Jian Bai

List of Publications by Year
in descending order

119	1,437	331538	434063
papers	citations	21 h-index	31 g-index

119	119	119	726
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Expanding the Detection of Traversable Area with RealSense for the Visually Impaired. Sensors, 2016, 16, 1954.	2.1	73
2	Practical phase unwrapping of interferometric fringes based on unscented Kalman filter technique. Optics Express, 2015, 23, 32337.	1.7	58
3	Micromachined Accelerometers with Sub-Âµg/â^šHz Noise Floor: A Review. Sensors, 2020, 20, 4054.	2.1	56
4	Target enhanced 3D reconstruction based on polarization-coded structured light. Optics Express, 2017, 25, 1173.	1.7	48
5	Design, Optimization, and Realization of a High-Performance MOEMS Accelerometer From a Double-Device-Layer SOI Wafer. Journal of Microelectromechanical Systems, 2017, 26, 859-869.	1.7	41
6	Quadriwave lateral shearing interferometer based on a randomly encoded hybrid grating. Optics Letters, 2015, 40, 2245.	1.7	40
7	Minimizing cross-axis sensitivity in grating-based optomechanical accelerometers. Optics Express, 2016, 24, 9094.	1.7	40
8	Subnanometer resolution displacement sensor based on a grating interferometric cavity with intensity compensation and phase modulation. Applied Optics, 2015, 54, 4188.	2.1	34
9	Detecting Traversable Area and Water Hazards for the Visually Impaired with a pRGB-D Sensor. Sensors, 2017, 17, 1890.	2.1	34
10	Nanometer-scale displacement sensor based on phase-sensitive diffraction grating. Applied Optics, 2011, 50, 1413.	2.1	33
11	Optical accelerometer based on grating interferometer with phase modulation technique. Applied Optics, 2012, 51, 7005.	0.9	33
12	Design of panoramic stereo imaging with single optical system. Optics Express, 2012, 20, 6085.	1.7	32
13	Aspheric subaperture stitching based on system modeling. Optics Express, 2015, 23, 19176.	1.7	28
14	Design of a panoramic annular lens with a long focal length. Applied Optics, 2007, 46, 7850.	2.1	27
15	Field-widened Michelson interferometer for spectral discrimination in high-spectral-resolution lidar: theoretical framework. Optics Express, 2015, 23, 12117.	1.7	27
16	Design of iodine absorption cell for high-spectral-resolution lidar. Optics Express, 2017, 25, 15913.	1.7	27
17	Real-time pedestrian crossing lights detection algorithm for the visually impaired. Multimedia Tools and Applications, 2018, 77, 20651-20671.	2.6	26
18	Calibration method for high-accuracy measurement of long focal length with Talbot interferometry. Applied Optics, 2012, 51, 2407.	0.9	24

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19	Common-path and compact wavefront diagnosis system based on cross grating lateral shearing interferometer. Applied Optics, 2014, 53, 7144.	0.9	24
20	Stray light analysis and suppression of panoramic annular lens. Optics Express, 2013, 21, 10810.	1.7	23
21	Long focal-length measurement using divergent beam and two gratings of different periods. Optics Express, 2014, 22, 27921.	1.7	22
22	A semianalytic Monte Carlo radiative transfer model for polarized oceanic lidar: Experiment-based comparisons and multiple scattering effects analyses. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 237, 106638.	1.1	21
23	Comparison of two panoramic front unit arrangements in design of a super wide angle panoramic annular lens. Applied Optics, 2016, 55, 3219.	0.9	20
24	IR stereo RealSense: Decreasing minimum range of navigational assistance for visually impaired individuals. Journal of Ambient Intelligence and Smart Environments, 2017, 9, 743-755.	0.8	20
25	General measurement of optical system aberrations with a continuously variable lateral shear ratio by a randomly encoded hybrid grating. Applied Optics, 2015, 54, 8913.	2.1	19
26	Relationship between the effective attenuation coefficient of spaceborne lidar signal and the IOPs of seawater. Optics Express, 2018, 26, 30278.	1.7	19
27	Panoramic Annular Localizer: Tackling the Variation Challenges of Outdoor Localization Using Panoramic Annular Images and Active Deep Descriptors. , 2019, , .		18
28	Panoramic annular SLAM with loop closure and global optimization. Applied Optics, 2021, 60, 6264.	0.9	18
29	Compact optical correlator based on one phase-only spatial light modulator. Optics Letters, 2011, 36, 1383.	1.7	17
30	Non-blind area PAL system design based on dichroic filter. Optics Express, 2016, 24, 4913.	1.7	17
31	Practical retrace error correction in non-null aspheric testing: A comparison. Optics Communications, 2017, 383, 378-385.	1.0	17
32	Investigation of a complete squeeze-film damping model for MEMS devices. Microsystems and Nanoengineering, 2021, 7, 54.	3.4	17
33	PALVO: visual odometry based on panoramic annular lens. Optics Express, 2019, 27, 24481.	1.7	17
34	Unifying Visual Localization and Scene Recognition for People With Visual Impairment. IEEE Access, 2020, 8, 64284-64296.	2.6	16
35	Assisting the visually impaired: multitarget warning through millimeter wave radar and RGB-depth sensors. Journal of Electronic Imaging, 2019, 28, 1.	0.5	16
36	Retrieving the seawater volume scattering function at the 180Â° scattering angle with a high-spectral-resolution lidar. Optics Express, 2017, 25, 11813.	1.7	15

