
Abstract

In this paper ,three nanoscale capacitors ,composed of finit size germanene flake and germanene (silicone, graphene) flake has been investigated by an ab initio method based on the density functional theory (DFT).The calculations are performed using the SIESTA package.

We investigated the structural , Electrical and Analysis of charge stored on capacitor plates, by applying an perpendicular external electric field.

The results show that by applying external electric field , the charge transfer has accured from permanent dipole moment by increasing applied electric field ,the energy stored on capacitors increase and subsequently caused to increasing in capacities.Thus our modeled nanocapacitors are a good candidate that can be used in nanocircuits.