Z R Kudrynskyi

List of Publications by Year
in descending order

71	3,269	331259 21	149479 56
papers	citations	h-index	g-index

73	73	73	4029
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High electron mobility, quantum Hall effect and anomalous optical response in atomically thin InSe. Nature Nanotechnology, 2017, 12, 223-227.	15.6	996
2	Tuning the Bandgap of Exfoliated InSe Nanosheets by Quantum Confinement. Advanced Materials, 2013, 25, 5714-5718.	11.1	512
3	High Broadâ€Band Photoresponsivity of Mechanically Formed InSeâ€“Graphene van der Waals Heterostructures. Advanced Materials, 2015, 27, 3760-3766.	11.1	320
4	The direct-to-indirect band gap crossover in two-dimensional van der Waals Indium Selenide crystals. Scientific Reports, 2016, 6, 39619.	1.6	150
5	Design of van der Waals interfaces for broad-spectrum optoelectronics. Nature Materials, 2020, 19, 299-304.	13.3	106
6	Epitaxial growth of Î³ -InSe and Îµ , Î² , and Î³ -In ₂ Se ₃ on Îµ -GaSe. 2D Materials, 2018, 5, 035026.	2.0	98
7	Quantum confinement and photoresponsivity of Î² -In ₂ Se ₃ nanosheets grown by physical vapour transport. 2D Materials, 2016, 3, 025030.	2.0	88
8	Engineering p â€“ n junctions and bandgap tuning of InSe nanolayers by controlled oxidation. 2D Materials, 2017, 4, 025043.	2.0	76
9	Room Temperature Electroluminescence from Mechanically Formed van der Waals IIIâ€“VI Homojunctions and Heterojunctions. Advanced Optical Materials, 2014, 2, 1064-1069.	3.6	71
10	Interlayer Bandâ€toâ€Band Tunneling and Negative Differential Resistance in van der Waals BP/InSe Fieldâ€Effect Transistors. Advanced Functional Materials, 2020, 30, 1910713.	7.8	65
11	Large Tunneling Magnetoresistance in van der Waals Ferromagnet/Semiconductor Heterojunctions. Advanced Materials, 2021, 33, e2104658.	11.1	61
12	Quantum confined acceptors and donors in InSe nanosheets. Applied Physics Letters, 2014, 105, 221909.	1.5	58
13	Giant Quantum Hall Plateau in Graphene Coupled to an InSe van der Waals Crystal. Physical Review Letters, 2017, 119, 157701.	2.9	44
14	Gate-Defined Quantum Confinement in InSe-Based van der Waals Heterostructures. Nano Letters, 2018, 18, 3950-3955.	4.5	40
15	Formation and Healing of Defects in Atomically Thin GaSe and InSe. ACS Nano, 2019, 13, 5112-5123.	7.3	35
16	Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials. Nano Letters, 2019, 19, 6475-6481.	4.5	32
17	Biexciton formation and exciton coherent coupling in layered GaSe. Journal of Chemical Physics, 2015, 142, 212422.	1.2	31
18	Coherent acoustic phonons in van der Waals nanolayers and heterostructures. Physical Review B, 2018, 98, .	1.1	31

