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English Русский

Հրատարակումներ

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Inelastic resonant tunnelling through adjacent localised electronic states in van der Waals heterostructures

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E-beam induced micropattern generation and amorphization of L-cysteine-functionalized graphene oxide nano-composites

Y. Melikyan, H. Gharagulyan, A. Vasil'ev, V. Hayrapetyan, M. Zhezhu, A. Simonyan, D.A. Ghazaryan,
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Colloids and Interface Science Communications 2024 100766-7

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Exploring van der Waals materials with high anisotropy: geometrical and optical approaches

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Olga G Matveeva, Dmitriy V Grudinin, Kirill V Voronin, Arslan Mazitov, Konstantin V Kravtsov,
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Davit A Ghazaryan, Andrey A Vyshnevyy, Aleksey V Arsenin, Valentyn S Volkov, Kostya S Novoselov
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Wandering principal optical axes in van der Waals triclinic materials

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Denis G Baranov, Davit A Ghazaryan, Aleksey V Arsenin, Luis Martin-Moreno, Valentyn S Volkov,
Kostya S Novoselov
Nature Communications 2024 1552

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Infrared photodetection in graphene-based heterostructures: bolometric and thermoelectric effects at the tunneling barrier

Dmitry A. Mylnikov, Mikhail A. Kashchenko, Kirill N. Kapralov, Davit A. Ghazaryan, Evgenii E. Vdovin, Sergey V. Morozov, Kostya S. Novoselov, Denis A. Bandurin, Alexander I. Chernov, Dmitry A. Svintsov
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Chiral Photonic Super-Crystals Based on Helical van der Waals Homostructures

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Kostya S. Novoselov, Davit A. Ghazaryan, Valentyn S. Volkov, Denis G. Baranov

Laser and Photonics Reviews 2024 2301113

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Programmable Carbon Nanotube Networks: Controlling Optical Properties Through Orientation and Interaction

Kirill V. Voronin, Georgy A. Ermolaev, Maria G. Burdanova, Aleksandr S. Slavich, Adilet N. Toksumakov,

Dmitry I. Yakubovsky, Maksim I. Paukov, Ying Xie, Liu Qian, Daria S. Kopylova, Dmitry V. Krasnikov,

Davit A. Ghazaryan, Denis G. Baranov, Alexander I. Chernov, Albert G. Nasibulin, Jin Zhang,

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Advanced Science 2024 2404694

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Polarization control of lasing from few-layer MoTe₂ coupled with the optical metasurface supporting quasi-trapped modes

A. V. Prokhorov, A. N. Toksumakov, A. V. Shesterikov, F. M. Maksimov, M. K. Tatmyshevskiy,

M. Yu. Gubin, R. V. Kirtaev, E. I. Titova, D. I. Yakubovsky, E. S. Zhukova, V. V. Burdin, S. M. Novikov,

A. I. Chernov, D. A. Ghazaryan, A. V. Arsenin, V. S. Volkov

Applied Physics Letters 2024 041702

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Improving the electro-optical properties of MoS₂/rGO hybrid nanocomposites using liquid crystals

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Materials Research Bulletin 2024 113036

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Essential L-Amino Acid-Functionalized Graphene Oxide for Liquid Crystalline Phase Formation

H. Gharagulyan, Y. Melikyan, V. Hayrapetyan, Kh. Kirakosyan, D.A. Ghazaryan, M. Yeranosyan

Materials Science and Engineering: B 2023 116564

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Graphene on SiO₂/Si and Al₂O₃ under thermal annealing and electric current: Competition of dopant desorption and conformation to substrate

E.A. Kolesov, M.S. Tivanov, O.V. Korolik, I.A. Svito, A.S. Antonovich, Yu. Klishin, D.A. Ghazaryan,

A.V. Arsenin, V.S. Volkov, O.O. Kapitanova, G.N. Panin

Diamond and Related Materials 2023 110362

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Dry Assembly of van der Waals Heterostructures Using Exfoliated and CVD-Grown 2D Materials

Adilet N. Toksumakov, M. N. Sidorova, A. S. Slavich, M. K. Tatmyshevskiy, I. A. Zavidovskiy, G. A. Ermolaev, V. S. Volkov, D. A. Ghazaryan, A. V. Arsenin

Bulletin of the Russian Academy of Sciences: Physics 2023 S453-S457

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Hexagonal boron nitride nanophotonics: a record-breaking material for the ultraviolet and visible spectral ranges

D. V. Grudin, G. A. Ermolaev, D. G. Baranov, A. N. Toksumakov, K. V. Voronin, A. S. Slavich, A. A. Vyshnevyy, A. B. Mazitov, I. A. Kruglov, D. A. Ghazaryan, A. V. Arsenin, K. S. Novoselov, V. S. Volkov
Materials Horizons 2023 2427-2435

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Anomalous optical response of graphene on hexagonal boron nitride substrates

