Title: **Functionalization by Acidic Treatment in the Purification of Multiwalled Carbon Nanotubes (MWCNTs)**

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Abstract

Comparative studies of two multi-walled carbon nanotubes (MWCNT) from different manufacturers were reported. The purification and functionalization of commercial multiwall carbon nanotubes were investigated. MWCNTs were treated with boiling concentrated HNO3 under a reflux condenser for 2 hours at 100 °C in order to purify and oxidize the raw material. The oxidized MWCNTs were rinsed with deionized water until stabilization of the filtrate pH. The measurement technique was by thermogravimetric analysis (TGA) for thermal analysis decomposition products. Meanwhile, the chemical shifted in MWCNTs can be determined by using Raman Spectroscopy.