

Dong Sun

List of Publications by Year in descending order

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68
papers

3,936
citations

172457
29
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118850
62
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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. <i>Nature Reviews Physics</i> , 2022, 4, 33-48.	26.6	94
2	Population Inversion and Dirac Fermion Cooling in 3D Dirac Semimetal Cd ₃ As ₂ . <i>Nano Letters</i> , 2022, 22, 1138-1144.	9.1	9
3	Ultrafast photothermoelectric effect in Dirac semimetallic Cd ₃ As ₂ revealed by terahertz emission. <i>Nature Communications</i> , 2022, 13, 1623.	12.8	29
4	Direct Light Orbital Angular Momentum Detection in Mid-Infrared Based on the Type-II Weyl Semimetal Ta ₃ Te ₄ . <i>Advanced Materials</i> , 2022, 34, .	21.0	9
5	Circular photogalvanic effect from third-order nonlinear effect in 1T-MoTe ₂ . <i>2D Materials</i> , 2021, 8, 025016.	4.4	8
6	Coherent diffraction rings induced by thermal-mechanical effect of a flexible Dirac semimetallic composite structure. <i>Journal of Applied Physics</i> , 2021, 129, 093102.	2.5	2
7	Two-Dimensional Material-Enhanced Flexible and Self-Healable Photodetector for Large-Area Photodetection. <i>Advanced Functional Materials</i> , 2021, 31, 2100136.	14.9	17
8	Gradient rhenium doping enabled tunable anisotropic valleytronic material based on monolayer molybdenum disulfide. <i>2D Materials</i> , 2021, 8, 035031.	4.4	4
9	Dynamical evolution of anisotropic response of type-II Weyl semimetal Ta ₃ Te ₄ under ultrafast photoexcitation. <i>Light: Science and Applications</i> , 2021, 10, 101.	16.6	17
10	Giant All-Optical Modulation of Second-Harmonic Generation Mediated by Dark Excitons. <i>ACS Photonics</i> , 2021, 8, 2320-2328.	6.6	11
11	Photoluminescent Quantum Interference in a van der Waals Magnet Preserved by Symmetry Breaking. <i>ACS Nano</i> , 2020, 14, 1003-1010.	14.6	23
12	Terahertz relaxation dynamics of a two-dimensional InSe multilayer. <i>Physical Review B</i> , 2020, 102, .	3.2	2
13	Radio frequency polarization modulation based on an optical frequency comb. <i>Review of Scientific Instruments</i> , 2020, 91, 083111.	1.3	3
14	Semimetals for high-performance photodetection. <i>Nature Materials</i> , 2020, 19, 830-837.	27.5	181
15	Photocurrent response of type-II Dirac semimetal PtTe ₂ . <i>2D Materials</i> , 2020, 7, 034003.	4.4	24
16	Epitaxial Synthesis of Monolayer PtSe ₂ Single Crystal on MoSe ₂ with Strong Interlayer Coupling. <i>ACS Nano</i> , 2019, 13, 10929-10938.	14.6	72
17	Observation of ballistic avalanche phenomena in nanoscale vertical InSe/BP heterostructures. <i>Nature Nanotechnology</i> , 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. <i>2D Materials</i> , 2019, 6, 035033.	4.4	41

