

Irina Grigorieva

List of Publications by Citations

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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.

67

papers

83,016

citations

42

h-index

69

g-index

69

ext. papers

92,792

ext. citations

19.6

avg, IF

7.9

L-index

#	Paper	IF	Citations
67	Electric field effect in atomically thin carbon films. <i>Science</i> , 2004 , 306, 666-9	33.3	47045
66	Two-dimensional gas of massless Dirac fermions in graphene. <i>Nature</i> , 2005 , 438, 197-200	50.4	16518
65	Van der Waals heterostructures. <i>Nature</i> , 2013 , 499, 419-25	50.4	6627
64	Unimpeded permeation of water through helium-leak-tight graphene-based membranes. <i>Science</i> , 2012 , 335, 442-4	33.3	2094
63	Precise and ultrafast molecular sieving through graphene oxide membranes. <i>Science</i> , 2014 , 343, 752-4	33.3	1664
62	Tunable sieving of ions using graphene oxide membranes. <i>Nature Nanotechnology</i> , 2017 , 12, 546-550	28.7	960
61	Cloning of Dirac fermions in graphene superlattices. <i>Nature</i> , 2013 , 497, 594-7	50.4	884
60	High electron mobility, quantum Hall effect and anomalous optical response in atomically thin InSe. <i>Nature Nanotechnology</i> , 2017 , 12, 223-227	28.7	723
59	Spin-half paramagnetism in graphene induced by point defects. <i>Nature Physics</i> , 2012 , 8, 199-202	16.2	638
58	Dirac cones reshaped by interaction effects in suspended graphene. <i>Nature Physics</i> , 2011 , 7, 701-704	16.2	577
57	Detecting topological currents in graphene superlattices. <i>Science</i> , 2014 , 346, 448-51	33.3	481
56	Square ice in graphene nanocapillaries. <i>Nature</i> , 2015 , 519, 443-5	50.4	471
55	Tunable metal-insulator transition in double-layer graphene heterostructures. <i>Nature Physics</i> , 2011 , 7, 958-961	16.2	417
54	Negative local resistance caused by viscous electron backflow in graphene. <i>Science</i> , 2016 , 351, 1055-8	33.3	344
53	Molecular transport through capillaries made with atomic-scale precision. <i>Nature</i> , 2016 , 538, 222-225	50.4	325
52	Quality Heterostructures from Two-Dimensional Crystals Unstable in Air by Their Assembly in Inert Atmosphere. <i>Nano Letters</i> , 2015 , 15, 4914-21	11.5	289
51	Graphene spintronics: the European Flagship perspective. <i>2D Materials</i> , 2015 , 2, 030202	5.9	198

50	Dual origin of defect magnetism in graphene and its reversible switching by molecular doping. <i>Nature Communications</i> , 2013 , 4, 2010	17.4	189
49	Universal shape and pressure inside bubbles appearing in van der Waals heterostructures. <i>Nature Communications</i> , 2016 , 7, 12587	17.4	175
48	Sieving hydrogen isotopes through two-dimensional crystals. <i>Science</i> , 2016 , 351, 68-70	33.3	173
47	Superballistic flow of viscous electron fluid through graphene constrictions. <i>Nature Physics</i> , 2017 , 13, 1182-1185	16.2	172
46	Commensurability Effects in Viscosity of Nanoconfined Water. <i>ACS Nano</i> , 2016 , 10, 3685-92	16.7	141
45	Hierarchy of Hofstadter states and replica quantum Hall ferromagnetism in graphene superlattices. <i>Nature Physics</i> , 2014 , 10, 525-529	16.2	137
44	Resonant terahertz detection using graphene plasmons. <i>Nature Communications</i> , 2018 , 9, 5392	17.4	129
43	Limits on gas impermeability of graphene. <i>Nature</i> , 2020 , 579, 229-232	50.4	109
42	Direct observation of vortex shells and magic numbers in mesoscopic superconducting disks. <i>Physical Review Letters</i> , 2006 , 96, 077005	7.4	107
41	Superconductivity in Potassium-Doped Metallic Polymorphs of MoS ₂ . <i>Nano Letters</i> , 2016 , 16, 629-36	11.5	99
40	Measuring Hall viscosity of graphene's electron fluid. <i>Science</i> , 2019 , 364, 162-165	33.3	97
39	Superconductivity in Ca-doped graphene laminates. <i>Scientific Reports</i> , 2016 , 6, 23254	4.9	87
38	High-temperature quantum oscillations caused by recurring Bloch states in graphene superlattices. <i>Science</i> , 2017 , 357, 181-184	33.3	83
37	Scalable and efficient separation of hydrogen isotopes using graphene-based electrochemical pumping. <i>Nature Communications</i> , 2017 , 8, 15215	17.4	76
36	Pinning-induced formation of vortex clusters and giant vortices in mesoscopic superconducting disks. <i>Physical Review Letters</i> , 2007 , 99, 147003	7.4	74
35	Ballistic molecular transport through two-dimensional channels. <i>Nature</i> , 2018 , 558, 420-424	50.4	73
34	Fluidity onset in graphene. <i>Nature Communications</i> , 2018 , 9, 4533	17.4	70
33	Submicron sensors of local electric field with single-electron resolution at room temperature. <i>Applied Physics Letters</i> , 2006 , 88, 013901	3.4	69

