Jaroslav Fabian

List of Publications by Year
in descending order

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213	22,828	32410 55	9346 148
papers	citations	h-index	g-index

216	216	216	18510
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spintronics: Fundamentals and applications. Reviews of Modern Physics, 2004, 76, 323-410.	16.4	9,479
2	Graphene spintronics. Nature Nanotechnology, 2014, 9, 794-807.	15.6	1,290
3	k Â· p theory for two-dimensional transition metal dichalcogenide semiconductors. 2D Materials, 2015, 2, 022001.	2.0	676
4	Semiconductor spintronics. Acta Physica Slovaca, 2007, 57, .	1.4	642
5	Band-structure topologies of graphene: Spin-orbit coupling effects from first principles. Physical Review B, 2009, 80, .	1.1	579
6	Tight-binding theory of the spin-orbit coupling in graphene. Physical Review B, 2010, 82, .	1.1	425
7	Diffusons, locons and propagons: Character of atomic vibrations in amorphous Si. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1999, 79, 1715-1731.	0.6	377
8	Graphene on transition-metal dichalcogenides: A platform for proximity spin-orbit physics and optospintronics. Physical Review B, 2015, 92, .	1.1	268
9	Magnetic Moment Formation in Graphene Detected by Scattering of Pure Spin Currents. Physical Review Letters, 2012, 109, 186604.	2.9	262
10	Van der Waals heterostructures for spintronics and opto-spintronics. Nature Nanotechnology, 2021, 16, 856-868.	15.6	261
11	Graphene spintronics: the European Flagship perspective. 2D Materials, 2015, 2, 030202.	2.0	243
12	Trivial and inverted Dirac bands and the emergence of quantum spin Hall states in graphene on transition-metal dichalcogenides. Physical Review B, 2016, 93, .	1.1	227
13	Electron spin relaxation in graphene: The role of the substrate. Physical Review B, 2009, 80, .	1.1	222
14	Spin-Polarized Transport in Inhomogeneous Magnetic Semiconductors: Theory of Magnetic/Nonmagneticpâ^'nJunctions. Physical Review Letters, 2002, 88, 066603.	2.9	207
15	Lightwave valleytronics in a monolayer of tungsten diselenide. Nature, 2018, 557, 76-80.	13.7	201
16	Spin Relaxation Mechanism in Graphene: Resonant Scattering by Magnetic Impurities. Physical Review Letters, 2014, 112, 116602.	2.9	185
17	Femtosecond photo-switching of interface polaritons in black phosphorus heterostructures. Nature Nanotechnology, 2017, 12, 207-211.	15.6	174
18	Tunneling Anisotropic Magnetoresistance and Spin-Orbit Coupling in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Fe</mml:mi><mml:mo>/</mml:mo><mml:mi>GaAs</mml:mi><mml:mo>/</mml:mo><mml:mi>Au</mml:mi><mml:mi> Junctions. Physical Review Letters, 2007, 99, 056601.	2.9	169

#	Article	IF	Citations
19	Giant Spin Lifetime Anisotropy in Graphene Induced by Proximity Effects. Physical Review Letters, 2017, 119, 206601.	2.9	161
20	Spin-Orbit Coupling in Hydrogenated Graphene. Physical Review Letters, 2013, 110, 246602.	2.9	154
21	Spin Relaxation of Conduction Electrons in Polyvalent Metals: Theory and a Realistic Calculation. Physical Review Letters, 1998, 81, 5624-5627.	2.9	151
22	Spin relaxation of conduction electrons. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 1708.	1.6	151
23	Spin electronics and spin computation. Solid State Communications, 2001, 119, 207-215.	0.9	144
24	Model spin-orbit coupling Hamiltonians for graphene systems. Physical Review B, 2017, 95, .	1.1	143
25	Supercurrent rectification and magnetochiral effects in symmetric Josephson junctions. Nature Nanotechnology, 2022, 17, 39-44.	15.6	134
26	Spin Injection and Detection in Silicon. Physical Review Letters, 2006, 97, 026602.	2.9	131
27	Thermal Expansion and GrÃ¼neisen Parameters of Amorphous Silicon: A Realistic Model Calculation. Physical Review Letters, 1997, 79, 1885-1888.	2.9	126
