

MAIN PRINCIPLES OF CONSTRUCTION OF NANOPARTICLES' SPATIAL STRUCTURE

A.G. Baldina, L.Y. Budkina

Moscow Power Engineering Institute, Moscow, Russia

Abstract. In connection with various and absolutely new properties of nanomaterials, researches in this area get the increasing urgency. Construction principles of nanoshells with cubic O_h and icosahedral I_h symmetry and their geometrical structure are considered in the presented work. Calculation of several shells with cubic and icosahedral symmetry is executed and variants of "hyperstructures" constructed from these shells are offered. Carrying out of nanoparticles' structure allows offering new possibilities for their use in various scientific and technological workings out.

Keywords: nanotechnology, nanoparticle, nanostructure, nanoshell, cubic group of symmetry, icosahedral group of symmetry.