

## **A better understanding of CNTs chemical purification and functionalization processes**

### **ABSTRACT**

Purification and functionalization of carbon nanotubes have been examined using different acid treatments. CNTs treatment may vary depending on the desired outcome. The results show that HCl as a strong acid, oxidizes all the materials present in the sample. HNO<sub>3</sub> acts as an oxidizing agent which is useful to produce functional CNTs. H<sub>2</sub>O<sub>2</sub> behaves as a regulator in presence of both acids. The results suggest that H<sub>2</sub>O<sub>2</sub> may be a critical element to control the outcome of CNTs purification and functionalization process.

**Keyword:** Acid treatment; CNTs; Purification; Functionalization