

# 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	Efficient helicity control of four-wave mixing in gated graphene. <i>Optics Letters</i> , 2022, 47, 234-237.	1.7	1
2	Dual-coupling-guided epitaxial growth of wafer-scale single-crystal WS <sub>2</sub> monolayer on vicinal a-plane sapphire. <i>Nature Nanotechnology</i> , 2022, 17, 33-38.	15.6	171
3	Spin mapping of intralayer antiferromagnetism and field-induced spin reorientation in monolayer CrTe <sub>2</sub> . <i>Nature Communications</i> , 2022, 13, 257.	5.8	62
4	Nanoscale Impact Ionization and Electroluminescence in a Biased Scanning-Tunneling-Microscope Junction. <i>Chinese Physics Letters</i> , 2022, 39, 037801.	1.3	0
5	Compelling Evidence for the $\mu$ -Phase InSe Crystal by Oblique Incident Second Harmonic Generation. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	5
6	Substrate dopant induced electronic inhomogeneity in epitaxial bilayer graphene. <i>2D Materials</i> , 2021, 8, 035001.	2.0	3
7	Giant enhancement of optical nonlinearity in two-dimensional materials by multiphoton-excitation resonance energy transfer from quantum dots. <i>Nature Photonics</i> , 2021, 15, 510-515.	15.6	50
8	Probing the Chiral Domains and Excitonic States in Individual WS <sub>2</sub> Tubes by Second-Harmonic Generation. <i>Nano Letters</i> , 2021, 21, 4937-4943.	4.5	12
9	Manipulating Ferromagnetism in Few-Layered Cr <sub>2</sub> Ge <sub>2</sub> Te <sub>6</sub> . <i>Advanced Materials</i> , 2021, 33, e2008586.	11.1	49
10	Giant All-Optical Modulation of Second-Harmonic Generation Mediated by Dark Excitons. <i>ACS Photonics</i> , 2021, 8, 2320-2328.	3.2	11
11	Flipping carbon monoxide on a salt surface. <i>Science</i> , 2020, 367, 148-149.	6.0	3
12	Third-Order Optical Nonlinearity of Three-Dimensional Massless Dirac Fermions. <i>ACS Photonics</i> , 2020, 7, 2515-2526.	3.2	18
13	Optical fibres with embedded two-dimensional materials for ultrahigh nonlinearity. <i>Nature Nanotechnology</i> , 2020, 15, 987-991.	15.6	94
14	Routing valley exciton emission of a WS <sub>2</sub> monolayer via delocalized Bloch modes of in-plane inversion-symmetry-broken photonic crystal slabs. <i>Light: Science and Applications</i> , 2020, 9, 148.	7.7	54
15	Tuning the optical nonlinearity of graphene. <i>Journal of Chemical Physics</i> , 2020, 153, 080903.	1.2	12
16	Transmission-Type Optical Modulator Based on Graphene Plasmonic Resonator Integrated with Off-Resonant Au Structure. <i>Advanced Optical Materials</i> , 2020, 8, 2000264.	3.6	12
17	Programmable transition metal dichalcogenide homojunctions controlled by nonvolatile ferroelectric domains. <i>Nature Electronics</i> , 2020, 3, 43-50.	13.1	167
18	Excitation Enhancement of Hot Electrons by Ultrafast Optical Pumping in Heavily $\mu$ -Doped Graphene Stacks. <i>Physical Review Applied</i> , 2020, 14, .	1.5	5

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19	Bond additivity model for anisotropic second-harmonic generation from two-dimensional honeycomb lattices. <i>Optics Letters</i> , 2020, 45, 268.	1.7	4
20	Giant nonreciprocal second-harmonic generation from antiferromagnetic bilayer CrI <sub>3</sub> . <i>Nature</i> , 2019, 572, 497-501.	13.7	309
21	Doping-Induced Second-Harmonic Generation in Centrosymmetric Graphene from Quadrupole Response. <i>Physical Review Letters</i> , 2019, 122, 047401.	2.9	64
