Lei Wang

List of Publications by Year
in descending order

		76326	88630
74	20,745	40	70
papers	citations	h-index	g-index

76	76	76	22008
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Strong in-plane scattering of acoustic graphene plasmons by surface atomic steps. Nature Communications, 2022, 13, 983.	12.8	6
2	A monolithically sculpted van der Waals nano-opto-electro-mechanical coupler. Light: Science and Applications, 2022, 11, 48.	16.6	7
3	Dissipation-enabled hydrodynamic conductivity in a tunable bandgap semiconductor. Science Advances, 2022, 8, eabi8481.	10.3	15
4	Tunable multi-bands in twisted double bilayer graphene. 2D Materials, 2022, 9, 034001.	4.4	2
5	Even-denominator fractional quantum Hall state in bilayer graphene. Wuli Xuebao/Acta Physica Sinica, 2022, .	0.5	0
6	Ferroelectricity in hBN intercalated double-layer graphene. Frontiers of Physics, 2022, 17, .	5.0	6
7	MoirÃ© metrology of energy landscapes in van der Waals heterostructures. Nature Communications, 2021, 12, 242.	12.8	60
8	Structure effect on intrinsic piezoelectricity in septuple-atomic-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si98.svg"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">MSi</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub><mml:msub><mml mathvariant="normal">N</mml:mi></mml:mrow><mml:mrow><mml:mn>4</mml:mn></mml:mrow></mml:msub></mml:mrow></mml: (M=Mo and W). Computational Materials Science, 2021, 188, 110223.	3.0	43
9	Accurate Measurement of the Gap of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mrow><mml:mi>Graphene</mml:mi><mml:mo>/</mml:mo><mml:mi>h</mml:mi></mml:mrow> MoirÃ© Superlattice through Photocurrent Spectroscopy. Physical Review Letters, 2021, 126, 146402.	7.8	10
10	Direct observation of widely tunable mid-infrared emission of graphene foam induced by modulated laser diode light. Carbon, 2021, 179, 486-492.	10.3	1
11	Stimulated piezotronical decontamination using Cu2MgSnS4 modified BaTiO3. Materials Today Energy, 2021, 21, 100717.	4.7	11
12	Self-powered skin electronics for energy harvesting and healthcare monitoring. Materials Today Energy, 2021, 21, 100786.	4.7	36
13	A top-down cutting method for construction of high-performance fiber-shaped quasi-solid-state asymmetric supercapacitors. Materials Today Energy, 2021, 21, 100758.	4.7	0
14	Quantum criticality in twisted transition metal dichalcogenides. Nature, 2021, 597, 345-349.	27.8	163
15	MoirÃ©less correlations in ABCA graphene. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	59
16	Tailoring the thermal transport properties of monolayer hexagonal boron nitride by grain size engineering. 2D Materials, 2020, 7, 015031.	4.4	21
17	Magnetic field detection limits for ultraclean graphene Hall sensors. Nature Communications, 2020, 11, 4163.	12.8	25
18	Unconventional valley-dependent optical selection rules and landau level mixing in bilayer graphene. Nature Communications, 2020, 11, 2941.	12.8	9

