Stephan Roche

List of Publications by Year
in descending order

244 papers	17,301 citations	14655 66 h-index	17105 122 g-index
265 all docs	265 docs citations	265 times ranked	16057 citing authors

#	Article	IF	Citations
1	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. Nanoscale, 2015, 7, 4598-4810.	5.6	2,452
2	Electronic and transport properties of nanotubes. Reviews of Modern Physics, 2007, 79, 677-732.	45.6	1,234
3	Charge Transport in Chemically Doped 2D Graphene. Physical Review Letters, 2008, 101, 036808.	7.8	461
4	Anomalous Doping Effects on Charge Transport in Graphene Nanoribbons. Physical Review Letters, 2009, 102, 096803.	7.8	323
5	Charge transport in disordered graphene-based low dimensional materials. Nano Research, 2008, 1, 361-394.	10.4	319
6	Proximity Effects Induced in Graphene by Magnetic Insulators: First-Principles Calculations on Spin Filtering and Exchange-Splitting Gaps. Physical Review Letters, 2013, 110, 046603.	7.8	287
7	Van der Waals heterostructures for spintronics and opto-spintronics. Nature Nanotechnology, 2021, 16, 856-868.	31.5	261
8	Graphene spintronics: the European Flagship perspective. 2D Materials, 2015, 2, 030202.	4.4	243
9	Nonvolatile Memories Based on Graphene and Related 2D Materials. Advanced Materials, 2019, 31, e1806663.	21.0	230
10	Mesoscopic Transport in Chemically Doped Carbon Nanotubes. Physical Review Letters, 2004, 92, 256805.	7.8	226
11	Tuning laser-induced band gaps in graphene. Applied Physics Letters, 2011, 98, .	3.3	215
12	Conductivity of Quasiperiodic Systems: A Numerical Study. Physical Review Letters, 1997, 79, 2518-2521.	7.8	212
13	Transport Length Scales in Disordered Graphene-Based Materials: Strong Localization Regimes and Dimensionality Effects. Physical Review Letters, 2008, 100, 036803.	7.8	192
14	Room-Temperature Spin Hall Effect in Graphene/MoS₂ van der Waals Heterostructures. Nano Letters, 2019, 19, 1074-1082.	9.1	186
15	Ultralow-dielectric-constant amorphous boron nitride. Nature, 2020, 582, 511-514.	27.8	173
16	Charge Transport in Polycrystalline Graphene: Challenges and Opportunities. Advanced Materials, 2014, 26, 5079-5094.	21.0	166
17	Sequence Dependent DNA-Mediated Conduction. Physical Review Letters, 2003, 91, 108101.	7.8	161
18	Giant Spin Lifetime Anisotropy in Graphene Induced by Proximity Effects. Physical Review Letters, 2017, 119, 206601.	7.8	161

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19	Transport properties of graphene containing structural defects. Physical Review B, 2012, 86, .	3.2	157
20	Spin transport in graphene/transition metal dichalcogenide heterostructures. Chemical Society Reviews, 2018, 47, 3359-3379.	38.1	150
21	Electrical transport in carbon nanotubes: Role of disorder and helical symmetries. Physical Review B, 2004, 69, .	3.2	149
22	Damaging Graphene with Ozone Treatment: A Chemically Tunable Metalâˆ'Insulator Transition. ACS Nano, 2010, 4, 4033-4038.	14.6	149
23	Aharonov-Bohm spectral features and coherence lengths in carbon nanotubes. Physical Review B, 2000, 62, 16092-16099.	3.2	147
24	Magnetotransport in disordered graphene exposed to ozone: From weak to strong localization. Physical Review B, 2010, 81, .	3.2	141
25	Magnetoresistance and Magnetic Ordering Fingerprints in Hydrogenated Graphene. Physical Review Letters, 2011, 107, 016602.	7.8	132
26	Graphene: Piecing it Together. Advanced Materials, 2011, 23, 4471-4490.	21.0	127
27	Tunable room-temperature spin galvanic and spin Hall effects in van der Waals heterostructures. Nature Materials, 2020, 19, 170-175.	27.5	127
28	Scaling Properties of Charge Transport in Polycrystalline Graphene. Nano Letters, 2013, 13, 1730-1735.	9.1	126
29	Electronic transport properties of carbon nanotube based metal/semiconductor/metal intramolecular junctions. Nanotechnology, 2005, 16, 230-233.	2.6	125
30	Machine-learning interatomic potentials enable first-principles multiscale modeling of lattice thermal conductivity in graphene/borophene heterostructures. Materials Horizons, 2020, 7, 2359-2367.	12.2	124
31	Tailoring magnetic insulator proximity effects in graphene: first-principles calculations. 2D Materials, 2017, 4, 025074.	4.4	121
32	Chemically Induced Mobility Gaps in Graphene Nanoribbons: A Route for Upscaling Device Performances. Nano Letters, 2009, 9, 2725-2729.	9.1	120
33	Effect of the Chemical Functionalization on Charge Transport in Carbon Nanotubes at the Mesoscopic Scale. Nano Letters, 2009, 9, 940-944.	9.1	118
34	Two-dimensional materials prospects for non-volatile spintronic memories. Nature, 2022, 606, 663-673.	27.8	116
35	Conduction mechanisms and magnetotransport in multiwalled carbon nanotubes. Physical Review B, 2001, 64, .	3.2	111
36	The 2021 quantum materials roadmap. JPhys Materials, 2020, 3, 042006.	4.2	111