#	ARTICLE		IF	CITATIONS
19	The Opposite Anisotropic Piezoresistive Effect of ReS ₂ . ACS Nano, 2019, 13, 3310-3319.	14.6	55	
20	Nonlinear photoresponse of type-II Weyl semimetals. Nature Materials, 2019, 18, 476-481.	27.5	185	
21	Experimental progress on layered topological semimetals. 2D Materials, 2019, 6, 032001.	4.4	26	
22	Wet Chemical Method for Black Phosphorus Thinning and Passivation. ACS Applied Materials & Interfaces, 2019, 11, 9213-9222.	8.0	23	
23	Robust edge photocurrent response on layered type II Weyl semimetal WTe ₂ . Nature Communications, 2019, 10, 5736.	12.8	69	
24	Single crystalline SmB ₆ nanowires for self-powered, broadband photodetectors covering mid-infrared. Applied Physics Letters, 2018, 112, .	3.3	14	
25	Anisotropic Broadband Photoresponse of Layered Type-II Weyl Semimetal MoTe ₂ . Advanced Materials, 2018, 30, e1707152.	21.0	139	
26	Broadband Anisotropic Photoresponse of the "Hydrogen Atom" Version Type-II Weyl Semimetal Candidate TaIrTe ₄ . ACS Nano, 2018, 12, 4055-4061.	14.6	94	
27	Dynamical anisotropic response of black phosphorus under magnetic field. 2D Materials, 2018, 5, 025010.	4.4	10	
28	Liquid phase mass production of air-stable black phosphorus/phospholipids nanocomposite with ultralow tunneling barrier. 2D Materials, 2018, 5, 025012.	4.4	4	
29	Anisotropic visible photoluminescence from thermally annealed few-layer black phosphorus. Nanotechnology, 2018, 29, 245202.	2.6	13	
30	Barkhausen effect in the first order structural phase transition in type-II Weyl semimetal MoTe ₂ . 2D Materials, 2018, 5, 044003.	4.4	12	
31	Solution-Based Property Tuning of Black Phosphorus. ACS Applied Materials & Interfaces, 2018, 10, 39890-39897.	8.0	16	
32	Seamless lateral graphene "n" junctions formed by selective in situ doping for high-performance photodetectors. Nature Communications, 2018, 9, 5168.	12.8	71	
33	Terahertz probe of photoexcited carrier dynamics in the Dirac semimetal $\text{Cd}_{3.3}\text{Mo}_{1.7}\text{Te}$. Physical Review B, 2018, 98, .	12.8	71	
34	Ultraviolet Light-Induced Persistent and Degenerated Doping in MoS ₂ for Potential Photocontrollable Electronics Applications. ACS Applied Materials & Interfaces, 2018, 10, 27840-27849.	8.0	13	
35	Implementing Lateral MoSe ₂ "N" Homojunction by Efficient Carrier-Type Modulation. ACS Applied Materials & Interfaces, 2018, 10, 26533-26538.	8.0	29	
36	Ultrafast Broadband Photodetectors Based on Three-Dimensional Dirac Semimetal Cd ₃ As ₂ . Nano Letters, 2017, 17, 834-841.	9.1	162	

#	ARTICLE: relaxation dynamics of photoexcited Dirac fermions in the three-dimensional Dirac semimetal $\langle mml:math xmlns:mml=$ http://www.w3.org/1998/Math/MathML > $\langle mml:mi>C</mml:mi><mml:msub><mml:mi>$ mathvariant="normal"> C $</mml:mi><mml:msub><mml:mi>$ d $</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mi>$ d $</mml:mi><mml:msub><mml:mi>$ A $</mml:mi><mml:msub><mml:mi>$ s $</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mi></mml:row></mml:math>, Phys.$	IF	CITATIONS
37	One-step exfoliation and functionalization of graphene by hydrophobin for high performance water molecular sensing. <i>Carbon</i> , 2017, 116, 695-702.	3.2	47
38	Review of ultrafast spectroscopy studies of valley carrier dynamics in two-dimensional semiconducting transition metal dichalcogenides. <i>Chinese Physics B</i> , 2017, 26, 037801.	10.3	20
39	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
40	On the Quantum Spin Hall Gap of Monolayer $1T\text{-WTe}_2$. <i>Advanced Materials</i> , 2016, 28, 4845-4851.	21.0	141
41	Thin tungsten telluride layer preparation by thermal annealing. <i>Nanotechnology</i> , 2016, 27, 414006.	2.6	12
42	Review of photo response in semiconductor transition metal dichalcogenides based photosensitive devices. <i>Optical Materials Express</i> , 2016, 6, 2313.	3.0	44
43	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
44	Dynamical Evolution of Anisotropic Response in Black Phosphorus under Ultrafast Photoexcitation. <i>Nano Letters</i> , 2015, 15, 4650-4656.	9.1	142
45	Electronic cooling via interlayer Coulomb coupling in multilayer epitaxial graphene. <i>Nature Communications</i> , 2015, 6, 8105.	12.8	28
46	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
47	Topological Surface State Enhanced Photothermoelectric Effect in Bi_2Se_3 Nanoribbons. <i>Nano Letters</i> , 2014, 14, 4389-4394.	9.1	79
48	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
49	Coherent Longitudinal Acoustic Phonon Approaching THz Frequency in Multilayer Molybdenum Disulphide. <i>Scientific Reports</i> , 2014, 4, 5722.	3.3	80
50	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
51	Microscopic theory of quantum interference-based generation and decay of current in graphene. , 2012, , .	0	
52	Absorption saturation in optically excited graphene. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	54
53	Photoresponse of a strongly correlated material determined by scanning photocurrent microscopy. <i>Nature Nanotechnology</i> , 2012, 7, 723-727.	31.5	72

#	ARTICLE		IF	CITATIONS
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	