28	Magnetic bipolar transistor. Applied Physics Letters, 2004, 84, 85-87.	1.5	121
29	Gate-tunable black phosphorus spin valve with nanosecond spin lifetimes. Nature Physics, 2017, 13, 888-893.	6.5	119
30	Magnetic quantum ratchet effect in graphene. Nature Nanotechnology, 2013, 8, 104-107.	15.6	116
31	Excitonic Valley Effects in Monolayer WS₂ under High Magnetic Fields. Nano Letters, 2016, 16, 7899-7904.	4.5	114
32	Proximity exchange effects in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mr heterostructures with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CrI</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:	1.1	113
33	Proximity Effects in Bilayer Graphene on Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> : Field-Effect Spin Valley Locking, Spin-Orbit Valve, and Spin Transistor. Physical Review Letters, 2017, 119, 146401.	2.9	108
34	Theory of the Spin Relaxation of Conduction Electrons in Silicon. Physical Review Letters, 2010, 104, 016601.	2.9	106
35	Theory of Phonon-Induced Spin Relaxation in Laterally Coupled Quantum Dots. Physical Review Letters, 2006, 96, 186602.	2.9	103
36	Anharmonic Decay of Vibrational States in Amorphous Silicon. Physical Review Letters, 1996, 77, 3839-3842.	2.9	102

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37	Spin injection through the depletion layer: A theory of spin-polarizedp-njunctions and solar cells. Physical Review B, 2001, 64, .	1.1	101
38	Theory of spin-polarized bipolar transport in magneticpâ^'njunctions. Physical Review B, 2002, 66, .	1.1	99
39	Phonon-Induced Spin Relaxation of Conduction Electrons in Aluminum. Physical Review Letters, 1999, 83, 1211-1214.	2.9	94
40	Anisotropic tunneling magnetoresistance and tunneling anisotropic magnetoresistance: Spin-orbit coupling in magnetic tunnel junctions. Physical Review B, 2009, 79, .	1.1	94
41	Strain-tunable orbital, spin-orbit, and optical properties of monolayer transition-metal dichalcogenides. Physical Review B, 2019, 100, .	1.1	91
42	Theory of spin-orbit coupling in bilayer graphene. Physical Review B, 2012, 85, .	1.1	90
43	Proximity Spinâ€“Orbit Torque on a Two-Dimensional Magnet within van der Waals Heterostructure: Current-Driven Antiferromagnet-to-Ferromagnet Reversible Nonequilibrium Phase Transition in Bilayer CrI₃. Nano Letters, 2020, 20, 2288-2295.	4.5	89
44	Spin transport in hydrogenated graphene. 2D Materials, 2015, 2, 022002.	2.0	81
45	Magnetic proximity in a van der Waals heterostructure of magnetic insulator and graphene. 2D Materials, 2020, 7, 015026.	2.0	80
46	Spin-orbit effects in single-electron states in coupled quantum dots. Physical Review B, 2005, 72, .	1.1	78
47	Proposal for a spin-polarized solar battery. Applied Physics Letters, 2001, 79, 1558-1560.	1.5	76
48	Theory of Sound Attenuation in Glasses: The Role of Thermal Vibrations. Physical Review Letters, 1999, 82, 1478-1481.	2.9	75
49	Theory of proximity-induced exchange coupling in graphene on hBN/(Co, Ni). Physical Review B, 2016, 94, .	1.1	74
50	Theoretical perspectives on spintronics and spin-polarized transport. IEEE Transactions on Magnetics, 2000, 36, 2821-2826.	1.2	69
51	Quantum Anomalous Hall Effects in Graphene from Proximity-Induced Uniform and Staggered Spin-Orbit and Exchange Coupling. Physical Review Letters, 2020, 124, 136403.	2.9	67
52	Orbital and spin relaxation in single and coupled quantum dots. Physical Review B, 2006, 74, .	1.1	64
53	Spin accumulation in the extrinsic spin Hall effect. Physical Review B, 2005, 72, .	1.1	63
54	Anisotropic plasmons in a two-dimensional electron gas with spin-orbit interaction. Physical Review B, 2009, 79, .	1.1	63

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55	Observation of Spin-Valley-Coupling-Induced Large Spin-Lifetime Anisotropy in Bilayer Graphene. Physical Review Letters, 2018, 121, 127702.	2.9	59
