

# Oleg Makarovsky

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Light-Induced Stark Effect and Reversible Photoluminescence Quenching in Inorganic Perovskite Nanocrystals. <i>Advanced Optical Materials</i> , <b>2021</b> , 9, 2100104	8.1	1
78	Inter-Flake Quantum Transport of Electrons and Holes in Inkjet-Printed Graphene Devices. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2007478	15.6	13
77	Universal mobility characteristics of graphene originating from charge scattering by ionised impurities. <i>Communications Physics</i> , <b>2021</b> , 4,	5.4	16
76	Ferroelectric semiconductor junctions based on graphene/In <sub>2</sub> Se <sub>3</sub> /graphene van der Waals heterostructures. <i>2D Materials</i> , <b>2021</b> , 8, 045020	5.9	4
75	Enhanced Optical Emission from 2D InSe Bent onto Si-Pillars. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 2000888	8.1	10
74	The Interaction of Hydrogen with the van der Waals Crystal -InSe. <i>Molecules</i> , <b>2020</b> , 25,	4.8	8
73	Spin flop and crystalline anisotropic magnetoresistance in CuMnAs. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	15
72	Resonant tunnelling into the two-dimensional subbands of InSe layers. <i>Communications Physics</i> , <b>2020</b> , 3,	5.4	13
71	Van der Waals SnSe <sub>2</sub> (1-x)S <sub>2x</sub> Alloys: Composition-Dependent Bowing Coefficient and Electron-Phonon Interaction. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1908092	15.6	10
70	Defect-Assisted High Photoconductive UV-Visible Gain in Perovskite-Decorated Graphene Transistors. <i>ACS Applied Electronic Materials</i> , <b>2020</b> , 2, 147-154	4	8
69	Room temperature upconversion electroluminescence from a mid-infrared In(AsN) tunneling diode. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 142108	3.4	0
68	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. <i>JETP Letters</i> , <b>2019</b> , 109, 482-489	1.2	4
67	Photoquantum Hall Effect and Light-Induced Charge Transfer at the Interface of Graphene/InSe Heterostructures. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1805491	15.6	13
66	Optical Detection and Spatial Modulation of Mid-Infrared Surface Plasmon Polaritons in a Highly Doped Semiconductor. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1700492	8.1	2
65	Observation of Spin and Valley Splitting of Landau Levels under Magnetic Tunneling in Graphene/Boron Nitride/Graphene Structures. <i>JETP Letters</i> , <b>2018</b> , 107, 238-242	1.2	1
64	Tunnel spectroscopy of localised electronic states in hexagonal boron nitride. <i>Communications Physics</i> , <b>2018</b> , 1,	5.4	25
63	Room Temperature Uniaxial Magnetic Anisotropy Induced By Fe-Islands in the InSe Semiconductor Van Der Waals Crystal. <i>Advanced Science</i> , <b>2018</b> , 5, 1800257	13.6	5

