

# Chemistry Seminar

## The Synthesis and Biological Function of Carbon Nanotubes: Can they be Made Safe?

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*12:00 p.m.*

*WSB-122*

**Abstract:** Until now we have been faced with the problem of insoluble carbon nanotubes (CNTs) that are harmful to both our bodies and the environment. Discussed in this paper is a background of carbon nanotubes, different synthesis methods, biological interactions, and various ways to make the CNTs soluble and compatible for human applications. Synthesis methods include: catalytic chemical vapor deposition (CCVD), the floating reactant method (FRM) and open-air laser-induced chemical vapor deposition (LCVD). Functionalization is the means by which insoluble, toxic CNTs can be made safer for biological interactions within an organism. The biological interactions of both functionalized and non-functionalized CNTs are discussed. The goal of this paper is to determine if CNTs can be made safer for biological uses such as drug delivery and tissue regeneration.