

Weidong Zhou

List of Publications by Year in descending order

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126
papers

3,399
citations

186265
28
h-index

144013
57
g-index

133
all docs

133
docs citations

133
times ranked

4794
citing authors

#	ARTICLE	IF	CITATIONS
1	High-performance green flexible electronics based on biodegradable cellulose nanofibril paper. Nature Communications, 2015, 6, 7170.	12.8	707
2	Progress in 2D photonic crystal Fano resonance photonics. Progress in Quantum Electronics, 2014, 38, 1-74.	7.0	232
3	Transfer-printed stacked nanomembrane lasers on silicon. Nature Photonics, 2012, 6, 615-620.	31.4	195
4	Origami silicon optoelectronics for hemispherical electronic eye systems. Nature Communications, 2017, 8, 1782.	12.8	177
5	Bioresorbable optical sensor systems for monitoring of intracranial pressure and temperature. Science Advances, 2019, 5, eaaw1899.	10.3	146
6	Optical Refractive Index Sensing Based on High-Q Bound States in the Continuum in Free-Space Coupled Photonic Crystal Slabs. Sensors, 2017, 17, 1861.	3.8	105
7	Bioresorbable photonic devices for the spectroscopic characterization of physiological status and neural activity. Nature Biomedical Engineering, 2019, 3, 644-654.	22.5	98
8	Sharpened VO ₂ Phase Transition via Controlled Release of Epitaxial Strain. Nano Letters, 2017, 17, 5614-5619.	9.1	93
9	Flexible high-frequency microwave inductors and capacitors integrated on a polyethylene terephthalate substrate. Applied Physics Letters, 2010, 96, .	3.3	77
10	Flexible Phototransistors Based on Single-Crystalline Silicon Nanomembranes. Advanced Optical Materials, 2016, 4, 120-125.	7.3	76
11	Double-layer Fano resonance photonic crystal filters. Optics Express, 2013, 21, 24582.	3.4	74
12	Large-area InP-based crystalline nanomembrane flexible photodetectors. Applied Physics Letters, 2010, 96, .	3.3	65
13	Flexible photonic-crystal Fano filters based on transferred semiconductor nanomembranes. Journal Physics D: Applied Physics, 2009, 42, 234007.	2.8	64
14	Fano filters based on transferred silicon nanomembranes on plastic substrates. Applied Physics Letters, 2008, 93, 061106.	3.3	62
15	226-nm AlGaIn/AlN UV LEDs using p-type Si for hole injection and UV reflection. Applied Physics Letters, 2018, 113, .	3.3	59
16	Coupled double-layer Fano resonance photonic crystal filters with lattice-displacement. Applied Physics Letters, 2013, 103, .	3.3	58
17	High quality factor photonic crystal filter at $k \approx 0$ and its application for refractive index sensing. Optics Express, 2017, 25, 10536.	3.4	55
18	Flexible Transient Optical Waveguides and Surface-Wave Biosensors Constructed from Monocrystalline Silicon. Advanced Materials, 2018, 30, e1801584.	21.0	55

