Oleg Makarovsky

List of Publications by Year
in descending order

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82 papers	4,555 citations	201385 27 h-index	98622 67 g-index
82 all docs	82 docs citations	82 times ranked	7387 citing authors

#	Article	IF	Citations
1	Vertical field-effect transistor based on grapheneâ€“WS2 heterostructures for flexible and transparent electronics. Nature Nanotechnology, 2013, 8, 100-103.	15.6	1,543
2	Tuning the Bandgap of Exfoliated InSe Nanosheets by Quantum Confinement. Advanced Materials, 2013, 25, 5714-5718.	11.1	512
3	Twist-controlled resonant tunnelling in graphene/boron nitride/graphene heterostructures. Nature Nanotechnology, 2014, 9, 808-813.	15.6	435
4	High Broadâ€Band Photoresponsivity of Mechanically Formed InSeâ€“Graphene van der Waals Heterostructures. Advanced Materials, 2015, 27, 3760-3766.	11.1	320
5	The direct-to-indirect band gap crossover in two-dimensional van der Waals Indium Selenide crystals. Scientific Reports, 2016, 6, 39619.	1.6	150
6	Quantum confinement and photoresponsivity of Î² -In ₂ Se ₃ nanosheets grown by physical vapour transport. 2D Materials, 2016, 3, 025030.	2.0	88
7	Phonon-Assisted Resonant Tunneling of Electrons in Grapheneâ€“Boron Nitride Transistors. Physical Review Letters, 2016, 116, 186603.	2.9	78
8	Linear magnetoresistance due to multiple-electron scattering by low-mobility islands in an inhomogeneous conductor. Nature Communications, 2012, 3, 1097.	5.8	76
9	Engineering p â€“ n junctions and bandgap tuning of InSe nanolayers by controlled oxidation. 2D Materials, 2017, 4, 025043.	2.0	76
10	Room Temperature Electroluminescence from Mechanically Formed van der Waals IIIâ€“VI Homojunctions and Heterojunctions. Advanced Optical Materials, 2014, 2, 1064-1069.	3.6	71
11	Universal mobility characteristics of graphene originating from charge scattering by ionised impurities. Communications Physics, 2021, 4, .	2.0	65
12	Resonant tunnelling between the chiral Landau states of twisted graphene lattices. Nature Physics, 2015, 11, 1057-1062.	6.5	64
13	Ligandâ€Induced Control of Photoconductive Gain and Doping in a Hybrid Grapheneâ€“Quantum Dot Transistor. Advanced Electronic Materials, 2015, 1, 1500062.	2.6	59
14	Quantum confined acceptors and donors in InSe nanosheets. Applied Physics Letters, 2014, 105, 221909.	1.5	58
15	Currentâ€“voltage instabilities in GaN/AlGaN resonant tunnelling structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2389-2392.	0.8	52
16	Giant Quantum Hall Plateau in Graphene Coupled to an InSe van der Waals Crystal. Physical Review Letters, 2017, 119, 157701.	2.9	44
17	Comment on â€œAlN/GaN double-barrier resonant tunneling diodes grown by rf-plasma-assisted molecular-beam epitaxyâ€•[Appl. Phys. Lett. 81, 1729 (2002)]. Applied Physics Letters, 2003, 83, 3626-3627.	1.5	37
18	Microscopic Analysis of the Valence Band and Impurity Band Theories of (Ga,Mn)As. Physical Review Letters, 2010, 105, 227202.	2.9	36