56	Protected Pseudohelical Edge States in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="double-struck">Z</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> -Trivial Proximitized Graphene. Physical Review Letters, 2018, 120, 156402.	2.9	57
57	Spin-orbit coupling in fluorinated graphene. Physical Review B, 2015, 91, .	1.1	56
58	Subcycle contact-free nanoscopy of ultrafast interlayer transport in atomically thin heterostructures. Nature Photonics, 2021, 15, 594-600.	15.6	55
59	Magnetic properties of HgTe quantum wells. Physical Review B, 2012, 86, .	1.1	54
60	First-principles studies of orbital and spin-orbit properties of GaAs, GaSb, InAs, and InSb zinc-blende and wurtzite semiconductors. Physical Review B, 2016, 94, .	1.1	54
61	Spin-polarized current amplification and spin injection in magnetic bipolar transistors. Physical Review B, 2004, 69, .	1.1	53
62	Spintronics: electron spin coherence, entanglement, and transport. Superlattices and Microstructures, 2000, 27, 289-295.	1.4	49
63	Tunneling Anomalous and Spin Hall Effects. Physical Review Letters, 2015, 115, 056602.	2.9	49
64	Excitonic Stark effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2016, 94, .	1.1	48
65	Robust spin-orbit torque and spin-galvanic effect at the Fe/GaAs (001) interface at room temperature. Nature Communications, 2016, 7, 13802.	5.8	48
66	Heterostructures of graphene and hBN: Electronic, spin-orbit, and spin relaxation properties from first principles. Physical Review B, 2019, 99, .	1.1	47
67	Theory of Anisotropic Exchange in Laterally Coupled Quantum Dots. Physical Review Letters, 2010, 104, 126401.	2.9	46
68	Magnetoanisotropic Andreev Reflection in Ferromagnet-Superconductor Junctions. Physical Review Letters, 2015, 115, 116601.	2.9	46
69	Spin-orbit coupling in elemental two-dimensional materials. Physical Review B, 2019, 100, .	1.1	45
70	Effects of optical and surface polar phonons on the optical conductivity of doped graphene. Physical Review B, 2013, 87, .	1.1	44
71	Spin-orbit coupling and spin relaxation in phosphorene: Intrinsic versus extrinsic effects. Physical Review B, 2016, 94, .	1.1	44
72	Twist-angle dependent proximity induced spin-orbit coupling in graphene/transition metal dichalcogenide heterostructures. Physical Review B, 2021, 104, .	1.1	44

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73	Theoretical investigation of theC60infrared spectrum. Physical Review B, 1996, 53, 13864-13870.	1.1	43
74	Silicon twists. Nature, 2007, 447, 269-270.	13.7	43
75	Magneto-optical conductivity of graphene on polar substrates. Physical Review B, 2013, 88, .	1.1	43
76	Electrically tunable exchange splitting in bilayer graphene on monolayer Cr₂X₂Te₆ with X = Ge, Si, and Sn. New Journal of Physics, 2018, 20, 073007.	1.2	43
77	Bipolar spintronics: Fundamentals and applications. IBM Journal of Research and Development, 2006, 50, 121-139.	3.2	41
78	Angular dependence of the tunneling anisotropic magnetoresistance in magnetic tunnel junctions. Physical Review B, 2009, 80, .	1.1	40
79	Impact of Electron-Impurity Scattering on the Spin Relaxation Time in Graphene: A First-Principles Study. Physical Review Letters, 2013, 110, 156602.	2.9	40
80	Realistic multiband<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>k</mml:mi><mml:mo>Â·</mml:mo><mml:mi>p</mml:mi> fromab initioand spin-orbit coupling effects of InAs and InP in wurtzite phase. Physical Review B, 2016, 93, .	1.1	40
81	Vibrational study ofenriched13C60crystals. Physical Review B, 1995, 51, 2844-2847.	1.1	39
82	Effect of Rashba and Dresselhaus spinâ€“orbit coupling on supercurrent rectification and magnetochiral anisotropy of ballistic Josephson junctions. Journal of Physics Condensed Matter, 2022, 34, 154005.	0.7	39