32	Intercalant-independent transition temperature in superconducting black phosphorus. <i>Nature Communications</i> , 2017 , 8, 15036	17.4	68
31	Strained Bubbles in van der Waals Heterostructures as Local Emitters of Photoluminescence with Adjustable Wavelength. <i>ACS Photonics</i> , 2019 , 6, 516-524	6.3	59
30	Capillary condensation under atomic-scale confinement. <i>Nature</i> , 2020 , 588, 250-253	50.4	59
29	Magnetoresistance of vertical Co-graphene-NiFe junctions controlled by charge transfer and proximity-induced spin splitting in graphene. <i>2D Materials</i> , 2017 , 4, 031004	5.9	52
28	Atomic Defects and Doping of Monolayer NbSe. <i>ACS Nano</i> , 2017 , 11, 2894-2904	16.7	46
27	Magnetic flux decoration of type-II superconductors. <i>Superconductor Science and Technology</i> , 1994 , 7, 161-176	3.1	46
26	Micromagnetometry of two-dimensional ferromagnets. <i>Nature Electronics</i> , 2019 , 2, 457-463	28.4	46
25	Unusual Suppression of the Superconducting Energy Gap and Critical Temperature in Atomically Thin NbSe. <i>Nano Letters</i> , 2018 , 18, 2623-2629	11.5	39
24	Giant oscillations in a triangular network of one-dimensional states in marginally twisted graphene. <i>Nature Communications</i> , 2019 , 10, 4008	17.4	36
23	Dual origin of room temperature sub-terahertz photoresponse in graphene field effect transistors. <i>Applied Physics Letters</i> , 2018 , 112, 141101	3.4	34
22	Spontaneous magnetization changes and nonlocal effects in mesoscopic ferromagnet-superconductor structures. <i>Physical Review B</i> , 2002 , 65,	3.3	32
21	Pillars as antipinning centers in superconducting films. <i>Physical Review B</i> , 2008 , 77,	3.3	30
20	Long-range nonlocal flow of vortices in narrow superconducting channels. <i>Physical Review Letters</i> , 2004 , 92, 237001	7.4	24
19	Control of electron-electron interaction in graphene by proximity screenings. <i>Nature Communications</i> , 2020 , 11, 2339	17.4	17
18	Bitter decoration of vortex patterns in superconducting Nb films with random, triangular, and Penrose arrays of antidots. <i>Physical Review B</i> , 2011 , 84,	3.3	15
17	Magnetoresistance in Co-hBN-NiFe Tunnel Junctions Enhanced by Resonant Tunneling through Single Defects in Ultrathin hBN Barriers. <i>Nano Letters</i> , 2018 , 18, 6954-6960	11.5	11
16	Long-range ballistic transport of Brown-Zak fermions in graphene superlattices. <i>Nature Communications</i> , 2020 , 11, 5756	17.4	10
15	Giant magneto-birefringence effect and tuneable colouration of 2D crystal suspensions. <i>Nature Communications</i> , 2020 , 11, 3725	17.4	10

14	Enhanced Superconductivity in Few-Layer TaS due to Healing by Oxygenation. <i>Nano Letters</i> , 2020 , 20, 3808-3818	11.5	10
13	Minibands in twisted bilayer graphene probed by magnetic focusing. <i>Science Advances</i> , 2020 , 6, eaay7838	4.3	8
12	Quantum Rescaling, Domain Metastability, and Hybrid Domain-Walls in 2D CrI Magnets. <i>Advanced Materials</i> , 2021 , 33, e2004138	24	8
11	Intrinsic Pinning of a Ferromagnetic Domain Wall in Yttrium Iron Garnet Films with Strong Uniaxial Anisotropy. <i>Journal of Low Temperature Physics</i> , 2005 , 139, 65-72	1.3	4
10	Exponentially selective molecular sieving through angstrom pores. <i>Nature Communications</i> , 2021 , 12, 7170	17.4	3
9	Intrinsic pinning of a ferromagnetic domain wall in yttrium iron garnet films with strong uniaxial anisotropy. <i>Journal of Low Temperature Physics</i> , 2005 , 139, 65-72	1.3	2
8	Tunable Spin Injection in High-Quality Graphene with One-Dimensional Contacts.. <i>Nano Letters</i> , 2022 ,	11.5	2
7	Reply to: Random interstratification in hydrated graphene oxide membranes and implications for seawater desalination.. <i>Nature Nanotechnology</i> , 2022 ,	28.7	2
6	Enhanced Spin Injection in Molecularly Functionalized Graphene via Ultrathin Oxide Barriers. <i>Physical Review Applied</i> , 2021 , 15,	4.3	2
5	Tunable spin-orbit coupling in two-dimensional InSe. <i>Physical Review B</i> , 2021 , 104,	3.3	2
4	Strongly Absorbing Nanoscale Infrared Domains within Strained Bubbles at hBN-Graphene Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 57638-57648	9.5	1
3	Out-of-equilibrium criticalities in graphene superlattices.. <i>Science</i> , 2022 , 375, 430-433	33.3	1
2	Nanomagnets: Quantum Rescaling, Domain Metastability, and Hybrid Domain-Walls in 2D CrI3 Magnets (Adv. Mater. 5/2021). <i>Advanced Materials</i> , 2021 , 33, 2170036	24	
1	Magnetization Signature of Topological Surface States in a Non-Symmorphic Superconductor. <i>Advanced Materials</i> , 2021 , 33, e2103257	24	