碳奈米管電漿表面改質之研究

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摘要

Aligned carbon nanotubes were produced by chemical vapor deposition process, which exhibit super-hydrophobic properties (wetting angle ~ 146°) due to their structure stability and needle-like mophology induced lotus effect. Different surface treatment methods were employed to improve hydrophilic properties of carbon nanotubes including oxygen plasma treatment and the deposition of Poly-l-lysine film on the surface of carbon nanotubes. The results show that the wetting or hydrophilic properties can be significantly improved by these surface modification process (wetting angle <35°).

關鍵字：carbon nanotubes, plasma surface modification