Adilet N Toksumakov, Georgy A Ermolaev, Mikhail K Tatmyshevskiy, Yuri A Klishin, Aleksandr S Slavich, Ilya V Begichev, Dusan Stosic, Dmitry I Yakubovsky, Dmitry G Kvashnin, Andrey A Vyshnevyy, Aleksey V Arsenin, Valentyn S Volkov, Davit A. Ghazaryan

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Tunable THz flat zone plate based on stretchable single-walled carbon nanotube thin film

Gleb M Katyba, Nikita I Raginov, Eldar M Khabushev, Vladislav A Zhelnov, Andrei Gorodetsky, Davit A Ghazaryan, Mikhail S Mironov, Dmitriy V Krasnikov, Yuri G Gladush, James Lloyd-Hughes, Albert G Nasibulin, Aleksey V Arsenin, Valentyn S Volkov, Kirill I Zaytsev, Maria G Burdanova
Optica 2023 53-61

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Photoluminescence anisotropy in hybrid nanostructures based on gallium phosphide nanowire and 2D transition metal dichalcogenides

MA Anikina, A Kuznetsov, AN Toksumakov, VV Dremov, DA Ghazaryan, VV Fedorov, AV Arsenin, VS Volkov, AD Bolshakov

St. Petersburg State Polytechnical University Journal: Physics and Mathematics 2023 3.2

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Temperature-dependent Raman spectroscopy and thermal conductivity of TiS₂ hexagonal nanodisks

Mohammad Talib, Samrah Manzoor, Davit A. Ghazaryan, Aleksey V. Arsenin, Valentyn S. Volkov,

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Materials Science in Semiconductor Processing 2022 107084

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High-refractive index and mechanically cleavable non-van der Waals InGaS₃

Adilet N. Toksumakov, Georgy A. Ermolaev, Aleksandr S. Slavich, Natalia V. Doroshina,, Ekaterina V. Sukhanova, Dmitry I. Yakubovsky, Alexander V. Syuy, Sergey M. Novikov,, Roman I. Romanov, Andrey M. Markeev, Aleksandr S. Oreshonkov, Dmitry M. Tsymbarenko, Zakhar I. Popov, Dmitry G. Kvashnin, Andrey A. Vyshnevyy, Aleksey V. Arsenin, Davit A. Ghazaryan, Valentyn S. Volkov

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Broadband optical and terahertz properties of 1D van der Waals heteronanotubes

Maria G. Burdanova, Yongjia Zheng, Maksim I. Paukov, Georgy A. Ermolaev, Gennady A. Komandin, Davit Ghazaryan, Sergey Novikov, Rong Xiang, Shohei Chiashi, Shigeo Maruyama, James Lloyd-Hughes, Alexey V. Arsenin, Valentin Volkov

IEEE Photonics Journal 2022 182243

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Twisted monolayer and bilayer graphene for vertical tunneling transistors

Davit A. Ghazaryan, Abhishek Misra, Evgenii E. Vdovin, Kenji Watanabe, Takashi Taniguchi, Sergei V. Morozov, Artem Mishchenko, Kostya S. Novoselov

Applied Physics Letters 2021 183106

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On the Role of Structural Imperfections of Graphene in Resonant Tunneling through Localized States in the h-BN Barrier of van-der-Waals Heterostructures

M. V. Grigoriev, D. A. Ghazaryan, E. E. Vdovin, Yu. N. Khanin, S. V. Morozov, K. S. Novoselov

Физика и техника полупроводников (Semiconductors) 2020 291–296

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High-temperature electronic devices enabled by hBN-encapsulated graphene

Makars Šiškins, Ciaran Mullan, Seok-Kyun Son, Jun Yin, Kenji Watanabe, Takashi Taniguchi,

Davit Ghazaryan, Kostya S. Novoselov, Artem Mishchenko

Applied Physics Letters 2019 123104

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Engineering Graphene Flakes for Wearable Textile Sensors via Highly Scalable and Ultrafast Yarn Dyeing Technique

Shaila Afroj, Nazmul Karim, Zihao Wang, Sirui Tan, Pei He, Matthew Holwill, Davit Ghazaryan,

Anura Fernando, Kostya S. Novoselov

ACS Nano 2019 3847–3857

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Field-induced insulating states in a graphene superlattice

S. Pezzini, S. Wiedmann, A. Mishchenko, M. Holwill, R. Gorbachev, D. Ghazaryan, K.S. Novoselov,

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Physical Review B 2019 045440

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Planar and van der Waals heterostructures for vertical tunnelling single electron transistors

Gwangwoo Kim, Sung-Soo Kim, Jonghyuk Jeon, Seong In Yoon, Seokmo Hong, Young Jin Cho,

Abhishek Misra, Servet Ozdemir, Jun Yin, Davit Ghazaryan, Matthew Holwill, Artem Mishchenko,

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Kostya S. Novoselov, Byeong-Hyeok Sohn, Hyeon Suk Shin

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