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19	Interâ€Flake Quantum Transport of Electrons and Holes in Inkjetâ€Printed Graphene Devices. Advanced Functional Materials, 2021, 31, 2007478.	7.8	25
20	High-Frequency Elastic Coupling at the Interface of van der Waals Nanolayers Imaged by Picosecond Ultrasonics. ACS Nano, 2019, 13, 11530-11537.	7.3	24
21	Mechanism of excitonic dephasing in layered InSe crystals. Physical Review B, 2014, 89, .	1.1	23
22	Resonant tunnelling into the two-dimensional subbands of InSe layers. Communications Physics, 2020, 3, .	2.0	22
23	Photoquantum Hall Effect and Lightâ€Induced Charge Transfer at the Interface of Graphene/InSe Heterostructures. Advanced Functional Materials, 2019, 29, 1805491.	7.8	20
24	Van der Waals SnSe 2(1â^' x) S 2 x Alloys: Compositionâ€Dependent Bowing Coefficient and Electronâ€“Phonon Interaction. Advanced Functional Materials, 2020, 30, 1908092.	7.8	18
25	Enhanced Optical Emission from 2D InSe Bent onto Siâ€Pillars. Advanced Optical Materials, 2020, 8, 2000828.	3.6	17
26	Magnetic properties and surface morphology of layered In2Se3 crystals intercalated with cobalt. Physics of the Solid State, 2013, 55, 1148-1155.	0.2	16
27	Ferroelectric semiconductor junctions based on graphene/In₂Se₃/graphene van der Waals heterostructures. 2D Materials, 2021, 8, 045020.	2.0	16
28	Anomalous Low Thermal Conductivity of Atomically Thin InSe Probed by Scanning Thermal Microscopy. Advanced Functional Materials, 2021, 31, 2008967.	7.8	15
29	Nanomechanical probing of the layer/substrate interface of an exfoliated InSe sheet on sapphire. Scientific Reports, 2016, 6, 26970.	1.6	14
30	Photoluminescence dynamics in few-layer InSe. Physical Review Materials, 2020, 4, .	0.9	14
31	Improved performance of InSe field-effect transistors by channel encapsulation. Semiconductor Science and Technology, 2018, 33, 06LT01.	1.0	13
32	Schottky-barrier thin-film transistors based on HfO2-capped InSe. Applied Physics Letters, 2019, 115, .	1.5	13
33	Defect-Assisted High Photoconductive UVâ€“Visible Gain in Perovskite-Decorated Graphene Transistors. ACS Applied Electronic Materials, 2020, 2, 147-154.	2.0	13
34	Graphene-InSe-graphene van der Waals heterostructures. Journal of Physics: Conference Series, 2015, 647, 012001.	0.3	11
35	The Interaction of Hydrogen with the van der Waals Crystal Î³-InSe. Molecules, 2020, 25, 2526.	1.7	11
36	Highly-mismatched InAs/InSe heterojunction diodes. Applied Physics Letters, 2016, 109, .	1.5	10

#	Article	IF	Citations
37	Memristive effects due to charge transfer in graphene gated through ferroelectric CuInP₂S₆. 2D Materials, 2022, 9, 035003.	2.0	10
38	Fabrication and characterization of photosensitive n-ZnO/p-InSe heterojunctions. Thin Solid Films, 2015, 582, 253-257.	0.8	9
39	Tunable spin-orbit coupling in two-dimensional InSe. Physical Review B, 2021, 104, .	1.1	9
40	Surface morphology and electrical properties of Au/Ni/âŒ©CâŒª/n-Ga2O3/p-GaSeâŒ©KNO3âŒª hybrid structures fabricated on the basis of a layered semiconductor with nanoscale ferroelectric inclusions. Semiconductors, 2012, 46, 342-353.	0.2	8
41	Fabrication and Characterization of Photosensitive n-CdO/p-InSe Heterojunctions. Acta Physica Polonica A, 2013, 124, 720-723.	0.2	8
42	Controlled synthesis and characterization of highly ordered coreâ€“shell nickelâ€“carbon nanoparticle arrays on the van der Waals surfaces of layered semiconductor crystals. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 342-350.	0.8	8
43	Effect of low-temperature annealing on the quality of InSe layered single crystals and the characteristics of n-InSe/p-InSe heterojunctions. Semiconductors, 2014, 48, 545-550.	0.2	8
44	Characterization of potential nanoporous sodium titanate film formation on Ti6Al4V and TiO2 microspherical substrates via wet-chemical alkaline conversion. Materials Characterization, 2022, 185, 111760.	1.9	8
45	Morphology of nanostructures formed on the van der Waals surface of GaSe layered crystals annealed in sulfur vapor. Physics of the Solid State, 2011, 53, 2154-2159.	0.2	7
46	Optical size effect in In2O3 nanostructured films. Semiconductors, 2013, 47, 345-348.	0.2	7
47	Magnetotransport and lateral confinement in an InSe van der Waals Heterostructure. 2D Materials, 2018, 5, 035040.	2.0	7
48	Electrical and photoelectric properties of n-CdO-p-InSe anisotype heterojunctions. Semiconductors, 2013, 47, 943-946.	0.2	6
49	Structure of oxidized and unoxidized end faces of GaSe layered crystals. Inorganic Materials, 2014, 50, 339-343.	0.2	6
50	Room Temperature Uniaxial Magnetic Anisotropy Induced By Feâ€Islands in the InSe Semiconductor Van Der Waals Crystal. Advanced Science, 2018, 5, 1800257.	5.6	6
51	Resonance and antiresonance in Raman scattering in GaSe and InSe crystals. Scientific Reports, 2021, 11, 924.	1.6	6
52	Photosensitive anisotype n-ZnSe/p-InSe and n-ZnSe/p-GaSe heterojunctions. Technical Physics, 2014, 59, 1205-1208.	0.2	5
53	Nanocomposite structures grown by inserting ionic salt RbNO3 into van der Waals gaps of IIIâ€“VI compound layered semiconductors. Solid State Ionics, 2015, 273, 59-65.	1.3	5
54	Highâ€Performance Phototransistors by Alumina Encapsulation of a 2D Semiconductor with Selfâ€Aligned Contacts. Advanced Electronic Materials, 2022, 8, .	2.6	5

