Oleg Makarovsky

List of Publications by Citations

79 papers	3,720 citations	24 h-index	60 g-index
82 ext. papers	4,184 ext. citations	6.5 avg, IF	4.64 L-index

#	Paper	IF	Citations
79	Vertical field-effect transistor based on graphene-WS2 heterostructures for flexible and transparent electronics. *Nature Nanotechnology*, **2013**, 8, 100-3	28.7	1342
78	Tuning the bandgap of exfoliated InSe nanosheets by quantum confinement. *Advanced Materials*, **2013**, 25, 5714-8	24	419
77	Twist-controlled resonant tunnelling in graphene/boron nitride/graphene heterostructures. *Nature Nanotechnology*, **2014**, 9, 808-13	28.7	341
76	High broad-band photoresponsivity of mechanically formed InSe-graphene van der Waals heterostructures. *Advanced Materials*, **2015**, 27, 3760-6	24	252
75	The direct-to-indirect band gap crossover in two-dimensional van der Waals Indium Selenide crystals. *Scientific Reports*, **2016**, 6, 39619	4.9	114
74	Quantum confinement and photoresponsivity of □In 2 Se 3 nanosheets grown by physical vapour transport. *2D Materials*, **2016**, 3, 025030	5.9	68
73	Engineering p □n junctions and bandgap tuning of InSe nanolayers by controlled oxidation. *2D Materials*, **2017**, 4, 025043	5.9	63
72	Phonon-Assisted Resonant Tunneling of Electrons in Graphene-Boron Nitride Transistors. *Physical Review Letters*, **2016**, 116, 186603	7.4	63
71	Room Temperature Electroluminescence from Mechanically Formed van der Waals III□VI Homojunctions and Heterojunctions. *Advanced Optical Materials*, **2014**, 2, 1064-1069	8.1	61
70	Linear magnetoresistance due to multiple-electron scattering by low-mobility islands in an inhomogeneous conductor. *Nature Communications*, **2012**, 3, 1097	17.4	57
69	Quantum confined acceptors and donors in InSe nanosheets. *Applied Physics Letters*, **2014**, 105, 221909	3.4	53
68	Resonant tunnelling between the chiral Landau states of twisted graphene lattices. *Nature Physics*, **2015**, 11, 1057-1062	16.2	49
67	Ligand-Induced Control of Photoconductive Gain and Doping in a Hybrid Graphene□Quantum Dot Transistor. *Advanced Electronic Materials*, **2015**, 1, 1500062	6.4	48
66	Current□oltage instabilities in GaN/AlGaN resonant tunnelling structures. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2003**, 2389-2392		47
65	Comment on □AlN/GaN double-barrier resonant tunneling diodes grown by rf-plasma-assisted molecular-beam epitaxy□[Appl. Phys. Lett. 81, 1729 (2002)]. *Applied Physics Letters*, **2003**, 83, 3626-3627	3.4	35
64	Giant Quantum Hall Plateau in Graphene Coupled to an InSe van der Waals Crystal. *Physical Review Letters*, **2017**, 119, 157701	7.4	33
63	Microscopic analysis of the valence band and impurity band theories of (Ga,Mn)As. *Physical Review Letters*, **2010**, 105, 227202	7.4	33