83	Quasi-1D exciton channels in strain-engineered 2D materials. Science Advances, 2021, 7, eabj3066.	4.7	37
84	Theory of electronic and spin-orbit proximity effects in graphene on Cu(111). Physical Review B, 2016, 93, .	1.1	36
85	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>k</mml:mi><mml:mo>Â·</mml:mo><mml:mi>p</mml:mi> theory for phosphorene: Effective <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>g</mml:mi></mml:math> -factors, Landau levels, and excitons. Physical Review B, 2019, 100, .	1.1	36
86	Beating of Friedel oscillations induced by spin-orbit interaction. Physical Review B, 2010, 81, .	1.1	35
87	Electrical Control of Valley-Zeeman Spin-Orbit-Couplingâ€“Induced Spin Precession at Room Temperature. Physical Review Letters, 2021, 127, 047202.	2.9	35
88	Proposal for all-electrical measurement of T1 in semiconductors. Applied Physics Letters, 2003, 82, 221-223.	1.5	34
89	Theory of single electron spin relaxation in Si/SiGe lateral coupled quantum dots. Physical Review B, 2011, 83, .	1.1	34
90	Enhanced spinâ€“orbit coupling in core/shell nanowires. Nature Communications, 2016, 7, 12413.	5.8	34

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91	Boosting proximity spinâ€“orbit coupling in graphene/WSe2 heterostructures via hydrostatic pressure. Npj 2D Materials and Applications, 2021, 5, .	3.9	34
92	Theory of thermal spin-charge coupling in electronic systems. Physical Review B, 2012, 85, .	1.1	33
93	Spin-orbit coupling effects in zinc-blende InSb and wurtzite InAs nanowires: Realistic calculations with multiband <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="bold">k</mml:mi><mml:mo>Â·</mml:mo><mml:mi mathvariant="bold">p</mml:mi></mml:mrow></mml:math> method. Physical Review B, 2018, 97, .	1.1	32
94	Swapping Exchange and Spin-Orbit Coupling in 2D van der Waals Heterostructures. Physical Review Letters, 2020, 125, 196402.	2.9	32
95	Interfacial Spin-Orbit Coupling: A Platform for Superconducting Spintronics. Physical Review Applied, 2020, 13, .	1.5	32
96	Giant proximity exchange and valley splitting in transition metal dichalcogenide/ <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>h</mml:mi><mml:mi>BN</mml:mi></mml:mrow></mml:math> /(Co, Ni) heterostructures. Physical Review B, 2020, 101, .	1.1	31
97	Resonant tunneling magnetoresistance in coupled quantum wells. Applied Physics Letters, 2006, 89, 242101.	1.5	30
98	Magnetic Control of Spin-Orbit Fields: A First-Principles Study of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Fe</mml:mi><mml:mo>/</mml:mo><mml:mi>GaAs</mml:mi></mml:math> Junctions. Physical Review Letters, 2013, 111, 036603.	2.9	30
99	Charge pumping by magnetization dynamics in magnetic and semimagnetic tunnel junctions with interfacial Rashba or bulk extrinsic spin-orbit coupling. Physical Review B, 2012, 85, .	1.1	29
100	Resonant Scattering by Magnetic Impurities as a Model for Spin Relaxation in Bilayer Graphene. Physical Review Letters, 2015, 115, 196601.	2.9	29
101	Narrow-band high-lying excitonsÂwith negative-mass electrons in monolayer WSe2. Nature Communications, 2021, 12, 5500.	5.8	29
102	Scattering-induced and highly tunable by gate damping-like spin-orbit torque in graphene doubly proximitized by two-dimensional magnet <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">Cr</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">Ge</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">Te</mml:mi><mml:mn>6</mml:mn></mml:msub></mml:math> and monolayer <m	1.3	29
103	Entanglement distillation by adiabatic passage in coupled quantum dots. Physical Review B, 2005, 72, .	1.1	28
104	Theory of digital magnetoresistance in ferromagnetic resonant-tunneling diodes. Physical Review B, 2007, 75, .	1.1	28