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19	Self-Assembly of Electrically Conducting Biopolymer Thin Films by Cellulose Regeneration in Gold Nanoparticle Aqueous Dispersions. Chemistry of Materials, 2010, 22, 2675-2680.	3.2	35
20	High Curie temperatures at low compensation in the ferromagnetic semiconductor (Ga,Mn)As. Physical Review B, 2013, 87, .	1.1	34
21	Terahertz response of hot electrons in dilute nitride Ga(AsN) alloys. Applied Physics Letters, 2006, 88, 032107.	1.5	33
22	Tunnel spectroscopy of localised electronic states in hexagonal boron nitride. Communications Physics, 2018, 1, .	2.0	33
23	Electron conduction in two-dimensionalGaAs1â^'yNychannels. Physical Review B, 2004, 69, .	1.1	31
24	Controlling High-Frequency Collective Electron Dynamics via Single-Particle Complexity. Physical Review Letters, 2012, 109, 024102.	2.9	29
25	Hot-electrons and negative differential conductance inGaAs1â^'xNx. Physical Review B, 2005, 72, .	1.1	28
26	Effect of low nitrogen concentrations on the electronic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>InAs</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn> Physical Review B, 2009, 80, .	1.1	27
27	Spin flop and crystalline anisotropic magnetoresistance in CuMnAs. Physical Review B, 2020, 101, .	1.1	27
28	Interâ€Flake Quantum Transport of Electrons and Holes in Inkjetâ€Printed Graphene Devices. Advanced Functional Materials, 2021, 31, 2007478.	7.8	25
29	Tuneable paramagnetic susceptibility and exciton g-factor in Mn-doped PbS colloidal nanocrystals. Nanoscale, 2014, 6, 8919-8925.	2.8	23
30	Resonant tunnelling into the two-dimensional subbands of InSe layers. Communications Physics, 2020, 3, .	2.0	22
31	Large zero-field spin splitting in AlGaN/AlN/GaN/AlN heterostructures. Journal of Applied Physics, 2009, 105, .	1.1	21
32	Magnetoanisotropy of electron-correlation-enhanced tunneling through a quantum dot. Physical Review B, 2007, 75, .	1.1	20
33	Photoquantum Hall Effect and Lightâ€Induced Charge Transfer at the Interface of Graphene/InSe Heterostructures. Advanced Functional Materials, 2019, 29, 1805491.	7.8	20
34	Resonance and current instabilities in AlN/GaN resonant tunnelling diodes. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 21, 752-755.	1.3	19
35	Fock-Darwin-Like Quantum Dot States Formed by Charged Mn Interstitial Ions. Physical Review Letters, 2008, 101, 226807.	2.9	19
36	Manipulating and Imaging the Shape of an Electronic Wave Function by Magnetotunneling Spectroscopy. Physical Review Letters, 2010, 105, 236804.	2.9	18

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37	Band-gap profiling by laser writing of hydrogen-containing III-N-Vs. Physical Review B, 2012, 86, .	1.1	18
38	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
39	Enhanced Optical Emission from 2D InSe Bent onto Siâ€Pillars. Advanced Optical Materials, 2020, 8, 2000828.	3.6	17
40	Direct Laser Writing of Nanoscale Lightâ€Emitting Diodes. Advanced Materials, 2010, 22, 3176-3180.	11.1	16
41	Ferroelectric semiconductor junctions based on graphene/In₂Se₃/graphene van der Waals heterostructures. 2D Materials, 2021, 8, 045020.	2.0	16
42	Photoluminescence of PbS nanocrystals at high magnetic fields up to 30 T. Physical Review B, 2010, 82, .	1.1	14
43	Laser Location and Manipulation of a Single Quantum Tunneling Channel in an InAs Quantum Dot. Physical Review Letters, 2012, 108, 117402.	2.9	14
44	Defect-Assisted High Photoconductive UVâ€“Visible Gain in Perovskite-Decorated Graphene Transistors. ACS Applied Electronic Materials, 2020, 2, 147-154.	2.0	13
45	Measuring the hole chemical potential in ferromagnetic Ga1â^'xMnxAsâ•GaAs heterostructures by photoexcited resonant tunneling. Applied Physics Letters, 2007, 90, 082106.	1.5	12
46	High magnetic field quantum transport in Au nanoparticleâ€“cellulose films. Nanotechnology, 2012, 23, 045702.	1.3	12
47	Using randomly distributed charges to create quantum dots. Physical Review B, 2010, 81, .	1.1	11
48	Quantum oscillations in the photocurrent of GaAs/AlAsp-i-ndiodes. Physical Review B, 2014, 89, .	1.1	11
49	Graphene-InSe-graphene van der Waals heterostructures. Journal of Physics: Conference Series, 2015, 647, 012001.	0.3	11
50	The Interaction of Hydrogen with the van der Waals Crystal Î³-InSe. Molecules, 2020, 25, 2526.	1.7	11
51	Laser writing of the electronic activity of N- and H-atoms in GaAs. Applied Physics Letters, 2011, 99, 021105.	1.5	10
52	Nonresonant hydrogen dopants in In(AsN): A route to high electron concentrations and mobilities. Physical Review B, 2013, 87, .	1.1	10
53	Highly-mismatched InAs/InSe heterojunction diodes. Applied Physics Letters, 2016, 109, .	1.5	10
54	Sensitive detection of photoexcited carriers by resonant tunneling through a single quantum dot. Physical Review B, 2009, 79, .	1.1	9

