Sergiy Krylyuk

List of Publications by Year
in descending order

75 papers	2,319 citations	331670 21 h-index	214800 47 g-index
77 all docs	77 docs citations	77 times ranked	4767 citing authors

#	Article	IF	Citations
1	Charge density wave activated excitons in TiSe2â€“MoSe2 heterostructures. APL Materials, 2022, 10, .	5.1	6
2	Spatially Resolved Band Gap and Dielectric Function in Two-Dimensional Materials from Electron Energy Loss Spectroscopy. Journal of Physical Chemistry A, 2022, 126, 1255-1262.	2.5	6
3	Thermomagnetic properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Bi</mml:mi><mml:mn>24</mml:mn></mml:msub></mml:mrow></mml:math> single crystal in the temperature range from 55ÂK to 380 K. Physical Review Materials, 2021, 5, .	3.1	8
4	Substrate-mediated hyperbolic phonon polaritons in MoO₃. Nanophotonics, 2021, 10, 1517-1527.	6.0	25
5	Buffer layer engineering of L1 FePd thin films with large perpendicular magnetic anisotropy. AIP Advances, 2021, 11, .	1.3	8
6	Mobility Extraction in 2D Transition Metal Dichalcogenide Devicesâ€”Avoiding Contact Resistance Implicated Overestimation. Small, 2021, 17, e2100940.	10.0	14
7	Automatic detection of crystallographic defects in STEM images by unsupervised learning with translational invariance. Microscopy and Microanalysis, 2021, 27, 1460-1462.	0.4	1
8	Low barrier height in a ZnO nanorods/NbSe2 heterostructure prepared by van der Waals epitaxy. APL Materials, 2021, 9, .	5.1	2
9	Development of a high-temperature (295â€“900ÂK) Seebeck coefficient Standard Reference Material. Journal of Materials Research, 2021, 36, 3339-3352.	2.6	5
10	Effect of Oblique Versus Normal Deposition on the Properties of Perpendicularly Magnetized L1₀ FePd Thin Films. IEEE Magnetics Letters, 2020, 11, 1-5.	1.1	2
11	Investigation of Structural Phases in Mo1-xWxTe2 in STEM. Microscopy and Microanalysis, 2020, 26, 2362-2364.	0.4	0
12	Photocurrent detection of the orbital angular momentum of light. Science, 2020, 368, 763-767.	12.6	113
13	Doping of MoTe2 via Surface Charge Transfer in Air. ACS Applied Materials & Interfaces, 2020, 12, 18182-18193.	8.0	15
14	Localized Excitons in NbSe₂-MoSe₂ Heterostructures. ACS Nano, 2020, 14, 8528-8538.	14.6	26
15	Valley phenomena in the candidate phase change material WSe2(1-x)Te2x. Communications Physics, 2020, 3, .	5.3	10
16	In Situ Transport Measurements Reveal Source of Mobility Enhancement of MoS₂ and MoTe₂ during Dielectric Deposition. ACS Applied Electronic Materials, 2020, 2, 1273-1279.	4.3	4
17	Comparable Enhancement of TERS Signals from WSe2 on Chromium and Gold. Journal of Physical Chemistry C, 2020, 124, 8971-8977.	3.1	5
18	Valley phenomena in the candidate phase change material WSeTe. Communications Physics, 2020, 3, .	5.3	1

