

# Hui Cao

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

140  
papers

6,444  
citations

38  
h-index

78  
g-index

180  
ext. papers

8,039  
ext. citations

7  
avg, IF

6.36  
L-index

#	Paper	IF	Citations
140	Harnessing disorder for photonic device applications. <i>Applied Physics Reviews</i> , <b>2022</b> , 9, 011309	17.3	1
139	Controlling Nonlinear Interaction in a Many-Mode Laser by Tuning Disorder.. <i>Physical Review Letters</i> , <b>2022</b> , 128, 143901	7.4	0
138	Sensitive control of broad-area semiconductor lasers by cavity shape. <i>APL Photonics</i> , <b>2022</b> , 7, 056106	5.2	0
137	Suppressing meta-holographic artifacts by laser coherence tuning. <i>Light: Science and Applications</i> , <b>2021</b> , 10, 104	16.7	8
136	Circumventing the optical diffraction limit with customized speckles. <i>Optica</i> , <b>2021</b> , 8, 122	8.6	8
135	High-Speed Random-Channel Cryptography in Multimode Fibers. <i>IEEE Photonics Journal</i> , <b>2021</b> , 13, 1-9	1.8	0
134	Massively parallel ultrafast random bit generation with a chip-scale laser. <i>Science</i> , <b>2021</b> , 371, 948-952	33.3	18
133	Multimode-fiber-based single-shot full-field measurement of optical pulses. <i>Optics Letters</i> , <b>2020</b> , 45, 2462-2465	3	5
132	Fast laser speckle suppression with an intracavity diffuser. <i>Nanophotonics</i> , <b>2020</b> , 10, 129-136	6.3	4
131	Spatial structure of lasing modes in wave-chaotic semiconductor microcavities. <i>New Journal of Physics</i> , <b>2020</b> , 22, 083002	2.9	7
130	Fluctuations and Correlations of Transmission Eigenchannels in Diffusive Media. <i>Physical Review Letters</i> , <b>2020</b> , 125, 165901	7.4	3
129	Deep learning of ultrafast pulses with a multimode fiber. <i>APL Photonics</i> , <b>2020</b> , 5, 096106	5.2	10
128	Electrically pumped semiconductor laser with low spatial coherence and directional emission. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 071101	3.4	11
127	Complex lasers with controllable coherence. <i>Nature Reviews Physics</i> , <b>2019</b> , 1, 156-168	23.6	40
126	Transverse localization of transmission eigenchannels. <i>Nature Photonics</i> , <b>2019</b> , 13, 352-358	33.9	21
125	Long-range spatio-temporal correlations in multimode fibers for pulse delivery. <i>Nature Communications</i> , <b>2019</b> , 10, 2973	17.4	14
124	Angular Memory Effect of Transmission Eigenchannels. <i>Physical Review Letters</i> , <b>2019</b> , 123, 203901	7.4	9