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37	Long Range Correlations in DNA: Scaling Properties and Charge Transfer Efficiency. Physical Review Letters, 2003, 91, 228101.	7.8	110
38	Quantum Transport in Graphene Nanoribbons: Effects of Edge Reconstruction and Chemical Reactivity. ACS Nano, 2010, 4, 1971-1976.	14.6	108
39	Two-Dimensional Graphene with Structural Defects: Elastic Mean Free Path, Minimum Conductivity, and Anderson Transition. Physical Review Letters, 2011, 106, 046803.	7.8	105
40	Quantum transport by means ofO(N)real-space methods. Physical Review B, 1999, 59, 2284-2291.	3.2	101
41	Gate-Tunable Atomically Thin Lateral MoS₂ Schottky Junction Patterned by Electron Beam. Nano Letters, 2016, 16, 3788-3794.	9.1	99
42	Reduced backscattering in potassium-doped nanotubes:Ab initioand semiempirical simulations. Physical Review B, 2006, 73, .	3.2	97
43	Exploring phononic properties of two-dimensional materials using machine learning interatomic potentials. Applied Materials Today, 2020, 20, 100685.	4.3	96
44	Graphene spintronics: puzzling controversies and challenges for spin manipulation. Journal Physics D: Applied Physics, 2014, 47, 094011.	2.8	95
45	Integer Quantum Hall Effect in Trilayer Graphene. Physical Review Letters, 2011, 107, 126806.	7.8	94
46	Chemical Functionalization Effects on Armchair Graphene Nanoribbon Transport. Nano Letters, 2009, 9, 2537-2541.	9.1	93
47	Quantum transport in disordered graphene: A theoretical perspective. Solid State Communications, 2012, 152, 1404-1410.	1.9	93
48	Electronic transport properties of quasicrystals. Journal of Mathematical Physics, 1997, 38, 1794-1822.	1.1	92
49	Spin Hall Effect and Weak Antilocalization in Graphene/Transition Metal Dichalcogenide Heterostructures. Nano Letters, 2017, 17, 5078-5083.	9.1	91
50	Orientational Dependence of Charge Transport in Disordered Silicon Nanowires. Nano Letters, 2008, 8, 4146-4150.	9.1	90
51	Quantum Dephasing in Carbon Nanotubes due to Electron-Phonon Coupling. Physical Review Letters, 2005, 95, 076803.	7.8	88
52	Magnetoresistance of Carbon Nanotubes: From Molecular to Mesoscopic Fingerprints. Physical Review Letters, 2001, 87, 246803.	7.8	87
53	Pseudospin-driven spin relaxation mechanism inÂgraphene. Nature Physics, 2014, 10, 857-863.	16.7	86
54	Spin Proximity Effects in Graphene/Topological Insulator Heterostructures. Nano Letters, 2018, 18, 2033-2039.	9.1	86