62	Self-Assembly of Electrically Conducting Biopolymer Thin Films by Cellulose Regeneration in Gold Nanoparticle Aqueous Dispersions. *Chemistry of Materials*, **2010**, 22, 2675-2680	9.6	33
61	Terahertz response of hot electrons in dilute nitride Ga(AsN) alloys. *Applied Physics Letters*, **2006**, 88, 032107	3.4	31
60	Electron conduction in two-dimensional GaAs1−yNy channels. *Physical Review B*, **2004**, 69,	3.3	30
59	High Curie temperatures at low compensation in the ferromagnetic semiconductor (Ga,Mn)As. *Physical Review B*, **2013**, 87,	3.3	29
58	Hot-electrons and negative differential conductance in GaAs1−xNx. *Physical Review B*, **2005**, 72,	3.3	27
57	Controlling high-frequency collective electron dynamics via single-particle complexity. *Physical Review Letters*, **2012**, 109, 024102	7.4	25
56	Tunnel spectroscopy of localised electronic states in hexagonal boron nitride. *Communications Physics*, **2018**, 1,	5.4	25
55	Effect of low nitrogen concentrations on the electronic properties of InAs1−xNx. *Physical Review B*, **2009**, 80,	3.3	24
54	Tuneable paramagnetic susceptibility and exciton g-factor in Mn-doped PbS colloidal nanocrystals. *Nanoscale*, **2014**, 6, 8919-25	7.7	21
53	Large zero-field spin splitting in AlGaN/AlN/GaN/AlN heterostructures. *Journal of Applied Physics*, **2009**, 105, 093701	2.5	20
52	Magnetoanisotropy of electron-correlation-enhanced tunneling through a quantum dot. *Physical Review B*, **2007**, 75,	3.3	19
51	Fock-Darwin-like quantum dot states formed by charged Mn interstitial ions. *Physical Review Letters* , **2008**, 101, 226807	7.4	17
50	Manipulating and imaging the shape of an electronic wave function by magnetotunneling spectroscopy. *Physical Review Letters*, **2010**, 105, 236804	7.4	16
49	Band-gap profiling by laser writing of hydrogen-containing III-N-Vs. *Physical Review B*, **2012**, 86,	3.3	16
48	Universal mobility characteristics of graphene originating from charge scattering by ionised impurities. *Communications Physics*, **2021**, 4,	5.4	16
47	Spin flop and crystalline anisotropic magnetoresistance in CuMnAs. *Physical Review B*, **2020**, 101,	3.3	15
46	Resonance and current instabilities in AlN/GaN resonant tunnelling diodes. *Physica E: Low-Dimensional Systems and Nanostructures*, **2004**, 21, 752-755	3	15
45	Direct laser writing of nanoscale light-emitting diodes. *Advanced Materials*, **2010**, 22, 3176-80	24	14

44	Resonant tunnelling into the two-dimensional subbands of InSe layers. *Communications Physics*, **2020**, 3,	5.4	13
43	Photoquantum Hall Effect and Light-Induced Charge Transfer at the Interface of Graphene/InSe Heterostructures. *Advanced Functional Materials*, **2019**, 29, 1805491	15.6	13
42	Inter-Flake Quantum Transport of Electrons and Holes in Inkjet-Printed Graphene Devices. *Advanced Functional Materials*, **2021**, 31, 2007478	15.6	13
41	Measuring the hole chemical potential in ferromagnetic Ga1−xMnxAs/GaAs heterostructures by photoexcited resonant tunneling. *Applied Physics Letters*, **2007**, 90, 082106	3.4	12
40	Enhanced Optical Emission from 2D InSe Bent onto Si-Pillars. *Advanced Optical Materials*, **2020**, 8, 2000828	8.1	10
39	Using randomly distributed charges to create quantum dots. *Physical Review B*, **2010**, 81,	3.3	10
38	Photoluminescence of PbS nanocrystals at high magnetic fields up to 30 T. *Physical Review B*, **2010**, 82,	3.3	10
37	Laser location and manipulation of a single quantum tunneling channel in an InAs quantum dot. *Physical Review Letters*, **2012**, 108, 117402	7.4	10
36	Van der Waals SnSe2(1−x)S2x Alloys: Composition-Dependent Bowing Coefficient and Electron–Phonon Interaction. *Advanced Functional Materials*, **2020**, 30, 1908092	15.6	10
35	Graphene-InSe-graphene van der Waals heterostructures. *Journal of Physics: Conference Series*, **2015**, 647, 012001	0.3	9
34	Quantum oscillations in the photocurrent of GaAs/AlAs p-i-n diodes. *Physical Review B*, **2014**, 89,	3.3	9
33	Highly-mismatched InAs/InSe heterojunction diodes. *Applied Physics Letters*, **2016**, 109, 182115	3.4	9
32	The Interaction of Hydrogen with the van der Waals Crystal -InSe. *Molecules*, **2020**, 25,	4.8	8
31	High magnetic field quantum transport in Au nanoparticle-cellulose films. *Nanotechnology*, **2012**, 23, 045702	3.4	8
30	Nonresonant hydrogen dopants in In(AsN): A route to high electron concentrations and mobilities. *Physical Review B*, **2013**, 87,	3.3	8
29	Sensitive detection of photoexcited carriers by resonant tunneling through a single quantum dot. *Physical Review B*, **2009**, 79,	3.3	8
28	Defect-Assisted High Photoconductive UV–Visible Gain in Perovskite-Decorated Graphene Transistors. *ACS Applied Electronic Materials*, **2020**, 2, 147-154	4	8
27	Laser writing of the electronic activity of N- and H-atoms in GaAs. *Applied Physics Letters*, **2011**, 99, 021105	3.4	7

