

501.

Title: Negative differential conductivity of bigraphene controlled by an external voltage in a magnetic field

Author: Belonenko, MB Lebedev, NG Yanyushkina, NN Source title: PHYSICS OF THE SOLID STATE

Volume: 53 Issue: 8

pages: 1694-1698

Publication year: AUG 2011

Abstract: The current-voltage characteristic of a graphene bilayer has been calculated using the average electron method in the case of applied strong electric and magnetic fields. In the relaxation time approximation, it has been shown that, in bigraphene in the presence of a constant magnetic field applied in the direction perpendicular to the bigraphene layers, these can arise states with a negative differential conductivity. In addition, the generation of terahertz pulses can be performed in this system over a rather wide range of interlayer voltages.