Shumin Xiao

List of Publications by Year
in descending order

119 papers	6,119 citations	61857 43 h-index	76769 74 g-index
121 all docs	121 docs citations	121 times ranked	5369 citing authors

#	Article	IF	Citations
1	Ultrafast control of vortex microlasers. Science, 2020, 367, 1018-1021.	6.0	457
2	All-Dielectric Full-Color Printing with TiO₂ Metasurfaces. ACS Nano, 2017, 11, 4445-4452.	7.3	361
3	All-dielectric metasurface for high-performance structural color. Nature Communications, 2020, 11, 1864.	5.8	266
4	Reprogrammable meta-hologram for optical encryption. Nature Communications, 2020, 11, 5484.	5.8	171
5	Trichromatic and Tripolarization-Channel Holography with Noninterleaved Dielectric Metasurface. Nano Letters, 2020, 20, 994-1002.	4.5	167
6	Random lasing in bone tissue. Optics Letters, 2010, 35, 1425.	1.7	163
7	Recent Advances in Perovskite Microâ€•and Nanolasers. Advanced Optical Materials, 2018, 6, 1800278.	3.6	149
8	Real-Time Tunable Colors from Microfluidic Reconfigurable All-Dielectric Metasurfaces. ACS Nano, 2018, 12, 2151-2159.	7.3	147
9	Lead Halide Perovskite Nanostructures for Dynamic Color Display. ACS Nano, 2018, 12, 8847-8854.	7.3	142
10	Highly Reproducible Organometallic Halide Perovskite Microdevices based on Topâ€Down Lithography. Advanced Materials, 2017, 29, 1606205.	11.1	138
11	Twoâ€Photon Pumped CH₃NH₃PbBr₃ Perovskite Microwire Lasers. Advanced Optical Materials, 2016, 4, 472-479.	3.6	134
12	Phyllotaxis-inspired nanosieves with multiplexed orbital angular momentum. ELight, 2021, 1, .	11.9	132
13	High-efficiency broadband achromatic metalens for near-IR biological imaging window. Nature Communications, 2021, 12, 5560.	5.8	130
14	Arbitrary polarization conversion dichroism metasurfaces for all-in-one full PoincarÃ© sphere polarizers. Light: Science and Applications, 2021, 10, 24.	7.7	126
15	Nonlinear Holographic All-Dielectric Metasurfaces. Nano Letters, 2018, 18, 8054-8061.	4.5	118
16	Unidirectional Lasing Emissions from CH₃NH₃PbBr₃ Perovskite Microdisks. ACS Photonics, 2016, 3, 1125-1130.	3.2	106
17	All-optical control of lead halide perovskite microlasers. Nature Communications, 2019, 10, 1770.	5.8	104
18	TiO ₂ metasurfaces: From visible planar photonics to photochemistry. Science Advances, 2019, 5, eaax0939.	4.7	91

