9.7 cm

SINGLE-WALL CARBON NANOTUBES IN MAGNETIC FIELDS

M.Szopa, M.Margańska, E.Zipper
Department of Theoretical Physics
University of Silesia
ul. Uniwersytecka 4
40 007 Katowice, Poland

We investigate magnetic susceptibilities of single-wall and multi-wall carbon nanotubes. We consider pure nanotubes, as well as nanotubes with Fermi energy lowered by the hole doping, in magnetic field parallel to the tube axis. The peculiar dispersion relation of the nanotubes leads to effects absent in mesoscopic metallic cylinders; like a change of the shape of the Fermi surface with doping. We compare these two systems and discuss their differences and similarities.

13.4 cm

Subject category :

7. Computations of Electronic Band Structures

Presentation mode :
poster

Corresponding author :
Magdalena Margańska

Address for correspondence :
Department of Theoretical Physics
University of Silesia
ul. Uniwersytecka 4
40 007 Katowice, Poland

Email address :
magdalena@server.phys.us.edu.pl