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37	Long-Range Traversability Awareness and Low-Lying Obstacle Negotiation with RealSense for the Visually Impaired. , 2018, , .		15
38	Single Chip-Based Nano-Optomechanical Accelerometer Based on Subwavelength Grating Pair and Rotated Serpentine Springs. Sensors, 2018, 18, 2036.	2.1	15
39	Reducing the minimum range of a RGB-depth sensor to aid navigation in visually impaired individuals. Applied Optics, 2018, 57, 2809.	0.9	14
40	Design of a compact varifocal panoramic system based on the mechanical zoom method. Applied Optics, 2021, 60, 6448.	0.9	14
41	Laser direct writing using submicron-diameter fibers. Optics Express, 2009, 17, 19960.	1.7	13
42	A high-resolution displacement sensor based on a grating interferometer with the phase modulation technique. Measurement Science and Technology, 2012, 23, 105102.	1.4	13
43	Field-widened Michelson interferometer for spectral discrimination in high-spectral-resolution lidar: practical development. Optics Express, 2016, 24, 7232.	1.7	13
44	Polarimetric target depth sensing in ambient illumination based on polarization-coded structured light. Applied Optics, 2017, 56, 7741.	0.9	13
45	Hierarchical visual localization for visually impaired people using multimodal images. Expert Systems With Applications, 2021, 165, 113743.	4.4	13
46	Aberration calibration in high-NA spherical surfaces measurement on point diffraction interferometry. Applied Optics, 2015, 54, 3877.	2.1	12
47	Surface defects evaluation system based on electromagnetic model simulation and inverse-recognition calibration method. Optics Communications, 2017, 390, 88-98.	1.0	12
48	Polarization properties of receiving telescopes in atmospheric remote sensing polarization lidars. Applied Optics, 2017, 56, 6837.	0.9	12
49	Design of freeform geometries in a MEMS accelerometer with a mechanical motion preamplifier based on a genetic algorithm. Microsystems and Nanoengineering, 2020, 6, 104.	3.4	12
50	Dual-view catadioptric panoramic system based on even aspheric elements. Applied Optics, 2020, 59, 7630.	0.9	12
51	Compact polarization-based dual-view panoramic lens. Applied Optics, 2017, 56, 6283.	0.9	11
52	A Semianalytic Monte Carlo Simulator for Spaceborne Oceanic Lidar: Framework and Preliminary Results. Remote Sensing, 2020, 12, 2820.	1.8	11
53	Generalized high-spectral-resolution lidar technique with a multimode laser for aerosol remote sensing. Optics Express, 2017, 25, 979.	1.7	10
54	Design of a large-range rotary microgripper with freeform geometries using a genetic algorithm. Microsystems and Nanoengineering, 2022, 8, 3.	3.4	10