62	Engineering p-n junctions and bandgap tuning of InSe nanolayers by controlled oxidation. <i>2D Materials</i> , <b>2017</b> , 4, 025043	5.9	63
61	Mobility enhancement of CVD graphene by spatially correlated charges. <i>2D Materials</i> , <b>2017</b> , 4, 025026	5.9	5
60	Enhancing optoelectronic properties of SiC-grown graphene by a surface layer of colloidal quantum dots. <i>2D Materials</i> , <b>2017</b> , 4, 031001	5.9	4
59	Giant Quantum Hall Plateau in Graphene Coupled to an InSe van der Waals Crystal. <i>Physical Review Letters</i> , <b>2017</b> , 119, 157701	7.4	33
58	Phonon-Assisted Resonant Tunneling of Electrons in Graphene-Boron Nitride Transistors. <i>Physical Review Letters</i> , <b>2016</b> , 116, 186603	7.4	63
57	The direct-to-indirect band gap crossover in two-dimensional van der Waals Indium Selenide crystals. <i>Scientific Reports</i> , <b>2016</b> , 6, 39619	4.9	114
56	Highly-mismatched InAs/InSe heterojunction diodes. <i>Applied Physics Letters</i> , <b>2016</b> , 109, 182115	3.4	9
55	Quantum confinement and photoresponsivity of $\text{In}_2\text{Se}_3$ nanosheets grown by physical vapour transport. <i>2D Materials</i> , <b>2016</b> , 3, 025030	5.9	68
54	Resonant Zener tunnelling via zero-dimensional states in a narrow gap diode. <i>Scientific Reports</i> , <b>2016</b> , 6, 32039	4.9	2
53	H-tailored surface conductivity in narrow band gap In(AsN). <i>Applied Physics Letters</i> , <b>2015</b> , 106, 022111	3.4	4
52	Resonant tunnelling between the chiral Landau states of twisted graphene lattices. <i>Nature Physics</i> , <b>2015</b> , 11, 1057-1062	16.2	49
51	Graphene-InSe-graphene van der Waals heterostructures. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 647, 012001	0.3	9
50	High broad-band photoresponsivity of mechanically formed InSe-graphene van der Waals heterostructures. <i>Advanced Materials</i> , <b>2015</b> , 27, 3760-6	24	252
49	Ligand-Induced Control of Photoconductive Gain and Doping in a Hybrid Graphene-Quantum Dot Transistor. <i>Advanced Electronic Materials</i> , <b>2015</b> , 1, 1500062	6.4	48
48	Impact ionization and large room-temperature magnetoresistance in micron-sized high-mobility InAs channels. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	5
47	Tunable spectral response by hydrogen irradiation of Ga(AsN) superlattice diodes. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 242110	3.4	1
46	Twist-controlled resonant tunnelling in graphene/boron nitride/graphene heterostructures. <i>Nature Nanotechnology</i> , <b>2014</b> , 9, 808-13	28.7	341
45	Tuneable paramagnetic susceptibility and exciton g-factor in Mn-doped PbS colloidal nanocrystals. <i>Nanoscale</i> , <b>2014</b> , 6, 8919-25	7.7	21

44	Room Temperature Electroluminescence from Mechanically Formed van der Waals III-VI Homojunctions and Heterojunctions. <i>Advanced Optical Materials</i> , <b>2014</b> , 2, 1064-1069	8.1	61
43	Quantum confined acceptors and donors in InSe nanosheets. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 221909	3.4	53
42	Quantum oscillations in the photocurrent of GaAs/AlAs p-i-n diodes. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	9
41	Tuning the bandgap of exfoliated InSe nanosheets by quantum confinement. <i>Advanced Materials</i> , <b>2013</b> , 25, 5714-8	24	419
40	High Curie temperatures at low compensation in the ferromagnetic semiconductor (Ga,Mn)As. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	29
39	Suppression of electron magnetotunneling between parallel two-dimensional GaAs/InAs electron systems by the correlation interaction. <i>Semiconductors</i> , <b>2013</b> , 47, 1215-1218	0.7	
38	Vertical field-effect transistor based on graphene-WS <sub>2</sub> heterostructures for flexible and transparent electronics. <i>Nature Nanotechnology</i> , <b>2013</b> , 8, 100-3	28.7	1342
37	Nonresonant hydrogen dopants in In(AsN): A route to high electron concentrations and mobilities. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	8
36	A micrometer-size movable light emitting area in a resonant tunneling light emitting diode. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 241105	3.4	2
35	High magnetic field quantum transport in Au nanoparticle-cellulose films. <i>Nanotechnology</i> , <b>2012</b> , 23, 045702	3.4	8
34	Linear magnetoresistance due to multiple-electron scattering by low-mobility islands in an inhomogeneous conductor. <i>Nature Communications</i> , <b>2012</b> , 3, 1097	17.4	57
33	Controlling high-frequency collective electron dynamics via single-particle complexity. <i>Physical Review Letters</i> , <b>2012</b> , 109, 024102	7.4	25
32	Laser location and manipulation of a single quantum tunneling channel in an InAs quantum dot. <i>Physical Review Letters</i> , <b>2012</b> , 108, 117402	7.4	10
31	Band-gap profiling by laser writing of hydrogen-containing III-N-Vs. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	16
30	Nano-sized light emitting diodes by near field laser exposure. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 183102	3.4	4
29	Laser writing of the electronic activity of N- and H-atoms in GaAs. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 021105	1.4	7
28	Electronic energy levels, wavefunctions and potential landscape of nanostructures probed by magneto-tunnelling spectroscopy. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 334, 012010	0.3	
27	TEM of Nano-LEDs made by laser writing. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 326, 012055	0.3	0

