

Xiaodong Zhang

List of Publications by Year in descending order

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62
papers

1,913
citations

377584

21
h-index

299063

42
g-index

62
all docs

62
docs citations

62
times ranked

1841
citing authors

#	ARTICLE	IF	CITATIONS
1	Scattering by pure seawater: Effect of salinity. Optics Express, 2009, 17, 5698.	1.7	308
2	An overview of approaches and challenges for retrieving marine inherent optical properties from ocean color remote sensing. Progress in Oceanography, 2018, 160, 186-212.	1.5	257
3	Influence of bubbles on scattering of light in the ocean. Applied Optics, 1998, 37, 6525.	2.1	129
4	Estimating scattering of pure water from density fluctuation of the refractive index. Optics Express, 2009, 17, 1671.	1.7	92
5	The volume scattering function of natural bubble populations. Limnology and Oceanography, 2002, 47, 1273-1282.	1.6	89
6	Zone mapping application for precision-farming: a decision support tool for variable rate application. Precision Agriculture, 2010, 11, 103-114.	3.1	64
7	The optical volume scattering function in a surf zone inverted to derive sediment and bubble particle subpopulations. Journal of Geophysical Research, 2012, 117, .	3.3	62
8	Retrieving composition and sizes of oceanic particle subpopulations from the volume scattering function. Applied Optics, 2011, 50, 1240.	2.1	59
9	Scattering by pure seawater at high salinity. Optics Express, 2009, 17, 12685.	1.7	57
10	Physical-geometric optics method for large size faceted particles. Optics Express, 2017, 25, 24044.	1.7	52
11	New insight into particulate mineral and organic matter in coastal ocean waters through optical inversion. Estuarine, Coastal and Shelf Science, 2014, 149, 1-12.	0.9	43
12	Radiometric Calibration for AgCam. Remote Sensing, 2010, 2, 464-477.	1.8	37
13	Comparison of optically derived particle size distributions: scattering over the full angular range versus diffraction at near forward angles. Applied Optics, 2012, 51, 5085.	0.9	37
14	Modeling Atmosphere-Ocean Radiative Transfer: A PACE Mission Perspective. Frontiers in Earth Science, 2019, 7, .	0.8	37
15	Optical influence of ship wakes. Applied Optics, 2004, 43, 3122.	2.1	33
16	Significance of scattering by oceanic particles at angles around 120 degree. Optics Express, 2014, 22, 31329.	1.7	29
17	Inversion of spectral absorption coefficients to infer phytoplankton size classes, chlorophyll concentration, and detrital matter. Applied Optics, 2015, 54, 5805.	2.1	28
18	An operational overview of the EXport Processes in the Ocean from RemoTe Sensing (EXPORTS) Northeast Pacific field deployment. Elementa, 2021, 9, .	1.1	28

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19	SWAT Modeling of Non-Point Source Pollution in Depression-Dominated Basins under Varying Hydroclimatic Conditions. <i>International Journal of Environmental Research and Public Health</i> , 2018, 15, 2492.	1.2	24
20	Diel variations of the attenuation, backscattering and absorption coefficients of four phytoplankton species and comparison with spherical, coated spherical and hexahedral particle optical models. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 217, 288-304.	1.1	24
21	Biogeochemical origins of particles obtained from the inversion of the volume scattering function and spectral absorption in coastal waters. <i>Biogeosciences</i> , 2013, 10, 6029-6043.	1.3	23
22	Evaluating flood potential with GRACE in the United States. <i>Natural Hazards and Earth System Sciences</i> , 2016, 16, 1011-1018.	1.5	23
23	Effects of Subsurface Drainage on Evapotranspiration for Corn and Soybean Crops in Southeastern North Dakota. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2012, 138, 1060-1067.	0.6	21
24	Experimental Estimates of Optical Backscattering Associated With Submicron Particles in Clear Oceanic Waters. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087100.	1.5	21
25	Scattering by solutions of major sea salts. <i>Optics Express</i> , 2009, 17, 19580.	1.7	20
26	Light scattering by pure seawater: Effect of pressure. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2019, 146, 103-109.	0.6	20
27	Modeling the inherent optical properties of aquatic particles using an irregular hexahedral ensemble. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 191, 30-39.	1.1	19
28	A three-step semi analytical algorithm (3SAA) for estimating inherent optical properties over oceanic, coastal, and inland waters from remote sensing reflectance. <i>Remote Sensing of Environment</i> , 2021, 263, 112537.	4.6	18
29	Light scattering by pure water and seawater: the depolarization ratio and its variation with salinity. <i>Applied Optics</i> , 2019, 58, 991.	0.9	18
30	Backscattering by very small particles in coastal waters. <i>Journal of Geophysical Research: Oceans</i> , 2015, 120, 6914-6926.	1.0	17
31	Modeling Water Quantity and Sulfate Concentrations in the Devils Lake Watershed Using Coupled SWAT and CEQUAL-W2. <i>Journal of the American Water Resources Association</i> , 2017, 53, 748-760.	1.0	16
32	Retrieval of Phytoplankton Pigments from Underway Spectrophotometry in the Fram Strait. <i>Remote Sensing</i> , 2019, 11, 318.	1.8	16
33	Calibration of the LISST-VSF to derive the volume scattering functions in clear waters. <i>Optics Express</i> , 2019, 27, A1188.	1.7	15
34	Interpretation of scattering by oceanic particles around 120 degrees and its implication in ocean color studies. <i>Optics Express</i> , 2017, 25, A191.	1.7	13
35	Digital Northern Great Plains: A Web-Based System Delivering Near Real Time Remote Sensing Data for Precision Agriculture. <i>Remote Sensing</i> , 2010, 2, 861-873.	1.8	12
36	A Bidirectional Subsurface Remote Sensing Reflectance Model Explicitly Accounting for Particle Backscattering Shapes. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 8614-8626.	1.0	10

