Shiwei Wu

List of Publications by Year
in descending order

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68 papers	7,833 citations	101384 36 h-index	95083 68 g-index
69 all docs	69 docs citations	69 times ranked	11281 citing authors

#	Article	IF	Citations
1	Gate-tunable room-temperature ferromagnetism in two-dimensional Fe3GeTe2. Nature, 2018, 563, 94-99.	13.7	1,646
2	Non-blinking and photostable upconverted luminescence from single lanthanide-doped nanocrystals. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10917-10921.	3.3	626
3	Epitaxial growth of a 100-square-centimetre single-crystal hexagonal boron nitride monolayer on copper. Nature, 2019, 570, 91-95.	13.7	422
4	Direct observation of van der Waals stackingâ€“dependent interlayer magnetism. Science, 2019, 366, 983-987.	6.0	377
5	Surface Plasmonâ€Enhanced Photodetection in Few Layer MoS₂ Phototransistors with Au Nanostructure Arrays. Small, 2015, 11, 2392-2398.	5.2	359
6	Giant nonreciprocal second-harmonic generation from antiferromagnetic bilayer CrI3. Nature, 2019, 572, 497-501.	13.7	309
7	Formation of Bandgap and Subbands in Graphene Nanomeshes with Sub-10 nm Ribbon Width Fabricated via Nanoimprint Lithography. Nano Letters, 2010, 10, 2454-2460.	4.5	302
8	Strong Second-Harmonic Generation in Atomic Layered GaSe. Journal of the American Chemical Society, 2015, 137, 7994-7997.	6.6	273
9	Valley and band structure engineering of folded MoS2 bilayers. Nature Nanotechnology, 2014, 9, 825-829.	15.6	267
10	Control of Relative Tunneling Rates in Single Molecule Bipolar Electron Transport. Physical Review Letters, 2004, 93, 236802.	2.9	204
11	Gate-tunable third-order nonlinear optical response of massless Dirac fermions in graphene. Nature Photonics, 2018, 12, 430-436.	15.6	194
12	Atomic-Scale Coupling of Photons to Single-Molecule Junctions. Science, 2006, 312, 1362-1365.	6.0	189
13	Dual-coupling-guided epitaxial growth of wafer-scale single-crystal WS2 monolayer on vicinal a-plane sapphire. Nature Nanotechnology, 2022, 17, 33-38.	15.6	171
14	Defect Structure of Localized Excitons in a <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:mn>2</mml:mn></mml:msub></ Monolayer. Physical Review Letters, 2017, 119, 046101.	2.9	170
15	Anomalous and Highly Efficient InAs Nanowire Phototransistors Based on Majority Carrier Transport at Room Temperature. Advanced Materials, 2014, 26, 8203-8209.	11.1	168
16	Programmable transition metal dichalcogenide homojunctions controlled by nonvolatile ferroelectric domains. Nature Electronics, 2020, 3, 43-50.	13.1	167
17	High-Responsivity Graphene/InAs Nanowire Heterojunction Near-Infrared Photodetectors with Distinct Photocurrent On/Off Ratios. Small, 2015, 11, 936-942.	5.2	166
18	Kinetic Nature of Grain Boundary Formation in Asâ€Grown MoS₂ Monolayers. Advanced Materials, 2015, 27, 4069-4074.	11.1	130