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55	Ultrafast acoustical gating of the photocurrent in apâ^'iâ^'ntunneling diode incorporating a quantum well. Physical Review B, 2009, 80, .	1.1	7
56	Hot electron transport and impact ionization in the narrow energy gap InAs1â^'xNx alloy. Applied Physics Letters, 2010, 96, 052115.	1.5	7
57	Nano-sized light emitting diodes by near field laser exposure. Applied Physics Letters, 2011, 98, .	1.5	7
58	Tunneling in Graphene/h-BN/Graphene Heterostructures through Zero-Dimensional Levels of Defects in h-BN and Their Use as Probes to Measure the Density of States of Graphene. JETP Letters, 2019, 109, 482-489.	0.4	7
59	Quantum Hall effect breakdown: can the bootstrap heating and inter-Landau-level scattering models be reconciled?. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 178-181.	1.3	6
60	Nanoscale Potential Fluctuations in (GaMn)As/GaAs Heterostructures: From Individual Ions to Charge Clusters and Electrostatic Quantum Dots. Nano Letters, 2010, 10, 4874-4879.	4.5	6
61	Impact ionization and large room-temperature magnetoresistance in micron-sized high-mobility InAs channels. Physical Review B, 2014, 90, .	1.1	6
62	Mobility enhancement of CVD graphene by spatially correlated charges. 2D Materials, 2017, 4, 025026.	2.0	6
63	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
64	Enhancing optoelectronic properties of SiC-grown graphene by a surface layer of colloidal quantum dots. 2D Materials, 2017, 4, 031001.	2.0	5
65	H-tailored surface conductivity in narrow band gap In(AsN). Applied Physics Letters, 2015, 106, .	1.5	4
66	Resonant Zener tunnelling via zero-dimensional states in a narrow gap diode. Scientific Reports, 2016, 6, 32039.	1.6	4
67	Observation of Spin and Valley Splitting of Landau Levels under Magnetic Tunneling in Graphene/Boron Nitride/Graphene Structures. JETP Letters, 2018, 107, 238-242.	0.4	4
68	Imaging the photovoltaic response of PbSâ€sensitized porous titania. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2450-2453.	0.8	3
69	A micrometer-size movable light emitting area in a resonant tunneling light emitting diode. Applied Physics Letters, 2013, 103, .	1.5	3
70	Optical Detection and Spatial Modulation of Midâ€infrared Surface Plasmon Polaritons in a Highly Doped Semiconductor. Advanced Optical Materials, 2018, 6, 1700492.	3.6	3
71	Lightâ€induced Stark Effect and Reversible Photoluminescence Quenching in Inorganic Perovskite Nanocrystals. Advanced Optical Materials, 2021, 9, 2100104.	3.6	3
72	Nonlinear hole transport through a submicron-size channel. Applied Physics Letters, 2003, 82, 925-927.	1.5	1

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73	Magnetoresistance of Si MOSFETs with high concentration of electrons. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 22, 320-323.	1.3	1
74	Electrical conduction properties of Ga(AsN) layers. AIP Conference Proceedings, 2005, , .	0.3	1
75	Quasiballistic transport of hot holes in GaAs submicron channels. Applied Physics Letters, 2005, 86, 042101.	1.5	1
76	TEM of Nano-LEDs made by laser writing. Journal of Physics: Conference Series, 2011, 326, 012055.	0.3	1
77	Tunable spectral response by hydrogen irradiation of Ga(AsN) superlattice diodes. Applied Physics Letters, 2014, 104, 242110.	1.5	1
78	Room temperature upconversion electroluminescence from a mid-infrared In(AsN) tunneling diode. Applied Physics Letters, 2020, 116, 142108.	1.5	1
79	Ultrafast Acoustic Gating of Photocurrent in Nanodevices With a Quantum Well. AIP Conference Proceedings, 2011, , .	0.3	0
80	Electronic energy levels, wavefunctions and potential landscape of nanostructures probed by magneto-tunnelling spectroscopy. Journal of Physics: Conference Series, 2011, 334, 012010.	0.3	0
81	Nanoengineering the built-in electric field of a photonic device by interstitial-ion diffusion. Physical Review B, 2012, 85, .	1.1	0
82	Suppression of electron magnetotunneling between parallel two-dimensional GaAs/InAs electron systems by the correlation interaction. Semiconductors, 2013, 47, 1215-1218.	0.2	0