
DMITRY GOLOVATY, The University of Akron, Akron, OH 44325, USA

A Ginzburg–Landau-type model of carbon nanotubes

We demonstrate that a multiwalled carbon nanotubes—an interacting system of concentric carbon layers—can be effectively described by a Ginzburg–Landau-type energy with a potential that has multiple wells. The number of wells depends on the geometric characteristics of the tube and leads to the experimentally observed polygonization effect.