105	Spin-orbit coupling and anisotropic exchange in two-electron double quantum dots. Physical Review B, 2010, 82, .	1.1	28
106	Emergence of spinâ€“orbit fields in magnetotransport of quasi-two-dimensional iron on gallium arsenide. Nature Communications, 2015, 6, 7374.	5.8	28
107	Copper adatoms on graphene: Theory of orbital and spin-orbital effects. Physical Review B, 2017, 95, .	1.1	28
108	Twist-angle engineering of excitonic quantum interference and optical nonlinearities in stacked 2D semiconductors. Nature Communications, 2021, 12, 1553.	5.8	28

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109	Absence of a giant spin Hall effect in plasma-hydrogenated graphene. Physical Review B, 2019, 99, .	1.1	27
110	Many-Body Quantum MonteÂCarlo Study of 2D Materials: Cohesion and Band Gap in Single-Layer Phosphorene. Physical Review X, 2019, 9, .	2.8	27
111	Large exciton binding energies in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MnPS</mml:mi><mml:mn>3</mml:mn></mml:msub><m as a case study of a van der Waals layered magnet. Physical Review B, 2021, 103, .	3.7	27
112	Electric-field control of interfacial spinâ€“orbit fields. Nature Electronics, 2018, 1, 350-355.	13.1	26
113	Theory of Spin Relaxation in Two-Electron Lateral Coupled Quantum Dots. Physical Review Letters, 2012, 108, 246602.	2.9	25
114	Annealing-induced magnetic moments detected by spin precession measurements in epitaxial graphene on SiC. Physical Review B, 2013, 87, .	1.1	24
115	Spin-orbit coupling in methyl functionalized graphene. Physical Review B, 2016, 93, .	1.1	24
116	Orbital effects on tunneling anisotropic magnetoresistance in Fe/GaAs/Au junctions. Physical Review B, 2009, 80, .	1.1	23
117	Resonant scattering due to adatoms in graphene: Top, bridge, and hollow positions. Physical Review B, 2018, 97, .	1.1	23
118	Band-structure effects in the spin relaxation of conduction electrons (invited). Journal of Applied Physics, 1999, 85, 5075-5079.	1.1	22
119	Adiabatic passage schemes in coupled semiconductor nanostructures. Optics Communications, 2006, 264, 426-434.	1.0	22
120	Magnetoanisotropic Josephson effect due to interfacial spin-orbit fields in superconductor/ferromagnet/superconductor junctions. Physical Review B, 2017, 95, .	1.1	22
121	Spin transport in inhomogeneous magnetic fields:â€ƒA proposal for Stern-Gerlach-like experiments with conduction electrons. Physical Review B, 2002, 66, .	1.1	21
122	Theory of optical spin orientation in silicon. Physical Review B, 2011, 83, .	1.1	21
123	Theory of spin-orbit-induced spin relaxation in functionalized graphene. Physical Review B, 2015, 92, .	1.1	20
124	Single and bilayer graphene on the topological insulator Bi2Se3 : Electronic and spin-orbit properties from first principles. Physical Review B, 2019, 100, .	1.1	20
125	All-electrical creation and control of spin-galvanic signal in graphene and molybdenum ditelluride heterostructures at room temperature. Communications Physics, 2021, 4, .	2.0	20
126	Heterostructures of Graphene and Topological Insulators Bi₂Se₃, Bi₂Te₃, and Sb₂Te₃. Physica Status Solidi (B): Basic Research, 2021, 258, 2000081.	0.7	19

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127	Bipolar spintronics: from spin injection to spin-controlled logic. Journal of Physics Condensed Matter, 2007, 19, 165219.	0.7	18
128	Control of electron spin and orbital resonances in quantum dots through spin-orbit interactions. Physical Review B, 2008, 77, .	1.1	18
129	Probing topological transitions in HgTe/CdTe quantum wells by magneto-optical measurements. Physical Review B, 2015, 91, .	1.1	18
130	Electric Field Control of Spin Lifetimes in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Nb</mml:mi><mml:mtext>â^'</mml:mtext><mml:msub><mml:mrow><mml:mi>SrTiO</mml:mi> Spin-Orbit Fields. Physical Review Letters, 2015, 115, 136601.	2.9	18
