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	Design of a large-range rotary microgripper with freeform geometries using a genetic algorithm. Microsystems and Nanoengineering, 2022, 8, 3.	3.4	10
2	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
3	A Mems Electro-Mechanical Co-Optimization Platform Featuring Freeform Geometry Optimization Based on a Genetic Algorithm. , 2022, , .		0
4	High-performance panoramic annular lens design for real-time semantic segmentation on aerial imagery. Optical Engineering, 2022, 61, .	0.5	5
5	Accurate mechanicalâ€“optical theoretical model of cross-axis sensitivity of an interferometric micro-optomechanical accelerometer. Applied Optics, 2022, 61, 3201.	0.9	0
6	Design of stereo imaging system with a panoramic annular lens and a convex mirror. Optics Express, 2022, 30, 19017.	1.7	8
7	Semi-analytic Fresnel diffraction calculation with polynomial decomposition. Optics Letters, 2022, 47, 3776.	1.7	2
8	Analysis and correction of spherical aberrations in long focal length measurements. Optics Communications, 2021, 482, 126564.	1.0	3
9	Hierarchical visual localization for visually impaired people using multimodal images. Expert Systems With Applications, 2021, 165, 113743.	4.4	13
10	Genetic Algorithm for the Design of Freeform Geometries in a Large-Range Rotary Microgripper. , 2021, , .		1
11	A Mems Accelerometer with an Auto-Tuning System Based on an Electrostatic Anti-Spring. , 2021, , .		4
12	Feature-based characterization and extraction of ripple errors over the large square aperture. Optics Express, 2021, 29, 8296.	1.7	5
13	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
14	Non-propagation fast phase diverse phase retrieval for wavefront measurement with generalized FFT-based basis function. Optics Express, 2021, 29, 18817.	1.7	0
15	Investigation of the Influence of Temperature and Humidity on the Bandwidth of an Accelerometer. Micromachines, 2021, 12, 860.	1.4	1
16	Panoramic annular SLAM with loop closure and global optimization. Applied Optics, 2021, 60, 6264.	0.9	18
17	Design of a compact varifocal panoramic system based on the mechanical zoom method. Applied Optics, 2021, 60, 6448.	0.9	14
18	Investigation of a complete squeeze-film damping model for MEMS devices. Microsystems and Nanoengineering, 2021, 7, 54.	3.4	17

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19	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
20	Two characterization methods of ripple errors for the large square aperture. Applied Optics, 2021, 60, 8706.	0.9	0
21	Large-scale phase retrieval method for wavefront reconstruction with multi-stage random phase modulation. Optics Communications, 2021, 498, 127115.	1.0	5
22	A Temperature Control Method for Microaccelerometer Chips Based on Genetic Algorithm and Fuzzy PID Control. Micromachines, 2021, 12, 1511.	1.4	6
23	Interferometric measurement of freeform surfaces using irregular subaperture stitching. Measurement Science and Technology, 2020, 31, 055202.	1.4	6
24	Optimum wavelength of spaceborne oceanic lidar in penetration depth. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 256, 107310.	1.1	9
25	Micromachined Accelerometers with Sub-Âµg/âˆšHz Noise Floor: A Review. Sensors, 2020, 20, 4054.	2.1	56
26	A Semianalytic Monte Carlo Simulator for Spaceborne Oceanic Lidar: Framework and Preliminary Results. Remote Sensing, 2020, 12, 2820.	1.8	11
27	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
28	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
29	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
30	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
31	Unifying Visual Localization and Scene Recognition for People With Visual Impairment. IEEE Access, 2020, 8, 64284-64296.	2.6	16
32	Dual-view catadioptric panoramic system based on even aspheric elements. Applied Optics, 2020, 59, 7630.	0.9	12
33	Simultaneous reconstruction of phase and amplitude for wavefront measurements based on nonlinear optimization algorithms. Optics Express, 2020, 28, 19726.	1.7	8
34	Modal-based nonlinear optimization algorithm for wavefront measurement with under-sampled data. Optics Letters, 2020, 45, 5456.	1.7	7
35	Non-null testing of the aspheric surface using a quadriwave lateral shearing interferometer. Applied Optics, 2020, 59, 5447.	0.9	3
36	OpenMPR: Recognize places using multimodal data for people with visual impairments. Measurement Science and Technology, 2019, 30, 124004.	1.4	9