123	Remote key establishment by random mode mixing in multimode fibers and optical reciprocity. <i>Optical Engineering</i> , <b>2019</b> , 58, 1	1.1	16
122	Introducing non-local correlations into laser speckles. <i>Optics Express</i> , <b>2019</b> , 27, 6057-6067	3.3	8
121	Multimode lasing in wave-chaotic semiconductor microlasers. <i>Physical Review A</i> , <b>2019</b> , 100,	2.6	4
120	Creating and controlling complex light. <i>APL Photonics</i> , <b>2019</b> , 4, 110806	5.2	11
119	Random-laser dynamics with temporally modulated pump. <i>Physical Review A</i> , <b>2019</b> , 99,	2.6	5
118	Customizing speckle intensity statistics. <i>Optica</i> , <b>2018</b> , 5, 595	8.6	48
117	Complete polarization control in multimode fibers with polarization and mode coupling. <i>Light: Science and Applications</i> , <b>2018</b> , 7, 54	16.7	38
116	Transporting the Optical Chirality through the Dynamical Barriers in Optical Microcavities. <i>Laser and Photonics Reviews</i> , <b>2018</b> , 12, 1800027	8.3	17
115	Suppressing spatiotemporal lasing instabilities with wave-chaotic microcavities. <i>Science</i> , <b>2018</b> , 361, 1225-1231	33.3	46
114	Coherent injection of light into an absorbing scattering medium with a microscopic pore. <i>Optics Letters</i> , <b>2018</b> , 43, 2189-2192	3	1
113	Statistical description of transport in multimode fibers with mode-dependent loss. <i>New Journal of Physics</i> , <b>2018</b> , 20, 113028	2.9	5
112	Enhancing light transmission through a disordered waveguide with inhomogeneous scattering and loss. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 021103	3.4	6
111	Correlation-enhanced control of wave focusing in disordered media. <i>Nature Physics</i> , <b>2017</b> , 13, 497-502	16.2	52
110	Condensation of thresholds in multimode microlasers. <i>Physical Review A</i> , <b>2017</b> , 95,	2.6	2
109	Enabling time resolved microscopy with random Raman lasing. <i>Scientific Reports</i> , <b>2017</b> , 7, 44572	4.9	8
108	Intracavity frequency-doubled degenerate laser. <i>Optics Letters</i> , <b>2017</b> , 42, 411-414	3	5
107	Enhanced optical coupling and Raman scattering via microscopic interface engineering. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 201105	3.4	4
106	Enhanced coupling of light into a turbid medium through microscopic interface engineering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 7941-7946	11.5	6

105	Super- and Anti-Principal-Modes in Multimode Waveguides. <i>Physical Review X</i> , <b>2017</b> , 7,	9.1	8
104	Perspective on speckle spectrometers. <i>Journal of Optics (United Kingdom)</i> , <b>2017</b> , 19, 060402	1.7	28
103	Principal modes in multimode fibers: exploring the crossover from weak to strong mode coupling. <i>Optics Express</i> , <b>2017</b> , 25, 2709-2724	3.3	28
102	Customizing Speckle Statistics <b>2017</b> ,		1
101	Interaction-induced mode switching in steady-state microlasers. <i>Optics Express</i> , <b>2016</b> , 24, 41-54	3.3	9
100	Control of Energy Density inside a Disordered Medium by Coupling to Open or Closed Channels. <i>Physical Review Letters</i> , <b>2016</b> , 117, 086803	7.4	37
99	Spatiotemporal Control of Light Transmission through a Multimode Fiber with Strong Mode Coupling. <i>Physical Review Letters</i> , <b>2016</b> , 117, 053901	7.4	48
98	Fluctuations and correlations of emission from random lasers. <i>Physical Review A</i> , <b>2016</b> , 93,	2.6	12
97	Topological defect lasers. <i>Journal of Optics (United Kingdom)</i> , <b>2016</b> , 18, 014005	1.7	7
96	Coherent Control of Photocurrent in a Strongly Scattering Photoelectrochemical System. <i>ACS Photonics</i> , <b>2016</b> , 3, 449-455	6.3	20
95	A narrow-band speckle-free light source via random Raman lasing. <i>Journal of Modern Optics</i> , <b>2016</b> , 63, 46-49	1.1	19
94	Ultrahigh-speed, phase-sensitive full-field interferometric confocal microscopy for quantitative microscale physiology. <i>Biomedical Optics Express</i> , <b>2016</b> , 7, 4674-4684	3.5	4
93	Coherence switching of a degenerate VECSEL for multimodality imaging. <i>Optica</i> , <b>2016</b> , 3, 403	8.6	25
92	Evanescently coupled multimode spiral spectrometer. <i>Optica</i> , <b>2016</b> , 3, 956	8.6	44
91	Controlling mode competition by tailoring the spatial pump distribution in a laser: a resonance-based approach. <i>Optics Express</i> , <b>2016</b> , 24, 26006-26015	3.3	13
90	Coherent artifact suppression in line-field reflection confocal microscopy using a low spatial coherence light source. <i>Optics Letters</i> , <b>2016</b> , 41, 4775-4778	3	3
89	Controlling a microdisk laser by local refractive index perturbation. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 051105	3.4	3
88	The optical frequency comb fibre spectrometer. <i>Nature Communications</i> , <b>2016</b> , 7, 12995	17.4	24