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19	Correlated electronic phases in twisted bilayer transition metal dichalcogenides. Nature Materials, 2020, 19, 861-866.	27.5	544
20	Layered boron nitride enabling high-performance AlGaN/GaN high electron mobility transistor. Journal of Alloys and Compounds, 2020, 829, 154542.	5.5	19
21	Graphene Plasmonic Tamm States with Ultracompact Footprint. Physical Review Applied, 2019, 12, .	3.8	8
22	Properties and applications of new superlattice: twisted bilayer graphene. Materials Today Physics, 2019, 9, 100099.	6.0	62
23	Graphene transistor based on tunable Dirac fermion optics. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6575-6579.	7.1	34
24	Graphene on Selfâ€Assembled InGaN Quantum Dots Enabling Ultrahighly Sensitive Photodetectors. Advanced Optical Materials, 2019, 7, 1801792.	7.3	33
25	Deterministic and Etchingâ€Free Transfer of Largeâ€Scale 2D Layered Materials for Constructing Interlayer Coupled van der Waals Heterostructures. Advanced Materials Technologies, 2018, 3, 1700282.	5.8	26
26	Ultrafast Graphene Light Emitters. Nano Letters, 2018, 18, 934-940.	9.1	109
27	Three-dimensional nanopores on monolayer graphene for hydrogen storage. Materials Chemistry and Physics, 2018, 209, 134-145.	4.0	6
28	Direct Growth of Graphene on Silicon by Metal-Free Chemical Vapor Deposition. Nano-Micro Letters, 2018, 10, 20.	27.0	57
29	Evolution of Two-Dimensional Mo_{1â€“x}W_xS₂ Alloy-Based Vertical Heterostructures with Various Composition Ranges via Manipulating the Mo/W Precursors. Journal of Physical Chemistry C, 2018, 122, 28337-28346.	3.1	17
30	Two-step fabrication of large-scale MoS₂ hollow flakes. CrystEngComm, 2018, 20, 5619-5624.	2.6	6
31	Fundamental limits to graphene plasmonics. Nature, 2018, 557, 530-533.	27.8	401
32	Exceptionally large migration length of carbon and topographically-facilitated self-limiting molecular beam epitaxial growth of graphene on hexagonal boron nitride. Carbon, 2017, 114, 579-584.	10.3	12
33	Direct measurement of discrete valley and orbital quantum numbers in bilayer graphene. Nature Communications, 2017, 8, 948.	12.8	71
34	Frictional Magneto-Coulomb Drag in Graphene Double-Layer Heterostructures. Physical Review Letters, 2017, 119, 056802.	7.8	20
35	van der Waals epitaxial two-dimensional CdS_xSe_(1â^'x)semiconductor alloys with tunable-composition and application to flexible optoelectronics. Nanoscale, 2017, 9, 13786-13793.	5.6	30
36	Tunable excitons in bilayer graphene. Science, 2017, 358, 907-910.	12.6	126

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37	van der Waals epitaxy and photoresponse of two-dimensional CdSe plates. Nanoscale, 2016, 8, 11375-11379.	5.6	34
38	Electron optics with p-n junctions in ballistic graphene. Science, 2016, 353, 1522-1525.	12.6	253
39	Piezophototronic Effect in Singleâ€Atomicâ€Layer MoS₂ for Strainâ€Gated Flexible Optoelectronics. Advanced Materials, 2016, 28, 8463-8468.	21.0	187
40	Multiple hot-carrier collection in photo-excited graphene MoirÃ© superlattices. Science Advances, 2016, 2, e1600002.	10.3	42
41	The hot pick-up technique for batch assembly of van der Waals heterostructures. Nature Communications, 2016, 7, 11894.	12.8	446
42	Specular interband Andreev reflections at van der Waals interfaces between graphene and NbSe2. Nature Physics, 2016, 12, 328-332.	16.7	159
43	Ultrafast optical switching of infrared plasmon polaritons in high-mobility graphene. Nature Photonics, 2016, 10, 244-247.	31.4	312
44	Oxygen-activated growth and bandgap tunability of large single-crystal bilayer graphene. Nature Nanotechnology, 2016, 11, 426-431.	31.5	287
45	Largeâ€Scale Growth of Twoâ€Dimensional SnS₂ Crystals Driven by Screw Dislocations and Application to Photodetectors. Advanced Functional Materials, 2015, 25, 4255-4261.	14.9	184
46	High-Speed Electro-Optic Modulator Integrated with Graphene-Boron Nitride Heterostructure and Photonic Crystal Nanocavity. Nano Letters, 2015, 15, 2001-2005.	9.1	142
47	Evidence for a fractional fractal quantum Hall effect in graphene superlattices. Science, 2015, 350, 1231-1234.	12.6	155
48	Multi-terminal transport measurements of MoS2 using a van der Waals heterostructure device platform. Nature Nanotechnology, 2015, 10, 534-540.	31.5	1,099
49	Flexible Graphene Field-Effect Transistors Encapsulated in Hexagonal Boron Nitride. ACS Nano, 2015, 9, 8953-8959.	14.6	112
50	Seeing Hofstadter's butterfly in atomic Fermi gases. Physical Review A, 2014, 89, .	2.5	7
51	Topological phase transition in the Hofstadter-Hubbard model. Physical Review B, 2014, 90, .	3.2	21
52	Piezoelectricity of single-atomic-layer MoS2 for energy conversion and piezotronics. Nature, 2014, 514, 470-474.	27.8	1,762
53	Physical Adsorption and Charge Transfer of Molecular Br₂ on Graphene. ACS Nano, 2014, 8, 2943-2950.	14.6	58
54	Tailoring the Electronic Structure in Bilayer Molybdenum Disulfide via Interlayer Twist. Nano Letters, 2014, 14, 3869-3875.	9.1	278

