

# Artem Mishchenko

## List of Publications by Citations

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88

papers

19,094

citations

40

h-index

94

g-index

94

ext. papers

22,152

ext. citations

13.4

avg, IF

6.7

L-index

#	Paper	IF	Citations
88	2D materials and van der Waals heterostructures. <i>Science</i> , <b>2016</b> , 353, aac9439	33.3	3469
87	Field-effect tunneling transistor based on vertical graphene heterostructures. <i>Science</i> , <b>2012</b> , 335, 947-50	33.3	1991
86	Strong light-matter interactions in heterostructures of atomically thin films. <i>Science</i> , <b>2013</b> , 340, 1311-4	33.3	1850
85	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
84	Probing the nature of defects in graphene by Raman spectroscopy. <i>Nano Letters</i> , <b>2012</b> , 12, 3925-30	11.5	1341
83	Light-emitting diodes by band-structure engineering in van der Waals heterostructures. <i>Nature Materials</i> , <b>2015</b> , 14, 301-6	27	1116
82	Cloning of Dirac fermions in graphene superlattices. <i>Nature</i> , <b>2013</b> , 497, 594-7	50.4	884
81	High electron mobility, quantum Hall effect and anomalous optical response in atomically thin InSe. <i>Nature Nanotechnology</i> , <b>2017</b> , 12, 223-227	28.7	723
80	Proton transport through one-atom-thick crystals. <i>Nature</i> , <b>2014</b> , 516, 227-30	50.4	505
79	Detecting topological currents in graphene superlattices. <i>Science</i> , <b>2014</b> , 346, 448-51	33.3	481
78	Resonant tunnelling and negative differential conductance in graphene transistors. <i>Nature Communications</i> , <b>2013</b> , 4, 1794	17.4	451
77	Electronic properties of graphene encapsulated with different two-dimensional atomic crystals. <i>Nano Letters</i> , <b>2014</b> , 14, 3270-6	11.5	345
76	Twist-controlled resonant tunnelling in graphene/boron nitride/graphene heterostructures. <i>Nature Nanotechnology</i> , <b>2014</b> , 9, 808-13	28.7	341
75	Molecular transport through capillaries made with atomic-scale precision. <i>Nature</i> , <b>2016</b> , 538, 222-225	50.4	325
74	Single molecular conductance of tolanes: experimental and theoretical study on the junction evolution dependent on the anchoring group. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 2292-304	16.4	294
73	Quality Heterostructures from Two-Dimensional Crystals Unstable in Air by Their Assembly in Inert Atmosphere. <i>Nano Letters</i> , <b>2015</b> , 15, 4914-21	11.5	289
72	Influence of conformation on conductance of biphenyl-dithiol single-molecule contacts. <i>Nano Letters</i> , <b>2010</b> , 10, 156-63	11.5	252

71	Single-molecule junctions based on nitrile-terminated biphenyls: a promising new anchoring group. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 184-7	16.4	192
70	Sieving hydrogen isotopes through two-dimensional crystals. <i>Science</i> , <b>2016</b> , 351, 68-70	33.3	173
69	Magnon-assisted tunnelling in van der Waals heterostructures based on CrBr <sub>3</sub> . <i>Nature Electronics</i> , <b>2018</b> , 1, 344-349	28.4	167
68	Quantum oscillations of the critical current and high-field superconducting proximity in ballistic graphene. <i>Nature Physics</i> , <b>2016</b> , 12, 318-322	16.2	144
67	Hierarchy of Hofstadter states and replica quantum Hall ferromagnetism in graphene superlattices. <i>Nature Physics</i> , <b>2014</b> , 10, 525-529	16.2	137
66	Electron transfer kinetics on mono- and multilayer graphene. <i>ACS Nano</i> , <b>2014</b> , 8, 10089-100	16.7	132
65	An MCBJ case study: The influence of E-conjugation on the single-molecule conductance at a solid/liquid interface. <i>Beilstein Journal of Nanotechnology</i> , <b>2011</b> , 2, 699-713	3	130
64	Wafer-Scale and Wrinkle-Free Epitaxial Growth of Single-Orientated Multilayer Hexagonal Boron Nitride on Sapphire. <i>Nano Letters</i> , <b>2016</b> , 16, 3360-6	11.5	130
63	Chemically controlled conductivity: torsion-angle dependence in a single-molecule biphenyldithiol junction. <i>Angewandte Chemie - International Edition</i> , <b>2009</b> , 48, 8886-90	16.4	129
62	Macroscopic self-reorientation of interacting two-dimensional crystals. <i>Nature Communications</i> , <b>2016</b> , 7, 10800	17.4	86
61	High-temperature quantum oscillations caused by recurring Bloch states in graphene superlattices. <i>Science</i> , <b>2017</b> , 357, 181-184	33.3	83
60	Indirect excitons in van der Waals heterostructures at room temperature. <i>Nature Communications</i> , <b>2018</b> , 9, 1895	17.4	83
59	Conduction mechanisms in biphenyl dithiol single-molecule junctions. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	73
58	Exfoliation of natural van der Waals heterostructures to a single unit cell thickness. <i>Nature Communications</i> , <b>2017</b> , 8, 14410	17.4	66
57	Quantum capacitance measurements of electron-hole asymmetry and next-nearest-neighbor hopping in graphene. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	66
56	Phonon-Assisted Resonant Tunneling of Electrons in Graphene-Boron Nitride Transistors. <i>Physical Review Letters</i> , <b>2016</b> , 116, 186603	7.4	63
55	Tuning the valley and chiral quantum state of Dirac electrons in van der Waals heterostructures. <i>Science</i> , <b>2016</b> , 353, 575-9	33.3	63
54	Edge currents shunt the insulating bulk in gapped graphene. <i>Nature Communications</i> , <b>2017</b> , 8, 14552	17.4	55

