

研究简报

苯乙烯/马来酸酐共聚物修饰碳纳米管的研究

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收稿日期 2006-4-24 修回日期 2006-6-30 网络版发布日期 2006-12-27 接受日期 2006-8-29

摘要 利用羟基碳纳米管上的羟基与马来酸酐之间的简单反应, 在碳纳米管上引入双键, 进一步引发苯乙烯聚合, 在碳纳米管表面接枝苯乙烯马来酸酐共聚物,

同时采用羟基碳纳米管与苯乙烯马来酸酐共聚物直接反应也在碳纳米管的表面引入了苯乙烯马来酸酐共聚物.

经IR, Raman, TG和TEM测定, 证明了碳纳米管与苯乙烯马来酸酐共聚物之间为化学键连接关系.

关键词 [碳纳米管](#) [马来酸酐](#) [苯乙烯马来酸酐共聚物](#) [修饰](#)

分类号

Study of Multiple-Wall Carbon Nanotubes Functionalized by the Poly(styrene-co-maleic Anhydride)

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Abstract The multiple-wall carbon nanotubes (MWNT) with double bond were synthesized by the reaction of the hydroxyl on the hydroxyl containing MWNT and maleic anhydride, which were further modified by styrene to obtain the poly(styrene-co-maleic anhydride) (SMA) functionalized MWNT. The directly importing group method by the reaction between MWNT-OH and SMA was also used for acquiring the SMA functionalized MWNT. The characterization results of IR, Raman, TEM and TG proved the existence of chemical bonds between nanotubes and poly(styrene-co-maleic anhydride).

Key words [multiple-wall carbon nanotube](#) [maleic anhydride](#) [poly\(styrene-co-maleic anhydride\)](#) [chemical modification](#)

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