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19	Manipulating Nanoscale Light Fields with the Asymmetric Bowtie Nano-Colorsorter. Nano Letters, 2009, 9, 4505-4509.	4.5	112
20	Nonlinear broadband photoluminescence of graphene induced by femtosecond laser irradiation. Physical Review B, 2010, 82, .	1.1	108
21	Intramolecular photon emission from a single molecule in a scanning tunneling microscope. Physical Review B, 2008, 77, .	1.1	99
22	Optical fibres with embedded two-dimensional materials for ultrahigh nonlinearity. Nature Nanotechnology, 2020, 15, 987-991.	15.6	94
23	Tunneling rates in electron transport through double-barrier molecular junctions in a scanning tunneling microscope. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 8832-8837.	3.3	89
24	Highâ€Performance Waferâ€Scale MoS₂ Transistors toward Practical Application. Small, 2018, 14, e1803465.	5.2	88
25	Conductance Hysteresis and Switching in a Single-Molecule Junction. Journal of Physical Chemistry C, 2008, 112, 5241-5244.	1.5	77
26	Stacking symmetry governed second harmonic generation in graphene trilayers. Science Advances, 2018, 4, eaat0074.	4.7	75
27	Chemical and Bandgap Engineering in Monolayer Hexagonal Boron Nitride. Scientific Reports, 2017, 7, 45584.	1.6	73
28	Hot Phonon Dynamics in Graphene. Nano Letters, 2012, 12, 5495-5499.	4.5	66
29	Doping-Induced Second-Harmonic Generation in Centrosymmetric Graphene from Quadrupole Response. Physical Review Letters, 2019, 122, 047401.	2.9	64
30	Spin mapping of intralayer antiferromagnetism and field-induced spin reorientation in monolayer CrTe2. Nature Communications, 2022, 13, 257.	5.8	62
31	Two-photon-induced hot-electron transfer to a single molecule in a scanning tunneling microscope. Physical Review B, 2010, 82, .	1.1	56
32	Routing valley exciton emission of a WS2 monolayer via delocalized Bloch modes of in-plane inversion-symmetry-broken photonic crystal slabs. Light: Science and Applications, 2020, 9, 148.	7.7	54
33	Strong coupling between Tamm plasmon polariton and two dimensional semiconductor excitons. Applied Physics Letters, 2017, 110, .	1.5	51
34	Giant enhancement of optical nonlinearity in two-dimensional materials by multiphoton-excitation resonance energy transfer from quantum dots. Nature Photonics, 2021, 15, 510-515.	15.6	50
35	Manipulating Ferromagnetism in Fewâ€Layered Cr₂Ge₂Te₆. Advanced Materials, 2021, 33, e2008586.	11.1	49
36	High-quality infrared imaging with graphene photodetectors at room temperature. Nanoscale, 2016, 8, 16065-16072.	2.8	47

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37	Universal Imaging of Full Strain Tensor in 2D Crystals with Thirdâ€Harmonic Generation. Advanced Materials, 2019, 31, e1808160.	11.1	32
38	A Photoelectric-Stimulated MoS ₂ Transistor for Neuromorphic Engineering. Research, 2019, 2019, 1618798.	2.8	27
39	Lasing from lead halide perovskite semiconductor microcavity system. Nanoscale, 2018, 10, 10371-10376.	2.8	26
40	Hexagonal Boron Nitride Growth on Cuâ€Si Alloy: Morphologies and Large Domains. Small, 2019, 15, e1805188.	5.2	24
41	Gate Switching of Ultrafast Photoluminescence in Graphene. Nano Letters, 2018, 18, 7985-7990.	4.5	23
42	Controlled growth of six-point stars MoS₂ by chemical vapor deposition and its shape evolution mechanism. Nanotechnology, 2017, 28, 395601.	1.3	21
43	Chiral selection rules for multi-photon processes in two-dimensional honeycomb materials. Optics Letters, 2019, 44, 2141.	1.7	19
44	Third-Order Optical Nonlinearity of Three-Dimensional Massless Dirac Fermions. ACS Photonics, 2020, 7, 2515-2526.	3.2	18
45	A cryogen-free low temperature scanning tunneling microscope capable of inelastic electron tunneling spectroscopy. Review of Scientific Instruments, 2016, 87, 063701.	0.6	15
46	Screening effect of graphite and bilayer graphene on excitons in MoSe ₂ monolayer. 2D Materials, 2017, 4, 015021.	2.0	15
47	Enhanced light-matter interactions in graphene-covered dielectric magnetic mirrors. Optics Express, 2017, 25, 30754.	1.7	15
48	Dynamical Tuning of Graphene Plasmonic Resonances byÂUltraviolet Illuminations. Advanced Optical Materials, 2018, 6, 1701081.	3.6	14
49	Intraband divergences in third order optical response of 2D systems. APL Photonics, 2019, 4, .	3.0	14
50	Pressureâ€Controlled Structural Symmetry Transition in Layered InSe. Laser and Photonics Reviews, 2019, 13, 1900012.	4.4	13
51	Tuning the optical nonlinearity of graphene. Journal of Chemical Physics, 2020, 153, 080903.	1.2	12
52	Transmissionâ€Type Optical Modulator Based on Graphene Plasmonic Resonator Integrated with Offâ€Resonant Au Structure. Advanced Optical Materials, 2020, 8, 2000264.	3.6	12
53	Probing the Chiral Domains and Excitonic States in Individual WS₂ Tubes by Second-Harmonic Generation. Nano Letters, 2021, 21, 4937-4943.	4.5	12
54	Giant All-Optical Modulation of Second-Harmonic Generation Mediated by Dark Excitons. ACS Photonics, 2021, 8, 2320-2328.	3.2	11