26	Imaging the photovoltaic response of PbS-sensitized porous titania. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2011</b> , 208, 2450-2453	1.6	2
25	Manipulating and imaging the shape of an electronic wave function by magnetotunneling spectroscopy. <i>Physical Review Letters</i> , <b>2010</b> , 105, 236804	7.4	16
24	Microscopic analysis of the valence band and impurity band theories of (Ga,Mn)As. <i>Physical Review Letters</i> , <b>2010</b> , 105, 227202	7.4	33
23	Hot electron transport and impact ionization in the narrow energy gap InAs <sub>1-x</sub> N <sub>x</sub> alloy. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 052115	3.4	6
22	Using randomly distributed charges to create quantum dots. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	10
21	Photoluminescence of PbS nanocrystals at high magnetic fields up to 30 T. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	10
20	Nanoscale potential fluctuations in (GaMn)As/GaAs heterostructures: from individual ions to charge clusters and electrostatic quantum dots. <i>Nano Letters</i> , <b>2010</b> , 10, 4874-9	11.5	5
19	Self-Assembly of Electrically Conducting Biopolymer Thin Films by Cellulose Regeneration in Gold Nanoparticle Aqueous Dispersions. <i>Chemistry of Materials</i> , <b>2010</b> , 22, 2675-2680	9.6	33
18	Direct laser writing of nanoscale light-emitting diodes. <i>Advanced Materials</i> , <b>2010</b> , 22, 3176-80	24	14
17	Ultrafast acoustical gating of the photocurrent in a p-i-n tunneling diode incorporating a quantum well. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	7
16	Effect of low nitrogen concentrations on the electronic properties of InAs <sub>1-x</sub> N <sub>x</sub> . <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	24
15	Large zero-field spin splitting in AlGaN/AlN/GaN/AlN heterostructures. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 093701	2.5	20
14	Sensitive detection of photoexcited carriers by resonant tunneling through a single quantum dot. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	8
13	Fock-Darwin-like quantum dot states formed by charged Mn interstitial ions. <i>Physical Review Letters</i> , <b>2008</b> , 101, 226807	7.4	17
12	Magnetoanisotropy of electron-correlation-enhanced tunneling through a quantum dot. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	19
11	Measuring the hole chemical potential in ferromagnetic Ga <sub>1-x</sub> Mn <sub>x</sub> As/GaAs heterostructures by photoexcited resonant tunneling. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 082106	3.4	12
10	Terahertz response of hot electrons in dilute nitride Ga(AsN) alloys. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 032107	3.4	31
9	Hot-electrons and negative differential conductance in GaAs <sub>1-x</sub> N <sub>x</sub> . <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	27

- 8 Quasiballistic transport of hot holes in GaAs submicron channels. *Applied Physics Letters*, **2005**, 86, 042103-4 1
- 7 Electron conduction in two-dimensional GaAs<sub>1-x</sub>Ny channels. *Physical Review B*, **2004**, 69, 041404-4 3-3 30
- 6 Resonance and current instabilities in AlN/GaN resonant tunnelling diodes. *Physica E: Low-Dimensional Systems and Nanostructures*, **2004**, 21, 752-755 3 15
- 5 Magnetoresistance of Si(001) MOSFETs with high concentration of electrons. *Physica E: Low-Dimensional Systems and Nanostructures*, **2004**, 22, 320-323 3 1
- 4 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
- 3 Current-voltage instabilities in GaN/AlGaIn resonant tunnelling structures. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2003**, 2389-2392 47
- 2 Nonlinear hole transport through a submicron-size channel. *Applied Physics Letters*, **2003**, 82, 925-927 3-4 1
- 1 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