Zhipei Sun

List of Publications by Year
in descending order

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138 papers	17,080 citations	28274 55 h-index	13771 129 g-index
138 all docs	138 docs citations	138 times ranked	17825 citing authors

#	Article	IF	Citations
1	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. Nanoscale, 2015, 7, 4598-4810.	5.6	2,452
2	Graphene Mode-Locked Ultrafast Laser. ACS Nano, 2010, 4, 803-810.	14.6	1,795
3	Optical modulators with 2D layered materials. Nature Photonics, 2016, 10, 227-238.	31.4	1,188
4	Inkjet-Printed Graphene Electronics. ACS Nano, 2012, 6, 2992-3006.	14.6	1,018
5	Production and processing of graphene and 2d crystals. Materials Today, 2012, 15, 564-589.	14.2	866
6	Nanotubeâ€“Polymer Composites for Ultrafast Photonics. Advanced Materials, 2009, 21, 3874-3899.	21.0	778
7	Nanotube and graphene saturable absorbers for fibre lasers. Nature Photonics, 2013, 7, 842-845.	31.4	695
8	Nonlinear Optics with 2D Layered Materials. Advanced Materials, 2018, 30, e1705963.	21.0	485
9	A stable, wideband tunable, near transform-limited, graphene-mode-locked, ultrafast laser. Nano Research, 2010, 3, 653-660.	10.4	351
10	Black phosphorus ink formulation for inkjet printing of optoelectronics and photonics. Nature Communications, 2017, 8, 278.	12.8	311
11	Single-nanowire spectrometers. Science, 2019, 365, 1017-1020.	12.6	291
12	Vapourâ€“liquidâ€“solid growth of monolayer MoS2 nanoribbons. Nature Materials, 2018, 17, 535-542.	27.5	286
13	Versatile multi-wavelength ultrafast fiber laser mode-locked by carbon nanotubes. Scientific Reports, 2013, 3, 2718.	3.3	280
14	Polarization and Thickness Dependent Absorption Properties of Black Phosphorus: New Saturable Absorber for Ultrafast Pulse Generation. Scientific Reports, 2015, 5, 15899.	3.3	268
15	Two-dimensional material-based saturable absorbers: towards compact visible-wavelength all-fiber pulsed lasers. Nanoscale, 2016, 8, 1066-1072.	5.6	246
16	Far-field nanoscale infrared spectroscopy of vibrational fingerprints of molecules with graphene plasmons. Nature Communications, 2016, 7, 12334.	12.8	237
17	Solution processing of graphene, topological insulators and other 2d crystals for ultrafast photonics. Optical Materials Express, 2014, 4, 63.	3.0	187
18	Ultra-strong nonlinear optical processes and trigonal warping in MoS2 layers. Nature Communications, 2017, 8, 893.	12.8	177

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19	Gas identification with graphene plasmons. Nature Communications, 2019, 10, 1131.	12.8	154
20	Carbon Nanotube Polycarbonate Composites for Ultrafast Lasers. Advanced Materials, 2008, 20, 4040-4043.	21.0	148
21	Optical Waveplates Based on Birefringence of Anisotropic Two-Dimensional Layered Materials. ACS Photonics, 2017, 4, 3023-3030.	6.6	144
22	Precise control of the interlayer twist angle in large scale MoS2 homostructures. Nature Communications, 2020, 11, 2153.	12.8	142
23	Inkjet Printed Largeâ€Area Flexible Fewâ€Layer Graphene Thermoelectrics. Advanced Functional Materials, 2018, 28, 1800480.	14.9	136
24	Engineering symmetry breaking in 2D layered materials. Nature Reviews Physics, 2021, 3, 193-206.	26.6	135
25	Ultrafast stretched-pulse fiber laser mode-locked by carbon nanotubes. Nano Research, 2010, 3, 404-411.	10.4	133
26	Broadband Graphene Saturable Absorber for Pulsed Fiber Lasers at 1, 1.5, and 2 Î¼m. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 411-415.	2.9	133
27	Monitoring Local Strain Vector in Atomic-Layered MoSe₂ by Second-Harmonic Generation. Nano Letters, 2017, 17, 7539-7543.	9.1	128
28	Graphene photonic crystal fibre with strong and tunable lightâ€“matter interaction. Nature Photonics, 2019, 13, 754-759.	31.4	127
29	Large-area tungsten disulfide for ultrafast photonics. Nanoscale, 2017, 9, 1871-1877.	5.6	126
30	Nanomaterialâ€Based Plasmonâ€Enhanced Infrared Spectroscopy. Advanced Materials, 2018, 30, e1704896.	21.0	124
31	Rapid visualization of grain boundaries in monolayer MoS2 by multiphoton microscopy. Nature Communications, 2017, 8, 15714.	12.8	120
32	15 GHz picosecond pulse generation from a monolithic waveguide laser with a graphene-film saturable output coupler. Optics Express, 2013, 21, 7943.	3.4	111
33	Ultra-high on-chip optical gain in erbium-based hybrid slot waveguides. Nature Communications, 2019, 10, 432.	12.8	100
34	A MoSe₂/WSe₂ Heterojunctionâ€Based Photodetector at Telecommunication Wavelengths. Advanced Functional Materials, 2018, 28, 1804388.	14.9	95
35	Optical fibres with embedded two-dimensional materials for ultrahigh nonlinearity. Nature Nanotechnology, 2020, 15, 987-991.	31.5	94
36	High-power graphene mode-locked Tm/Ho co-doped fiber laser with evanescent field interaction. Scientific Reports, 2015, 5, 16624.	3.3	92