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55	Tunable fractional quantum Hall phases in bilayer graphene. Science, 2014, 345, 61-64.	12.6	137
56	Measurement of collective dynamical mass of Dirac fermions in graphene. Nature Nanotechnology, 2014, 9, 594-599.	31.5	53
57	Single- and bi-layer graphene grown on sapphire by molecular beam epitaxy. Solid State Communications, 2014, 189, 15-20.	1.9	13
58	Slow Gold Adatom Diffusion on Graphene: Effect of Silicon Dioxide and Hexagonal Boron Nitride Substrates. Journal of Physical Chemistry B, 2013, 117, 4305-4312.	2.6	34
59	One-Dimensional Electrical Contact to a Two-Dimensional Material. Science, 2013, 342, 614-617.	12.6	2,236
60	The Role of Surface Oxygen in the Growth of Large Single-Crystal Graphene on Copper. Science, 2013, 342, 720-723.	12.6	977
61	Effect of surface morphology on friction of graphene on various substrates. Nanoscale, 2013, 5, 3063.	5.6	148
62	Graphene Field-Effect Transistors Based on Boronâ€“Nitride Dielectrics. Proceedings of the IEEE, 2013, 101, 1609-1619.	21.3	137
63	Hofstadterâ€™s butterfly and the fractal quantum Hall effect in moirÃ© superlattices. Nature, 2013, 497, 598-602.	27.8	1,404
64	Graphene based heterostructures. Solid State Communications, 2012, 152, 1275-1282.	1.9	184
65	Chemical Vapor Deposition-Derived Graphene with Electrical Performance of Exfoliated Graphene. Nano Letters, 2012, 12, 2751-2756.	9.1	365
66	Renormalization of the Graphene Dispersion Velocity Determined from Scanning Tunneling Spectroscopy. Physical Review Letters, 2012, 109, 116802.	7.8	86
67	Negligible Environmental Sensitivity of Graphene in a Hexagonal Boron Nitride/Graphene/h-BN Sandwich Structure. ACS Nano, 2012, 6, 9314-9319.	14.6	98
68	Spin and valley quantum Hall ferromagnetism inÂgraphene. Nature Physics, 2012, 8, 550-556.	16.7	307
69	Graphene growth on h-BN by molecular beam epitaxy. Solid State Communications, 2012, 152, 975-978.	1.9	92
70	High-frequency performance of graphene field effect transistors with saturating IV-characteristics. , 2011, , .		32
71	Multicomponent fractional quantum Hall effect inÂgraphene. Nature Physics, 2011, 7, 693-696.	16.7	405
72	Probing Layer Number and Stacking Order of Fewâ€Layer Graphene by Raman Spectroscopy. Small, 2010, 6, 195-200.	10.0	650

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73	Boron nitride substrates for high-quality graphene electronics. Nature Nanotechnology, 2010, 5, 722-726.	31.5	5,794
74	Grapheneâ€“BN Heterostructures. , 0, , 219-237.		0