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55	Quantum transport in chemically modified two-dimensional graphene: From minimal conductivity to Anderson localization. Physical Review B, 2011, 84, .	3.2	84
56	Broken Symmetries, Zero-Energy Modes, and Quantum Transport in Disordered Graphene: From Supermetallic to Insulating Regimes. Physical Review Letters, 2013, 110, 196601.	7.8	84
57	Edge-disorder-dependent transport length scales in graphene nanoribbons: From Klein defects to the superlattice limit. Physical Review B, 2009, 79, .	3.2	82
58	Spin transport in hydrogenated graphene. 2D Materials, 2015, 2, 022002.	4.4	81
59	Near-field photocurrent nanoscopy on bare and encapsulated graphene. Nature Communications, 2016, 7, 10783.	12.8	80
60	Magnetic proximity in a van der Waals heterostructure of magnetic insulator and graphene. 2D Materials, 2020, 7, 015026.	4.4	80
61	Band Gap Engineering via Edge-Functionalization of Graphene Nanoribbons. Journal of Physical Chemistry C, 2013, 117, 26790-26796.	3.1	78
62	Contact-dependent effects and tunneling currents in DNA molecules. Physical Review B, 2005, 71, .	3.2	76
63	Electronic Transport in Carbon Nanotubes with Random Coverage of Physisorbed Molecules. Nano Letters, 2005, 5, 2216-2219.	9.1	75
64	Role of grain boundaries in tailoring electronic properties of polycrystalline graphene by chemical functionalization. 2D Materials, 2015, 2, 024008.	4.4	74
65	Persistent currents in carbon nanotube based rings. Physical Review B, 2003, 67, .	3.2	72
66	Magnetism, symmetry and spin transport in van der Waals layered systems. Nature Reviews Physics, 2022, 4, 150-166.	26.6	72
67	Carbon nanotubes: Exceptional mechanical and electronic properties. Annales De Chimie: Science Des Materiaux, 2000, 25, 529-532.	0.4	69
68	Chemical disorder strength in carbon nanotubes: Magnetic tuning of quantum transport regimes. Physical Review B, 2006, 74, .	3.2	69
69	Magnetoresistance in disordered graphene: The role of pseudospin and dimensionality effects unraveled. Europhysics Letters, 2011, 94, 47006.	2.0	69
70	Inducing and optimizing magnetism in graphene nanomeshes. Physical Review B, 2011, 84, .	3.2	69
71	Spin dynamics and relaxation in graphene dictated by electron-hole puddles. Scientific Reports, 2016, 6, 21046.	3.3	67
72	Effects of domains in phonon conduction through hybrid boron nitride and graphene sheets. Physical Review B, 2011, 84, .	3.2	66

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73	LOW-DIMENSIONAL QUANTUM TRANSPORT PROPERTIES OF CHEMICALLY-DISORDERED CARBON NANOTUBES: FROM WEAK TO STRONG LOCALIZATION REGIMES. Modern Physics Letters B, 2007, 21, 1955-1982.	1.9	65
74	Tailoring emergent spin phenomena in Dirac material heterostructures. Science Advances, 2018, 4, eaat9349.	10.3	65
75	Unveiling the Magnetic Structure of Graphene Nanoribbons. Physical Review Letters, 2011, 107, 086601.	7.8	64
76	Edge magnetotransport fingerprints in disordered graphene nanoribbons. Physical Review B, 2010, 82, .	3.2	63
77	Magnetically Induced Field Effect in Carbon Nanotube Devices. Nano Letters, 2007, 7, 960-964.	9.1	62
78	Electrical and Thermal Transport in Coplanar Polycrystalline Grapheneâ€"hBN Heterostructures. Nano Letters, 2017, 17, 1660-1664.	9.1	62
79	Scaling properties of polycrystalline graphene: a review. 2D Materials, 2017, 4, 012002.	4.4	62
80	Spin Hall Effect and Origins of Nonlocal Resistance in Adatom-Decorated Graphene. Physical Review Letters, 2016, 117, 176602.	7.8	61
81	Atomistic Boron-Doped Graphene Field-Effect Transistors: A Route toward Unipolar Characteristics. ACS Nano, 2012, 6, 7942-7947.	14.6	60
82	Inelastic Quantum Transport and Peierls-Like Mechanism in Carbon Nanotubes. Physical Review Letters, 2006, 97, 076804.	7.8	59
83	Highly defective graphene: A key prototype of two-dimensional Anderson insulators. Nano Research, 2013, 6, 326-334.	10.4	59
84	Graphene gets a better gap. Nature Nanotechnology, 2011, 6, 8-9.	31.5	58
85	Point-Mutation Effects on Charge-Transport Properties of the Tumor-Suppressor Gene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi><mml:mn>53</mml:mn></mml:math>. Physical Review Letters, 2008, 100, 018105.	7.8	57
86	Spin-valve effect in zigzag graphene nanoribbons by defect engineering. Physical Review B, 2009, 80, .	3.2	56
87	Modeling graphene-based nanoelectromechanical devices. Physical Review B, 2010, 81, .	3.2	56
88	Fingerprints of Inelastic Transport at the Surface of the Topological Insulator<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Bi</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mm Role of Electron-Phonon Coupling. Physical Review Letters, 2014, 112, .	7.8	56
89	Range and correlation effects in edge disordered graphene nanoribbons. New Journal of Physics, 2009, 11, 095004.	2.9	55
90	Inelastic Transport in Vibrating Disordered Carbon Nanotubes: Scattering Times and Temperature-Dependent Decoherence Effects. Physical Review Letters, 2010, 104, 116801.	7.8	55