87	Controlling Random Lasing with Three-Dimensional Plasmonic Nanorod Metamaterials. <i>Nano Letters</i> , <b>2016</b> , 16, 2471-7	11.5	50
86	Broadband multimode fiber spectrometer. <i>Optics Letters</i> , <b>2016</b> , 41, 2029-32	3	33
85	Low spatial coherence electrically pumped semiconductor laser for speckle-free full-field imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 1304-9	11.5	84
84	Mesoporous GaN for Photonic Engineering Highly Reflective GaN Mirrors as an Example. <i>ACS Photonics</i> , <b>2015</b> , 2, 980-986	6.3	90
83	Modification of light transmission channels by inhomogeneous absorption in random media. <i>Optics Express</i> , <b>2015</b> , 23, 11043-53	3.3	22
82	Rotation-induced evolution of far-field emission patterns of deformed microdisk cavities. <i>Optica</i> , <b>2015</b> , 2, 323	8.6	21
81	Optical resonances in rotating dielectric microcavities of deformed shape. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2015</b> , 32, 1736	1.7	6
80	Using geometry to manipulate long-range correlation of light inside disordered media. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	6
79	Control of mesoscopic transport by modifying transmission channels in opaque media. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	14
78	Minimum reflection channel in amplifying random media. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	1
77	Broadband Coherent Enhancement of Transmission and Absorption in Disordered Media. <i>Physical Review Letters</i> , <b>2015</b> , 115, 223901	7.4	30
76	Multiscale patterning of a metallic glass using sacrificial imprint lithography. <i>Microsystems and Nanoengineering</i> , <b>2015</b> , 1,	7.7	14
75	Pump-controlled modal interactions in microdisk lasers. <i>Physical Review A</i> , <b>2015</b> , 91,	2.6	24
74	Low-spatial-coherence high-radiance broadband fiber source for speckle free imaging. <i>Optics Letters</i> , <b>2015</b> , 40, 4607-10	3	36
73	Photonic crystals with topological defects. <i>Physical Review A</i> , <b>2015</b> , 91,	2.6	5
72	The illumination characteristics of operative microscopes. <i>American Journal of Otolaryngology - Head and Neck Medicine and Surgery</i> , <b>2015</b> , 36, 356-60	2.8	7
71	Rotating optical microcavities with broken chiral symmetry. <i>Physical Review Letters</i> , <b>2015</b> , 114, 053903	7.4	38
70	Dielectric microcavities: Model systems for wave chaos and non-Hermitian physics. <i>Reviews of Modern Physics</i> , <b>2015</b> , 87, 61-111	40.5	363

69	Differential Expression of Ecdysone Receptor Leads to Variation in Phenotypic Plasticity across Serial Homologs. <i>PLoS Genetics</i> , <b>2015</b> , 11, e1005529	6	48
68	Coherent control of total transmission of light through disordered media. <i>Physical Review Letters</i> , <b>2014</b> , 112, 133903	7.4	77
67	Position-dependent diffusion of light in disordered waveguides. <i>Physical Review Letters</i> , <b>2014</b> , 112, 023904	7.4	39
66	Generating Non-Rayleigh Speckles with Tailored Intensity Statistics. <i>Physical Review Letters</i> , <b>2014</b> , 112,	7.4	53
65	Noise analysis of spectrometers based on speckle pattern reconstruction. <i>Applied Optics</i> , <b>2014</b> , 53, 410-7	7.7	17
64	PARTIALLY PUMPED RANDOM LASERS. <i>International Journal of Modern Physics B</i> , <b>2014</b> , 28, 1430001	1.1	22
63	Artificial selection for structural color on butterfly wings and comparison with natural evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 12109-14	11.5	45
62	Full-field interferometric confocal microscopy using a VCSEL array. <i>Optics Letters</i> , <b>2014</b> , 39, 4446-9	3	26
61	High-resolution and broadband all-fiber spectrometers. <i>Optica</i> , <b>2014</b> , 1, 175	8.6	70
60	Manipulation of high-order scattering processes in ultrasmall optical resonators to control far-field emission. <i>Physical Review Letters</i> , <b>2014</b> , 112, 163902	7.4	5
59	Control of light diffusion in a disordered photonic waveguide. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 041104	3.4	7
58	Active control of emission directionality of semiconductor microdisk lasers. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 231108	3.4	60
57	Transmission channels for light in absorbing random media: From diffusive to ballistic-like transport. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	45
56	Rotation-induced mode coupling in open wavelength-scale microcavities. <i>Physical Review A</i> , <b>2014</b> , 90,	2.6	14
55	Probing long-range intensity correlations inside disordered photonic nanostructures. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	10
54	Cryptic iridescence in a fossil weevil generated by single diamond photonic crystals. <i>Journal of the Royal Society Interface</i> , <b>2014</b> , 11, 20140736	4.1	15
53	Secure Optical Communication Using Random Mode Mixing and Time-Reversal Symmetry in Multimode Fibers <b>2014</b> ,		1
52	Compact spectrometer based on a disordered photonic chip. <i>Nature Photonics</i> , <b>2013</b> , 7, 746-751	33.9	255