#	Article	IF	Citations
19	Resonance-enhanced three-photon luminesce via lead halide perovskite metasurfaces for optical encoding. Nature Communications, 2019, 10, 2085.	5.8	91
20	Surface-Emitting Perovskite Random Lasers for Speckle-Free Imaging. ACS Nano, 2019, 13, 10653-10661.	7.3	87
21	Channeling Chaotic Rays into Waveguides for Efficient Collection of Microcavity Emission. Physical Review Letters, 2012, 108, 243902.	2.9	85
22	Dielectric multi-momentum meta-transformer in the visible. Nature Communications, 2019, 10, 4789.	5.8	82
23	Formation of Lead Halide Perovskite Based Plasmonic Nanolasers and Nanolaser Arrays by Tailoring the Substrate. ACS Nano, 2018, 12, 3865-3874.	7.3	81
24	Stretchable All-Dielectric Metasurfaces with Polarization-Insensitive and Full-Spectrum Response. ACS Nano, 2020, 14, 1418-1426.	7.3	80
25	Lead halide perovskite vortex microlasers. Nature Communications, 2020, 11, 4862.	5.8	75
26	Metasurface for Structured Light Projection over 120Â° Field of View. Nano Letters, 2020, 20, 6719-6724.	4.5	75
27	Microâ€and Nanostructured Lead Halide Perovskites: From Materials to Integrations and Devices. Advanced Materials, 2021, 33, e2000306.	11.1	75
28	Tailoring the Performances of Lead Halide Perovskite Devices with Electronâ€Beam Irradiation. Advanced Materials, 2017, 29, 1701636.	11.1	72
29	Chipâ€Scale Fabrication of Uniform Lead Halide Perovskites Microlaser Array and Photodetector Array. Laser and Photonics Reviews, 2018, 12, 1700234.	4.4	65
30	Experimental demonstration of PTâ€symmetric stripe lasers. Laser and Photonics Reviews, 2016, 10, 588-594.	4.4	64
31	Unidirectional High Intensity Narrow-Linewidth Lasing from a Planar Random Microcavity Laser. Physical Review Letters, 2006, 96, 033902.	2.9	60
32	Emerging opportunities for ultra-high Q whispering gallery mode microcavities. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	58
33	Highly Controllable Etchless Perovskite Microlasers Based on Bound States in the Continuum. ACS Nano, 2021, 15, 7386-7391.	7.3	58
34	Far-field single nanoparticle detection and sizing. Optica, 2017, 4, 1151.	4.8	55
35	High-Density and Uniform Lead Halide Perovskite Nanolaser Array on Silicon. Journal of Physical Chemistry Letters, 2016, 7, 2549-2555.	2.1	54
36	Formation of single-mode laser in transverse plane of perovskite microwire via micromanipulation. Optics Letters, 2016, 41, 555.	1.7	52

#	Article	IF	Citations
37	Dynamic Bifunctional Metasurfaces for Holography and Color Display. Advanced Materials, 2021, 33, e2101258.	11.1	52
38	Ultra-compact snapshot spectral light-field imaging. Nature Communications, 2022, 13, 2732.	5.8	52
39	Onâ€Chip Spiral Waveguides for Ultrasensitive and Rapid Detection of Nanoscale Objects. Advanced Materials, 2018, 30, e1800262.	11.1	49
40	$2-mu$ m Wavelength Grating Coupler, Bent Waveguide, and Tunable Microring on Silicon Photonic MPW. IEEE Photonics Technology Letters, 2018, 30, 471-474.	1.3	48
41	Lead Halide Perovskite Based Microdisk Lasers for Onâ€Chip Integrated Photonic Circuits. Advanced Optical Materials, 2018, 6, 1701266.	3.6	48
42	Tunable optical metasurfaces enabled by multiple modulation mechanisms. Nanophotonics, 2020, 9, 4407-4431.	2.9	47
43	A hybrid system with highly enhanced graphene SERS for rapid and tag-free tumor cells detection. Scientific Reports, 2016, 6, 25134.	1.6	45
44	End-fire injection of light into high-Q silicon microdisks. Optica, 2018, 5, 612.	4.8	44
45	Phase characterisation of metalenses. Light: Science and Applications, 2021, 10, 52.	7.7	44
46	Lead Halide Perovskiteâ€Based Dynamic Metasurfaces. Laser and Photonics Reviews, 2019, 13, 1900079.	4.4	42
47	Complex Inverse Design of Meta-optics by Segmented Hierarchical Evolutionary Algorithm. ACS Nano, 2019, 13, 821-829.	7.3	40
48	Whispering-gallery-mode based CH₃NH₃PbBr₃ perovskite microrod lasers with high quality factors. Materials Chemistry Frontiers, 2017, 1, 477-481.	3.2	39
49	Optical metasurfaces towards multifunctionality and tunability. Nanophotonics, 2022, 11, 1761-1781.	2.9	39
50	Formation of long-lived resonances in hexagonal cavities by strong coupling of superscar modes. Physical Review A, 2013, 88, .	1.0	37
51	Postsynthetic and Selective Control of Lead Halide Perovskite Microlasers. Journal of Physical Chemistry Letters, 2016, 7, 3886-3891.	2.1	37
52	Darkâ€Field Sensors based on Organometallic Halide Perovskite Microlasers. Advanced Materials, 2018, 30, e1801481.	11.1	36
53	Massâ€Manufactural Lanthanideâ€Based Ultraviolet B Microlasers. Advanced Materials, 2019, 31, e1807079.	11.1	36
54	Dynamic Structural Colors Based on Allâ€Dielectric Mie Resonators. Advanced Optical Materials, 2021, 9, 2002126.	3.6	36