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37	Optical harmonic generation in monolayer group-VI transition metal dichalcogenides. Physical Review B, 2018, 98, .	3.2	92
38	A general ink formulation of 2D crystals for wafer-scale inkjet printing. Science Advances, 2020, 6, eaba5029.	10.3	89
39	Black phosphorus polycarbonate polymer composite for pulsed fibre lasers. Applied Materials Today, 2016, 4, 17-23.	4.3	87
40	152 fs nanotube-mode-locked thulium-doped all-fiber laser. Scientific Reports, 2016, 6, 28885.	3.3	86
41	High photoresponsivity and broadband photodetection with a band-engineered WSe₂/SnSe₂ heterostructure. Nanoscale, 2019, 11, 3240-3247.	5.6	84
42	Quantum photonics with layered 2D materials. Nature Reviews Physics, 2022, 4, 219-236.	26.6	82
43	Surface plasmon resonance for characterization of large-area atomic-layer graphene film. Optica, 2016, 3, 151.	9.3	80
44	Transition-metal dichalcogenides heterostructure saturable absorbers for ultrafast photonics. Optics Letters, 2017, 42, 4279.	3.3	79
45	Farâ€Field Spectroscopy and Nearâ€Field Optical Imaging of Coupled Plasmonâ€“Phonon Polaritons in 2D van der Waals Heterostructures. Advanced Materials, 2016, 28, 2931-2938.	21.0	77
46	Single-wall carbon nanotubes and graphene oxide-based saturable absorbers for low phase noise mode-locked fiber lasers. Scientific Reports, 2016, 6, 25266.	3.3	74
47	Probing optical anisotropy of nanometer-thin van der waals microcrystals by near-field imaging. Nature Communications, 2017, 8, 1471.	12.8	74
48	Lattice Dynamics, Phonon Chirality, and Spinâ€“Phonon Coupling in 2D Itinerant Ferromagnet Fe₃GeTe₂. Advanced Functional Materials, 2019, 29, 1904734.	14.9	70
49	Graphene charge-injection photodetectors. Nature Electronics, 2022, 5, 281-288.	26.0	70
50	Tuning the nonlinear optical absorption of reduced graphene oxide by chemical reduction. Optics Express, 2014, 22, 19375.	3.4	69
51	Ultrafast all-fiber based cylindrical-vector beam laser. Applied Physics Letters, 2017, 110, .	3.3	69
52	Rapid and Large-Area Characterization of Exfoliated Black Phosphorus Using Third-Harmonic Generation Microscopy. Journal of Physical Chemistry Letters, 2017, 8, 1343-1350.	4.6	68
53	Synchronized multi-wavelength soliton fiber laser via intracavity group delay modulation. Nature Communications, 2021, 12, 6712.	12.8	67
54	Double-Wall Carbon Nanotubes for Wide-Band, Ultrafast Pulse Generation. ACS Nano, 2014, 8, 4836-4847.	14.6	66