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91	Splitting of the Zero-Energy Landau Level and Universal Dissipative Conductivity at Critical Points in Disordered Graphene. Physical Review Letters, 2013, 110, 086602.	7.8	55
92	Backbone-induced effects in the charge transport efficiency of synthetic DNA molecules. Nanotechnology, 2006, 17, 3002-3007.	2.6	54
93	Effects of Dephasing on Spin Lifetime in Ballistic Spin-Orbit Materials. Physical Review Letters, 2016, 116, 086602.	7.8	54
94	Oxygen Surface Functionalization of Graphene Nanoribbons for Transport Gap Engineering. ACS Nano, 2011, 5, 9271-9277.	14.6	53
95	Laser-induced effects on the electronic features of graphene nanoribbons. Applied Physics Letters, 2012, 101, 253506.	3.3	53
96	Quantum Hall effect in polycrystalline graphene: The role of grain boundaries. Physical Review B, 2014, 90, .	3.2	52
97	Quantum transport length scales in silicon-based semiconducting nanowires: Surface roughness effects. Physical Review B, 2008, 77, .	3.2	51
98	Polaron transport in organic crystals: Temperature tuning of disorder effects. Physical Review B, 2011, 84, .	3.2	51
99	Physical model of the contact resistivity of metal-graphene junctions. Journal of Applied Physics, 2014, 115, .	2.5	51
100	Fermi surfaces and anomalous transport in quasicrystals. Physical Review B, 1998, 58, 11338-11344.	3.2	50
101	Quantum interference in multiwall carbon nanotubes. Semiconductor Science and Technology, 2006, 21, S38-S45.	2.0	50
102	A simple drain current model for Schottky-barrier carbon nanotube field effect transistors. Nanotechnology, 2007, 18, 025201.	2.6	50
103	Engineering carbon chains from mechanically stretched graphene-based materials. Physical Review B, 2011, 83, .	3.2	50
104	Electronic conduction in multi-walled carbon nanotubes: role of intershell coupling and incommensurability. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 285, 94-100.	2.1	48
105	Quantum transport properties of chemically functionalized long semiconducting carbon nanotubes. Nano Research, 2010, 3, 288-295.	10.4	48
106	Magnetism-Dependent Transport Phenomena in Hydrogenated Graphene: From Spin-Splitting to Localization Effects. ACS Nano, 2011, 5, 3987-3992.	14.6	47
107	Charge transport in carbon nanotubes based materials: a Kuboâ€“Greenwood computational approach. Comptes Rendus Physique, 2009, 10, 283-296.	0.9	46
108	Efficient linear scaling method for computing the thermal conductivity of disordered materials. Physical Review B, 2011, 83, .	3.2	46

