

Igor Å¹/₂utiÄ

List of Publications by Year in descending order

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104
papers

14,913
citations

76031

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108
docs citations

108
times ranked

12857
citing authors

#	ARTICLE	IF	CITATIONS
1	Spintronics: Fundamentals and applications. <i>Reviews of Modern Physics</i> , 2004, 76, 323-410.	16.4	9,479
2	Semiconductor spintronics. <i>Acta Physica Slovaca</i> , 2007, 57, .	1.4	642
3	Midgap edge states and pairing symmetry of quasi-one-dimensional organic superconductors. <i>Physical Review B</i> , 2001, 63, .	1.1	262
4	New moves of the spintronics tango. <i>Nature Materials</i> , 2012, 11, 368-371.	13.3	249
5	Spin-Polarized Transport in Inhomogeneous Magnetic Semiconductors: Theory of Magnetic/Nonmagnetic p-n Junctions. <i>Physical Review Letters</i> , 2002, 88, 066603.	2.9	207
6	Proximitized materials. <i>Materials Today</i> , 2019, 22, 85-107.	8.3	206
7	Roadmap for Emerging Materials for Spintronic Device Applications. <i>IEEE Transactions on Magnetics</i> , 2015, 51, 1-11.	1.2	179
8	Tunneling spectroscopy for ferromagnet/superconductor junctions. <i>Physical Review B</i> , 2000, 61, 1555-1566.	1.1	161
9	Nanospintronics Based on Magnetologic Gates. <i>IEEE Transactions on Electron Devices</i> , 2012, 59, 259-262.	1.6	141
10	Ultrafast spin-lasers. <i>Nature</i> , 2019, 568, 212-215.	13.7	134
11	Spin Injection and Detection in Silicon. <i>Physical Review Letters</i> , 2006, 97, 026602.	2.9	131
12	Magnetic bipolar transistor. <i>Applied Physics Letters</i> , 2004, 84, 85-87.	1.5	121
13	Temperature-Dependent Asymmetry of the Nonlocal Spin-Injection Resistance: Evidence for Spin Nonconserving Interface Scattering. <i>Physical Review Letters</i> , 2005, 94, 176601.	2.9	118
14	Magnetic Proximity Effects in Transition-Metal Dichalcogenides: Converting Excitons. <i>Physical Review Letters</i> , 2017, 119, 127403.	2.9	111
15	Spin injection through the depletion layer: A theory of spin-polarized p-n junctions and solar cells. <i>Physical Review B</i> , 2001, 64, .	1.1	101
16	Effective gating and tunable magnetic proximity effects in two-dimensional heterostructures. <i>Physical Review B</i> , 2016, 93, .	1.1	85
17	Determination of Interface Atomic Structure and Its Impact on Spin Transport Using Z-Contrast Microscopy and Density-Functional Theory. <i>Physical Review Letters</i> , 2006, 96, 196101.	2.9	78
18	Proposal for a spin-polarized solar battery. <i>Applied Physics Letters</i> , 2001, 79, 1558-1560.	1.5	76

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19	Spin-polarized transport and Andreev reflection in semiconductor/superconductor hybrid structures. Physical Review B, 1999, 60, R16322-R16325.	1.1	71
20	Taming spin currents. Nature Materials, 2011, 10, 647-648.	13.3	68
21	Spin modulation in semiconductor lasers. Applied Physics Letters, 2010, 97, .	1.5	67
22	Phase-Sensitive Tests of the Pairing State Symmetry in Sr ₂ RuO ₄ . Physical Review Letters, 2005, 95, 217004.	2.9	65
23	Spin inversion in graphene spin valves by gate-tunable magnetic proximity effect at one-dimensional contacts. Nature Communications, 2018, 9, 2869.	5.8	65
24	Phase Signature of Topological Transition in Josephson Junctions. Physical Review Letters, 2021, 126, 036802.	2.9	65
25	Analytical model of spin-polarized semiconductor lasers. Applied Physics Letters, 2008, 93, .	1.5	63
26	Tailoring Magnetism in Quantum Dots. Physical Review Letters, 2007, 98, 207203.	2.9	62
27	Large Tunneling Magnetoresistance in van der Waals Ferromagnet/Semiconductor Heterojunctions. Advanced Materials, 2021, 33, e2104658.	11.1	61
28	Wireless Majorana Bound States: From Magnetic Tunability to Braiding. Physical Review Letters, 2016, 117, 077002.	2.9	59
29	Experimental Demonstration of xor Operation in Graphene Magnetologic Gates at Room Temperature. Physical Review Applied, 2016, 5, .	1.5	58
30	Angular Dependence of the Nonlinear Transverse Magnetic Moment of YBa ₂ Cu ₃ O _{6.95} in the Meissner State. Physical Review Letters, 1999, 82, 3132-3135.	2.9	56
31	Probing many-body interactions in monolayer transition-metal dichalcogenides. Physical Review B, 2019, 99, .	1.1	56
32	Mapping between quantum dot and quantum well lasers: From conventional to spin lasers. Physical Review B, 2012, 85, .	1.1	55
33	Cubic spin-orbit coupling and anomalous Josephson effect in planar junctions. Physical Review B, 2021, 103, .	1.1	54
34	Spintronics: electron spin coherence, entanglement, and transport. Superlattices and Microstructures, 2000, 27, 289-295.	1.4	49
35	Excitonic Stark effect in MoS_2 . Physical Review B, 2016, 94, .	1.1	48
36	Magnetoanisotropic Andreev Reflection in Ferromagnet-Superconductor Junctions. Physical Review Letters, 2015, 115, 116601.	2.9	46