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55	OpenMPR: Recognize places using multimodal data for people with visual impairments. Measurement Science and Technology, 2019, 30, 124004.	1.4	9
56	Optimum wavelength of spaceborne oceanic lidar in penetration depth. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 256, 107310.	1.1	9
57	Simultaneous reconstruction of phase and amplitude for wavefront measurements based on nonlinear optimization algorithms. Optics Express, 2020, 28, 19726.	1.7	8
58	Design of stereo imaging system with a panoramic annular lens and a convex mirror. Optics Express, 2022, 30, 19017.	1.7	8
59	Frequency locking of a field-widened Michelson interferometer based on optimal multi-harmonics heterodyning. Optics Letters, 2016, 41, 3916.	1.7	7
60	Optical vortex beam direct-writing photolithography. Applied Physics Express, 2018, 11, 036503.	1.1	7
61	Modal-based nonlinear optimization algorithm for wavefront measurement with under-sampled data. Optics Letters, 2020, 45, 5456.	1.7	7
62	Design of vari-focal panoramic annular lenses based on Alvarez surfaces. , 2014, , .		6
63	Misalignment correction for free-form surface in non-null interferometric testing. Optics Communications, 2019, 437, 204-213.	1.0	6
64	Interferometric measurement of freeform surfaces using irregular subaperture stitching. Measurement Science and Technology, 2020, 31, 055202.	1.4	6
65	Accurate phase retrieval algorithm based on linear correlation in self-calibration phase-shifting interferometry with blind phase shifts. Optics Communications, 2020, 466, 125612.	1.0	6
66	Fusion of millimeter wave radar and RGB-depth sensors for assisted navigation of the visually impaired. , 2018, , .		6
67	A Temperature Control Method for Microaccelerometer Chips Based on Genetic Algorithm and Fuzzy PID Control. Micromachines, 2021, 12, 1511.	1.4	6
68	Parallel lensless optical correlator based on two phase-only spatial light modulators. Optics Express, 2011, 19, 12594.	1.7	5
69	Focused laser lithographic system with sub-wavelength resolution based on vortex laser induced opacity of photochromic material. Optics Letters, 2014, 39, 6707.	1.7	5
70	Design of the interferometric spectral discrimination filters for a three-wavelength high-spectral-resolution lidar. Optics Express, 2016, 24, 27622.	1.7	5
71	Determination of thermally induced effects and design guidelines of optomechanical accelerometers. Measurement Science and Technology, 2017, 28, 115201.	1.4	5
72	Comprehensive design and calibration of an even aspheric quarter-wave plate for polarization point diffraction interferometry. Applied Optics, 2018, 57, 1789.	0.9	5

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73	Feature-based characterization and extraction of ripple errors over the large square aperture. Optics Express, 2021, 29, 8296.	1.7	5
74	Large-scale phase retrieval method for wavefront reconstruction with multi-stage random phase modulation. Optics Communications, 2021, 498, 127115.	1.0	5
75	High-performance panoramic annular lens design for real-time semantic segmentation on aerial imagery. Optical Engineering, 2022, 61, .	0.5	5
76	Tolerance analysis and optimization of a lateral deformable NEMS zeroth-order gratings. Optics Communications, 2015, 355, 356-366.	1.0	4
77	Characterization of the pinhole diffraction based on the waveguide effect in a point diffraction interferometer. Applied Optics, 2018, 57, 781.	0.9	4
78	Genetic Algorithm for the Design of Freeform Geometries in a MEMS Accelerometer Comprising a Mechanical Motion Pre-Amplifier. , 2019, , .		4
79	Investigation of the thermal deformation of a chip-scale packaged optical accelerometer. Measurement: Journal of the International Measurement Confederation, 2020, 163, 108017.	2.5	4
80	A Mems Accelerometer with an Auto-Tuning System Based on an Electrostatic Anti-Spring. , 2021, , .		4
81	The analysis of temperature effect and temperature compensation of MOEMS accelerometer based on a grating interferometric cavity. Proceedings of SPIE, 2016, , .	0.8	3
82	High-spectral-resolution lidar for ocean ecosystem studies. Proceedings of SPIE, 2016, , .	0.8	3
83	Analysis and correction of spherical aberrations in long focal length measurements. Optics Communications, 2021, 482, 126564.	1.0	3
84	Representation of complex optical surfaces with adaptive radial basis functions. Applied Optics, 2019, 58, 3938.	0.9	3
85	A MOEMS Accelerometer Based on Diffraction Grating with Improved Mechanical Structure. International Journal of Automation Technology, 2015, 9, 473-481.	0.5	3
86	Non-null testing of the aspheric surface using a quadriwave lateral shearing interferometer. Applied Optics, 2020, 59, 5447.	0.9	3
87	Panoramic optical annular staring inspection system for evaluating the inner surface of a pipe. , 2007, , .		2
88	An improved image restoration method for the high definition panoramic camera system. Optics and Lasers in Engineering, 2009, 47, 982-989.	2.0	2
89	Calibration method for high accuracy measurement of long focal length with Talbot interferometry: reply. Applied Optics, 2015, 54, 10573.	2.1	2
90	Design of a panoramic long-wave infrared athermal system. Optical Engineering, 2016, 55, 125103.	0.5	2

