

Publications

Article

Impact of Rashba Spin-Orbit Interaction on Electron Mobility in GaN Nanowires due to Scattering by Acoustic Phonons [Влияние спин-орбитального взаимодействия Рашбы на подвижность электронов в нанопроволоках GaN при присоединении на акустических фононах]

A. Vartanian, A. Asatryan, M. Yerosyan, A. Stepanyan, G. Khachatryan, S. Hayrapetyan, Y.-H. Xie

Journal of Contemporary Physics (Armenian Academy of Sciences) 2025 418-422

<https://link.springer.com/article/10.1134/S1068337226700167>

Article

Effect of spin-orbit coupling on the hot-electron energy relaxation in nanowires

A. L. Vartanian, A. L. Asatryan, A. G. Stepanyan, K. A. Vardanyan, A. A. Kirakosyan

International Journal of Modern Physics B 2020 2050322(1-13)

Article

Energy loss rate of hot electrons due to polar-optical phonon modes in a semiconductor nanowire under transverse electric field

A. Stepanyan, A. Asatryan, M. Yerosyan, K. Vardanyan, A. Kirakosyan, A. Vartanian

Physica B Condensed Matter 2018 340-346

Conference

The influence of the transverse electric field on the hot electron energy loss rate via polar-optical phonons in nanowires

A. Asatryan, A. Stepanyan, M. Yerosyan, A. Kirakosyan, A. Vartanian

2018 EI-P-3

http://www.irphe.am/?q=irphe_2018

Article

Energy-loss rate of hot electrons due to confined acoustic phonon modes in a semiconductor quantum wire under transverse electric field.

A. Stepanyan, M. Yerosyan, L. Vardanyan, A. Asatryan, A. Kirakosyan, A. Vartanian

Physica B Condensed Matter 2017 102-107

<http://www.journals.elsevier.com/physica-b-condensed-matter>

Conference

Electric field effect on hot-electron energy-loss rate via LA-phonon scattering in a cylindrical quantum wire.

A. Stepanyan, L. Vardanyan, A. Asatryan, A. Vartanian, A. Kirakosyan

2016 89

<http://www.rau.am/optics2016/>

Article

Confined acoustic phonon-mediated spin relaxation in a twodimensional quantum dot in the presence of perpendicular magnetic field

K A Vardanyan, A L Vartanian, A G Stepanyan, A A Kirakosyan

Journal of Physics Conference Series 2015 012043 /4pp

<http://iopscience.iop.org/journal/1742-6596>

Conference

Dilatational and flexural acoustic-phonon mediated spin relaxation in a two-dimensional quantum dot in the presence of perpendicular magnetic field.

Arshak Vartanian, Karen Vardanyan, Armen Stepanyan, Albert Kirakosyan

2015 134-134

<http://www.rau.am/optics2015/>