131	Graphene on two-dimensional hexagonal BN, AlN, and GaN: Electronic, spin-orbit, and spin relaxation properties. Physical Review B, 2021, 103, .	1.1	18
132	Engineering Proximity Exchange by Twisting: Reversal of Ferromagnetic and Emergence of Antiferromagnetic Dirac Bands in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Graphene/</mml:mtext><mml:msub><mml:mrow><mml:mi>Cr</mml:mi></mml:mrow><mm Physical Review Letters, 2022, 128, 106401.	2.9	18
133	Theory of spin relaxation in two-electron laterally coupled Si/SiGe quantum dots. Physical Review B, 2012, 86, .	1.1	17
134	Counterintuitive gate dependence of weak antilocalization in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>graphene</mml:mi><mml:mo>/</mml:mo><mml:msub><mml:mi mathvariant="normal">WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> heterostructures. Physical Review B, 2022, 105, .	1.1	17
135	Decay of localized vibrational states in glasses:mA one-dimensional example. Physical Review B, 1997, 55, R3328-R3331.	1.1	16
136	Magnetotransport signatures of the proximity exchange and spin-orbit couplings in graphene. Physical Review B, 2016, 94, .	1.1	16
137	Optical conductivity of hydrogenated graphene from first principles. Physical Review B, 2014, 89, .	1.1	15
138	Bilayer graphene encapsulated within monolayers of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm or <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cr</mml:mi><mml:mn>2</mml:mn></mml:r : Tunable proximity spin-orbit or exchange coupling. Physical Review B, 2021, 104, .	1.1	15
139	Electronic and optical properties of ferromagneticGa1â^'xMnxAsin a multiband tight-binding approach. Physical Review B, 2008, 78, .	1.1	14
140	Unusual spin properties of InP wurtzite nanowires revealed by Zeeman splitting spectroscopy. Physical Review B, 2019, 99, .	1.1	14
141	Gate-defined coupled quantum dots in topological insulators. Physical Review B, 2014, 89, .	1.1	13
142	Tunneling magnetothermopower in magnetic tunnel junctions. Physical Review B, 2014, 89, .	1.1	13
143	Anisotropic Polar Magneto-Optic Kerr Effect of Ultrathin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Fe</mml:mi><mml:mrow><mml:mo>/</mml:mo><mml:mi>GaAs</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mn>001</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 92 Td (stretchy="fal Spin-Orbit Interaction. Physical Review Letters, 2016, 117, 157202.	2.9	13
144	Common nonlinear features and spin-orbit coupling effects in the Zeeman splitting of novel wurtzite materials. Physical Review B, 2019, 99, .	1.1	13

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145	Chiral Majorana fermions in graphene from proximity-induced superconductivity. Physical Review B, 2020, 101, .	1.1	13
146	Numerical study of anharmonic vibrational decay in amorphous and paracrystalline silicon. Physical Review B, 2003, 67, .	1.1	12
147	The Ebersâ€“Moll model for magnetic bipolar transistors. Applied Physics Letters, 2005, 86, 133506.	1.5	12
148	Integrating MBE materials with graphene to induce novel spin-based phenomena. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 04D105.	0.6	12
149	Tunneling anisotropic thermopower and Seebeck effects in magnetic tunnel junctions. Physical Review B, 2014, 90, .	1.1	12
150	Intuitive approach to the unified theory of spin relaxation. Physical Review B, 2017, 96, .	1.1	12
151	Spin properties of black phosphorus and phosphorene, and their prospects for spincalorics. Journal Physics D: Applied Physics, 2018, 51, 174001.	1.3	12
152	Proximity spin-orbit and exchange coupling in ABA and ABC trilayer graphene van der Waals heterostructures. Physical Review B, 2022, 105, .	1.1	12
153	Spin's lifetime extended. Nature, 2009, 458, 580-581.	13.7	11