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37	Toward high-frequency operation of spin lasers. <i>Physical Review B</i> , 2015, 92, .	1.1	45
38	Giant spin-valley polarization and multiple Hall effect in functionalized bismuth monolayers. <i>Npj Quantum Materials</i> , 2018, 3, .	1.8	44
39	Silicon twists. <i>Nature</i> , 2007, 447, 269-270.	13.7	43
40	Magneto-optical conductivity of graphene on polar substrates. <i>Physical Review B</i> , 2013, 88, .	1.1	43
41	Graphene spintronics: Spin injection and proximity effects from first principles. <i>Physical Review B</i> , 2014, 90, .	1.1	43
42	Piezomagnetic Quantum Dots. <i>Physical Review Letters</i> , 2008, 101, 207202.	2.9	42
43	Marrying Excitons and Plasmons in Monolayer Transition-Metal Dichalcogenides. <i>Physical Review X</i> , 2017, 7, .	2.8	41
44	Tunable magnetic textures in spin valves: From spintronics to Majorana bound states. <i>Physical Review B</i> , 2019, 99, .	1.1	41
45	Dynamical screening in monolayer transition-metal dichalcogenides and its manifestations in the exciton spectrum. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 203001.	0.7	38
46	Spin-lasers: From threshold reduction to large-signal analysis. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	37
47	Tunable magnetic textures: From Majorana bound states to braiding. <i>Solid State Communications</i> , 2017, 262, 1-6.	0.9	37
48	A path to spin logic. <i>Nature Physics</i> , 2005, 1, 85-86.	6.5	35
49	Proposal for all-electrical measurement of T1 in semiconductors. <i>Applied Physics Letters</i> , 2003, 82, 221-223.	1.5	34
50	Theory of thermal spin-charge coupling in electronic systems. <i>Physical Review B</i> , 2012, 85, .	1.1	33
51	Tunneling Planar Hall Effect in Topological Insulators: Spin Valves and Amplifiers. <i>Physical Review Letters</i> , 2016, 117, 166806.	2.9	33
52	Electrical Control of Majorana Bound States Using Magnetic Stripes. <i>Physical Review Applied</i> , 2019, 12, .	1.5	32
53	Interfacial Spin-Orbit Coupling: A Platform for Superconducting Spintronics. <i>Physical Review Applied</i> , 2020, 13, .	1.5	32
54	Thermodynamics of Carrier-Mediated Magnetism in Semiconductors. <i>Physical Review Letters</i> , 2007, 99, 257202.	2.9	30

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55	Spin-lasers: spintronics beyond magnetoresistance. Solid State Communications, 2020, 316-317, 113949.	0.9	30
56	Phase Control of Majorana Bound States in a Topological X Junction. Physical Review Letters, 2020, 124, 137001.	2.9	29
57	Synthesis, Magnetic Properties, and Electronic Structure of Magnetic Topological Insulator $MnBi_2Se_4$. Nano Letters, 2021, 21, 5083-5090.	4.5	28
58	Tailoring chirp in spin-lasers. Applied Physics Letters, 2012, 100, .	1.5	27
59	Magnetism in Closed-Shell Quantum Dots: Emergence of Magnetic Bipolarons. Physical Review Letters, 2011, 106, 177201.	2.9	26
60	Localized Excitons in $NbSe_2$ - $MoSe_2$ Heterostructures. ACS Nano, 2020, 14, 8528-8538.	7.3	26
61	Quantum Spin-Valley Hall Kink States: From Concept to Materials Design. Physical Review Letters, 2021, 127, 116402.	2.9	25
62	Superconducting-gap-node spectroscopy using nonlinear electrodynamics. Physical Review B, 1997, 56, 11279-11293.	1.1	23
63	Superconducting Proximity Effect in InAsSb Surface Quantum Wells with In Situ Al Contacts. ACS Applied Electronic Materials, 2020, 2, 2351-2356.	2.0	22
64	Fusion of Majorana bound states with mini-gate control in two-dimensional systems. Nature Communications, 2022, 13, 1738.	5.8	22
65	Wurtzite spin lasers. Physical Review B, 2017, 95, .	1.1	21
66	Optically Probing Tunable Band Topology in Atomic Monolayers. Physical Review Letters, 2020, 125, 157402.	2.9	21
67	Low-frequency nonlinear magnetic response of an unconventional superconductor. Physical Review B, 1998, 58, 8738-8748.	1.1	20
68	Digital operation and eye diagrams in spin-lasers. Applied Physics Letters, 2015, 107, .	1.5	20
69	Water-Dispersible $CsPbBr_3$ Perovskite Nanocrystals with Ultra-Stability and its Application in Electrochemical CO_2 Reduction. Nano-Micro Letters, 2021, 13, 172.	14.4	20
70	Bipolar spintronics: from spin injection to spin-controlled logic. Journal of Physics Condensed Matter, 2007, 19, 165219.	0.7	18
71	Theory of quantum dot spin lasers. Physical Review B, 2010, 82, .	1.1	18
72	Probing topological transitions in HgTe/CdTe quantum wells by magneto-optical measurements. Physical Review B, 2015, 91, .	1.1	18