51	Controlling multimode coupling by boundary-wave scattering. <i>Physical Review A</i> , <b>2013</b> , 88,	2.6	16
50	Plasmonic Enhancement of Dye-Sensitized Solar Cells Using Core-Shell-Shell Nanostructures. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 927-934	3.8	102
49	Noise properties of coherent perfect absorbers and critically coupled resonators. <i>Physical Review A</i> , <b>2013</b> , 87,	2.6	8
48	All-fiber spectrometer based on speckle pattern reconstruction. <i>Optics Express</i> , <b>2013</b> , 21, 6584-600	3.3	123
47	Low-loss high-speed speckle reduction using a colloidal dispersion. <i>Applied Optics</i> , <b>2013</b> , 52, 1168-72	1.7	45
46	Broadband subwavelength focusing of light using a passive sink. <i>Optics Express</i> , <b>2013</b> , 21, 17435-46	3.3	25
45	Extreme output sensitivity to subwavelength boundary deformation in microcavities. <i>Physical Review A</i> , <b>2013</b> , 87,	2.6	28
44	Formation of long-lived resonances in hexagonal cavities by strong coupling of superscar modes. <i>Physical Review A</i> , <b>2013</b> , 88,	2.6	30
43	Perfect coupling of light to surface plasmons by coherent absorption. <i>Physical Review Letters</i> , <b>2012</b> , 108, 186805	7.4	128
42	Speckle-free laser imaging using random laser illumination. <i>Nature Photonics</i> , <b>2012</b> , 6, 355-359	33.9	562
41	Channeling chaotic rays into waveguides for efficient collection of microcavity emission. <i>Physical Review Letters</i> , <b>2012</b> , 108, 243902	7.4	76
40	Using a multimode fiber as a high-resolution, low-loss spectrometer. <i>Optics Letters</i> , <b>2012</b> , 37, 3384-6	3	98
39	Wavelength-scale microdisks as optical gyroscopes: a finite-difference time-domain simulation study. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2012</b> , 29, 1648	1.7	13
38	Lasing in localized mode at optimized photonic amorphous structure. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 091101	3.4	4
37	Directional waveguide coupling from a wavelength-scale deformed microdisk laser. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 061125	3.4	12
36	Local chirality of optical resonances in ultrasmall resonators. <i>Physical Review Letters</i> , <b>2012</b> , 108, 253902	7.4	37
35	Photonic band gaps in three-dimensional network structures with short-range order. <i>Physical Review A</i> , <b>2011</b> , 84,	2.6	45
34	Time-reversed lasing and interferometric control of absorption. <i>Science</i> , <b>2011</b> , 331, 889-92	33.3	508

