

Hao Jiang

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.

101 papers	6,307 citations	27 h-index	79 g-index
108 ext. papers	7,914 ext. citations	7 avg, IF	5.73 L-index

#	Paper	IF	Citations
101	Concentric ring structure on the front surface of fused silica induced by a focused femtosecond pulse laser. <i>Precision Engineering</i> , 2022 , 74, 242-246	2.9	
100	Superachromatic polarization modulator for stable and complete polarization measurement over an ultra-wide spectral range.. <i>Optics Express</i> , 2022 , 30, 15113-15133	3.3	0
99	Complete Dielectric Tensor and Giant Optical Anisotropy in Quasi-One-Dimensional ZrTe5 2021 , 3, 525-534		8
98	2D Niobium-Doped MoS2: Tuning the Exciton Transitions and Potential Applications. <i>ACS Applied Electronic Materials</i> , 2021 , 3, 2564-2572	4	2
97	Beam collapse and refractive index changes inside fused silica induced by loosely focused femtosecond laser. <i>Journal of Optics (United Kingdom)</i> , 2021 , 23, 075402	1.7	
96	Complex optical conductivity of Bi2Se3 thin film: Approaching two-dimensional limit. <i>Applied Physics Letters</i> , 2021 , 118, 191101	3.4	4
95	Diffraction based single pulse measurement of air ionization dynamics induced by femtosecond laser. <i>Optics Express</i> , 2021 , 29, 18601-18610	3.3	1
94	Effective medium approximation based interpretation for Mueller matrix spectra of polydimethylsiloxane gratings. <i>Journal of Optics (United Kingdom)</i> , 2021 , 23, 025403	1.7	
93	Reconstruction of finite deep sub-wavelength nanostructures by Mueller-matrix scattered-field microscopy. <i>Optics Express</i> , 2021 , 29, 32158-32168	3.3	0
92	Dynamic modulation performance of ferroelectric liquid crystal polarization rotators and Mueller matrix polarimeter optimization. <i>Frontiers of Mechanical Engineering</i> , 2020 , 15, 256-264	3.3	1
91	A Memristor with Low Switching Current and Voltage for 1S1R Integration and Array Operation. <i>Advanced Electronic Materials</i> , 2020 , 6, 1901411	6.4	21
90	Investigation of Spatial Chirp Induced by Misalignments in a Parallel Grating Pair Pulse Stretcher. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 1584	2.6	5
89	Three-dimensional memristor circuits as complex neural networks. <i>Nature Electronics</i> , 2020 , 3, 225-232	28.4	112
88	Multiobjective optimization for target design in diffraction-based overlay metrology. <i>Applied Optics</i> , 2020 , 59, 2897-2905	1.7	2
87	Performance optimization of tandem organic solar cells at varying incident angles based on optical analysis method. <i>Optics Express</i> , 2020 , 28, 2381-2397	3.3	4
86	On the limits of low-numerical-aperture imaging scatterometry. <i>Optics Express</i> , 2020 , 28, 8445-8462	3.3	3
85	High-speed Mueller matrix ellipsometer with microsecond temporal resolution. <i>Optics Express</i> , 2020 , 28, 10873-10887	3.3	8