53	Magnetoresistance of vertical Co-graphene-NiFe junctions controlled by charge transfer and proximity-induced spin splitting in graphene. <i>2D Materials</i> , <b>2017</b> , 4, 031004	5.9	52
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	Control of excitons in multi-layer van der Waals heterostructures. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 101901	9.4	49
50	Graphene-hexagonal boron nitride resonant tunneling diodes as high-frequency oscillators. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 103105	3.4	48
49	Electrical and optical characterization of atomically thin WS <sub>2</sub> . <i>Dalton Transactions</i> , <b>2014</b> , 43, 10388-91	4.3	43
48	Unusual Suppression of the Superconducting Energy Gap and Critical Temperature in Atomically Thin NbSe. <i>Nano Letters</i> , <b>2018</b> , 18, 2623-2629	11.5	39
47	Ab initio study of the thermopower of biphenyl-based single-molecule junctions. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	39
46	High-order fractal states in graphene superlattices. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 5135-5139	11.5	37
45	Nonlocal Response and Anamorphosis: The Case of Few-Layer Black Phosphorus. <i>Nano Letters</i> , <b>2015</b> , 15, 6991-5	11.5	36
44	Composite super-moiré lattices in double-aligned graphene heterostructures. <i>Science Advances</i> , <b>2019</b> , 5, eaay8897	14.3	36
43	Indirect Excitons and Trions in MoSe <sub>2</sub> /WSe <sub>2</sub> van der Waals Heterostructures. <i>Nano Letters</i> , <b>2020</b> , 20, 1869-1875	18.5	34
42	Catechol-Based Macrocyclic Rods: En Route to Redox-Active Molecular Switches. <i>European Journal of Organic Chemistry</i> , <b>2009</b> , 2009, 6140-6150	3.2	34
41	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
40	Tunable van Hove singularities and correlated states in twisted monolayer/bilayer graphene. <i>Nature Physics</i> , <b>2021</b> , 17, 619-626	16.2	33
39	Electrochemical gate-controlled electron transport of redox-active single perylene bisimide molecular junctions. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 374122	1.8	32
38	Electronic phase separation in multilayer rhombohedral graphite. <i>Nature</i> , <b>2020</b> , 584, 210-214	50.4	31
37	Planar and van der Waals heterostructures for vertical tunnelling single electron transistors. <i>Nature Communications</i> , <b>2019</b> , 10, 230	17.4	29
36	Graphene hot-electron light bulb: incandescence from hBN-encapsulated graphene in air. <i>2D Materials</i> , <b>2018</b> , 5, 011006	5.9	29