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37	Genetic Algorithm for the Design of Freeform Geometries in a MEMS Accelerometer Comprising a Mechanical Motion Pre-Amplifier. , 2019, , .		4
38	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
39	Panoramic Annular Localizer: Tackling the Variation Challenges of Outdoor Localization Using Panoramic Annular Images and Active Deep Descriptors. , 2019, , .		18
40	Misalignment correction for free-form surface in non-null interferometric testing. Optics Communications, 2019, 437, 204-213.	1.0	6
41	Assisting the visually impaired: multitarget warning through millimeter wave radar and RGB-depth sensors. Journal of Electronic Imaging, 2019, 28, 1.	0.5	16
42	Representation of complex optical surfaces with adaptive radial basis functions. Applied Optics, 2019, 58, 3938.	0.9	3
43	PALVO: visual odometry based on panoramic annular lens. Optics Express, 2019, 27, 24481.	1.7	17
44	Real-time pedestrian crossing lights detection algorithm for the visually impaired. Multimedia Tools and Applications, 2018, 77, 20651-20671.	2.6	26
45	Optical vortex beam direct-writing photolithography. Applied Physics Express, 2018, 11, 036503.	1.1	7
46	Long-Range Traversability Awareness and Low-Lying Obstacle Negotiation with RealSense for the Visually Impaired. , 2018, , .		15
47	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
48	Reducing the minimum range of a RGB-depth sensor to aid navigation in visually impaired individuals. Applied Optics, 2018, 57, 2809.	0.9	14
49	Characterization of the pinhole diffraction based on the waveguide effect in a point diffraction interferometer. Applied Optics, 2018, 57, 781.	0.9	4
50	Single Chip-Based Nano-Optomechanical Accelerometer Based on Subwavelength Grating Pair and Rotated Serpentine Springs. Sensors, 2018, 18, 2036.	2.1	15
51	Comprehensive design and calibration of an even aspheric quarter-wave plate for polarization point diffraction interferometry. Applied Optics, 2018, 57, 1789.	0.9	5
52	Fusion of millimeter wave radar and RGB-depth sensors for assisted navigation of the visually impaired. , 2018, , .		6
53	Relationship between the effective attenuation coefficient of spaceborne lidar signal and the IOPs of seawater. Optics Express, 2018, 26, 30278.	1.7	19
54	3D simulation for scatter light distribution of optical surface defects. , 2018, , .		1

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55	A pressure-tuned field-widened Michelson interferometer system as the spectroscopic filter of high-spectral-resolution lidar. , 2018, , .		0
56	Thermal stress of MOEMS accelerometers based on grating interferometric cavity. , 2018, , .		0
57	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
58	Surface defects evaluation system based on electromagnetic model simulation and inverse-recognition calibration method. Optics Communications, 2017, 390, 88-98.	1.0	12
59	Determination of thermally induced effects and design guidelines of optomechanical accelerometers. Measurement Science and Technology, 2017, 28, 115201.	1.4	5
60	Practical retrace error correction in non-null aspheric testing: A comparison. Optics Communications, 2017, 383, 378-385.	1.0	17
61	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
62	Design of the closed-loop capacitive microaccelerometer based on PSpice. , 2017, , .		2
63	Polarization properties of receiving telescopes in atmospheric remote sensing polarization lidars. Applied Optics, 2017, 56, 6837.	0.9	12
64	Design of iodine absorption cell for high-spectral-resolution lidar. Optics Express, 2017, 25, 15913.	1.7	27
65	Generalized high-spectral-resolution lidar technique with a multimode laser for aerosol remote sensing. Optics Express, 2017, 25, 979.	1.7	10
66	Target enhanced 3D reconstruction based on polarization-coded structured light. Optics Express, 2017, 25, 1173.	1.7	48
67	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
68	Compact polarization-based dual-view panoramic lens. Applied Optics, 2017, 56, 6283.	0.9	11
69	Polarimetric target depth sensing in ambient illumination based on polarization-coded structured light. Applied Optics, 2017, 56, 7741.	0.9	13
70	Detecting Traversable Area and Water Hazards for the Visually Impaired with a pRGB-D Sensor. Sensors, 2017, 17, 1890.	2.1	34
71	Spherical aberration compensation method for long focal-length measurement based on Talbot interferometry. Proceedings of SPIE, 2017, , .	0.8	0
72	Expanding the Detection of Traversable Area with RealSense for the Visually Impaired. Sensors, 2016, 16, 1954.	2.1	73

