

STRUCTURAL ORDERING OF MULTILAYER CARBON NANOTUBES

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In work peculiarities of structure of multilayer carbon nanotubes are considered. Is established, that existence of five types of multilayer nanotubes made from tubes of an identical chirality (for degrees of a chirality $k = 0, 0.2, 0.3, 0.4$ is possible, 0.5) Intertubes distances for each of types are constants and essentially differ from meaning d_{002} characteristic for structure of graphite. For multilayer nanotubes made from tubes of an any chirality the intertubes distances vary in a wide range from 0.354 up to 0.345 nm. Moreover the method atom — atom potential investigated change of energy of bond between pairs of enclosed nanotubes depending on their mutual shift and turn. Is established, that the difference in energy of bond at various mutual shifts and turns of enclosed nanotubes is insignificant (less than 1% of energy of bond), that should result in absence about in their mutual arrangement.

Key words: carbon nanotubes, crystal structure, computer modelling.

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