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19	MoS2 cleaning by acetone and UV-ozone: Geological and synthetic material. Applied Surface Science, 2019, 478, 183-188.	6.1	8
20	Dielectric Properties of NbxW1-xSe2 Alloys. Journal of Research of the National Institute of Standards and Technology, 2019, 124, 1-10.	1.2	3
21	Automated Mechanical Exfoliation of MoS2 and MoTe2 Layers for Two-Dimensional Materials Applications. IEEE Nanotechnology Magazine, 2019, 18, 144-148.	2.0	18
22	Electric-field induced structural transition in vertical MoTe2- and Mo1â€“xWxTe2-based resistive memories. Nature Materials, 2019, 18, 55-61.	27.5	300
23	Near-infrared photonic phase-change properties of transition metal ditellurides. , 2019, , .		4
24	Near-infrared photonic phase-change properties of transition metal ditellurides. Proceedings of SPIE, 2019, 11085, .	0.8	0
25	Electrochemical Detection of Acetaminophen with Silicon Nanowires. Electroanalysis, 2018, 30, 886-891.	2.9	11
26	Nanoscale Heterogeneities in Monolayer MoSe₂ Revealed by Correlated Scanning Probe Microscopy and Tip-Enhanced Raman Spectroscopy. ACS Applied Nano Materials, 2018, 1, 572-579.	5.0	45
27	Probing the Optical Properties and Strain-Tuning of Ultrathin Mo_{1â€“x}W_xTe₂. Nano Letters, 2018, 18, 2485-2491.	9.1	53
28	Electronic Characteristics of MoSe<inf>2</inf> and MoTe<inf>2</inf> for Nanoelectronic Applications. , 2018, , .		0
29	Comprehensive optical characterization of atomically thin <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NbSe</mml:mi><mml:mn>2</mml:mn></mml:msub></ Physical Review B, 2018, 98, .	3.2	20
30	Hexagonal MoTe2 with Amorphous BN Passivation Layer for Improved Oxidation Resistance and Endurance of 2D Field Effect Transistors. Scientific Reports, 2018, 8, 8668.	3.3	61
31	Control of polarity in multilayer MoTe2 field-effect transistors by channel thickness. , 2018, 10725, .		3
32	Electrochemical Detection of Acetaminophen with Silicon Nanowires. Electroanalysis, 2018, 30, .	2.9	0
33	Nanowire Aptasensors for Electrochemical Detection of Cell-Secreted Cytokines. ACS Sensors, 2017, 2, 1644-1652.	7.8	24
34	Novel nanofluidic chemical cells based on self-assembled solid-state SiO₂ nanotubes. Nanotechnology, 2017, 28, 435601.	2.6	1
35	The structural phases and vibrational properties of Mo _{1â^'x} W _x Te ₂ alloys. 2D Materials, 2017, 4, 045008.	4.4	65
36	Rapid determination of nanowires electrical properties using a dielectrophoresis-well based system. Applied Physics Letters, 2017, 110, .	3.3	10

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37	Correlated structural and optical properties of the MoTe2-WTe2 alloy system (Conference) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T		1
38	Rapid determination of nanowire electrical properties using a dielectrophoresis-well based system. Applied Physics Letters, 2017, 110, .	3.3	0
39	Phonon anharmonicity in bulk Td-MoTe2. Applied Physics Letters, 2016, 109, .	3.3	27
40	Characterization of Few-Layer 1Tâ€² MoTe₂ by Polarization-Resolved Second Harmonic Generation and Raman Scattering. ACS Nano, 2016, 10, 9626-9636.	14.6	148
41	Near-theoretical fracture strengths in native and oxidized silicon nanowires. Nanotechnology, 2016, 27, 31LT02.	2.6	8
42	Structural and optical nanoscale analysis of GaN coreâ€“shell microrod arrays fabricated by combined top-down and bottom-up process on Si(111). Japanese Journal of Applied Physics, 2016, 55, 05FF02.	1.5	4
43	Dense nanoimprinted silicon nanowire arrays with passivated axial p-i-n junctions for photovoltaic applications. Journal of Applied Physics, 2015, 117, .	2.5	11
44	Real-time electrical detection of the formation and destruction of lipid bilayers on silicon nanowire devices. Sensing and Bio-Sensing Research, 2015, 4, 103-108.	4.2	1
45	Faceting control in core-shell GaN micropillars using selective epitaxy. APL Materials, 2014, 2, 106104.	5.1	3
46	Miniature all-solid-state heterostructure nanowire Li-ion batteries as a tool for engineering and structural diagnostics of nanoscale electrochemical processes. Nanoscale, 2014, 6, 11756-11768.	5.6	19
47	Electron Microscopy Observation of TiO₂ Nanocrystal Evolution in High-Temperature Atomic Layer Deposition. Nano Letters, 2013, 13, 5727-5734.	9.1	49
48	Detection of Deep-Levels in Doped Silicon Nanowires Using Low-Frequency Noise Spectroscopy. IEEE Transactions on Electron Devices, 2013, 60, 4206-4212.	3.0	17
49	Selective streptavidin bioconjugation on silicon and silicon carbide nanowires for biosensor applications. Journal of Materials Research, 2013, 28, 68-77.	2.6	30
50	Formation of large-area GaN nanostructures with controlled geometry and morphology using top-down fabrication scheme. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	20
51	Biofunctionalization of Si nanowires using a solution based technique. Proceedings of SPIE, 2012, , .	0.8	2
52	In situ atomic-scale imaging of electrochemical lithiation in silicon. Nature Nanotechnology, 2012, 7, 749-756.	31.5	533
53	Ultimate Bending Strength of Si Nanowires. Nano Letters, 2012, 12, 2599-2604.	9.1	74
54	Bending manipulation and measurements of fracture strength of silicon and oxidized silicon nanowires by atomic force microscopy. Journal of Materials Research, 2012, 27, 562-570.	2.6	29

