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

Aleksandr S Slavich, Georgy A Ermolaev, Mikhail K Tatmyshevskiy, Adilet N Toksumakov,
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Alexander V Syuy, Dmitry M Tsybarenko, Mikhail S Mironov, Sergey M Novikov, Ivan Kruglov,
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Programmable Carbon Nanotube Networks: Controlling Optical Properties Through Orientation and Interaction

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Anisotropic Optical Properties of Monolayer Aligned Single-Walled Carbon Nanotubes

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

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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

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

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

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