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73	Novel Aspects of Spin-Polarized Transport and Spin Dynamics. Journal of Superconductivity and Novel Magnetism, 2002, 15, 5-12.	0.5	17
74	Enhanced spin-triplet pairing in magnetic junctions with s -wave superconductors. Physical Review B, 2020, 101, .	1.1	17
75	Spin polarization of Co(0001)/graphene junctions from first principles. Journal of Physics Condensed Matter, 2014, 26, 104204.	0.7	15
76	Evidence for anisotropic spin-triplet Andreev reflection at the 2D van der Waals ferromagnet/superconductor interface. Nature Communications, 2021, 12, 6725.	5.8	15
77	Superconducting proximity effects in metals with a repulsive pairing interaction. Physical Review B, 2010, 82, .	1.1	14
78	Magnetic anisotropies of quantum dots doped with magnetic ions. Physical Review B, 2012, 85, .	1.1	14
79	Taken for a spin. Nature Nanotechnology, 2014, 9, 750-752.	15.6	14
80	Reanalysis of the magnetic field dependence of the penetration depth: Observation of the nonlinear Meissner effect. Physical Review B, 2001, 63, .	1.1	13
81	Shedding light on nanomagnets. Nature Nanotechnology, 2009, 4, 623-625.	15.6	13
82	Tailoring magnetism in semiconductors. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	12
83	Spin ordering in magnetic quantum dots: From core-halo to Wigner molecules. Physical Review B, 2012, 86, .	1.1	11
84	Spin-orbit coupling proximity effect in MoS ₂ /Fe ₃ GeTe ₂ heterostructures. Applied Physics Letters, 2022, 120, .	1.5	11
85	Cause a stir. Nature Physics, 2016, 12, 24-25.	6.5	9
86	Probing tunneling spin injection into graphene via bias dependence. Physical Review B, 2018, 98, .	1.1	9
87	Reentrant formation of magnetic polarons in quantum dots. Physical Review B, 2012, 86, .	1.1	8
88	Intensity equations for birefringent spin lasers. Physical Review B, 2021, 103, .	1.1	7
89	Chameleon Magnets. Science, 2011, 332, 1040-1041.	6.0	6
90	Reconfigurable nanoelectronics using graphene based spintronic logic gates. Proceedings of SPIE, 2011, , .	0.8	6

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91	Nodal ground states and orbital textures in semiconductor quantum dots. Physical Review B, 2014, 89, .	1.1	6
92	Charge density wave activated excitons in TiSe2â€“MoSe2 heterostructures. APL Materials, 2022, 10, .	2.2	6
93	Spin Twists in a Transistor. Science, 2012, 337, 307-308.	6.0	5
94	Spin-orbit coupled particle in a spin bath. Physical Review B, 2013, 87, .	1.1	5
95	Magnetic ordering in quantum dots: Open versus closed shells. Physical Review B, 2015, 92, .	1.1	5
96	Optical orientation in bipolar spintronic devices. Semiconductor Science and Technology, 2008, 23, 114005.	1.0	4
97	Resonant tunneling anisotropic magnetoresistance induced by magnetic proximity. Physical Review B, 2020, 102, .	1.1	4
98	Threshold behavior in spin lasers: Spontaneous emission and nonlinear gain. Applied Physics Letters, 2021, 119, 171104.	1.5	4
99	Angular dependence of the penetration depth in unconventional superconductors. Physical Review B, 2000, 63, .	1.1	3
100	Spins take sides. Nature Physics, 2009, 5, 630-632.	6.5	3
101	Semiconductor Spin-Lasers. , 2011, , 731-745.		3
102	Optical Control of Hole Wavefunction in Type-II Magnetic Quantum Dot Structures. Journal of Physical Chemistry C, 2019, 123, 25934-25940.	1.5	3
103	Proximity-induced magnetization in graphene: Towards efficient spin gating. Physical Review Materials, 2020, 4, .	0.9	2
104	Nanoelectronics with proximitized materials. Solid-State Electronics, 2019, 155, 93-98.	0.8	1