#	Article	IF	Citations
55	Single Nanoparticle Detection Using Far-field Emission of Photonic Molecule around the Exceptional Point. Scientific Reports, 2015, 5, 11912.	1.6	35
56	Allâ€Dielectric Metasurfaceâ€Enabled Multiple Vortex Emissions. Advanced Materials, 2022, 34, e2109255.	11.1	35
57	Extreme output sensitivity to subwavelength boundary deformation in microcavities. Physical Review A, 2013, 87, .	1.0	31
58	Broadband and Tunable-Focus Flat Lens with Dielectric Metasurface. Plasmonics, 2016, 11, 537-541.	1.8	30
59	Random lasing actions in self-assembled perovskite nanoparticles. Optical Engineering, 2016, 55, 057102.	0.5	29
60	Achieving Circularly Polarized Surface Emitting Perovskite Microlasers with All-Dielectric Metasurfaces. ACS Nano, 2020, 14, 17063-17070.	7.3	28
61	Photon hopping and nanowire based hybrid plasmonic waveguide and ring-resonator. Scientific Reports, 2015, 5, .	1.6	27
62	Spin Angular Momentum Controlled Multifunctional Allâ€Dielectric Metasurface Doublet. Laser and Photonics Reviews, 2020, 14, 1900324.	4.4	27
63	Lead Halide Perovskite Nanoribbon Based Uniform Nanolaser Array on Plasmonic Grating. ACS Photonics, 2017, 4, 649-656.	3.2	26
64	Inversed Vernier effect based single-mode laser emission in coupled microdisks. Scientific Reports, 2015, 5, 13682.	1.6	25
65	Multiplexing Vectorial Holographic Images with Arbitrary Metaholograms. Advanced Optical Materials, 2021, 9, 2100626.	3.6	25
66	Transmission of IM/DD Signals at 2ÂÎ¼m Wavelength Using PAM and CAP. IEEE Photonics Journal, 2016, 8, 1-7.	1.0	24
67	Suppressing meta-holographic artifacts by laser coherence tuning. Light: Science and Applications, 2021, 10, 104.	7.7	24
68	Quasiparityâ€Time Symmetric Microdisk Laser. Laser and Photonics Reviews, 2017, 11, 1700052.	4.4	23
69	Transporting the Optical Chirality through the Dynamical Barriers in Optical Microcavities. Laser and Photonics Reviews, 2018, 12, 1800027.	4.4	22
70	Design of Mid-infrared electro-optic modulators based on aluminum nitride waveguides. Journal of Lightwave Technology, 2016, , 1-1.	2.7	21
71	Miscellaneous Lasing Actions in Organo-Lead Halide Perovskite Films. ACS Applied Materials & Interfaces, 2017, 9, 20711-20718.	4.0	21
72	Broad-Band Photodetectors Based on Copper Indium Diselenide Quantum Dots in a Methylammonium Lead Iodide Perovskite Matrix. ACS Applied Materials & Interfaces, 2020, 12, 35201-35210.	4.0	21