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91	Mechanical design optimization of a single-axis MOEMS accelerometer based on a grating interferometry cavity for ultrahigh sensitivity. Proceedings of SPIE, 2016, , .	0.8	2
92	Design of the closed-loop capacitive microaccelerometer based on PSpice. , 2017, , .		2
93	Optical Acceleration Measurement Method with Large Non-ambiguity Range and High Resolution via Synthetic Wavelength and Single Wavelength Superheterodyne Interferometry. Sensors, 2018, 18, 3417.	2.1	2
94	Cross-iteration multi-step optimization strategy for three-dimensional intensity position correction in phase diverse phase retrieval. Optics Express, 2021, 29, 29186.	1.7	2
95	Semi-analytic Fresnel diffraction calculation with polynomial decomposition. Optics Letters, 2022, 47, 3776.	1.7	2
96	Design of a panoramic annular lens with a horizontal symmetric FOV. Proceedings of SPIE, 2012, , .	0.8	1
97	Photolithography using lateral surface of nanofibers. Optics Communications, 2015, 343, 195-200.	1.0	1
98	High-spectral-resolution lidar for ocean biological carbon pump studies. , 2016, , .		1
99	Polarized high-spectral-resolution lidar based on field-widened Michelson interferometer. Proceedings of SPIE, 2016, , .	0.8	1
100	Full-aperture long focal-length measurement based on divergent beam. Journal of Physics: Conference Series, 2016, 680, 012012.	0.3	1
101	Genetic Algorithm for the Design of Freeform Geometries in a Large-Range Rotary Micrograpper. , 2021, , .		1
102	Investigation of the Influence of Temperature and Humidity on the Bandwidth of an Accelerometer. Micromachines, 2021, 12, 860.	1.4	1
103	3D simulation for scatter light distribution of optical surface defects. , 2018, , .		1
104	Distortion control for panoramic annular lens with Q-type aspheres. Proceedings of SPIE, 2014, , .	0.8	0
105	Analysis of the imaging performance of panoramic annular lens with conic conformal dome. , 2015, , .		0
106	Recent developments of interferometric wavefront sensing. , 2015, , .		0
107	Comprehensive view of high-spectral-resolution lidar technique from the perspective of spectral discrimination. Proceedings of SPIE, 2016, , .	0.8	0
108	A novel design of dual-channel optical system of star-tracker based on non-blind area PAL system. , 2016, , .		0

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109	Field-widened Michelson interferometer system as the spectroscopic filter of high-spectral-resolution lidar. , 2016, , .		0
110	Comparison of Fiber-to-Waveguide Couplers in Point Diffraction Interferometer Based on Waveguide Reference Wavefront Source. Applied Sciences (Switzerland), 2020, 10, 9115.	1.3	0
111	Corrections to â€œDesign, Optimization, and Realization of a High Performance MOEMS Accelerometer From a Double-Device-Layer SOI Waferâ€•[Aug 17 859-869]. Journal of Microelectromechanical Systems, 2021, 30, 331-331.	1.7	0
112	Non-propagation fast phase diverse phase retrieval for wavefront measurement with generalized FFT-based basis function. Optics Express, 2021, 29, 18817.	1.7	0
113	Two characterization methods of ripple errors for the large square aperture. Applied Optics, 2021, 60, 8706.	0.9	0
114	Spherical aberration compensation method for long focal-length measurement based on Talbot interferometry. Proceedings of SPIE, 2017, , .	0.8	0
115	A pressure-tuned field-widened Michelson interferometer system as the spectroscopic filter of high-spectral-resolution lidar. , 2018, , .		0
116	Thermal stress of MOEMS accelerometers based on grating interferometric cavity. , 2018, , .		0
117	Correlated Theory of Cross-Axis Interference of MEMS Devices Based on Parallel Plate and Squeeze Film Air Damping Induced Suppression. IEEE Sensors Journal, 2022, 22, 6698-6705.	2.4	0
118	A Mems Electro-Mechanical Co-Optimization Platform Featuring Freeform Geometry Optimization Based on a Genetic Algorithm. , 2022, , .		0
119	Accurate mechanicalâ€“optical theoretical model of cross-axis sensitivity of an interferometric micro-optomechanical accelerometer. Applied Optics, 2022, 61, 3201.	0.9	0