

# Dong Liu

## List of Publications by Year in descending order

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150  
papers

2,349  
citations

236925

25  
h-index

276875

41  
g-index

150  
all docs

150  
docs citations

150  
times ranked

1642  
citing authors

#	ARTICLE	IF	CITATIONS
1	Global distribution of cirrus clouds from CloudSat/CloudAerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) measurements. Journal of Geophysical Research, 2008, 113, .	3.3	365
2	Climatology of drizzle in marine boundary layer clouds based on 1 year of data from CloudSat and CloudAerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO). Journal of Geophysical Research, 2008, 113, .	3.3	111
3	Dark-field microscopic image stitching method for surface defects evaluation of large fine optics. Optics Express, 2013, 21, 5974.	3.4	68
4	Practical methods for retrace error correction in nonnull aspheric testing. Optics Express, 2009, 17, 7025.	3.4	64
5	Microscopic scattering imaging measurement and digital evaluation system of defects for fine optical surface. Optics Communications, 2007, 278, 240-246.	2.1	58
6	Practical phase unwrapping of interferometric fringes based on unscented Kalman filter technique. Optics Express, 2015, 23, 32337.	3.4	58
7	Assessing the depolarization capabilities of nonspherical particles in a super-ellipsoidal shape space. Optics Express, 2018, 26, 1726.	3.4	57
8	Retrieval and analysis of a polarized high-spectral-resolution lidar for profiling aerosol optical properties. Optics Express, 2013, 21, 13084.	3.4	52
9	Demodulation of a single complex fringe interferogram with a path-independent regularized phase-tracking technique. Applied Optics, 2010, 49, 170.	2.1	41
10	Real time diagnosis of transient pulse laser with high repetition by radial shearing interferometer. Applied Optics, 2007, 46, 8305.	2.1	40
11	Quadriwave lateral shearing interferometer based on a randomly encoded hybrid grating. Optics Letters, 2015, 40, 2245.	3.3	40
12	Minimizing cross-axis sensitivity in grating-based optomechanical accelerometers. Optics Express, 2016, 24, 9094.	3.4	40
13	System analysis of a tilted field-widened Michelson interferometer for high spectral resolution lidar. Optics Express, 2012, 20, 1406.	3.4	39
14	Automated discrimination between digs and dust particles on optical surfaces with dark-field scattering microscopy. Applied Optics, 2014, 53, 5131.	1.8	39
15	Defects evaluation system for spherical optical surfaces based on microscopic scattering dark-field imaging method. Applied Optics, 2016, 55, 6162.	2.1	38
16	Non-null annular subaperture stitching interferometry for steep aspheric measurement. Applied Optics, 2014, 53, 5755.	1.8	36
17	Reverse optimization reconstruction of aspheric figure error in a non-null interferometer. Applied Optics, 2014, 53, 5538.	1.8	36
18	Lidar Remote Sensing of Seawater Optical Properties: Experiment and Monte Carlo Simulation. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 9489-9498.	6.3	33

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19	Practical and accurate method for aspheric misalignment aberrations calibration in non-null interferometric testing. <i>Applied Optics</i> , 2013, 52, 8501.	1.8	31
20	Effects of spectral discrimination in high-spectral-resolution lidar on the retrieval errors for atmospheric aerosol optical properties. <i>Applied Optics</i> , 2014, 53, 4386.	1.8	29
21	Vertical distribution of subsurface phytoplankton layer in South China Sea using airborne lidar. <i>Remote Sensing of Environment</i> , 2021, 263, 112567.	11.0	29
22	Aspheric subaperture stitching based on system modeling. <i>Optics Express</i> , 2015, 23, 19176.	3.4	28
23	Field-widened Michelson interferometer for spectral discrimination in high-spectral-resolution lidar: theoretical framework. <i>Optics Express</i> , 2015, 23, 12117.	3.4	27
24	Design of iodine absorption cell for high-spectral-resolution lidar. <i>Optics Express</i> , 2017, 25, 15913.	3.4	27
25	The Three-Dimensional Structure of Transatlantic African Dust Transport: A New Perspective from CALIPSO LIDAR Measurements. <i>Advances in Meteorology</i> , 2012, 2012, 1-9.	1.6	26
26	Gravitational wave astronomy: the current status. <i>Science China: Physics, Mechanics and Astronomy</i> , 2015, 58, 1.	5.1	26
27	Real-time pedestrian crossing lights detection algorithm for the visually impaired. <i>Multimedia Tools and Applications</i> , 2018, 77, 20651-20671.	3.9	26
28	Detection of surface defects and subsurface defects of polished optics with multisensor image fusion. <i>Photonix</i> , 2022, 3, .	13.5	26
29	Common-path and compact wavefront diagnosis system based on cross grating lateral shearing interferometer. <i>Applied Optics</i> , 2014, 53, 7144.	1.8	24
30	The next detectors for gravitational wave astronomy. <i>Science China: Physics, Mechanics and Astronomy</i> , 2015, 58, 1.	5.1	23
31	Fast and accurate wavefront reconstruction in two-frame phase-shifting interferometry with unknown phase step. <i>Optics Letters</i> , 2018, 43, 3033.	3.3	22
32	Interferometric filters for spectral discrimination in high-spectral-resolution lidar: performance comparisons between Fabry-Perot interferometer and field-widened Michelson interferometer. <i>Applied Optics</i> , 2013, 52, 7838.	1.8	21
33	Distortion correction in surface defects evaluating system of large fine optics. <i>Optics Communications</i> , 2014, 312, 110-116.	2.1	21
34	A semianalytic Monte Carlo radiative transfer model for polarized oceanic lidar: Experiment-based comparisons and multiple scattering effects analyses. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 237, 106638.	2.3	21
35	Comparing black and brown carbon absorption from AERONET and surface measurements at wintertime Fresno. <i>Atmospheric Environment</i> , 2019, 199, 164-176.	4.1	20
36	Backscattering ratios of soot-contaminated dusts at triple LiDAR wavelengths: T-matrix results. <i>Optics Express</i> , 2019, 27, A92.	3.4	20