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73	Design of the interferometric spectral discrimination filters for a three-wavelength high-spectral-resolution lidar. Optics Express, 2016, 24, 27622.	1.7	5
74	The analysis of temperature effect and temperature compensation of MOEMS accelerometer based on a grating interferometric cavity. Proceedings of SPIE, 2016, , .	0.8	3
75	Design of a panoramic long-wave infrared athermal system. Optical Engineering, 2016, 55, 125103.	0.5	2
76	High-spectral-resolution lidar for ocean biological carbon pump studies. , 2016, , .		1
77	Field-widened Michelson interferometer for spectral discrimination in high-spectral-resolution lidar: practical development. Optics Express, 2016, 24, 7232.	1.7	13
78	Polarized high-spectral-resolution lidar based on field-widened Michelson interferometer. Proceedings of SPIE, 2016, , .	0.8	1
79	Comprehensive view of high-spectral-resolution lidar technique from the perspective of spectral discrimination. Proceedings of SPIE, 2016, , .	0.8	0
80	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
81	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
82	Frequency locking of a field-widened Michelson interferometer based on optimal multi-harmonics heterodyning. Optics Letters, 2016, 41, 3916.	1.7	7
83	Non-blind area PAL system design based on dichroic filter. Optics Express, 2016, 24, 4913.	1.7	17
84	A novel design of dual-channel optical system of star-tracker based on non-blind area PAL system. , 2016, , .		0
85	Full-aperture long focal-length measurement based on divergent beam. Journal of Physics: Conference Series, 2016, 680, 012012.	0.3	1
86	Minimizing cross-axis sensitivity in grating-based optomechanical accelerometers. Optics Express, 2016, 24, 9094.	1.7	40
87	Field-widened Michelson interferometer system as the spectroscopic filter of high-spectral-resolution lidar. , 2016, , .		0
88	High-spectral-resolution lidar for ocean ecosystem studies. Proceedings of SPIE, 2016, , .	0.8	3
89	Practical phase unwrapping of interferometric fringes based on unscented Kalman filter technique. Optics Express, 2015, 23, 32337.	1.7	58
90	Analysis of the imaging performance of panoramic annular lens with conic conformal dome. , 2015, , .		0

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91	Recent developments of interferometric wavefront sensing. , 2015, , .		0
92	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
93	Calibration method for high accuracy measurement of long focal length with Talbot interferometry: reply. Applied Optics, 2015, 54, 10573.	2.1	2
94	Photolithography using lateral surface of nanofibers. Optics Communications, 2015, 343, 195-200.	1.0	1
95	Subnanometer resolution displacement sensor based on a grating interferometric cavity with intensity compensation and phase modulation. Applied Optics, 2015, 54, 4188.	2.1	34
96	Field-widened Michelson interferometer for spectral discrimination in high-spectral-resolution lidar: theoretical framework. Optics Express, 2015, 23, 12117.	1.7	27
97	Aspheric subaperture stitching based on system modeling. Optics Express, 2015, 23, 19176.	1.7	28
98	Quadriwave lateral shearing interferometer based on a randomly encoded hybrid grating. Optics Letters, 2015, 40, 2245.	1.7	40
99	Aberration calibration in high-NA spherical surfaces measurement on point diffraction interferometry. Applied Optics, 2015, 54, 3877.	2.1	12
100	Tolerance analysis and optimization of a lateral deformable NEMS zeroth-order gratings. Optics Communications, 2015, 355, 356-366.	1.0	4
101	A MOEMS Accelerometer Based on Diffraction Grating with Improved Mechanical Structure. International Journal of Automation Technology, 2015, 9, 473-481.	0.5	3
102	Distortion control for panoramic annular lens with Q-type aspheres. Proceedings of SPIE, 2014, , .	0.8	0
103	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
104	Long focal-length measurement using divergent beam and two gratings of different periods. Optics Express, 2014, 22, 27921.	1.7	22
105	Common-path and compact wavefront diagnosis system based on cross grating lateral shearing interferometer. Applied Optics, 2014, 53, 7144.	0.9	24
106	Design of vari-focal panoramic annular lenses based on Alvarez surfaces. , 2014, , .		6
107	Stray light analysis and suppression of panoramic annular lens. Optics Express, 2013, 21, 10810.	1.7	23
108	Design of panoramic stereo imaging with single optical system. Optics Express, 2012, 20, 6085.	1.7	32

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109	Calibration method for high-accuracy measurement of long focal length with Talbot interferometry. Applied Optics, 2012, 51, 2407.	0.9	24
110	Optical accelerometer based on grating interferometer with phase modulation technique. Applied Optics, 2012, 51, 7005.	0.9	33
111	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
112	Design of a panoramic annular lens with a horizontal symmetric FOV. Proceedings of SPIE, 2012, , .	0.8	1
113	Nanometer-scale displacement sensor based on phase-sensitive diffraction grating. Applied Optics, 2011, 50, 1413.	2.1	33
114	Parallel lensless optical correlator based on two phase-only spatial light modulators. Optics Express, 2011, 19, 12594.	1.7	5
115	Compact optical correlator based on one phase-only spatial light modulator. Optics Letters, 2011, 36, 1383.	1.7	17
116	An improved image restoration method for the high definition panoramic camera system. Optics and Lasers in Engineering, 2009, 47, 982-989.	2.0	2
117	Laser direct writing using submicron-diameter fibers. Optics Express, 2009, 17, 19960.	1.7	13
118	Panoramic optical annular staring inspection system for evaluating the inner surface of a pipe. , 2007, , .		2
119	Design of a panoramic annular lens with a long focal length. Applied Optics, 2007, 46, 7850.	2.1	27