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55	Nanowires: Anomalous and Highly Efficient InAs Nanowire Phototransistors Based on Majority Carrier Transport at Room Temperature (Adv. Mater. 48/2014). Advanced Materials, 2014, 26, 8232-8232.	11.1	9
56	Analysis of the relationship between the contact barrier and rectification ratio in a two-dimensional Pâ€“N heterojunction. Semiconductor Science and Technology, 2018, 33, 114012.	1.0	8
57	Excitation Enhancement of Hot Electrons by Ultrafast Optical Pumping in Heavily <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>p</mml:mi></mml:math> -Doped Graphene Stacks. Physical Review Applied, 2020, 14, .	1.5	5
58	Compelling Evidence for the Îµâ€Phase InSe Crystal by Oblique Incident Second Harmonic Generation. Advanced Optical Materials, 2022, 10, .	3.6	5
59	Molybdenum Disulfide: Kinetic Nature of Grain Boundary Formation in As-Grown MoS2 Monolayers (Adv. Mater. 27/2015). Advanced Materials, 2015, 27, 3974-3974.	11.1	4
60	Bond additivity model for anisotropic second-harmonic generation from two-dimensional honeycomb lattices. Optics Letters, 2020, 45, 268.	1.7	4
61	Au Nanoarrays: Surface Plasmon-Enhanced Photodetection in Few Layer MoS2Phototransistors with Au Nanostructure Arrays (Small 20/2015). Small, 2015, 11, 2346-2346.	5.2	3
62	Flipping carbon monoxide on a salt surface. Science, 2020, 367, 148-149.	6.0	3
63	Substrate dopant induced electronic inhomogeneity in epitaxial bilayer graphene. 2D Materials, 2021, 8, 035001.	2.0	3
64	Photodetectors: High-Responsivity Graphene/InAs Nanowire Heterojunction Near-Infrared Photodetectors with Distinct Photocurrent On/Off Ratios (Small 8/2015). Small, 2015, 11, 890-890.	5.2	2
65	Probing Phonon Dynamics in Individual Single-Walled Carbon Nanotubes. Nano Letters, 2018, 18, 2590-2594.	4.5	2
66	Graphene Plasmonic Resonances: Dynamical Tuning of Graphene Plasmonic Resonances byÂUltraviolet Illuminations (Advanced Optical Materials 6/2018). Advanced Optical Materials, 2018, 6, 1870023.	3.6	1
67	Efficient helicity control of four-wave mixing in gated graphene. Optics Letters, 2022, 47, 234-237.	1.7	1
68	Nanoscale Impact Ionization and Electroluminescence in a Biased Scanning-Tunneling-Microscope Junction. Chinese Physics Letters, 2022, 39, 037801.	1.3	0