

Laboratory Experiment Proposal Submission

Experimental Details

Experiment location: E134
Experiment title: Dispersion/Purification of carbon nanotubes in chlorosulfonic acid
Experiment date: 06/14/13
Experiment contactname: Paul Butler
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Chemicals Used

<u>Chemical Name</u>	<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>	<u>Special Hazards</u>
Chlorosulfonic Acid	4	0	2	NONE
Carbon Nanotubes	2	0	0	

Reactants and Resulting Samples

<u>Chemical Name</u>	<u>Hazardous?</u>	<u>Known Hazards</u>
Cholorosulfonic Acid	Y	reacts violently with water

Required Safety Equipment

- Glove Chemical
- Glove Neoprene
- Safety Glasses
- Lab Coat
- Hood Acids

Required Laboratory Equipment

- Balance
- Centrifuge
- Drying Oven
- Ph Meter
- Glovebox
- Rotary Evaporator

Experimental Write Up

Dry carbon nanotubes - purchased from Aldrich - will be dispersed in chlorosulfonic acid at a volume fraction of 10mg/ml. The dispersion will then be centrifuged, the supernatant removed and the precipitate dried out by acid evaporation either in a rotary evaporator or a drying oven. The dry acid-treated carbon-nanotubes will then be dispersed in aqueous solutions with the help of surfactants (namely sodium dodecyl benzyl sulfonate)

Experimenter Signature: _____

Date: _____

Lab Responsible Signature: _____

Date: _____