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19	229-nm UV LEDs on aluminum nitride single crystal substrates using p-type silicon for increased hole injection. <i>Applied Physics Letters</i> , 2018, 112, .	3.3	52
20	Enhanced Performance of Ge Photodiodes via Monolithic Antireflection Texturing and In_2S_3 -Ge Self-Passivation by Inverse Metal-Assisted Chemical Etching. <i>ACS Nano</i> , 2018, 12, 6748-6755.	14.6	50
21	Microcavity-coupled emitters in hexagonal boron nitride. <i>Nanophotonics</i> , 2020, 9, 2937-2944.	6.0	37
22	RF Characterization of Gigahertz Flexible Silicon Thin-Film Transistor on Plastic Substrates Under Bending Conditions. <i>IEEE Electron Device Letters</i> , 2013, 34, 262-264.	3.9	36
23	High-performance flexible BiCMOS electronics based on single-crystal Si nanomembrane. <i>Npj Flexible Electronics</i> , 2017, 1, .	10.7	36
24	Nanoscale groove textured In_2S_3 -Ga 2O_3 by room temperature inverse metal-assisted chemical etching and photodiodes with enhanced responsivity. <i>Applied Physics Letters</i> , 2018, 113, .	3.3	36
25	Photonic crystal membrane reflectors by magnetic field-guided metal-assisted chemical etching. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	35
26	Printed Large-Area Single-Mode Photonic Crystal Bandedge Surface-Emitting Lasers on Silicon. <i>Scientific Reports</i> , 2016, 6, 18860.	3.3	33
27	Fast Flexible Transistors with a Nanotrench Structure. <i>Scientific Reports</i> , 2016, 6, 24771.	3.3	33
28	Transferrable single crystalline 4H-SiC nanomembranes. <i>Journal of Materials Chemistry C</i> , 2017, 5, 264-268.	5.5	30
29	RIR-MAPLE deposition of conjugated polymers for application to optoelectronic devices. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 105, 555-563.	2.3	28
30	Broadband Membrane Reflectors on Glass. <i>IEEE Photonics Technology Letters</i> , 2012, 24, 476-478.	2.5	28
31	Large-Area Printed Broadband Membrane Reflectors by Laser Interference Lithography. <i>IEEE Photonics Journal</i> , 2013, 5, 2200106-2200106.	2.0	28
32	Design of Fano Broadband Reflectors on SOI. <i>IEEE Photonics Technology Letters</i> , 2010, 22, 1108-1110.	2.5	26
33	Field penetrations in photonic crystal Fano reflectors. <i>Optics Express</i> , 2010, 18, 14152.	3.4	26
34	Resonance control of membrane reflectors with effective index engineering. <i>Applied Physics Letters</i> , 2009, 95, 023110.	3.3	25
35	Band-Bending of Ga-Polar GaN Interfaced with Al_2O_3 through Ultraviolet/Ozone Treatment. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 17576-17585.	8.0	25
36	A Multifunction Heterojunction Formed Between Pentacene and a Single-Crystal Silicon Nanomembrane. <i>Advanced Functional Materials</i> , 2013, 23, 3398-3403.	14.9	23

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37	Solution-processed omnidirectional antireflection coatings on amorphous silicon solar cells. <i>Journal of Applied Physics</i> , 2009, 105, 103501.	2.5	22
38	First-principles simulation of photonic crystal surface-emitting lasers using rigorous coupled wave analysis. <i>Applied Physics Letters</i> , 2018, 113, .	3.3	22
39	Optofluidic vapor sensing with free-space coupled 2D photonic crystal slabs. <i>Scientific Reports</i> , 2019, 9, 4209.	3.3	22
40	Breakthroughs in Photonics 2012: Breakthroughs in Nanomembranes and Nanomembrane Lasers. <i>IEEE Photonics Journal</i> , 2013, 5, 0700707-0700707.	2.0	18
41	A Portable Micro-Gas Chromatography with Integrated Photonic Crystal Slab Sensors on Chip. <i>Biosensors</i> , 2021, 11, 326.	4.7	18
42	Transferred Flexible Three-Color Silicon Membrane Photodetector Arrays. <i>IEEE Photonics Journal</i> , 2015, 7, 1-6.	2.0	17
43	Tuning the Refractive Index of Homopolymer Blends by Controlling Nanoscale Domain Size via RIR- MAPLE Deposition. <i>Macromolecular Chemistry and Physics</i> , 2013, 214, 2643-2650.	2.2	16
44	Polarization- and angle-dependent characteristics in two dimensional photonic crystal membrane reflectors. <i>Applied Physics Letters</i> , 2013, 103, 211107.	3.3	16
45	Colloidal quantum dot absorption enhancement in flexible Fano filters. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	15
46	Fano-Resonance Photonic Crystal Membrane Reflectors at Mid- and Far-Infrared. <i>IEEE Photonics Journal</i> , 2013, 5, 4700206-4700206.	2.0	15
47	Transfer Printed Nanomembranes for Heterogeneously Integrated Membrane Photonics. <i>Photonics</i> , 2015, 2, 1081-1100.	2.0	14
48	Buried InP/Airhole Photonic Crystal Surface-Emitting Lasers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2021, 218, 2000416.	1.8	14
49	Semiconductor nanomembranes for integrated silicon photonics and flexible Photonics. <i>Optical and Quantum Electronics</i> , 2012, 44, 605-611.	3.3	13
50	Low index contrast heterostructure photonic crystal cavities with high quality factors and vertical radiation coupling. <i>Applied Physics Letters</i> , 2018, 112, 141105.	3.3	13
51	Design of a portable imager for near-infrared visualization of cutaneous wounds. <i>Journal of Biomedical Optics</i> , 2017, 22, 016010.	2.6	12
52	AlGaAs/Si dual-junction tandem solar cells by epitaxial lift-off and print-transfer-assisted direct bonding. <i>Energy Science and Engineering</i> , 2018, 6, 47-55.	4.0	12
53	Coupled Bilayer Photonic Crystal Slab Electro-Optic Spatial Light Modulators. <i>IEEE Photonics Journal</i> , 2017, 9, 1-11.	2.0	11
54	Photonic crystal bandedge membrane lasers on silicon. <i>Applied Optics</i> , 2017, 56, H67.	1.8	11