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109	Spin precession in anisotropic media. Physical Review B, 2017, 95, .	3.2	46
110	Linear scaling quantum transport methodologies. Physics Reports, 2021, 903, 1-69.	25.6	46
111	Ballistic tracks in graphene nanoribbons. Nature Communications, 2018, 9, 4426.	12.8	45
112	Effects of magnetic field and disorder on the electronic properties of carbon nanotubes. Physical Review B, 1999, 59, 5242-5246.	3.2	43
113	ELECTRONIC TRANSPORT AND THERMOPOWER IN APERIODIC DNA SEQUENCES. Modern Physics Letters B, 2004, 18, 847-871.	1.9	43
114	Efficient linear scaling method for computing the Landauer-BÃ¼ttiker conductance. European Physical Journal B, 2005, 46, 427-431.	1.5	43
115	Gate-Dependent Magnetoresistance Phenomena in Carbon Nanotubes. Physical Review Letters, 2005, 94, 066801.	7.8	43
116	Onset of Landau-Level Formation in Carbon-Nanotube-Based Electronic Fabry-Perot Resonators. Physical Review Letters, 2008, 101, 046803.	7.8	42
117	Aharonov-Bohm Conductance Modulation in Ballistic Carbon Nanotubes. Physical Review Letters, 2007, 98, 176802.	7.8	41
118	Phonon transport in large scale carbon-based disordered materials: Implementation of an efficient order-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>N</mml:mi></mml:math>and real-space Kubo methodology. Physical Review B, 2010, 82, .	3.2	41
119	Formalism for the computation of the RKKY interaction in aperiodic systems. Physical Review B, 1999, 60, 322-328.	3.2	39
120	Multiple Quantum Phases in Graphene with Enhanced Spin-Orbit Coupling: From the Quantum Spin Hall Regime to the Spin Hall Effect and a Robust Metallic State. Physical Review Letters, 2014, 113, 246603.	7.8	39
121	Insulating behavior of an amorphous graphene membrane. Physical Review B, 2012, 86, .	3.2	38
122	Canted Persistent Spin Texture and Quantum Spin Hall Effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WTe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></r Physical Review Letters, 2020, 125, 256603.	7.8	38
123	Thermal conductivity of MoS ₂ polycrystalline nanomembranes. 2D Materials, 2016, 3, 035016.	4.4	37
124	Nonequilibrium energy gaps in carbon nanotubes: Role of phonon symmetries. Physical Review B, 2008, 78, .	3.2	36
125	Record Low Thermal Conductivity of Polycrystalline MoS₂ Films: Tuning the Thermal Conductivity by Grain Orientation. ACS Applied Materials & Interfaces, 2017, 9, 37905-37911.	8.0	35
126	Valley-polarized quantum transport generated by gauge fields in graphene. 2D Materials, 2017, 4, 031006.	4.4	35

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127	Frequency-dependent electrical transport in carbon nanotubes. Physical Review B, 2001, 64, .	3.2	34
128	Unconventional features in the quantum Hall regime of disordered graphene: Percolating impurity states and Hall conductance quantization. Physical Review B, 2016, 93, .	3.2	34
129	Growth of Twin-Free and Low-Doped Topological Insulators on BaF₂(111). Crystal Growth and Design, 2017, 17, 4655-4660.	3.0	34
130	Charge transport in carbon nanotubes: quantum effects of electronâ€“phonon coupling. Journal of Physics Condensed Matter, 2007, 19, 183203.	1.8	33
131	Impact of Vacancies on Diffusive and Pseudodiffusive Electronic Transport in Graphene. Crystals, 2013, 3, 289-305.	2.2	32
132	Efficient machine-learning based interatomic potentialsfor exploring thermal conductivity in two-dimensional materials. JPhys Materials, 2020, 3, 02LT02.	4.2	32
133	Non-perturbative effects of laser illumination on the electrical properties of graphene nanoribbons. Journal of Physics Condensed Matter, 2013, 25, 144202.	1.8	31
134	Batch processing of nanometer-scale electrical circuitry based on in-situ grown single-walled carbon nanotubes. Microelectronic Engineering, 2002, 61-62, 485-489.	2.4	28
135	Carbon nanotube chemistry and assembly for electronic devices. Comptes Rendus Physique, 2009, 10, 330-347.	0.9	28
136	Large edge magnetism in oxidized few-layer black phosphorus nanomeshes. Nano Research, 2017, 10, 718-728.	10.4	27
137	Localized electronic states at grain boundaries on the surface of graphene and graphite. 2D Materials, 2016, 3, 031005.	4.4	26
138	1D ferromagnetic edge contacts to 2D graphene/h-BN heterostructures. 2D Materials, 2018, 5, 014001.	4.4	26
139	Transport Properties. , 2006, , 335-437.		25
140	Deciphering the origin of nonlocal resistance in multiterminal graphene on hexagonal-boron-nitride with <i>ab initio</i> quantum transport: Fermi surface edge currents rather than Fermi sea topological valley currents. JPhys Materials, 2018, 1, 015006.	4.2	24
141	Unequivocal signatures of the crossover to Anderson localization in realistic models of disordered quasi-one-dimensional materials. Physical Review B, 2018, 98, .	3.2	23
142	Blue emission at atomically sharp 1D heterojunctions between graphene and h-BN. Nature Communications, 2020, 11, 5359.	12.8	23
143	Sensing ion channel in neuron networks with graphene field effect transistors. 2D Materials, 2018, 5, 045020.	4.4	21
144	Anomalous Magnetotransport in Chemically Doped Carbon Nanotubes. Physical Review Letters, 2005, 95, 126802.	7.8	20