26	Ultrafast acoustical gating of the photocurrent in a pin tunneling diode incorporating a quantum well. *Physical Review B*, **2009**, 80,	3.3	7
25	Hot electron transport and impact ionization in the narrow energy gap InAs1−xNx alloy. *Applied Physics Letters*, **2010**, 96, 052115	3.4	6
24	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	3	6
23	Mobility enhancement of CVD graphene by spatially correlated charges. *2D Materials*, **2017**, 4, 025026	5.9	5
22	Impact ionization and large room-temperature magnetoresistance in micron-sized high-mobility InAs channels. *Physical Review B*, **2014**, 90,	3.3	5
21	Nanoscale potential fluctuations in (GaMn)As/GaAs heterostructures: from individual ions to charge clusters and electrostatic quantum dots. *Nano Letters*, **2010**, 10, 4874-9	11.5	5
20	Room Temperature Uniaxial Magnetic Anisotropy Induced By Fe-Islands in the InSe Semiconductor Van Der Waals Crystal. *Advanced Science*, **2018**, 5, 1800257	13.6	5
19	Enhancing optoelectronic properties of SiC-grown graphene by a surface layer of colloidal quantum dots. *2D Materials*, **2017**, 4, 031001	5.9	4
18	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	1.2	4
17	H-tailored surface conductivity in narrow band gap In(AsN). *Applied Physics Letters*, **2015**, 106, 022111	3.4	4
16	Nano-sized light emitting diodes by near field laser exposure. *Applied Physics Letters*, **2011**, 98, 183102	3.4	4
15	Ferroelectric semiconductor junctions based on graphene/In2Se3/graphene van der Waals heterostructures. *2D Materials*, **2021**, 8, 045020	5.9	4
14	Optical Detection and Spatial Modulation of Mid-Infrared Surface Plasmon Polaritons in a Highly Doped Semiconductor. *Advanced Optical Materials*, **2018**, 6, 1700492	8.1	2
13	A micrometer-size movable light emitting area in a resonant tunneling light emitting diode. *Applied Physics Letters*, **2013**, 103, 241105	3.4	2
12	Imaging the photovoltaic response of PbS-sensitized porous titania. *Physica Status Solidi (A) Applications and Materials Science*, **2011**, 208, 2450-2453	1.6	2
11	Resonant Zener tunnelling via zero-dimensional states in a narrow gap diode. *Scientific Reports*, **2016**, 6, 32039	4.9	2
10	Observation of Spin and Valley Splitting of Landau Levels under Magnetic Tunneling in Graphene/Boron Nitride/Graphene Structures. *JETP Letters*, **2018**, 107, 238-242	1.2	1
9	Tunable spectral response by hydrogen irradiation of Ga(AsN) superlattice diodes. *Applied Physics Letters*, **2014**, 104, 242110	3.4	1

8	Magnetoresistance of Si(001) MOSFETs with high concentration of electrons. *Physica E: Low-Dimensional Systems and Nanostructures*, **2004**, 22, 320-323	3	1
7	Nonlinear hole transport through a submicron-size channel. *Applied Physics Letters*, **2003**, 82, 925-927	3.4	1
6	Quasiballistic transport of hot holes in GaAs submicron channels. *Applied Physics Letters*, **2005**, 86, 042101	3.4	1
5	Light-Induced Stark Effect and Reversible Photoluminescence Quenching in Inorganic Perovskite Nanocrystals. *Advanced Optical Materials*, **2021**, 9, 2100104	8.1	1
4	TEM of Nano-LEDs made by laser writing. *Journal of Physics: Conference Series*, **2011**, 326, 012055	0.3	0
3	Room temperature upconversion electroluminescence from a mid-infrared In(AsN) tunneling diode. *Applied Physics Letters*, **2020**, 116, 142108	3.4	0
2	Suppression of electron magnetotunneling between parallel two-dimensional GaAs/InAs electron systems by the correlation interaction. *Semiconductors*, **2013**, 47, 1215-1218	0.7	
1	Electronic energy levels, wavefunctions and potential landscape of nanostructures probed by magneto-tunnelling spectroscopy. *Journal of Physics: Conference Series*, **2011**, 334, 012010	0.3	