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55	Influences of screw dislocations on electroluminescence of AlGaIn/AlN-based UVC LEDs. AIP Advances, 2019, 9, .	1.3	11
56	On-Chip Photonic Crystal Surface-Emitting Membrane Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-11.	2.9	11
57	Scaling Challenges in High Power Photonic Crystal Surface-Emitting Lasers. IEEE Journal of Quantum Electronics, 2022, 58, 1-9.	1.9	11
58	Semiconductor Nanomembrane-Based Light-Emitting and Photodetecting Devices. Photonics, 2016, 3, 40.	2.0	8
59	Bioresorbable Multilayer Photonic Cavities as Temporary Implants for Tether-Free Measurements of Regional Tissue Temperatures. BME Frontiers, 2021, 2021, .	4.5	7
60	Size Scaling of Photonic Crystal Surface Emitting Lasers on Silicon Substrates. IEEE Photonics Journal, 2018, 10, 1-6.	2.0	6
61	Controllable finite ultra-narrow quality-factor peak in a perturbed Dirac-cone band structure of a photonic-crystal slab. Applied Physics Letters, 2021, 119, .	3.3	6
62	Complete 2π phase control by photonic crystal slabs. Optics Express, 2021, 29, 40795.	3.4	6
63	Optical Add-Drop Filter Design Based on Photonic Crystal Ring Resonators. , 2007, , .		5
64	Structural Stability of Bilayer MoS ₂ in Ambient Air. Advanced Materials Interfaces, 2021, 8, 2101188.	3.7	5
65	Transferrable single-crystal silicon nanomembranes and their application to flexible microwave systems. Journal of Information Display, 2011, 12, 109-113.	4.0	4
66	Design of an Angle Detector for Laser Beams Based on Grating Coupling. Micromachines, 2012, 3, 36-44.	2.9	4
67	Experimental and numerical study of highly sensitive displacement sensors based on photonic crystals at microwave band. Microwave and Optical Technology Letters, 2012, 54, 432-434.	1.4	4
68	Integrated Bioresorbable Optical Sensor Systems for Biomedical Pressure and Temperature Monitoring. , 2019, , .		3
69	Design of GaN-Based PCSEL With Temperature-Insensitive Lasing Wavelength. IEEE Photonics Journal, 2021, 13, 1-6.	2.0	3
70	Structural Impact and Optical Optimization in Stretchable Thin Film Flexible Solar Cells. , 2008, , .		2
71	Flexible crystalline InP nanomembrane LED arrays. , 2010, , .		2
72	Semiconductor nanomembranes for integrated and flexible photonics. , 2011, , .		2

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73	Flexible three-color silicon membrane photodetector arrays. , 2014, , .		2
74	Radio-frequency flexible electronics: Transistors and passives. , 2014, , .		2
75	Materials and design considerations for fast flexible and stretchable electronics. , 2015, , .		2
76	AlGaAs/Si dual-junction tandem solar cells fabricated by epitaxial lift-off and print transfer-assisted bonding. , 2015, , .		2
77	Optically Pumped $1\frac{1}{4}\mu\text{m}$ Low Threshold Photonic Crystal Surface Emitting Lasers Grown on GaAs Substrate. , 2019, , .		2
78	Buried Tunnel Junction Current Injection for InP-Based Nanomembrane Photonic Crystal Surface Emitting Lasers on Silicon. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900527.	1.8	2
79	Characteristics of Photonic Crystal Cavity Based Infrared Photodetectors. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	1
80	Spectral trimming of fano reflectors on silicon and glass substrates. , 2008, , .		1
81	Semiconductor Nanomembranes and Applications in Electronics and Photonics. , 2008, , .		1
82	Crystalline silicon nanomembrane stacking for large-area flexible photodetectors. , 2009, , .		1
83	Stacked fano resonance photonic crystal nanomembrane high-Q filters. , 2012, , .		1
84	Large area MoS ₂ /van der Waals epitaxy on III-Ns and the epitaxial formation of a n-MoS ₂ /p-InGaN diode. , 2016, , .		1
85	Free-space coupled silicon photonic crystal refractometric membrane sensors. , 2017, , .		1
86	Direct Measurement of Directional Emission from Monolayer WS ₂ Laser with Heterostructure Photonic Crystal Cavities. , 2018, , .		1
87	Optical Waveguides: Flexible Transient Optical Waveguides and Surface-Wave Biosensors Constructed from Monocrystalline Silicon (Adv. Mater. 32/2018). Advanced Materials, 2018, 30, 1870239.	21.0	1
88	Hybrid Integrated Photonic Platforms: feature issue introduction. Optical Materials Express, 2021, 11, 4095.	3.0	1
89	Encapsulated photonic crystals and the role of surface state on high performance photonic crystal surface emitting lasers. , 2005, , .		0
90	Diffraction limited ultra-small photonic-crystal ring resonators with low loss. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0