84	Attitude metrology based on the field-of-view effect of birefringence using high-speed polarimetry. <i>Optics Letters</i> , 2020 , 45, 2074-2077	3	2
83	Nonuniform depolarization properties of typical nanostructures and potential applications. <i>Optics Letters</i> , 2020 , 45, 1910-1913	3	0
82	Multi-objective collaborative optimization strategy for efficiency and chromaticity of stratified OLEDs based on an optical simulation method and sensitivity analysis. <i>Optics Express</i> , 2020 , 28, 27532-27546	2.3	0
81	An analytical method to determine the complex refractive index of an ultra-thin film by ellipsometry. <i>Applied Surface Science</i> , 2020 , 507, 145091	6.7	6
80	Layer-dependent dielectric permittivity of topological insulator Bi ₂ Se ₃ thin films. <i>Applied Surface Science</i> , 2020 , 509, 144822	6.7	12
79	Remote Absolute Roll-Angle Measurement in Range of 180°Based on Polarization Modulation. <i>Nanomanufacturing and Metrology</i> , 2020 , 3, 228-235	3.4	3
78	A Brewster incidence method for shocked dynamic metrology of transparent materials and its error evaluation. <i>AIP Advances</i> , 2020 , 10, 105203	1.5	
77	Thickness dependent native oxidation kinetics observation and prediction for Cu films using spectroscopic ellipsometry. <i>Applied Surface Science</i> , 2020 , 518, 146236	6.7	3
76	Complex Optical Conductivity of Two-Dimensional MoS ₂ : A Striking Layer Dependency. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 6246-6252	6.4	20
75	Layer-dependent dielectric and optical properties of centimeter-scale 2D WSe ₂ : evolution from a single layer to few layers. <i>Nanoscale</i> , 2019 , 11, 22762-22771	7.7	24
74	Dynamic characteristics of nematic liquid crystal variable retarders investigated by a high-speed polarimetry. <i>Journal of Optics (United Kingdom)</i> , 2019 , 21, 065605	1.7	4
73	Characterization of Volume Gratings Based on Distributed Dielectric Constant Model Using Mueller Matrix Ellipsometry. <i>Applied Sciences (Switzerland)</i> , 2019 , 9, 698	2.6	4
72	Artificial Neural Network (ANN) to Spiking Neural Network (SNN) Converters Based on Diffusive Memristors. <i>Advanced Electronic Materials</i> , 2019 , 5, 1900060	6.4	55
71	Superhydrophilic Cu(OH) ₂ nanowire-based QCM transducer with self-healing ability for humidity detection. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 9068-9077	13	23
70	Reinforcement learning with analogue memristor arrays. <i>Nature Electronics</i> , 2019 , 2, 115-124	28.4	166
69	Characterization of dielectric function for metallic thin films based on ellipsometric parameters and reflectivity. <i>Physica Scripta</i> , 2019 , 94, 085802	2.6	7
68	Scalable 3D Ta:SiO _x Memristive Devices. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800958	6.4	2
67	Dependence-Analysis-Based Data-Refinement in Optical Scatterometry for Fast Nanostructure Reconstruction. <i>Applied Sciences (Switzerland)</i> , 2019 , 9, 4091	2.6	0

66	Strain-optical behavior of polyethylene terephthalate film during uniaxial stretching investigated by Mueller matrix ellipsometry. <i>Polymer</i> , 2019 , 182, 121842	3.9	2
65	Characterization of a liquid crystal variable retarder by Mueller matrix ellipsometry 2019 ,		2
64	Simulation method for study on outcoupling characteristics of stratified anisotropic OLEDs. <i>Optics Express</i> , 2019 , 27, A1014-A1029	3.3	8
63	Wide field-of-view angle linear retarder with an ultra-flat retardance response. <i>Optics Letters</i> , 2019 , 44, 3026-3029	3	3
62	Learning with Resistive Switching Neural Networks 2019 ,		4
61	Memristor crossbar arrays with 6-nm half-pitch and 2-nm critical dimension. <i>Nature Nanotechnology</i> , 2019 , 14, 35-39	28.7	231
60	Nondestructive investigation on the nanocomposite ordering upon holography using Mueller matrix ellipsometry. <i>European Polymer Journal</i> , 2019 , 110, 123-129	5.2	3
59	Long short-term memory networks in memristor crossbar arrays. <i>Nature Machine Intelligence</i> , 2019 , 1, 49-57	22.5	176
58	Emerging Memory Devices for Neuromorphic Computing. <i>Advanced Materials Technologies</i> , 2019 , 4, 1800589	6.589	181
57	Calibration of polarization effect of a high-numerical-aperture objective lens with Mueller matrix polarimetry. <i>Measurement Science and Technology</i> , 2019 , 30, 025201	2	5
56	Layer-Dependent Dielectric Function of Wafer-Scale 2D MoS2. <i>Advanced Optical Materials</i> , 2019 , 7, 1801850	1850	31
55	Broadband optical properties of graphene and HOPG investigated by spectroscopic Mueller matrix ellipsometry. <i>Applied Surface Science</i> , 2018 , 439, 1079-1087	6.7	44
54	Threshold Switching: Threshold Switching of Ag or Cu in Dielectrics: Materials, Mechanism, and Applications (Adv. Funct. Mater. 6/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870036	15.6	7
53	Fully memristive neural networks for pattern classification with unsupervised learning. <i>Nature Electronics</i> , 2018 , 1, 137-145	28.4	511
52	Probing optimal measurement configuration for optical scatterometry by the multi-objective genetic algorithm. <i>Measurement Science and Technology</i> , 2018 , 29, 045014	2	2
51	Threshold Switching of Ag or Cu in Dielectrics: Materials, Mechanism, and Applications. <i>Advanced Functional Materials</i> , 2018 , 28, 1704862	15.6	168
50	Memristor-Based Analog Computation and Neural Network Classification with a Dot Product Engine. <i>Advanced Materials</i> , 2018 , 30, 1705914	24	339
49	Unconventional computing with diffusive memristors 2018 ,		2

