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富勒烯氯化物的合成及分离表征

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氯化富勒烯是富勒烯进行各种有机修饰的一种很重要的中间体。目前所能合成的 I_h-C_{60} 氯化物的种类比其它卤化物（如氟化物、溴化物）少得多，迄今能大量合成的低氯衍生物仅有 I_h-$C_{60}Cl_6$ 一种氯化物。本文介绍一种简便合成 I_h-$C_{60}Cl_8$(**a**)，I_h-$C_{60}Cl_{10}$(**b**)的方法，并进行了分离和质谱光谱表征。

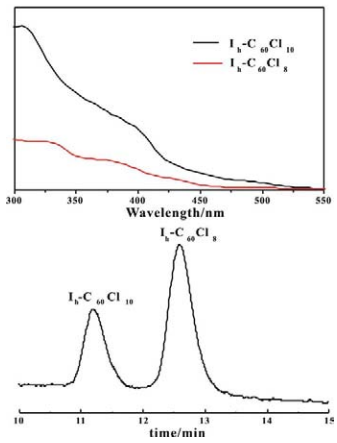

Fig 1. UV/Vis spectrum and HPLC chromatogram of the chlorofullerenes

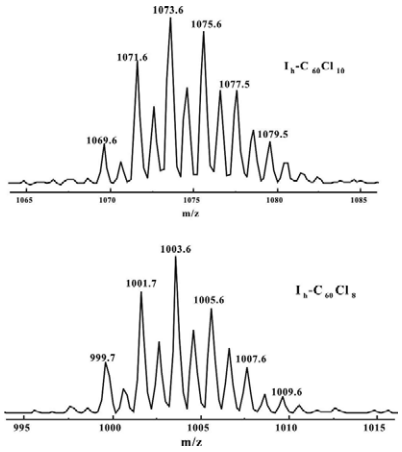

Fig 2. APCI Mass spectra of the chlorofullerenes

关键词：富勒烯；氯化；修饰。

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Synthesis, Isolation and Characterization of Chlorofullerenes

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Chlorofullerenes are valuable reactants for further derivation. The fullerenes chlorides synthesized so far are considerably less than those of bromides and fluorides. To date, only $C_{60}Cl_6$ can be macroscopically synthesized. Here we report a facile synthesis of I_h-$C_{60}Cl_8$ and I_h-$C_{60}Cl_{10}$, as well as their separation and analyses.