PHONON IN LOW-DIMENSIONAL CRYSTALS

Edib Dobardžić

Faculty of Physics University of Belgrade

Abstract. Using experimental results and global minimization algorithm, force constants for various quasi-two-dimensional systems can be found with arbitrary precision. Results made for graphene, MS2 (M=Mo, W) and BC3 layered materials are presented. Applying kinematic and dynamical corrections on already found force constants phonon properties in corresponding tubular congurations are shown enabling further analysis of vibrational and mechanical properties of nanotubes.