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37	Macro-scale grid-based and subbasin-based hydrologic modeling: joint simulation and cross-calibration. <i>Journal of Hydroinformatics</i> , 2019, 21, 77-91.	1.1	10
38	Evaluation of MOST functions and roughness length parameterization on sensible heat flux measured by large aperture scintillometer over a corn field. <i>Agricultural and Forest Meteorology</i> , 2010, 150, 1182-1191.	1.9	9
39	Estimating Surface Soil Water Content in the Red River Valley of the North using Landsat 5 TM Data. <i>Soil Science Society of America Journal</i> , 2013, 77, 1133-1143.	1.2	9
40	Re-examining the effect of particle phase functions on the remote-sensing reflectance. <i>Applied Optics</i> , 2017, 56, 6881.	0.9	9
41	Size distributions of coastal ocean suspended particulate inorganic matter: Amorphous silica and clay minerals and their dynamics. <i>Estuarine, Coastal and Shelf Science</i> , 2017, 189, 243-251.	0.9	8
42	Light scattering by pure seawater at subzero temperatures. <i>Deep-Sea Research Part I: Oceanographic Research Papers</i> , 2020, 162, 103306.	0.6	8
43	Variability of relationship between the volume scattering function at 180° and the backscattering coefficient for aquatic particles. <i>Applied Optics</i> , 2020, 59, C31.	0.9	8
44	Effects of temperature and salinity on light scattering by water. <i>Proceedings of SPIE</i> , 2010, , .	0.8	7
45	Anomalous Light Scattering by Pure Seawater. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 2679.	1.3	7
46	Shape of particle backscattering in the North Pacific Ocean: the β factor. <i>Applied Optics</i> , 2021, 60, 1260.	0.9	7
47	Assessment of Normalized Water-Leaving Radiance Derived from GOCI Using AERONET-OC Data. <i>Remote Sensing</i> , 2021, 13, 1640.	1.8	7
48	Deriving the angular response function for backscattering sensors. <i>Applied Optics</i> , 2021, 60, 8676.	0.9	7
49	Identifying the Driving Factors of Water Quality in a Sub-Watershed of the Republican River Basin, Kansas USA. <i>International Journal of Environmental Research and Public Health</i> , 2018, 15, 1041.	1.2	6
50	Changes in Regional Snowfall in Central North America (1961–2017): Mountain Versus Plains. <i>Geosciences (Switzerland)</i> , 2020, 10, 157.	1.0	6
51	Automatic Calibration for CE-QUAL-W2 Model Using Improved Global-Best Harmony Search Algorithm. <i>Water (Switzerland)</i> , 2021, 13, 2308.	1.2	5
52	Light Scattering by Pure Water and Seawater: Recent Development. <i>Journal of Remote Sensing</i> , 2021, , .	3.2	5
53	Near real-time high-resolution airborne camera, AEROCam, for precision agriculture. <i>Geocarto International</i> , 2011, 26, 537-551.	1.7	4
54	A Brief Review of Mueller Matrix Calculations Associated with Oceanic Particles. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 2686.	1.3	4

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55	Mitigating Impact of Devils Lake Flooding on the Sheyenne River Sulfate Concentration. Journal of the American Water Resources Association, 2020, 56, 297-309.	1.0	4
56	A theoretical study of the effect of subsurface oceanic bubbles on the enhanced aerosol optical depth band over the southern oceans as detected from MODIS and MISR. Atmospheric Measurement Techniques, 2015, 8, 2149-2160.	1.2	3
57	A closure study of ocean inherent optical properties using flow cytometry measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 241, 106730.	1.1	3
58	Alignment of optical backscatter measurements from the EXPORTS Northeast Pacific Field Deployment. Elementa, 2022, 10, .	1.1	3
59	A method for tracking the Brownian motion to estimate the size distribution of submicron particles in seawater. Limnology and Oceanography: Methods, 0, , .	1.0	2
60	Molecular light scattering by pure seawater. , 2013, , 225-243.		1
61	TECHNOLOGICAL INNOVATIONS BRINGING SPATIAL TECHNOLOGY TO PRECISION AGRICULTURE IN THE NORTHERN GREAT PLAINS. Technology and Innovation, 2014, 16, 27-35.	0.2	0
62	Providing Precision Crop and Range Protection in the US Northern Great Plains. , 2010, , 367-384.		0