35	Stacking Order in Graphite Films Controlled by van der Waals Technology. <i>Nano Letters</i> , <b>2019</b> , 19, 8526-8532	16.2	26
34	Excess resistivity in graphene superlattices caused by umklapp electron-electron scattering. <i>Nature Physics</i> , <b>2019</b> , 15, 32-36	16.2	25
33	Tunnel spectroscopy of localised electronic states in hexagonal boron nitride. <i>Communications Physics</i> , <b>2018</b> , 1,	5.4	25
32	Chemisch kontrollierte Leitfähigkeit: Torsionswinkelabhängigkeit in Biphenyldithiol-Einzelmolekülbrückkontakten. <i>Angewandte Chemie</i> , <b>2009</b> , 121, 9048-9052	3.6	24
31	Graphene Thermal Emitter with Enhanced Joule Heating and Localized Light Emission in Air. <i>ACS Photonics</i> , <b>2019</b> , 6, 2117-2125	6.3	23
30	Conformationally controlled electron delocalization in n-type rods: synthesis, structure, and optical, electrochemical, and spectroelectrochemical properties of dicyanocyclophanes. <i>Chemistry - A European Journal</i> , <b>2011</b> , 17, 7236-50	4.8	23
29	In situ manipulation of van der Waals heterostructures for twistrionics. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	23
28	Dimensional reduction, quantum Hall effect and layer parity in graphite films. <i>Nature Physics</i> , <b>2019</b> , 15, 437-442	16.2	23
27	High-temperature electronic devices enabled by hBN-encapsulated graphene. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 123104	3.4	19
26	Cooperative and Noncooperative Assembly of Oligopyrenotides Resolved by Atomic Force Microscopy. <i>Macromolecules</i> , <b>2012</b> , 45, 5986-5992	5.5	19
25	Charge transport in single molecular junctions at the solid/liquid interface. <i>Topics in Current Chemistry</i> , <b>2012</b> , 313, 121-88		19
24	Electrochemical scanning tunnelling spectroscopy of a ferrocene-modified n-Si(111)-surface: electrolyte gating and ambipolar FET behaviour. <i>Chemical Communications</i> , <b>2011</b> , 47, 9807-9	5.8	19
23	Stacking transition in bilayer graphene caused by thermally activated rotation. <i>2D Materials</i> , <b>2017</b> , 4, 011013	5.9	18
22	An approach to measure electromechanical properties of atomic and molecular junctions. <i>Journal of Physics Condensed Matter</i> , <b>2012</b> , 24, 164210	1.8	16
21	Charge transport with single molecules--an electrochemical approach. <i>Chimia</i> , <b>2010</b> , 64, 383-90	1.3	15
20	Stacking transition in rhombohedral graphite. <i>Frontiers of Physics</i> , <b>2019</b> , 14, 1	3.7	15
19	Propagating Plasmons in a Charge-Neutral Quantum Tunneling Transistor. <i>ACS Photonics</i> , <b>2017</b> , 4, 3012-3017	10.17	13
18	Lifting of the Landau level degeneracy in graphene devices in a tilted magnetic field. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	13

17	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
16	Long-range ballistic transport of Brown-Zak fermions in graphene superlattices. <i>Nature Communications</i> , <b>2020</b> , 11, 5756	17.4	10
15	A Facile Route for Patterned Growth of Metal-Insulator Carbon Lateral Junction through One-Pot Synthesis. <i>ACS Nano</i> , <b>2015</b> , 9, 8352-60	16.7	7
14	Magnetotransport in single-layer graphene in a large parallel magnetic field. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	6
13	Selective spectroscopy of tunneling transitions between the Landau levels in vertical double-gate graphene/Boron nitride/graphene heterostructures. <i>JETP Letters</i> , <b>2016</b> , 104, 334-340	1.2	5
12	Edge photocurrent driven by terahertz electric field in bilayer graphene. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	5
11	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
10	The promoting effect of water on the electrodeposition of Eu in a dicyanamide ionic liquid. <i>Electrochimica Acta</i> , <b>2021</b> , 379, 138169	6.7	4
9	Growth of graphene on tantalum and its protective properties. <i>Carbon</i> , <b>2018</b> , 139, 29-34	10.4	3
8	Field-induced insulating states in a graphene superlattice. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	2
7	Edge photocurrent in bilayer graphene due to inter-Landau-level transitions. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	2
6	Twisted monolayer and bilayer graphene for vertical tunneling transistors. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 183106	3.4	2
5	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
4	Cross sectional STEM imaging and analysis of multilayered two dimensional crystal heterostructure devices. <i>Microscopy and Microanalysis</i> , <b>2015</b> , 21, 107-108	0.5	1
3	Fluorination Clusters on Graphene Resolved by Conductive AFM. <i>NATO Science for Peace and Security Series A: Chemistry and Biology</i> , <b>2016</b> , 19-24	0.1	0
2	Observation of Regions of Negative Differential Conductivity and Current Generation during Tunneling through Zero-Dimensional Defect Levels of the h-BN Barrier in Graphene/h-BN/Graphene Heterostructures. <i>Semiconductors</i> , <b>2019</b> , 53, 1038-1041	0.7	0
1	Novel phenomena in two-dimensional semiconductors <b>2020</b> , 25-79		