48	Measurement configuration optimization for dynamic metrology using Stokes polarimetry. <i>Measurement Science and Technology</i> , 2018 , 29, 054010	2	2
47	Large Memristor Crossbars for Analog Computing 2018 ,		6
46	Capacitive neural network with neuro-transistors. <i>Nature Communications</i> , 2018 , 9, 3208	17.4	132
45	Efficient and self-adaptive in-situ learning in multilayer memristor neural networks. <i>Nature Communications</i> , 2018 , 9, 2385	17.4	371
44	Comprehensive characterization of a general composite waveplate by spectroscopic Mueller matrix polarimetry. <i>Optics Express</i> , 2018 , 26, 25408-25425	3.3	14
43	Analogue signal and image processing with large memristor crossbars. <i>Nature Electronics</i> , 2018 , 1, 52-59	28.4	550
42	Study of the retardance of a birefringent waveplate at tilt incidence by Mueller matrix ellipsometer. <i>Journal of Optics (United Kingdom)</i> , 2018 , 20, 015401	1.7	17
41	Characterization of beam splitters in the calibration of a six-channel Stokes polarimeter. <i>Journal of Optics (United Kingdom)</i> , 2018 , 20, 125606	1.7	4
40	Metrology of Nanostructures by Tomographic Mueller-Matrix Scatterometry. <i>Applied Sciences (Switzerland)</i> , 2018 , 8, 2583	2.6	2
39	A provable key destruction scheme based on memristive crossbar arrays. <i>Nature Electronics</i> , 2018 , 1, 548-554	28.4	32
38	Anatomy of Ag/Hafnia-Based Selectors with 10 Nonlinearity. <i>Advanced Materials</i> , 2017 , 29, 1604457	24	245
37	Efficient electrical control of thin-film black phosphorus bandgap. <i>Nature Communications</i> , 2017 , 8, 14474	17.4	183
36	Three-dimensional crossbar arrays of self-rectifying Si/SiO ₂ /Si memristors. <i>Nature Communications</i> , 2017 , 8, 15666	17.4	115
35	A novel true random number generator based on a stochastic diffusive memristor. <i>Nature Communications</i> , 2017 , 8, 882	17.4	180
34	Reduced-basis boundary element method for fast electromagnetic field computation. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2017 , 34, 2231-2242	1.8	1
33	Memristors with diffusive dynamics as synaptic emulators for neuromorphic computing. <i>Nature Materials</i> , 2017 , 16, 101-108	27	1201
32	Robust overlay metrology with differential Mueller matrix calculus. <i>Optics Express</i> , 2017 , 25, 8491-8510	3.3	1
31	Optimal design of wide-view-angle waveplate used for polarimetric diagnosis of lithography system 2016 ,		1