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37	General measurement of optical system aberrations with a continuously variable lateral shear ratio by a randomly encoded hybrid grating. <i>Applied Optics</i> , 2015, 54, 8913.	2.1	19
38	Validation of the Analytical Model of Oceanic Lidar Returns: Comparisons with Monte Carlo Simulations and Experimental Results. <i>Remote Sensing</i> , 2019, 11, 1870.	4.0	19
39	Relationship between the effective attenuation coefficient of spaceborne lidar signal and the IOPs of seawater. <i>Optics Express</i> , 2018, 26, 30278.	3.4	19
40	Performance estimation of space-borne high-spectral-resolution lidar for cloud and aerosol optical properties at 532 nm. <i>Optics Express</i> , 2019, 27, A481.	3.4	19
41	Measurement of transient near-infrared laser pulse wavefront with high precision by radial shearing interferometer. <i>Optics Communications</i> , 2007, 275, 173-178.	2.1	18
42	Non-null interferometric aspheric testing with partial null lens and reverse optimization. <i>Proceedings of SPIE</i> , 2009, , .	0.8	18
43	Wavefront retrieval for cross-grating lateral shearing interferometer based on differential Zernike polynomial fitting. , 2013, , .		18
44	Off-axis cyclic radial shearing interferometer for measurement of centrally blocked transient wavefront. <i>Optics Letters</i> , 2013, 38, 2493.	3.3	17
45	Practical retrace error correction in non-null aspheric testing: A comparison. <i>Optics Communications</i> , 2017, 383, 378-385.	2.1	17
46	Determination of aspheric vertex radius of curvature in non-null interferometry. <i>Applied Optics</i> , 2015, 54, 2838.	1.8	16
47	Retrieving the seawater volume scattering function at the 180° scattering angle with a high-spectral-resolution lidar. <i>Optics Express</i> , 2017, 25, 11813.	3.4	15
48	Determination of Planetary Boundary Layer height with Lidar Signals Using Maximum Limited Height Initialization and Range Restriction (MLHI-RR). <i>Remote Sensing</i> , 2020, 12, 2272.	4.0	15
49	Dual-field-of-view high-spectral-resolution lidar: Simultaneous profiling of aerosol and water cloud to study aerosol–cloud interaction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2110756119.	7.1	15
50	Confocal laser scanning and 3D reconstruction methods for the subsurface damage of polished optics. <i>Optics and Lasers in Engineering</i> , 2021, 136, 106315.	3.8	14
51	Phase function effects on the retrieval of oceanic high-spectral-resolution lidar. <i>Optics Express</i> , 2019, 27, A654.	3.4	14
52	Field-widened Michelson interferometer for spectral discrimination in high-spectral-resolution lidar: practical development. <i>Optics Express</i> , 2016, 24, 7232.	3.4	13
53	Use of Debye’s series to determine the optimal edge-effect terms for computing the extinction efficiencies of spheroids. <i>Optics Express</i> , 2017, 25, 20298.	3.4	13
54	Random two-frame phase-shifting interferometry via minimization of coefficient of variation. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	13