#	Article	IF	Citations
73	Controlling multimode coupling by boundary-wave scattering. Physical Review A, 2013, 88, .	1.0	20
74	Improving the Performance of a CH₃NH₃PbBr₃ Perovskite Microrod Laser through Hybridization with Fewâ€Layered Graphene. Advanced Optical Materials, 2016, 4, 2057-2062.	3.6	20
75	Transmissive structural color filters using vertically coupled aluminum nanohole/nanodisk array with a triangular-lattice. Nanotechnology, 2018, 29, 395202.	1.3	20
76	Highly Controllable Lasing Actions in Lead Halide Perovskiteâ€“Si₃N₄ Hybrid Microâ€Resonators. Laser and Photonics Reviews, 2019, 13, 1800189.	4.4	19
77	Kerr Frequency Comb Interaction with Raman, Brillouin, and Second Order Nonlinear Effects. Laser and Photonics Reviews, 2022, 16, 2100184.	4.4	19
78	Hybridizing CH₃NH₃PbBr₃ microwires and tapered fibers for efficient light collection. Journal of Materials Chemistry A, 2016, 4, 8015-8019.	5.2	18
79	Maskless Fabrication of Aluminum Nanoparticles for Plasmonic Enhancement of Lead Halide Perovskite Lasers. Advanced Optical Materials, 2017, 5, 1700529.	3.6	18
80	Dual-wavelength switchable single-mode lasing from a lanthanide-doped resonator. Nature Communications, 2022, 13, 1727.	5.8	18
81	Ultracompact Orbital Angular Momentum Sorter on a CMOS Chip. Nano Letters, 2022, 22, 3993-3999.	4.5	18
82	Direct observation of chaotic resonances in optical microcavities. Light: Science and Applications, 2021, 10, 135.	7.7	17
83	Selfâ€Cleaning Titanium Dioxide Metasurfaces with UV Irradiation. Laser and Photonics Reviews, 2021, 15, 2000330.	4.4	17
84	Quasi-guiding Modes in Microfibers on a High Refractive Index Substrate. ACS Photonics, 2015, 2, 1278-1283.	3.2	16
85	Enhancing the Magnetic Resonance via Strong Coupling in Optical Metamaterials. Advanced Optical Materials, 2017, 5, 1700469.	3.6	16
86	Structured Semiconductor Interfaces: Active Functionality on Light Manipulation. Proceedings of the IEEE, 2020, 108, 772-794.	16.4	16
87	Allâ€Dielectric Metaâ€Reflectarray for Efficient Control of Visible Light. Annalen Der Physik, 2018, 530, 1700418.	0.9	15
88	Optical Fiber Humidity Sensor Based on Water Absorption Peak Near 2-Î¼m Waveband. IEEE Photonics Journal, 2019, 11, 1-8.	1.0	15
89	Onâ€Chipâ€Integrated Methylammonium Halide Perovskite Optical Sensors. Advanced Optical Materials, 2019, 7, 1801308.	3.6	15
90	The combination of high Q factor and chirality in twin cavities and microcavity chain. Scientific Reports, 2014, 4, 6493.	1.6	14