30	A Dynamically Reconfigurable Ambipolar Black Phosphorus Memory Device. <i>ACS Nano</i> , 2016 , 10, 10428-10435	10.7	72
29	Black Phosphorus Mid-Infrared Photodetectors with High Gain. <i>Nano Letters</i> , 2016 , 16, 4648-55	11.5	476
28	Optimal broadband Mueller matrix ellipsometer using multi-waveplates with flexibly oriented axes. <i>Journal of Optics (United Kingdom)</i> , 2016 , 18, 025702	1.7	33
27	Depolarization artifacts in dual rotating-compensator Mueller matrix ellipsometry. <i>Journal of Optics (United Kingdom)</i> , 2016 , 18, 055701	1.7	17
26	Improved nanostructure reconstruction by performing data refinement in optical scatterometry. <i>Journal of Optics (United Kingdom)</i> , 2016 , 18, 015605	1.7	1
25	Sub-10 nm Ta Channel Responsible for Superior Performance of a HfO ₂ Memristor. <i>Scientific Reports</i> , 2016 , 6, 28525	4.9	128
24	Development of a spectroscopic Mueller matrix imaging ellipsometer for nanostructure metrology. <i>Review of Scientific Instruments</i> , 2016 , 87, 053707	1.7	13
23	Nondestructive analysis of lithographic patterns with natural line edge roughness from Mueller matrix ellipsometric data. <i>Applied Surface Science</i> , 2016 , 388, 524-530	6.7	9
22	Accurate alignment of optical axes of a biplate using a spectroscopic Mueller matrix ellipsometer. <i>Applied Optics</i> , 2016 , 55, 3935-41	0.2	13
21	Improved deep-etched multilayer grating reconstruction by considering etching anisotropy and abnormal errors in optical scatterometry. <i>Optics Letters</i> , 2015 , 40, 471-4	3	10
20	Mueller matrix imaging ellipsometry for nanostructure metrology. <i>Optics Express</i> , 2015 , 23, 17316-29	3.3	32
19	Towards understanding the detection of profile asymmetry from Mueller matrix differential decomposition. <i>Journal of Applied Physics</i> , 2015 , 118, 225308	2.5	6
18	Fast and accurate solution of inverse problem in optical scatterometry using heuristic search and robust correction. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2015 , 33, 031807	1.3	0
17	Measurement errors induced by axis tilt of biplates in dual-rotating compensator Mueller matrix ellipsometers 2015 ,		2
16	Device engineering and CMOS integration of nanoscale memristors 2014 ,		2
15	Force-moment line element method for Stokes flow around a slender body. <i>Engineering Analysis With Boundary Elements</i> , 2014 , 44, 120-129	2.6	2
14	. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2014 , 50, 2642-2653	3.7	6
13	Mueller matrix ellipsometric detection of profile asymmetry in nanoimprinted grating structures. <i>Journal of Applied Physics</i> , 2014 , 116, 194305	2.5	16

12	Single- and bi-layer memristive devices with tunable properties using TiOx switching layers deposited by reactive sputtering. <i>Applied Physics Letters</i> , 2014 , 104, 153505	3.4	12
11	Accurate characterization of nanoimprinted resist patterns using Mueller matrix ellipsometry. <i>Optics Express</i> , 2014 , 22, 15165-77	3.3	31
10	Robust solution to the inverse problem in optical scatterometry. <i>Optics Express</i> , 2014 , 22, 22031-42	3.3	18
9	Low voltage resistive switching devices based on chemically produced silicon oxide. <i>Applied Physics Letters</i> , 2013 , 103, 062104	3.4	28
8	Real-Time Estimation of Time-Varying Bending Modes Using Fiber Bragg Grating Sensor Arrays. <i>AIAA Journal</i> , 2013 , 51, 178-185	2.1	20
7	Effect of voltage polarity and amplitude on electroforming of TiO2 based memristive devices. <i>Nanoscale</i> , 2013 , 5, 3257-61	7.7	16
6	Improved measurement accuracy in optical scatterometry using correction-based library search. <i>Applied Optics</i> , 2013 , 52, 6726-34	1.7	20
5	Force-moment line element method for flexible slender bodies in Stokes flow. <i>Physical Review E</i> , 2013 , 88, 033306	2.4	1
4	Improvement of resistive switching uniformity for TiO2-based memristive devices by introducing a thin HfO2 layer. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2013 , 31, 06FA04	1.3	12
3	Measurement configuration optimization for accurate grating reconstruction by Mueller matrix polarimetry. <i>Journal of Micro/Nanolithography, MEMS, and MOEMS</i> , 2013 , 12, 033013	0.7	22
2	Cell-substrate interaction with cell-membrane-stress dependent adhesion. <i>Journal of Biomechanics</i> , 2012 , 45, 209-17	2.9	3
1	A Dynamical Compact Model of Diffusive and Drift Memristors for Neuromorphic Computing. <i>Advanced Electronic Materials</i> , 2100696	6.4	6