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55	Spectral anisotropy of a photoresponse from heterojunctions based on GaSe and InSe layered crystals. Technical Physics, 2014, 59, 407-410.	0.2	4
56	Composite Nanostructures Based on a Layered Semiconductor with Nanoscale 3D Ferroelectric Inclusions (p-GaSe Intercalated by KNO₃). Sensor Letters, 2013, 11, 1549-1554.	0.4	4
57	Terahertz control of photoluminescence emission in few-layer InSe. Applied Physics Letters, 2022, 120, .	1.5	4
58	Structure and magnetic properties of cobalt-intercalated layered InSe crystals. Technical Physics, 2014, 59, 1462-1465.	0.2	3
59	On the photopleochroism coefficient and its temperature dynamics in native oxide-p-InSe heterojunctions. Semiconductors, 2014, 48, 776-778.	0.2	3
60	Fabrication and characterization of PbSe nanostructures on van der Waals surfaces of GaSe layered semiconductor crystals. Nanotechnology, 2015, 26, 465601.	1.3	3
61	Sensitive elements of pressure transducers made of layered intercalated InSe, GaSe, and Bi2Te3 crystals. Technical Physics, 2013, 58, 1840-1843.	0.2	2
62	Morphology, chemical composition, and electrical characteristics of hybrid (Ni-C) nanocomposite structures grown on the van der Waals GaSe(0001) surface. Physics of the Solid State, 2014, 56, 2118-2130.	0.2	2
63	Photoelectric properties of n-ITO/p-GaTe heterojunctions. Semiconductors, 2015, 49, 600-603.	0.2	1
64	Electrochemical, optical, and magnetic properties of Ni x GaSe (0 < x â‰¤ 1) intercalation compounds. Inorganic Materials, 2015, 51, 1086-1089.	0.2	1
65	Charge Carrier Transport in Van Der Waals Semiconductor InSe Intercalated with RbNO3 Probed by Direct Current Methods. Applied Sciences (Switzerland), 2021, 11, 5181.	1.3	1
66	Heavy carrier effective masses in van der Waals semiconductor Sn(SeS) revealed by high magnetic fields up to 150 T. Physical Review B, 2021, 104, .	1.1	1
67	Preparation of Nanocomposite Magnetic Compounds Based on Layered Semiconductors by Means of Electrochemical Intercalation in a Gradient Magnetic Field. Acta Physica Polonica A, 2016, 130, 773-777.	0.2	1
68	Influence of Optical Illumination on the Electric Impedance of Composite Nanostructures Based on p-GaSe Layered Semiconductor with 3D Nanodimensional Inclusions of KNO3 Ferroelectric. Russian Physics Journal, 2014, 57, 642-656.	0.2	0
69	Morphology of Van der Waals surfaces and magnetic hysteresis in cobalt intercalated InTe. Functional Materials, 2015, 22, 327-331.	0.4	0
70	Physical properties of layered FeIn₂Se₄ single crystals. Functional Materials, 2016, 23, 557-560.	0.4	0
71	Formation of Graphite Nanostructures on the Surface of Layered n-InSe Crystal. Journal of Nano- and Electronic Physics, 2019, 11, 03038-1-03038-3.	0.2	0