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55	Development of ZJU high-spectral-resolution lidar for aerosol and cloud: Feature detection and classification. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 261, 107513.	2.3	13
56	System optimization of radial shearing interferometer for aspheric testing. <i>Proceedings of SPIE</i> , 2007, , .	0.8	12
57	Pattern recognition model for aerosol classification with atmospheric backscatter lidars: principles and simulations. <i>Journal of Applied Remote Sensing</i> , 2015, 9, 096006.	1.3	12
58	Aberration calibration in high-NA spherical surfaces measurement on point diffraction interferometry. <i>Applied Optics</i> , 2015, 54, 3877.	2.1	12
59	Polarization properties of receiving telescopes in atmospheric remote sensing polarization lidars. <i>Applied Optics</i> , 2017, 56, 6837.	1.8	12
60	100 MW Peak Power Picosecond Laser Based on Hybrid End-Pumped Nd:YVO4 and Side-Pumped Nd:YAG Amplifiers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018, 24, 1-7.	2.9	12
61	Development of ZJU High-Spectral-Resolution Lidar for Aerosol and Cloud: Extinction Retrieval. <i>Remote Sensing</i> , 2020, 12, 3047.	4.0	12
62	A Semianalytic Monte Carlo Simulator for Spaceborne Oceanic Lidar: Framework and Preliminary Results. <i>Remote Sensing</i> , 2020, 12, 2820.	4.0	11
63	Development of ZJU high-spectral-resolution lidar for aerosol and cloud: Calibration of overlap function. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 257, 107338.	2.3	11
64	Generalized high-spectral-resolution lidar technique with a multimode laser for aerosol remote sensing. <i>Optics Express</i> , 2017, 25, 979.	3.4	10
65	Effects of auxiliary atmospheric state parameters on the aerosol optical properties retrieval errors of high-spectral-resolution lidar. <i>Applied Optics</i> , 2018, 57, 2627.	1.8	10
66	Design and validation of a shipborne multiple-field-of-view lidar for upper ocean remote sensing. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 254, 107201.	2.3	10
67	High-precision technique for in-situ testing of the PZT scanner based on fringe analysis. <i>Optics Communications</i> , 2010, 283, 3115-3121.	2.1	9
68	Optimum wavelength of spaceborne oceanic lidar in penetration depth. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 256, 107310.	2.3	9
69	Optical system design for a hyperspectral imaging lidar using supercontinuum laser and its preliminary performance. <i>Optics Express</i> , 2021, 29, 17542.	3.4	9
70	Design of a high-spectral-resolution lidar for atmospheric temperature measurement down to the near ground. <i>Applied Optics</i> , 2019, 58, 9651.	1.8	9
71	Universal phase reconstruction approach of self-calibrating phase-shifting interferometry. <i>Optics Letters</i> , 2019, 44, 3857.	3.3	9
72	Research of precision interference locating method for a partial null compensator at aspheric testing. , 2009, , .		8

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73	Sparse microdefect evaluation system for large fine optical surfaces based on dark-field microscopic scattering imaging. , 2013, , .		8
74	Beam quality management by periodic reproduction of wavefront aberrations in end-pumped Nd:YVO <sub>4</sub> laser amplifiers. Optics Express, 2016, 24, 8988.	3.4	8
75	3D Transparent Object Detection and Reconstruction Based on Passive Mode Single-Pixel Imaging. Sensors, 2020, 20, 4211.	3.8	8
76	Automatic evaluation system for bulk defects in optics. Optics and Lasers in Engineering, 2021, 137, 106380.	3.8	8
77	Phase unwrapping in ICF target interferometric measurement via deep learning. Applied Optics, 2021, 60, 10.	1.8	8
78	Study on testing larger asphericity in non-null interferometer. Proceedings of SPIE, 2007, , .	0.8	7
79	Frequency locking of a field-widened Michelson interferometer based on optimal multi-harmonics heterodyning. Optics Letters, 2016, 41, 3916.	3.3	7
80	Aerosol Optical Properties over China from RAMS-CMAQ Model Compared with CALIOP Observations. Atmosphere, 2017, 8, 201.	2.3	7
81	Construction of Nighttime Cloud Layer Height and Classification of Cloud Types. Remote Sensing, 2020, 12, 668.	4.0	7
82	Instrument response effects on the retrieval of oceanic lidar. Applied Optics, 2020, 59, C21.	1.8	7
83	ICF target DT-layer refractive index and thickness from iterative analysis. Optics Express, 2018, 26, 17781.	3.4	6
84	Analysis of global three-dimensional aerosol structure with spectral radiance matching. Atmospheric Measurement Techniques, 2019, 12, 6541-6556.	3.1	6
85	Misalignment correction for free-form surface in non-null interferometric testing. Optics Communications, 2019, 437, 204-213.	2.1	6
86	Interferometric measurement of freeform surfaces using irregular subaperture stitching. Measurement Science and Technology, 2020, 31, 055202.	2.6	6
87	Performance Evaluation of Spaceborne Integrated Path Differential Absorption Lidar for Carbon Dioxide Detection at 1572 nm. Remote Sensing, 2020, 12, 2570.	4.0	6
88	Retrieval of phase distributions from the quadriwave lateral shearing interferogram obtained by randomly encoded hybrid grating. , 2015, , .		5
89	Design of the interferometric spectral discrimination filters for a three-wavelength high-spectral-resolution lidar. Optics Express, 2016, 24, 27622.	3.4	5
90	Determination of thermally induced effects and design guidelines of optomechanical accelerometers. Measurement Science and Technology, 2017, 28, 115201.	2.6	5