154	Proposal for a ferromagnetic multiwell spin oscillator. Applied Physics Letters, 2010, 97, 042104.	1.5	11
155	Transport Spectroscopy of Sublattice-Resolved Resonant Scattering in Hydrogen-Doped Bilayer Graphene. Physical Review Letters, 2018, 121, 136801.	2.9	11
156	Spin-Voltaic Effect and its Implications. Materials Transactions, 2003, 44, 2062-2065.	0.4	10
157	Connection between zero-energy Yu-Shiba-Rusinov states and 0â^Ï€ transitions in magnetic Josephson junctions. Physical Review B, 2018, 98, .	1.1	10
158	Spin relaxation in fluorinated single and bilayer graphene. Physical Review B, 2019, 100, .	1.1	10
159	Ultralong spin lifetimes in one-dimensional semiconductor nanowires. Applied Physics Letters, 2019, 114, 202101.	1.5	10
160	Anisotropic optical properties of Fe/GaAs(001) nanolayers from first principles. Physical Review B, 2014, 90, .	1.1	9
161	Skew Andreev reflection in ferromagnet/superconductor junctions. Physical Review B, 2019, 100, .	1.1	9
162	Anomalous Josephson Hall effect charge and transverse spin currents in superconductor/ferromagnetic-insulator/superconductor junctions. Physical Review B, 2020, 101, .	1.1	9

#	Article	IF	Citations
163	Diffusons, locons and propagons: Character of atomie yibrations in amorphous Si. , 0, .		9
164	Revealing the impact of strain in the optical properties of bubbles in monolayer MoSe₂. Nanoscale, 2022, 14, 5758-5768.	2.8	9
165	Self-sustained Magnetoelectric Oscillations in Magnetic Resonant Tunneling Structures. Physical Review Letters, 2008, 101, 077202.	2.9	8
166	Spin Edge Helices in a Perpendicular Magnetic Field. Physical Review Letters, 2010, 105, 186601.	2.9	8
167	Theory of the ac Spin-Valve Effect. Physical Review Letters, 2011, 107, 176604.	2.9	8
168	Connections between spin-orbit torques and unidirectional magnetoresistance in ferromagnetic-metalâ€“heavy-metal heterostructures. Physical Review B, 2022, 105, .	1.1	8
169	Strong Substrate Strain Effects in Multilayered WS₂ Revealed by High-Pressure Optical Measurements. ACS Applied Materials & Interfaces, 2022, , .	4.0	8
170	Spin-Polarized Bipolar Transport and Its Applications. Journal of Superconductivity and Novel Magnetism, 2003, 16, 697-705.	0.5	7
171	Proposal for a digital converter of analog magnetic signals. Applied Physics Letters, 2006, 89, 193507.	1.5	6
172	Magnetic circular dichroism in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ga</mml:mtext></mml:mrow><mml:mi>x</mml:mi></mml:msub> Theoretical evidence for and against an impurity band. Physical Review B, 2009, 80, .	1.1	6
173	Nonlinear spin to charge conversion in mesoscopic structures. Physical Review B, 2012, 85, .	1.1	6
174	Electric control of tunneling energy in graphene double dots. Physical Review B, 2014, 89, .	1.1	6
175	Intrinsic and extrinsic spin-orbit coupling and spin relaxation in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>PtSe</mml:mi><mml:mn>2</mml:mn></mml:msub> Physical Review B, 2021, 103, .	1.1	6
176	Spin-orbit coupled particle in a spin bath. Physical Review B, 2013, 87, .	1.1	5
177	Coexistence of tunneling magnetoresistance and Josephson effects in SFIFS junctions. AIP Advances, 2017, 7, 025008.	0.6	5
178	Interplay of resonant states and Landau levels in functionalized graphene. Physical Review B, 2019, 99, .	1.1	5
179	Landau levels in spin-orbit coupling proximitized graphene: Bulk states. Physical Review B, 2020, 102, .	1.1	5
180	Spin Switch and Spin Amplifier: Magnetic Bipolar Transistor in the Saturation Regime. Acta Physica Polonica A, 2004, 106, 109-118.	0.2	5

#	Article	IF	Citations
181	Superconducting triplet pairings and anisotropic magnetoresistance effects in ferromagnet/superconductor/ferromagnet double-barrier junctions. Physical Review B, 2021, 104, .	1.1	5
