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A effective purification procedures of single-walled and double-walled carbon nanotubes

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We have studied the purification of carbon nanotubes such as SWNTs and DWNTs. In general, the as-synthesized carbon products contain catalyst metal nanoparticles and amorphous carbon materials beside carbon nanotubes. Moreover, there are amorphous carbon layers at the surface of carbon nanotubes and support materials. In our result, the amorphous carbon materials, the catalyst metal nanoparticles and support materials easily removed by a simple purification process. The purification process comprises oxidation and acid treatment of carbon products containing carbon nanotubes.

We report that high-purity carbon nanotubes can be effectively obtained by our simple purification method.