22	Epitaxial growth of a 100-square-centimetre single-crystal hexagonal boron nitride monolayer on copper. <i>Nature</i> , 2019, 570, 91-95.	13.7	422
23	Pressure-Controlled Structural Symmetry Transition in Layered InSe. <i>Laser and Photonics Reviews</i> , 2019, 13, 1900012.	4.4	13
24	Hexagonal Boron Nitride Growth on Cu-Si Alloy: Morphologies and Large Domains. <i>Small</i> , 2019, 15, e1805188.	5.2	24
25	Universal Imaging of Full Strain Tensor in 2D Crystals with Third-Harmonic Generation. <i>Advanced Materials</i> , 2019, 31, e1808160.	11.1	32
26	Direct observation of van der Waals stacking-dependent interlayer magnetism. <i>Science</i> , 2019, 366, 983-987.	6.0	377
27	Intraband divergences in third order optical response of 2D systems. <i>APL Photonics</i> , 2019, 4, .	3.0	14
28	Chiral selection rules for multi-photon processes in two-dimensional honeycomb materials. <i>Optics Letters</i> , 2019, 44, 2141.	1.7	19
29	A Photoelectric-Stimulated MoS <sub>2</sub> Transistor for Neuromorphic Engineering. <i>Research</i> , 2019, 2019, 1618798.	2.8	27
30	Graphene Plasmonic Resonances: Dynamical Tuning of Graphene Plasmonic Resonances by Ultraviolet Illuminations ( <i>Advanced Optical Materials</i> 6/2018). <i>Advanced Optical Materials</i> , 2018, 6, 1870023.	3.6	1
31	Dynamical Tuning of Graphene Plasmonic Resonances by Ultraviolet Illuminations. <i>Advanced Optical Materials</i> , 2018, 6, 1701081.	3.6	14
32	Probing Phonon Dynamics in Individual Single-Walled Carbon Nanotubes. <i>Nano Letters</i> , 2018, 18, 2590-2594.	4.5	2
33	Gate Switching of Ultrafast Photoluminescence in Graphene. <i>Nano Letters</i> , 2018, 18, 7985-7990.	4.5	23
34	Analysis of the relationship between the contact barrier and rectification ratio in a two-dimensional P-N heterojunction. <i>Semiconductor Science and Technology</i> , 2018, 33, 114012.	1.0	8
35	High-Performance Wafer-Scale MoS <sub>2</sub> Transistors toward Practical Application. <i>Small</i> , 2018, 14, e1803465.	5.2	88
36	Gate-tunable room-temperature ferromagnetism in two-dimensional Fe <sub>3</sub> GeTe <sub>2</sub> . <i>Nature</i> , 2018, 563, 94-99.	13.7	1,646

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37	Lasing from lead halide perovskite semiconductor microcavity system. <i>Nanoscale</i> , 2018, 10, 10371-10376.	2.8	26
38	Gate-tunable third-order nonlinear optical response of massless Dirac fermions in graphene. <i>Nature Photonics</i> , 2018, 12, 430-436.	15.6	194
39	Stacking symmetry governed second harmonic generation in graphene trilayers. <i>Science Advances</i> , 2018, 4, eaat0074.	4.7	75
40	Strong coupling between Tamm plasmon polariton and two dimensional semiconductor excitons. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	51
41	Chemical and Bandgap Engineering in Monolayer Hexagonal Boron Nitride. <i>Scientific Reports</i> , 2017, 7, 45584.	1.6	73
42	Defect Structure of Localized Excitons in a $WSe_2$ Monolayer. <i>Physical Review Letters</i> , 2017, 119, 046101.	2.9	170
43	Controlled growth of six-point stars $MoS_2$ by chemical vapor deposition and its shape evolution mechanism. <i>Nanotechnology</i> , 2017, 28, 395601.	1.3	21