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55	Large-area highly crystalline WSe_2 atomic layers for ultrafast pulsed lasers. Optics Express, 2017, 25, 30020.	3.4	59
56	Wavelength and pulse duration tunable ultrafast fiber laser mode-locked with carbon nanotubes. Scientific Reports, 2018, 8, 2738.	3.3	57
57	Chip-integrated van der Waals PN heterojunction photodetector with low dark current and high responsivity. Light: Science and Applications, 2022, 11, 101.	16.6	57
58	Nanowire networkâ€“based multifunctional all-optical logic gates. Science Advances, 2018, 4, eaar7954.	10.3	51
59	Giant enhancement of optical nonlinearity in two-dimensional materials by multiphoton-excitation resonance energy transfer from quantum dots. Nature Photonics, 2021, 15, 510-515.	31.4	50
60	Single-photon sources with quantum dots in IIIâ€“V nanowires. Nanophotonics, 2019, 8, 747-769.	6.0	47
61	Pulse dynamics in carbon nanotube mode-locked fiber lasers near zero cavity dispersion. Optics Express, 2015, 23, 9947.	3.4	46
62	Efficient Allâ€Optical Plasmonic Modulators with Atomically Thin Van Der Waals Heterostructures. Advanced Materials, 2020, 32, e1907105.	21.0	44
63	Integrated photon-pair sources with nonlinear optics. Applied Physics Reviews, 2021, 8, .	11.3	43
64	Graphene Actively Modeâ€Locked Lasers. Advanced Functional Materials, 2018, 28, 1801539.	14.9	39
65	Phase-matching-induced near-chirp-free solitons in normal-dispersion fiber lasers. Light: Science and Applications, 2022, 11, 25.	16.6	39
66	Flexible and Electrically Tunable Plasmons in Grapheneâ€“Mica Heterostructures. Advanced Science, 2018, 5, 1800175.	11.2	38
67	Carbon Nanotubes as an Ultrafast Emitter with a Narrow Energy Spread at Optical Frequency. Advanced Materials, 2017, 29, 1701580.	21.0	37
68	Grapheneâ€“MoS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml43" display="inline" overflow="scroll" altimg="si1.gif"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math>â€“metal hybrid structures for plasmonic biosensors. Optics Communications, 2018, 428, 233-239.	2.1	37
69	Graphene actively Q-switched lasers. 2D Materials, 2017, 4, 025095.	4.4	34
70	Electrical Control of Interband Resonant Nonlinear Optics in Monolayer MoS₂. ACS Nano, 2020, 14, 8442-8448.	14.6	34
71	Efficient improvement of laser beam quality by coherent combining in an improved Michelson cavity. Optics Letters, 2005, 30, 1485.	3.3	32
72	Giant anisotropic photonics in the 1D van der Waals semiconductor fibrous red phosphorus. Nature Communications, 2021, 12, 4822.	12.8	32

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73	Ultrafast transient sub-bandgap absorption of monolayer MoS2. Light: Science and Applications, 2021, 10, 27.	16.6	32
74	Switchable Photoresponse Mechanisms Implemented in Single van der Waals Semiconductor/Metal Heterostructure. ACS Nano, 2022, 16, 568-576.	14.6	29
75	Optical Modification of 2D Materials: Methods and Applications. Advanced Materials, 2022, 34, e2110152.	21.0	29
76	Photonâ€Pair Generation with a 100 nm Thick Carbon Nanotube Film. Advanced Materials, 2017, 29, 1605978.	21.0	28
77	High performance complementary WS₂ devices with hybrid Gr/Ni contacts. Nanoscale, 2020, 12, 21280-21290.	5.6	27
78	Luminescent Gold Nanoclusterâ€Methylcellulose Composite Optical Fibers with Low Attenuation Coefficient and High Photostability. Small, 2021, 17, e2005205.	10.0	25
79	Electrically tuned nonlinearity. Nature Photonics, 2018, 12, 383-385.	31.4	23
80	Photoresponse of Graphene-Gated Graphene-GaSe Heterojunction Devices. ACS Applied Nano Materials, 2018, 1, 3895-3902.	5.0	23
81	Widely tunable picosecond optical parametric generation and amplification in BiB3O6. Optics Express, 2007, 15, 4139.	3.4	21
82	Broadband Plasmon-Enhanced Four-Wave Mixing in Monolayer MoS₂. Nano Letters, 2021, 21, 6321-6327.	9.1	20
83	Enhancing Si₃N₄ Waveguide Nonlinearity with Heterogeneous Integration of Few-Layer WS₂. ACS Photonics, 2021, 8, 2713-2721.	6.6	20
84	Ultrasensitive Midâ€Infrared Biosensing in Aqueous Solutions with Graphene Plasmons. Advanced Materials, 2022, 34, e2110525.	21.0	20
85	Passively Mode-Locked Radially Polarized Nd-Doped Yttrium Aluminum Garnet Laser Based on Graphene-Based Saturable Absorber. Applied Physics Express, 2013, 6, 082701.	2.4	18
86	Measurement of complex optical susceptibility for individual carbon nanotubes by elliptically polarized light excitation. Nature Communications, 2018, 9, 3387.	12.8	18
87	Complete structural characterization of single carbon nanotubes by Rayleigh scattering circular dichroism. Nature Nanotechnology, 2021, 16, 1073-1078.	31.5	18
88	Coherent modulation of chiral nonlinear optics with crystal symmetry. Light: Science and Applications, 2022, 11, .	16.6	18
89	High-beam-quality, 5.1J, 108Hz diode-pumped Nd:YAG rod oscillatorâ€“amplifier laser system. Optics Communications, 2006, 266, 39-43.	2.1	17
90	Fibre sources in the deep ultraviolet. Nature Photonics, 2011, 5, 446-447.	31.4	17