182	Signatures of superconducting triplet pairing in Niâ€“Ga-bilayer junctions. New Journal of Physics, 2022, 24, 033046.	1.2	5
183	Interplay of boundary states of graphene nanoribbons with a Kondo impurity. Physical Review B, 2022, 105, .	1.1	5
184	Issues, concepts, and challenges in spintronics. , 0, , .		4
185	Optical orientation in bipolar spintronic devices. Semiconductor Science and Technology, 2008, 23, 114005.	1.0	4
186	Spin Relaxation ins-Wave Superconductors in the Presence of Resonant Spin-Flip Scatterers. Physical Review Letters, 2020, 125, 087001.	2.9	4
187	Spin-Polarized Transport and Spintronic Devices. , 2011, , 615-647.		3
188	Band structure and spinâ€“orbit coupling engineering in transitionâ€metal dichalcogenides. Annalen Der Physik, 2014, 526, A89.	0.9	3
189	Intersubband excitations in ultrathin core-shell nanowires in the one-dimensional quantum limit probed by resonant inelastic light scattering. Physical Review B, 2021, 104, .	1.1	3
190	Optical conductivity of the Hubbard model in the strong coupling regime. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 186, 269-273.	0.9	2
191	Theory of pseudospin excitations in coaxial nanotubes. Physical Review B, 2010, 81, .	1.1	2
192	Spin-orbit-interaction induced singularity of the charge density relaxation propagator. Physical Review B, 2013, 88, .	1.1	2
193	Spin hot spots in singleâ€electron GaAsâ€based quantum dots. Physica Status Solidi (B): Basic Research, 2014, 251, 1924-1930.	0.7	2
194	Perspectives in spintronics: magnetic resonant tunneling, spin-orbit coupling, and GaMnAs. Journal of Physics: Conference Series, 2008, 129, 012021.	0.3	1
195	Silicon Spintronics: Challenges and Perspectives. ECS Transactions, 2011, 35, 3-12.	0.3	1
196	Spin-orbit coupling in graphene structures. , 2012, , .		1
197	Electronic and magnetic properties of Î±â^'FeGe2 films embedded in vertical spin valve devices. Physical Review Materials, 2020, 4, .	0.9	1
198	Ground-state energy of the Hubbard model in the BCS approximation. European Physical Journal D, 1993, 43, 1137-1142.	0.4	0

#	Article	IF	Citations
199	HIGH TEMPERATURE EFFECTS IN THE HUBBARD MODEL. International Journal of Modern Physics B, 1994, 08, 1065-1079.	1.0	0
200	Theoretical perspectives on spintronics and spin-polarized transport. , 0, , .		0
201	Numerical simulation of giant magnetoresistance resonant tunneling diodes. , 2006, , .		0
202	Self-consistent study of transport in Mn-doped semiconductor heterostructures. , 2010, , .		0
203	One- and two-photon indirect injection of carriers and spins in silicon. Proceedings of SPIE, 2012, , .	0.8	0
204	RESONANT SCATTERING OFF MAGNETIC IMPURITIES IN GRAPHENE: MECHANISM FOR ULTRAFAST SPIN RELAXATION. , 2015, , .		0
205	Femtosecond switch-on of hybrid polaritons in black phosphorus heterostructures. , 2017, , .		0
206	Ultrafast photo-activation of interface polaritons in black phosphorus heterostructures. , 2017, , .		0
207	Terahertz Quasiparticle Acceleration: From Electron-Hole Collisions To Lightwave Valleytronics. , 2018, , .		0
208	Lightwave Valleytronics at Multi-Terahertz Clock Rates. , 2019, , .		0
209	Lightwave control of the valley pseudospin in a monolayer of tungsten diselenide. EPJ Web of Conferences, 2019, 205, 05011.	0.1	0
210	Electronâ€“hole collisions in an atomically thin semiconductor. Journal of Physics: Conference Series, 2019, 1220, 012001.	0.3	0
211	Valleytronics on the subcycle timescale. , 2019, , .		0
212	Near-field nanoscopy of excitons and ultrafast interlayer dynamics in van der Waals crystals. , 2022, , .		0
213	Edge states in proximitized graphene ribbons and flakes in a perpendicular magnetic field: Emergence of lone pseudohelical pairs and pure spin-current states. Physical Review B, 2022, 105, .	1.1	0