

Dong Sun

List of Publications by Year in descending order

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68
papers

3,936
citations

172457

29
h-index

118850

62
g-index

68
all docs

68
docs citations

68
times ranked

6045
citing authors

#	ARTICLE	IF	CITATIONS
1	Light-induced emergent phenomena in 2D materials and topological materials. Nature Reviews Physics, 2022, 4, 33-48.	26.6	94
2	Population Inversion and Dirac Fermion Cooling in 3D Dirac Semimetal Cd ₃ As ₂ . Nano Letters, 2022, 22, 1138-1144.	9.1	9
3	Ultrafast photothermoelectric effect in Dirac semimetallic Cd ₃ As ₂ revealed by terahertz emission. Nature Communications, 2022, 13, 1623.	12.8	29
4	Direct Light Orbital Angular Momentum Detection in Mid-Infrared Based on the Type-II Weyl Semimetal TaIrTe ₄ . Advanced Materials, 2022, 34, .	21.0	9
5	Circular photogalvanic effect from third-order nonlinear effect in 1T TM -MoTe ₂ . 2D Materials, 2021, 8, 025016.	4.4	8
6	Coherent diffraction rings induced by thermal-mechanical effect of a flexible Dirac semimetallic composite structure. Journal of Applied Physics, 2021, 129, 093102.	2.5	2
7	Two-Dimensional Material-Enhanced Flexible and Self-Healable Photodetector for Large-Area Photodetection. Advanced Functional Materials, 2021, 31, 2100136.	14.9	17
8	Gradient rhenium doping enabled tunable anisotropic valleytronic material based on monolayer molybdenum disulfide. 2D Materials, 2021, 8, 035031.	4.4	4
9	Dynamical evolution of anisotropic response of type-II Weyl semimetal TaIrTe ₄ under ultrafast photoexcitation. Light: Science and Applications, 2021, 10, 101.	16.6	17
10	Giant All-Optical Modulation of Second-Harmonic Generation Mediated by Dark Excitons. ACS Photonics, 2021, 8, 2320-2328.	6.6	11
11	Photoluminescent Quantum Interference in a van der Waals Magnet Preserved by Symmetry Breaking. ACS Nano, 2020, 14, 1003-1010.	14.6	23
12	Terahertz relaxation dynamics of a two-dimensional InSe multilayer. Physical Review B, 2020, 102, .	3.2	2
13	Radio frequency polarization modulation based on an optical frequency comb. Review of Scientific Instruments, 2020, 91, 083111.	1.3	3
14	Semimetals for high-performance photodetection. Nature Materials, 2020, 19, 830-837.	27.5	181
15	Photocurrent response of type-II Dirac semimetal PtTe ₂ . 2D Materials, 2020, 7, 034003.	4.4	24
16	Epitaxial Synthesis of Monolayer PtSe ₂ Single Crystal on MoSe ₂ with Strong Interlayer Coupling. ACS Nano, 2019, 13, 10929-10938.	14.6	72
17	Observation of ballistic avalanche phenomena in nanoscale vertical InSe/BP heterostructures. Nature Nanotechnology, 2019, 14, 217-222.	31.5	153
18	Self-powered photodetector based on vertical MoO ₃ /MoS ₂ hetero-structure with gate tunable photo-response. 2D Materials, 2019, 6, 035033.	4.4	41