#	Article	IF	Citations
91	Coherent destruction of tunneling in chaotic microcavities via three-state anti-crossings. Scientific Reports, 2015, 4, 4858.	1.6	13
92	Fabricating high refractive index titanium dioxide film using electron beam evaporation for all-dielectric metasurfaces. MRS Communications, 2016, 6, 77-83.	0.8	13
93	Single Crystal Microrod Based Homonuclear Photonic Molecule Lasers. Advanced Optical Materials, 2017, 5, 1600744.	3.6	13
94	Singleâ€Crystalline Perovskite Microlasers for Highâ€Contrast and Subâ€Diffraction Imaging. Advanced Functional Materials, 2019, 29, 1904868.	7.8	13
95	Tailoring the lasing modes in CH₃NH₃PbBr₃ perovskite microplates via micro-manipulation. RSC Advances, 2016, 6, 50553-50558.	1.7	11
96	Chipâ€Scale Mass Manufacturable Highâ€Q Silicon Microdisks. Advanced Materials Technologies, 2017, 2, 1600299.	3.0	11
97	Adiabatic and Ultracompact Waveguide Tapers Based on Digital Metamaterials. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-6.	1.9	11
98	Fiber-Integrated Reversibly Wavelength-Tunable Nanowire Laser Based on Nanocavity Mode Coupling. ACS Nano, 2019, 13, 9965-9972.	7.3	11
99	Coherent destruction of dynamical tunneling in asymmetric resonant cavities. Physical Review A, 2013, 87, .	1.0	10
100	Large-Scale and Defect-Free Silicon Metamaterials with Magnetic Response. Scientific Reports, 2016, 6, 25760.	1.6	10
101	Direct modulation of microcavity emission via local perturbation. Physical Review A, 2013, 88, .	1.0	8
102	Lanthanide-doped nanocrystals in high-Q microtoroids for stable on-chip white-light lasers. Photonics Research, 2022, 10, 1594.	3.4	8
103	Manipulation of High-Order Scattering Processes in Ultrasmall Optical Resonators to Control Far-Field Emission. Physical Review Letters, 2014, 112, 163902.	2.9	7
104	Improvement of the chirality near avoided resonance crossing in optical microcavity. Science China: Physics, Mechanics and Astronomy, 2015, 58, 1.	2.0	7
105	The Role of Excitons on Light Amplification in Lead Halide Perovskites. Advanced Materials, 2016, 28, 10165-10169.	11.1	7
106	Deformed Microdisk-Based End-Fire Injection and Collection Resonant Device. Journal of Lightwave Technology, 2015, 33, 3698-3703.	2.7	6
107	Integrated Janus dipole source for selective coupling to silicon waveguide networks. Applied Physics Reviews, 2022, 9, .	5.5	6
108	End-fire injection of guided light into optical microcavity. Applied Physics B: Lasers and Optics, 2015, 120, 255-260.	1.1	5

#	Article	IF	Citations
109	Triangular lasing modes in hexagonal perovskite microplates with balanced gain and loss. RSC Advances, 2016, 6, 64589-64594.	1.7	5
110	Three-dimensional light confinement in a PT-symmetric nanocavity. RSC Advances, 2016, 6, 5792-5796.	1.7	5
111	Coupling the normal incident light into waveguide modes of DBR mirrors via a diffraction grating. Scientific Reports, 2016, 6, 38964.	1.6	3
112	Ultralowâ€threshold widebandâ€tunable singleâ€mode ultraviolet lasing from lanthanideâ€doped upconversion nanomaterials. Journal of the American Ceramic Society, 2022, 105, 5764-5773.	1.9	3
113	Rapid and Nondestructive Determination of Graphene Thickness with an all Dielectric Metasurface. Plasmonics, 2017, 12, 1685-1691.	1.8	2
114	Ultrafast Control of Microlasers. Optics and Photonics News, 2020, 31, 36.	0.4	2
115	Magnetic Field Enhancement: Enhancing the Magnetic Resonance via Strong Coupling in Optical Metamaterials (Advanced Optical Materials 20/2017). Advanced Optical Materials, 2017, 5, .	3.6	1
116	Perovskite Lasers: Highly Controllable Lasing Actions in Lead Halide Perovskite-Si3 N4 Hybrid Micro-Resonators (Laser Photonics Rev. 13(3)/2019). Laser and Photonics Reviews, 2019, 13, 1970018.	4.4	1
117	Efficient degenerate third-order difference frequency generation in microfiber-ring resonator systems. , 2017, , .		0
118	Sensors: Onâ€Chip Spiral Waveguides for Ultrasensitive and Rapid Detection of Nanoscale Objects (Adv.) Tj ETQq0 0 0 rgBT /Overlock 1	11.1	0
119	Microdisk Lasers: Fundamental Physics and Practical Applications. , 2020, , 233-267.		0