2008 Summary of Research Reports

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Project: Synthesis and Characterization of Novel Functionalized Carbon Nanotubes
Sponsor: NSWC

Statement of Work:

The interaction between commercially available Single- Walled Carbon Nanotubes (SWNTs) and the gaseous hydrazoic acid (HN3) will be studied using attenuated total reflectance FTIR spectroscopy. Whether the HN3 gas reacts with SWNTs through physisorption or chemisorption will be analyzed. This study will show whether under ambient conditions gaseous HN3 reacts with the metal such as Ni or Fe present in the SWNTs to generate the corresponding metal azides. The data may suggest that the polygonal carbon structure of the SWNTs does not react to gaseous HN3 upon repeated exposures at ambient conditions.