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91	Solution Processed Large Area Surface Textures Based on Dip Coating. , 2008, , .		0
92	Crystalline silicon thin film photovoltaic solar cells based on energy efficient nanomembrane transfer process. , 2011, , .		0
93	Low temperature stacked electrodes for flexible crystalline semiconductor thin film solar cells. , 2011, , .		0
94	Design of a compact grating coupler with controllable linewidths via transverse resonance and evanescent field coupling. , 2011, , .		0
95	Frame-assisted membrane transfer for large area optoelectronic devices on flexible substrates. , 2011, , .		0
96	Fano resonance membrane reflectors from mid-infrared to far-infrared. , 2011, , .		0
97	Sub-wavelength diffraction losses in a silicon nano-patterned membrane reflector. , 2012, , .		0
98	Nanomembrane transfer printing for MR-VCSELs on silicon. , 2012, , .		0
99	Design criteria to optimize the near perfect anti-reflection coating. , 2012, , .		0
100	Transfer printed photonic crystal nanomembrane lasers on silicon with low optical pumping threshold. , 2012, , .		0
101	Cavity design of nanomembrane MR-VCSELs on silicon. , 2012, , .		0
102	Fabrication and Characterization of Si/GaN Heterojunction Photodetectors. , 2012, , .		0
103	Large area imprinted surface textures for omnidirectional conformal AR coatings on flexible amorphous silicon solar cells. , 2012, , .		0
104	High-speed microwave thin-film transistors based on transferrable semiconductor nanomembranes. , 2012, , .		0
105	Electrically-pumped membrane-reflector surface-emitters on silicon. , 2013, , .		0
106	Toward microwave integrated circuits on flexible substrates (invited). , 2013, , .		0
107	Fabrication of electrically-pumped resonance-cavity membrane-reflector surface-emitters on silicon. , 2013, , .		0
108	Increasing the speed of flexible electronics. , 2013, , .		0

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109	Transfer printed nanomembrane high-Q filters based on displaced double-layer fano resonance photonic crystal slabs. , 2013, , .		0
110	15-GHz flexible microwave thin-film transistors on plastic. , 2013, , .		0
111	Surface-normal photonic crystal membrane reflectors with integrated inplane couplers for integrated silicon photonics. , 2014, , .		0
112	Thermally engineered photonic crystal membrane reflectors based on transferred nanomembranes on diamond. , 2014, , .		0
113	High-reflection Si/SiO ₂ Bragg reflector via membrane transfer printing. , 2015, , .		0
114	Heterogeneously integrated InGaAs and Si membrane four color focal plane arrays. , 2015, , .		0
115	Membrane reflector VCSELs on-silicon. , 2015, , .		0
116	Radio-frequency flexible and stretchable electronics (Key note). , 2016, , .		0
117	Flexible Si BiCMOS on plastic substrates. , 2017, , .		0
118	Enhanced light emission from MoS ₂ in heterostructure photonic crystal cavities. , 2017, , .		0
119	Design and fabrication of Si ₃ N ₄ surface normal photonic crystal filters and reflectors. , 2017, , .		0
120	Nano-indented Ge surfaces by metal-assisted chemical etching (MacEtch) and its application for optoelectronic devices. , 2017, , .		0
121	Photonic crystal surface-emitting lasers on silicon substrates. , 2017, , .		0
122	Scaling Towards Efficient Monolayer WS ₂ Photonic Crystal Lasers. , 2018, , .		0
123	2D Material Printing for Cavity Integration. , 2018, , .		0
124	Flexible Hybrid Semiconductor Membrane Photonic Devices Based on Micro Transfer Printing Process. , 2021, , .		0
125	Heterogeneous material integration with photonic crystal platforms for nanophotonic devices on foreign substrates. , 2008, , .		0
126	Full π phase shift from single and double layer photonic crystal slabs. , 2021, , .		0