44	Screening effect of graphite and bilayer graphene on excitons in $MoSe_2$ monolayer. <i>2D Materials</i> , 2017, 4, 015021.	2.0	15
45	Enhanced light-matter interactions in graphene-covered dielectric magnetic mirrors. <i>Optics Express</i> , 2017, 25, 30754.	1.7	15
46	A cryogen-free low temperature scanning tunneling microscope capable of inelastic electron tunneling spectroscopy. <i>Review of Scientific Instruments</i> , 2016, 87, 063701.	0.6	15
47	High-quality infrared imaging with graphene photodetectors at room temperature. <i>Nanoscale</i> , 2016, 8, 16065-16072.	2.8	47
48	Molybdenum Disulfide: Kinetic Nature of Grain Boundary Formation in As-Grown $MoS_2$ Monolayers ( <i>Adv. Mater.</i> 27/2015). <i>Advanced Materials</i> , 2015, 27, 3974-3974.	11.1	4
49	Au Nanoarrays: Surface Plasmon-Enhanced Photodetection in Few Layer $MoS_2$ Phototransistors with Au Nanostructure Arrays ( <i>Small</i> 20/2015). <i>Small</i> , 2015, 11, 2346-2346.	5.2	3
50	Kinetic Nature of Grain Boundary Formation in As-Grown $MoS_2$ Monolayers. <i>Advanced Materials</i> , 2015, 27, 4069-4074.	11.1	130
51	Surface Plasmon-Enhanced Photodetection in Few Layer $MoS_2$ Phototransistors with Au Nanostructure Arrays. <i>Small</i> , 2015, 11, 2392-2398.	5.2	359
52	Photodetectors: High-Responsivity Graphene/InAs Nanowire Heterojunction Near-Infrared Photodetectors with Distinct Photocurrent On/Off Ratios ( <i>Small</i> 8/2015). <i>Small</i> , 2015, 11, 890-890.	5.2	2
53	Strong Second-Harmonic Generation in Atomic Layered GaSe. <i>Journal of the American Chemical Society</i> , 2015, 137, 7994-7997.	6.6	273
54	High-Responsivity Graphene/InAs Nanowire Heterojunction Near-Infrared Photodetectors with Distinct Photocurrent On/Off Ratios. <i>Small</i> , 2015, 11, 936-942.	5.2	166

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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	Anomalous and Highly Efficient InAs Nanowire Phototransistors Based on Majority Carrier Transport at Room Temperature. Advanced Materials, 2014, 26, 8203-8209.	11.1	168
57	Valley and band structure engineering of folded MoS2 bilayers. Nature Nanotechnology, 2014, 9, 825-829.	15.6	267
58	Hot Phonon Dynamics in Graphene. Nano Letters, 2012, 12, 5495-5499.	4.5	66
59	Two-photon-induced hot-electron transfer to a single molecule in a scanning tunneling microscope. Physical Review B, 2010, 82, .	1.1	56
60	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
61	Nonlinear broadband photoluminescence of graphene induced by femtosecond laser irradiation. Physical Review B, 2010, 82, .	1.1	108
62	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
63	Manipulating Nanoscale Light Fields with the Asymmetric Bowtie Nano-Colorsorter. Nano Letters, 2009, 9, 4505-4509.	4.5	112
64	Intramolecular photon emission from a single molecule in a scanning tunneling microscope. Physical Review B, 2008, 77, .	1.1	99
65	Conductance Hysteresis and Switching in a Single-Molecule Junction. Journal of Physical Chemistry C, 2008, 112, 5241-5244.	1.5	77
66	Atomic-Scale Coupling of Photons to Single-Molecule Junctions. Science, 2006, 312, 1362-1365.	6.0	189
67	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
68	Control of Relative Tunneling Rates in Single Molecule Bipolar Electron Transport. Physical Review Letters, 2004, 93, 236802.	2.9	204