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91	High repetition rate Q-switched radially polarized laser with a graphene-based output coupler. Applied Physics Letters, 2014, 105, .	3.3	17
92	Strong and tunable interlayer coupling of infrared-active phonons to excitons in van der Waals heterostructures. Physical Review B, 2019, 99, .	3.2	17
93	Single-step chemical vapour deposition of anti-pyramid MoS₂/WS₂ vertical heterostructures. Nanoscale, 2021, 13, 4537-4542.	5.6	17
94	Giant Valley Coherence at Room Temperature in 3R WS ₂ with Broken Inversion Symmetry. Research, 2019, 2019, 6494565.	5.7	17
95	Extreme nonlinear strong-field photoemission from carbon nanotubes. Nature Communications, 2019, 10, 4891.	12.8	16
96	Passively Mode-Locked Solid-State Laser With Absorption Tunable Graphene Saturable Absorber Mirror. Journal of Lightwave Technology, 2019, 37, 2927-2931.	4.6	16
97	Broadband laser polarization control with aligned carbon nanotubes. Nanoscale, 2015, 7, 11199-11205.	5.6	14
98	Difference frequency generation in monolayer MoS₂. Nanoscale, 2020, 12, 19638-19643.	5.6	14
99	Multilayer MoTe₂ Fieldâ€Effect Transistor at High Temperatures. Advanced Materials Interfaces, 2021, 8, 2100950.	3.7	14
100	Robust circular polarization of indirect Q-K transitions in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn><mml:mi>R</mml:mi><mml:mo>â^’</mml:m mathvariant="normal">W</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 100, .	3.2	11
101	Scalable graphene electroâ€“optical modulators for all-fibre pulsed lasers. Nanoscale, 2021, 13, 9873-9880.	5.6	11
102	Giant All-Optical Modulation of Second-Harmonic Generation Mediated by Dark Excitons. ACS Photonics, 2021, 8, 2320-2328.	6.6	11
103	Spatially indirect intervalley excitons in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">W</mml:mi><mml:msub><mml:mi>Se</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:m Physical Review B, 2022, 105, .	3.2	11
104	High-power diode-side-pumped Nd:YAG solid laser mode-locked by CVD graphene. Optics Communications, 2014, 315, 204-207.	2.1	10
105	Soliton metamorphosis dynamics in ultrafast fiber lasers. Physical Review A, 2021, 103, .	2.5	10
106	Probing Electronic States in Monolayer Semiconductors through Static and Transient Thirdâ€Harmonic Spectroscopies. Advanced Materials, 2022, 34, e2107104.	21.0	10
107	Interlayer exciton complexes in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></ Physical Review B, 2022, 105, .	3.2	10
108	Tunable Quantum Tunneling through a Graphene/Bi₂Se₃ Heterointerface for the Hybrid Photodetection Mechanism. ACS Applied Materials & Interfaces, 2021, 13, 58927-58935.	8.0	10

