysis of amino acids and their mixture.

Key words [amino acid](#), [MALDI-FTMS](#), [carbon nanotube](#)

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