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145	Three-Dimensional Models of Topological Insulators: Engineering of Dirac Cones and Robustness of the Spin Texture. Physical Review Letters, 2012, 109, 266805.	7.8	20
146	Anomalous dissipation mechanism and Hall quantization limit in polycrystalline graphene grown by chemical vapor deposition. Physical Review B, 2014, 90, .	3.2	20
147	Control of spinâ€“charge conversion in van der Waals heterostructures. APL Materials, 2021, 9, .	5.1	20
148	Spin Manipulation in Graphene by Chemically Induced Pseudospin Polarization. Physical Review Letters, 2016, 116, 106601.	7.8	19
149	Embedded boron nitride domains in graphene nanoribbons for transport gap engineering. Physical Review B, 2012, 86, .	3.2	18
150	Graphene on two-dimensional hexagonal BN, AlN, and GaN: Electronic, spin-orbit, and spin relaxation properties. Physical Review B, 2021, 103, .	3.2	18
151	Valley-polarized quantum anomalous Hall phase in bilayer graphene with layer-dependent proximity effects. Physical Review B, 2021, 104, .	3.2	18
152	Tuning the band gap of semiconducting carbon nanotube by an axial magnetic field. Applied Physics Letters, 2010, 96, 132101.	3.3	17
153	Multiscale simulation of carbon nanotube transistors. Solid-State Electronics, 2013, 89, 26-67.	1.4	17
154	Tunneling magnetoresistance phenomenon utilizing graphene magnet electrode. Applied Physics Letters, 2014, 105, 183111.	3.3	17
155	Scale-invariant large nonlocality in polycrystalline graphene. Nature Communications, 2017, 8, 2198.	12.8	17
156	Nonlocal Spin Dynamics in the Crossover from Diffusive to Ballistic Transport. Physical Review Letters, 2020, 124, 196602.	7.8	17
157	Conductance of functionalized nanotubes, graphene and nanowires: from <i>ab initio</i> to mesoscopic physics. Physica Status Solidi (B): Basic Research, 2010, 247, 2962-2967.	1.5	16
158	Efficient linear scaling approach for computing the Kubo Hall conductivity. Physical Review B, 2015, 91, .	3.2	16
159	Observation of giant and tunable thermal diffusivity of a Dirac fluid at room temperature. Nature Nanotechnology, 2021, 16, 1195-1200.	31.5	16
160	Manipulation of spin transport in graphene/transition metal dichalcogenide heterobilayers upon twisting. 2D Materials, 0, , .	4.4	16
161	Multiscale simulation of carbon nanotube devices. Comptes Rendus Physique, 2009, 10, 305-319.	0.9	15
162	Quantum transport in chemically functionalized graphene at high magnetic field: defect-induced critical states and breakdown of electron-hole symmetry. 2D Materials, 2014, 1, 021001.	4.4	15

