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Autore	Reich S (Stephanie)
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Carbon nanotubes are exceptionally interesting from a fundamental research point of view. Many concepts of one-dimensional physics have been verified experimentally such as electron and phonon confinement or the one-dimensional singularities in the density of states; other 1D signatures are still under debate, such as Luttinger-liquid behavior. Carbon nanotubes are chemically stable, mechanically very strong, and conduct electricity. For this reason, they open up new perspectives for various applications, such as nano-transistors in circuits, field-emission displays, artificial muscles, or add
