

Abstract Submitted
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Properties and Applications of Carbon Nanotubes¹ DANIEL BULLMORE, MICHAEL DURAN, MICHAEL JACOBS, SAMINA MASOOD, University of Houston Clear Lake — Different synthesizing methods are used to create various nanostructures of carbon; we are mainly interested in single and multi-wall carbon nanotubes, (SWCNTs) and (MWCNTs) respectively. The properties of these tubes are related to their synthetic methods, chirality, and diameter. The extremely sturdy structure of CNTs, with their distinct thermal and electromagnetic properties, suggests a tremendous use of these tubes in electronics and medicines. Here, we analyze various physical properties of SWCNTs with a special emphasis on electromagnetic and chemical properties. By examining their electrical properties, we demonstrate the viability of discrete CNT based components. After considering the advantages of using CNTs over microstructures, we make a case for the advancement and development of nanostructures based electronics. As for current CNT applications, its hard to overlook their use and functionality in the development of cancer treatment. Whether the tubes are involved in chemotherapeutic drug delivery, molecular imaging and targeting, or photodynamic therapy, we show that the remarkable properties of SWCNTs can be used in advantageous ways by many different industries.

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