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163	Green function, quasi-classical Langevin and Kuboâ€“Greenwood methods in quantum thermal transport. Journal of Physics Condensed Matter, 2019, 31, 273003.	1.8	15
164	Universal Spin Diffusion Length in Polycrystalline Graphene. Nano Letters, 2019, 19, 7418-7426.	9.1	15
165	Conductance and coherence lengths in disordered carbon nanotubes: Role of lattice defects and phonon vibrations. Physical Review B, 2005, 72, .	3.2	14
166	Impact of oxidation morphology on reduced graphene oxides upon thermal annealing. JPhys Materials, 2020, 3, 015011.	4.2	14
167	Backscattering in carbon nanotubes: Role of quantum interference effects. Applied Physics Letters, 2001, 79, 3690-3692.	3.3	13
168	Quantum transport in graphene in presence of strain-induced pseudo-Landau levels. 2D Materials, 2016, 3, 034005.	4.4	13
169	Tunable circular dichroism and valley polarization in the modified Haldane model. Physical Review B, 2019, 99, .	3.2	13
170	Exploring event horizons and Hawking radiation through deformed graphene membranes. 2D Materials, 2020, 7, 041006.	4.4	13
171	Janus monolayers of magnetic transition metal dichalcogenides as an all-in-one platform for spin-orbit torque. Physical Review B, 2021, 104, .	3.2	13
172	Role of phason defects on the conductance of a one-dimensional quasicrystal. Physical Review B, 1996, 53, 212-220.	3.2	12
173	Quenching of the Quantum Hall Effect in Graphene with Scrolled Edges. Physical Review Letters, 2012, 108, 166602.	7.8	12
174	Valley Hall effect and nonlocal resistance in locally gapped graphene. Physical Review B, 2021, 103, .	3.2	12
175	Emerging properties of non-crystalline phases of graphene and boron nitride based materials. Nano Materials Science, 2022, 4, 10-17.	8.8	12
176	High Magnetic Field Phenomena in Carbon Nanotubes. Topics in Applied Physics, 2007, , 393-422.	0.8	11
177	Propagative Landau States and Fermi Level Pinning in Carbon Nanotubes. Physical Review Letters, 2009, 103, 256801.	7.8	11
178	Hinge Spin Polarization in Magnetic Topological Insulators Revealed by Resistance Switch. Physical Review Letters, 2021, 126, 167701.	7.8	11
179	Low-symmetry topological materials for large charge-to-spin interconversion: The case of transition metal dichalcogenide monolayers. Physical Review Research, 2021, 3, .	3.6	11
180	Transport fingerprints at graphene superlattice Dirac points induced by a boron nitride substrate. Physical Review B, 2014, 89, .	3.2	10

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181	Effect of the Channel Length on the Transport Characteristics of Transistors Based on Boron-Doped Graphene Ribbons. Materials, 2018, 11, 667.	2.9	10
182	Charge and spin transport anisotropy in nanopatterned graphene. JPhys Materials, 2018, 1, 015005.	4.2	10
183	Anomalous electronic conductance in quasicrystals. Physical Review B, 2000, 61, 6048-6056.	3.2	9
184	A simple drain current model for Schottky-barrier carbon nanotube field effect transistors. Nanotechnology, 2007, 18, 419001.	2.6	9
185	Competition between magnetic field dependent band structure and coherent backscattering in multiwall carbon nanotubes. New Journal of Physics, 2007, 9, 56-56.	2.9	8
186	Electronâ€"phonon induced conductance gaps in carbon nanotubes. Applied Physics A: Materials Science and Processing, 2007, 86, 283-288.	2.3	8
187	Anisotropic behavior of quantum transport in graphene superlattices: Coexistence of ballistic conduction with Anderson insulating regime. Physical Review B, 2014, 89, .	3.2	8
188	The phase diagram of 2D antiferromagnets. Nature Nanotechnology, 2019, 14, 1088-1089.	31.5	8
189	Magnetism, spin dynamics, and quantum transport in two-dimensional systems. MRS Bulletin, 2020, 45, 357-365.	3.5	8
190	Have mysterious topological valley currents been observed in graphene superlattices?. JPhys Materials, 2022, 5, 021001.	4.2	8
191	Anomalous diffusion and elastic mean free path in disorder-free multiwalled carbon nanotubes. Physical Review B, 2006, 74, .	3.2	7
192	Mechanically-induced transport switching effect in graphene-based nanojunctions. Physical Review B, 2011, 83, .	3.2	7
193	Impact of graphene polycrystallinity on the performance of graphene field-effect transistors. Applied Physics Letters, 2014, 104, 043509.	3.3	7
194	Anomalous ballistic transport in disordered bilayer graphene: A Dirac semimetal induced by dimer vacancies. Physical Review B, 2016, 93, .	3.2	7
195	Magnetic properties. , 2006, , 119-151.		6
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