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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 Grudin, Kirill V Voronin, Arslan Mazitov, Konstantin V Kravtsov,
Alexander V Syuy, Dmitry M Tsybarenko, Mikhail S Mironov, Sergey M Novikov, Ivan Kruglov,
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

Georgy A Ermolaev, Kirill V Voronin, Adilet N Toksumakov, Dmitriy V Grudin, Ilia M Fradkin,
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Roman V Kirtaev, Sergey M Novikov, Elena S Zhukova, Ivan Kruglov, Andrey A Vyshnevyy,
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Broadband optical properties of Ti3C2 MXene revisited

Aleksey V. Arsenin, Valentyn S. Volkov, Daria A. Panova, Gleb I. Tselikov, Georgy A. Ermolaev,
Alexander V. Syuy, Dmitrii S. Zimbovskii, Olesya O. Kapitanova, Dmitry I. Yakubovskiy, Arslan B. Mazitov,
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Crystallinity as a factor of SERS stability of silver nanoparticles formed by Ar+ irradiation

Aleksey V. Arsenin, Valentyn S. Volkov, Natalia V. Doroshina, Oleg A. Streletskiy, Ilya A. Zavidovskiy,
Mikhail K. Tatmyshevskiy, Gleb I. Tselikov, Olesya O. Kapitanova, Alexander V. Syuy, Roman Romanov,
Prabhash Mishra, Vjaceslavs Bobrovs, Andrey M. Markeev, Dmitry I. Yakubovskiy, Irina A. Veselova,
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Chiral Photonic Super-Crystals Based on Helical van der Waals Homostructures

Kirill V. Voronin, Adilet N. Toksumakov, Georgy A. Ermolaev, Aleksandr S. Slavich,
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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, Aleksey V. Arsenin, Valentyn Volkov
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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
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Anisotropic Optical Properties of Monolayer Aligned Single-Walled Carbon Nanotubes

Aleksey V. Arsenin, Valentyn S. Volkov, Georgy A. Ermolaev, Ying Xie, Liu Qian, Mikhail K. Tatmyshevskiy, Aleksandr S. Slavich, Jin Zhang, Alexander I. Chernov
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Exploring stable hot carrier multiplication in filled carbon nanotubes

Aleksey V. Arsenin, Maksim I. Paukov, Shuang Sun, Anna A. Vorfolomeeva, Alexander V. Syuy, Roman I. Romanov, Mikhail S. Mironov, Andrey A. Vyshnevyy, Gennadiy A. Komandin, Lyubov G. Bulusheva, Alexander V. Okotrub, Valentyn Volkov, Yan Zhang, Maria G. Burdanova
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Laser-synthesized TiN-based nanoparticles as novel efficient electrostatic nanosorbent for environmental water cleaning

Aleksey V Arsenin, Valentyn S Volkov, Alexander V Syuy, Ilya V Martynov, Ilya A Zavidovskiy, Dmitry V Dyubo, Qingjiang Sun, Xi Yang, Gleb V Tikhonowski, Daniil I Tselikov, Maxim S Savinov, Islam V Sozaev, Anton A Popov, Sergey M Klimentov, Gleb I Tselikov, Sergey M Novikov, Xiangwei Zhao, Andrei V Kabashin
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Unveiling the broadband optical properties of Bi₂Te₃: Ultrahigh refractive index and

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Aleksey V. Arsenin, Valentyn S. Volkov, Georgy A. Ermolaev, et al.

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

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Anomalous optical response of graphene on hexagonal boron nitride substrates

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Physisorption-Mediated Charge Transfer in TiS₂ Nanodiscs: A Room Temperature Sensor for Highly Sensitive and Reversible Carbon Dioxide Detection

Aleksey V. Arsenin, Valentyn S. Volkov, Samrah Manzoor, Mohammad Talib, Sergey M. Novikov,

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van der Waals Materials for Overcoming Fundamental Limitations in Photonic Integrated Circuitry

Aleksey V. Arsenin, Valentyn S. Volkov, Andrey A. Vyshnevyy, Georgy A. Ermolaev, Dmitriy V. Grudinin,

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Alexey Kuznetsov, Eduard Moiseev, Artem N. Abramov, Nikita Fominykh, Vladislav A. Sharov,

Valeriy M. Kondratev, Ivan I. Shishkin, Konstantin P. Kotlyar, Demid A. Kirilenko, Vladimir V. Fedorov,

Svetlana A. Kadinskaya, Alexandr A. Vorobyev, Ivan S. Mukhin, Aleksey V. Arsenin, Valentyn S. Volkov,

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Self-assembled photonic structure: a Ga optical antenna on GaP nanowires

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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 nanodiscs

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,
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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,
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