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37	relaxation dynamics of photoexcited Dirac fermions in the three-dimensional Dirac semimetal Cd_3As_2 . <i>Physical Review Letters</i> , 2012, 109, 166601.	3.2	47
38	One-step exfoliation and functionalization of graphene by hydrophobin for high performance water molecular sensing. <i>Carbon</i> , 2017, 116, 695-702.	10.3	20
39	Review of ultrafast spectroscopy studies of valley carrier dynamics in two-dimensional semiconducting transition metal dichalcogenides. <i>Chinese Physics B</i> , 2017, 26, 037801.	1.4	25
40	Contact Engineering of Molybdenum Ditelluride Field Effect Transistors through Rapid Thermal Annealing. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 30107-30114.	8.0	37
41	On the Quantum Spin Hall Gap of Monolayer $1T\text{-}WTe_2$. <i>Advanced Materials</i> , 2016, 28, 4845-4851.	21.0	141
42	Thin tungsten telluride layer preparation by thermal annealing. <i>Nanotechnology</i> , 2016, 27, 414006.	2.6	12
43	Review of photo response in semiconductor transition metal dichalcogenides based photosensitive devices. <i>Optical Materials Express</i> , 2016, 6, 2313.	3.0	44
44	An ultrafast terahertz probe of the transient evolution of the charged and neutral phase of photo-excited electron-hole gas in a monolayer semiconductor. <i>2D Materials</i> , 2016, 3, 014001.	4.4	18
45	Dynamical Evolution of Anisotropic Response in Black Phosphorus under Ultrafast Photoexcitation. <i>Nano Letters</i> , 2015, 15, 4650-4656.	9.1	142
46	Electronic cooling via interlayer Coulomb coupling in multilayer epitaxial graphene. <i>Nature Communications</i> , 2015, 6, 8105.	12.8	28
47	Photovoltaic Effect and Evidence of Carrier Multiplication in Graphene Vertical Homojunctions with Asymmetrical Metal Contacts. <i>ACS Nano</i> , 2015, 9, 8851-8858.	14.6	19
48	Topological Surface State Enhanced Photothermoelectric Effect in Bi_2Se_3 Nanoribbons. <i>Nano Letters</i> , 2014, 14, 4389-4394.	9.1	79
49	Optical Properties of Metal-Molybdenum Disulfide Hybrid Nanosheets and Their Application for Enhanced Photocatalytic Hydrogen Evolution. <i>ACS Nano</i> , 2014, 8, 6979-6985.	14.6	92
50	Coherent Longitudinal Acoustic Phonon Approaching THz Frequency in Multilayer Molybdenum Disulphide. <i>Scientific Reports</i> , 2014, 4, 5722.	3.3	80
51	Valley Carrier Dynamics in Monolayer Molybdenum Disulfide from Helicity-Resolved Ultrafast Pump-Probe Spectroscopy. <i>ACS Nano</i> , 2013, 7, 11087-11093.	14.6	213
52	Microscopic theory of quantum interference-based generation and decay of current in graphene. <i>Physical Review Letters</i> , 2012, 109, 166601.		0
53	Absorption saturation in optically excited graphene. <i>Applied Physics Letters</i> , 2012, 101, 111101.	3.3	54
54	Photoresponse of a strongly correlated material determined by scanning photocurrent microscopy. <i>Nature Nanotechnology</i> , 2012, 7, 723-727.	31.5	72

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55	Ultrafast hot-carrier-dominated photocurrent in graphene. <i>Nature Nanotechnology</i> , 2012, 7, 114-118.	31.5	362
56	Evidence for interlayer electronic coupling in multilayer epitaxial graphene from polarization-dependent coherently controlled photocurrent generation. <i>Physical Review B</i> , 2012, 85, .	3.2	19
57	Current relaxation due to hot carrier scattering in graphene. <i>New Journal of Physics</i> , 2012, 14, 105012.	2.9	39
58	Hot carrier cooling by acoustic phonons in epitaxial graphene by ultrafast pump-probe spectroscopy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011, 8, 1194-1197.	0.8	15
59	Spectroscopic Measurement of Interlayer Screening in Multilayer Epitaxial Graphene. <i>Physical Review Letters</i> , 2010, 104, 136802.	7.8	100
60	Coherent Control of Ballistic Photocurrents in Multilayer Epitaxial Graphene Using Quantum Interference. <i>Nano Letters</i> , 2010, 10, 1293-1296.	9.1	122
61	Temperature-Dependent Coherently Controlled Photocurrent Generation in Epitaxial Graphene. , 2010, , .		0
62	Ultrafast dynamics and interlayer thermal coupling of hot carriers in epitaxial graphene. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009, 6, 470-473.	0.8	5
63	THz Carrier Dynamics in Epitaxial Graphene. , 2009, , .		1
64	Ultrafast Spectroscopy of Multilayer Epitaxial Graphene. , 2009, , .		1
65	Slow Light Using P-Doped Semiconductor Heterostructures for High-Bandwidth Nonlinear Signal Processing. <i>Journal of Lightwave Technology</i> , 2008, 26, 3811-3817.	4.6	12
66	Ultrafast Relaxation of Excited Dirac Fermions in Epitaxial Graphene Using Optical Differential Transmission Spectroscopy. <i>Physical Review Letters</i> , 2008, 101, 157402.	7.8	427
67	Spin relaxation in charged quantum dots measured by coherent optical phase modulation spectroscopy. <i>Solid State Communications</i> , 2006, 140, 381-385.	1.9	11
68	Entanglement-changing power of two-qubit unitary operations. <i>Physical Review A</i> , 2004, 70, .	2.5	19