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91	Rotating a half-wave plate by 45°: An ideal calibration method for the gain ratio in polarization lidars. Optics Communications, 2018, 407, 361-366.	2.1	5
92	Detection of Chlorophyll a and CDOM Absorption Coefficient with a Dual-Wavelength Oceanic Lidar: Wavelength Optimization Method. Remote Sensing, 2020, 12, 3021.	4.0	5
93	Retrievals of aerosol layer height during dust events over the taklimakan and gobi desert. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 254, 107198.	2.3	5
94	Compact wavelength tunable output around 440 nm pulsed laser for oceanic lidar application. Optics Communications, 2021, 485, 126706.	2.1	5
95	Retrieving the microphysical properties of opaque liquid water clouds from CALIOP measurements. Optics Express, 2019, 27, 34126.	3.4	5
96	The wavefront aberration analysis and testing accuracy evaluation for the large aberration aspheric system based on the best fit sphere. , 2007, , .		4
97	Tilted pressure-tuned field-widened Michelson interferometer for high spectral resolution lidar. Proceedings of SPIE, 2012, , .	0.8	4
98	Retrieval of aerosol liquid water content from high spectral resolution lidar. Science of the Total Environment, 2021, 799, 149423.	8.0	4
99	Multiple scattering effects on the return spectrum of oceanic high-spectral-resolution lidar. Optics Express, 2019, 27, 30204.	3.4	4
100	LiDAR Remote Sensing for Vertical Distribution of Seawater Optical Properties and Chlorophyll-a From the East China Sea to the South China Sea. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-21.	6.3	4
101	Mathematical modeling analysis on a small and compact two-dimensional CGLSI interference system. Proceedings of SPIE, 2013, , .	0.8	3
102	A spectroscopic transmittance analytical modeling for field-widened Michelson interferometer employed by high spectral resolution lidars. Proceedings of SPIE, 2013, , .	0.8	3
103	Development of a field-widened Michelson spectroscopic filter for a polarized near-infrared high spectral resolution lidar. Proceedings of SPIE, 2013, , .	0.8	3
104	Numerical simulation research and applications on scattering imaging of surface defects on optical components. , 2016, , .		3
105	High-spectral-resolution lidar for ocean ecosystem studies. Proceedings of SPIE, 2016, , .	0.8	3
106	Compact, snapshot and triple-wavelength system for ICF target ice-layer refractive index and thickness measurement. Optics and Laser Technology, 2021, 134, 106595.	4.6	3
107	Research on digital calibration method for optical surface defect dimension. Proceedings of SPIE, 2012, , .	0.8	2
108	Water Cloud Detection with Circular Polarization Lidar: A Semianalytic Monte Carlo Simulation Approach. Sensors, 2022, 22, 1679.	3.8	2