33	Control of lasing in biomimetic structures with short-range order. <i>Physical Review Letters</i> , <b>2011</b> , 106, 183901	7.4	65
32	Spatial coherence of random laser emission. <i>Optics Letters</i> , <b>2011</b> , 36, 3404-6	3	77
31	Lasing modes in polycrystalline and amorphous photonic structures. <i>Physical Review A</i> , <b>2011</b> , 84,	2.6	8
30	Wavelength-scale deformed microdisk lasers. <i>Physical Review A</i> , <b>2011</b> , 84,	2.6	23
29	Lasing in Thue-Morse structures with optimized aperiodicity. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 201109	3.4	14
28	Lasing in localized modes of a slow light photonic crystal waveguide. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 241107	3.4	26
27	Morphology-induced plasmonic resonances in silver-aluminum alloy thin films. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 041116	3.4	15
26	Nanoscale Coherent Perfect Absorber of Light <b>2011</b> ,		1
25	Relation between transmission and energy stored in random media with gain. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	13
24	Photonic-band-gap effects in two-dimensional polycrystalline and amorphous structures. <i>Physical Review A</i> , <b>2010</b> , 82,	2.6	33
23	Giant resonances near the split band edges of two-dimensional photonic crystals. <i>Physical Review A</i> , <b>2010</b> , 82,	2.6	10
22	Demonstration of laser action in a pseudorandom medium. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 223101	3.4	18
21	Numerical study of amplified spontaneous emission and lasing in random media. <i>Physical Review A</i> , <b>2010</b> , 82,	2.6	23
20	Coherent perfect absorbers: time-reversed lasers. <i>Physical Review Letters</i> , <b>2010</b> , 105, 053901	7.4	676
19	Effects of spatially nonuniform gain on lasing modes in weakly scattering random systems. <i>Physical Review A</i> , <b>2010</b> , 81,	2.6	36
18	Structural Color: How Noniridescent Colors Are Generated by Quasi-ordered Structures of Bird Feathers (Adv. Mater. 2627/2010). <i>Advanced Materials</i> , <b>2010</b> , 22, n/a-n/a	24	1
17	A conductivity-based selective etching for next generation GaN devices. <i>Physica Status Solidi (B): Basic Research</i> , <b>2010</b> , 247, 1713-1716	1.3	68
16	LASING IN RANDOM MEDIA. <i>Advanced Series in Applied Physics</i> , <b>2010</b> , 205-251		1

15	Photonic bandgap engineering with inverse opal multistacks of different refractive index contrasts. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 091101	3.4	26
14	Finite-Difference Time-Domain Formulation of Stochastic Noise in Macroscopic Atomic Systems. <i>Journal of Lightwave Technology</i> , <b>2009</b> , 27, 4530-4535	4	22
13	Chaotic microcavity laser with high quality factor and unidirectional output. <i>Physical Review A</i> , <b>2009</b> , 80,	2.6	73
12	Finite-difference time-domain simulation of thermal noise in open cavities. <i>Physical Review A</i> , <b>2008</b> , 77,	2.6	13
11	Collective electronic states in inhomogeneous media at critical and subcritical metal concentrations. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	2
10	Effect of local pumping on random laser modes in one dimension. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2007</b> , 24, A26	1.7	28
9	Effect of amplification on conductance distribution of a disordered waveguide. <i>Physical Review E</i> , <b>2006</b> , 74, 056609	2.4	7
8	Review on latest developments in random lasers with coherent feedback. <i>Journal of Physics A</i> , <b>2005</b> , 38, 10497-10535		269
7	Field and intensity correlations in amplifying random media. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	18
6	Effects of localization and amplification on intensity distribution of light transmitted through random media. <i>Physical Review E</i> , <b>2004</b> , 70, 037603	2.4	14
5	Random lasing in closely packed resonant scatterers. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2004</b> , 21, 159	1.7	120
4	Cavity formation and light propagation in partially ordered and completely random one-dimensional systems. <i>IEEE Journal of Quantum Electronics</i> , <b>2003</b> , 39, 364-374	2	30
3	Lasing in disordered media. <i>Progress in Optics</i> , <b>2003</b> , 317-370	3.4	15
2	Lasing in random media. <i>Waves in Random and Complex Media</i> , <b>2003</b> , 13, R1-R39		393
1	Direct time-domain observation of transition from strong to weak coupling in a semiconductor microcavity. <i>Applied Physics Letters</i> , <b>1998</b> , 73, 3031-3033	3.4	9