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109	New Approach for Thickness Determination of Solution-Deposited Graphene Thin Films. ACS Omega, 2017, 2, 2630-2638.	3.5	8
110	Nonlinear Optics: Nonlinear Optics with 2D Layered Materials (Adv. Mater. 24/2018). Advanced Materials, 2018, 30, 1870172.	21.0	8
111	Engineering the Dipole Orientation and Symmetry Breaking with Mixedâ€Dimensional Heterostructures. Advanced Science, 2022, 9, e2200082.	11.2	8
112	Soliton Mode-Locked Large-Mode-Area Tm-Doped Fiber Oscillator. IEEE Photonics Technology Letters, 2020, 32, 117-120.	2.5	7
113	Controllable Growth of Graphene Photonic Crystal Fibers with Tunable Optical Nonlinearity. ACS Photonics, 2022, 9, 961-968.	6.6	7
114	All-Optical Intensity Modulator by Polarization-Dependent Graphene-Microfiber Waveguide. IEEE Photonics Journal, 2017, 9, 1-8.	2.0	6
115	Measurement of Nanowire Optical Modes Using Cross-Polarization Microscopy. Scientific Reports, 2017, 7, 17790.	3.3	6
116	Ultrafast Lasers: Graphene Actively Mode-Locked Lasers (Adv. Funct. Mater. 28/2018). Advanced Functional Materials, 2018, 28, 1870194.	14.9	6
117	Lowâ€Power Continuousâ€Wave Second Harmonic Generation in Semiconductor Nanowires. Laser and Photonics Reviews, 2018, 12, 1800126.	8.7	6
118	Observation of logarithmic Kohn anomaly in monolayer graphene. Physical Review B, 2020, 102, .	3.2	6
119	Deterministic Modification of CVD Grown Monolayer MoS₂ with Optical Pulses. Advanced Materials Interfaces, 2021, 8, 2002119.	3.7	6
120	Molybdenum Disulfide/Doubleâ€Wall Carbon Nanotube Mixedâ€Dimensional Heterostructures. Advanced Materials Interfaces, 2022, 9, .	3.7	6
121	Activeâ€“passive Q-switched fiber laser based on graphene microfiber. Applied Physics B: Lasers and Optics, 2019, 125, 1.	2.2	5
122	Optical Amplification in Hollow-Core Negative-Curvature Fibers Doped with Perovskite CsPbBr3 Nanocrystals. Nanomaterials, 2019, 9, 868.	4.1	5
123	Carbon Nanotubes: Carbon Nanotubes as an Ultrafast Emitter with a Narrow Energy Spread at Optical Frequency (Adv. Mater. 30/2017). Advanced Materials, 2017, 29, .	21.0	4
124	Potential for sub-mm long erbium-doped composite silicon waveguide DFB lasers. Scientific Reports, 2020, 10, 10878.	3.3	4
125	Carboxyl graphene oxide mode-locked femtosecond fiber laser. Applied Physics Express, 2020, 13, 082001.	2.4	4
126	Enhanced terahertz emission from mushroom-shaped InAs nanowire network induced by linear and nonlinear optical effects. Nanotechnology, 2022, 33, 085207.	2.6	4

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127	On-chip photonics and optoelectronics with a van der Waals material dielectric platform. Nanoscale, 2022, 14, 9459-9465.	5.6	4
128	Inducing Strong Lightâ€“Matter Coupling and Optical Anisotropy in Monolayer MoS₂ with High Refractive Index Nanowire. ACS Applied Materials & Interfaces, 2022, 14, 31140-31147.	8.0	4
129	High-Power Femtosecond Pulse Generation From an All-Fiber Er-Doped Chirped Pulse Amplification System. IEEE Photonics Journal, 2020, 12, 1-8.	2.0	3
130	Raman fingerprints and exciton-phonon coupling in 2D ternary layered semiconductor InSeBr. Applied Physics Letters, 2020, 116, 163105.	3.3	3
131	Dual-gated monoâ€“bilayer graphene junctions. Nanoscale Advances, 2021, 3, 399-406.	4.6	3
132	Carbon Nanotubes: Photonâ€Pair Generation with a 100 nm Thick Carbon Nanotube Film (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10	21.0	2
133	Tuning of Emission Wavelength of CaS:Eu by Addition of Oxygen Using Atomic Layer Deposition. Materials, 2021, 14, 5966.	2.9	2
134	Configuration to improve second-harmonic-generation conversion efficiency. Applied Optics, 2004, 43, 1174.	2.1	1
135	Ultra-high harmonic mode-locking with a micro-fiber knot resonator and Lyot filter. Optics Express, 2022, 30, 14770.	3.4	1
136	Ultrafast Lasers Enabled by Graphene and Other 2D Materials. , 2015, , .		0
137	2D materials as a new platform for photonic applications. Frontiers of Optoelectronics, 2020, 13, 89-90.	3.7	0
138	Optical Modification of Monolayer MoS₂: Deterministic Modification of CVD Grown Monolayer MoS₂ with Optical Pulses (Adv. Mater. Interfaces 10/2021). Advanced Materials Interfaces, 2021, 8, 2170056.	3.7	0