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55	Large-area GaN n-core/p-shell arrays fabricated using top-down etching and selective epitaxial overgrowth. Applied Physics Letters, 2012, 101, .	3.3	15
56	Electrolyte Stability Determines Scaling Limits for Solid-State 3D Li Ion Batteries. Nano Letters, 2012, 12, 505-511.	9.1	121
57	Realization of vertically-aligned GaN n-p core-shell nanoscale structures using top-down fabrication. , 2011, , .		1
58	Tapering Control of Si Nanowires Grown from SiCl₄ at Reduced Pressure. ACS Nano, 2011, 5, 656-664.	14.6	85
59	Correlation between the performance and microstructure of Ti/Al/Ti/Au Ohmic contacts to p-type silicon nanowires. Nanotechnology, 2011, 22, 075206.	2.6	15
60	Characterization of deep-levels in silicon nanowires by low-frequency noise spectroscopy. Applied Physics Letters, 2011, 99, 113107.	3.3	19
61	Compressive Stress Effect on the Radial Elastic Modulus of Oxidized Si Nanowires. Nano Letters, 2010, 10, 2031-2037.	9.1	38
62	Rapid thermal oxidation of silicon nanowires. Applied Physics Letters, 2009, 94, .	3.3	21
63	Contact-resonance atomic force microscopy for nanoscale elastic property measurements: Spectroscopy and imaging. Ultramicroscopy, 2009, 109, 929-936.	1.9	19
64	Nanostructures on SiC surface created by laser microablation. Applied Surface Science, 2008, 254, 2031-2036.	6.1	19
65	Surface effects on the elastic modulus of Te nanowires. Applied Physics Letters, 2008, 92, 241908.	3.3	40
66	Electrical properties and low-temperature photolumincesence of Si-doped CdTe crystals. Semiconductors, 2006, 40, 143-147.	0.5	7
67	Influence of layer deformation on thermal quenching of exciton photoluminescence in short-period GaAs/AlAs superlattices. Semiconductor Science and Technology, 2004, 19, 475-479.	2.0	7
68	Gamma-radiation effect on donor and acceptor states in CdTe and CdTe:Cl. Journal of Alloys and Compounds, 2004, 371, 142-145.	5.5	9
69	Characterization of ultrashort-period GaAs/AlAs superlattices by exciton photoluminescence. Materials Science and Engineering C, 2002, 19, 439-443.	7.3	2
70	Observation of stimulated emission in an ultrashort-period nonsymmetric GaAs/AlAs superlattice. Applied Physics Letters, 2001, 78, 4085-4087.	3.3	10
71	Time-resolved spectra and kinetics of the exciton photoluminescence in different types of GaAs/AlAs superlattices. Superlattices and Microstructures, 2001, 29, 57-66.	3.1	0
72	Enhancement of the photoluminescence intensity in short-period GaAs/AlAs superlattices with different well and barrier thickness. Applied Physics Letters, 1999, 74, 2596-2598.	3.3	16

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73	Enhancement of electron-phonon interaction in ultrashort-period GaAs/AlAs superlattices. Physical Review B, 1997, 55, 10621-10624.	3.2	15
74	Polarization effects in semiconductor superlattices. Semiconductor Science and Technology, 1995, 10, 422-424.	2.0	6
75	Electrochemically Assaying Dopamine with p-Doped Silicon Nanowires. Analytical Letters, 0, , 1-9.	1.8	0