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109	Error analysis and system optimization of non-null aspheric testing system. , 2010, , .		1
110	Application of image entropy evaluation function for the leveling of large aperture components in auto defects detecting. Proceedings of SPIE, 2012, , .	0.8	1
111	Study on distortion correction for image mosaic of surface defects. , 2012, , .		1
112	Comparisons between field-widen Michelson interferometer and Fabry-Perot interferometer as the spectroscopic filter in high spectral resolution lidar. , 2013, , .		1
113	Grayscale adjustment method for CCD mosaic camera in surface defect detection system. Proceedings of SPIE, 2014, , .	0.8	1
114	Digital calibration method for defects evaluation of large fine optical surfaces. , 2014, , .		1
115	A high-resolution detecting system based on machine vision for defects on large aperture and super-smooth surface. , 2015, , .		1
116	Compact wavefront diagnosis system based on the randomly encoded hybrid grating. Proceedings of SPIE, 2015, , .	0.8	1
117	High-spectral-resolution lidar for ocean biological carbon pump studies. , 2016, , .		1
118	Polarized high-spectral-resolution lidar based on field-widened Michelson interferometer. Proceedings of SPIE, 2016, , .	0.8	1
119	Aspheric and free-form surfaces test with non-null sub-aperture stitching. , 2016, , .		1
120	Oceanic Lidar: Theory and Experiment. EPJ Web of Conferences, 2020, 237, 07021.	0.3	1
121	Optimization of the OCO-2 Cloud Screening Algorithm and Evaluation against MODIS and TCCON Measurements over Land Surfaces in Europe and Japan. Advances in Atmospheric Sciences, 2020, 37, 387-398.	4.3	1
122	Refractive index distribution of the ice-layer in ICF target from the interference method. Optics and Laser Technology, 2021, 138, 106860.	4.6	1
123	Absolute measurement approach for crystal growth height based on a polarization-synchronized phase-shifting interferometer. Applied Optics, 2021, 60, 9721.	1.8	1
124	Algorithms and applications of aberration correction and American standard-based digital evaluation in surface defects evaluating system. Proceedings of SPIE, 2016, , .	0.8	1
125	Effects of a nonideal half-wave plate on the gain ratio calibration measurements in polarization lidars. Applied Optics, 2017, 56, 8100.	1.8	1
126	Detailed investigation of the iterative analysis for inertial confinement fusion target characterization. Applied Optics, 2020, 59, 10880.	1.8	1

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127	The position shifting of frequency spectrum of Fourier transform in the application of aspheric surface testing. , 2007, , .		0
128	Design of a field-widened Michelson interferometer for a near-infrared high spectral resolution lidar. , 2013, , .		0
129	Development of the ZJU polarized near-infrared high spectral resolution lidar. Proceedings of SPIE, 2013, , .	0.8	0
130	Non-null annular subaperture stitching interferometry for aspheric test. , 2015, , .		0
131	Model-based phase-shifting interferometer. , 2015, , .		0
132	Recent developments of interferometric wavefront sensing. , 2015, , .		0
133	Retrieval of high-spectral-resolution lidar for atmospheric aerosol optical properties profiling. Proceedings of SPIE, 2015, , .	0.8	0
134	Earth observation and atmospheric sounding based on a high spectral resolution lidar. Proceedings of SPIE, 2015, , .	0.8	0
135	Precisely connected and calculated algorithm of punctate scratches in the super-smooth surface defects evaluation system. Proceedings of SPIE, 2015, , .	0.8	0
136	Reverse optimization reconstruction method in non-null aspheric interferometry. Proceedings of SPIE, 2015, , .	0.8	0
137	Comprehensive view of high-spectral-resolution lidar technique from the perspective of spectral discrimination. Proceedings of SPIE, 2016, , .	0.8	0
138	Error analysis of spherical scanning mechanism used for surface defects detection. Proceedings of SPIE, 2016, , .	0.8	0
139	Field-widened Michelson interferometer system as the spectroscopic filter of high-spectral-resolution lidar. , 2016, , .		0
140	Program of Spaceborne Oceanic Lidar Based on Semianalytic Monte Carlo Method. , 2019, , .		0
141	Retrieval of Aerosol Optical Properties Based on High Spectral Resolution Lidar. EPJ Web of Conferences, 2020, 237, 08018.	0.3	0
142	Non-null interferometers for irregular surface measurement with system modeling. Measurement Science and Technology, 2021, 32, 045205.	2.6	0
143	Study on Single-Terminal Transmission Visibility Meter based on reflector. , 2021, , .		0
144	Research on auto-centering device in surface defects evaluation system of large spherical optics. Proceedings of SPIE, 2016, , .	0.8	0

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145	Testing of an off-axis parabolic mirror based on hybrid compensation technology. , 2017, , .		0
146	A pressure-tuned field-widened Michelson interferometer system as the spectroscopic filter of high-spectral-resolution lidar. , 2018, , .		0
147	Lidar Ratio Regional Transfer Method for Extinction Coefficient Accuracy Improvement in Lidar Networks. Remote Sensing, 2022, 14, 626.	4.0	0
148	Embedded laser frequency locking for HSRL applications with an iodine absorption cell. , 2022, , .		0
149	Real-time detection method for bulk bubbles in optics based on deep learning. Applied Optics, 2022, 61, 4344.	1.8	0
150	Multiple scattering effect of water clouds on spaceborne oceanic lidar signals. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 288, 108253.	2.3	0