

Physical Removal of Metallic Carbon Nanotubes from
Nanotube Network Devices
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Electronic and optoelectronic devices based on thin films of carbon nanotubes are currently limited by the presence of metallic nanotubes. Here we present a novel approach based on nanotube alkyl functionalization to physically remove the metallic nanotubes from such network devices. The process relies on preferential thermal desorption of the alkyls from the semiconducting nanotubes and the subsequent dissolution and selective removal of the metallic nanotubes in chloroform. The approach is versatile and is applied to devices post-fabrication.