Shubha Sathyendranath

List of Publications by Year
in descending order

138 papers	10,839 citations	29994 54 h-index	33814 99 g-index
141 all docs	141 docs citations	141 times ranked	7638 citing authors

#	Article	IF	Citations
1	An estimate of global primary production in the ocean from satellite radiometer data. Journal of Plankton Research, 1995, 17, 1245-1271.	0.8	1,230
2	An optical classification of coastal and oceanic waters based on the specific spectral absorption curves of phytoplankton pigments, dissolved organic matter, and other particulate materials1. Limnology and Oceanography, 1981, 26, 671-689.	1.6	688
3	Oceanic Primary Production: Estimation by Remote Sensing at Local and Regional Scales. Science, 1988, 241, 1613-1620.	6.0	580
4	Ecosystem dynamics based on plankton functional types for global ocean biogeochemistry models. Global Change Biology, 2005, 11, 051013014052005-???.	4.2	353
5	Primary productivity of planet earth: biological determinants and physical constraints in terrestrial and aquatic habitats. Global Change Biology, 2001, 7, 849-882.	4.2	281
6	Variations in the spectral values of specific absorption of phytoplankton. Limnology and Oceanography, 1987, 32, 403-415.	1.6	255
7	A three-component model of phytoplankton size class for the Atlantic Ocean. Ecological Modelling, 2010, 221, 1472-1483.	1.2	246
8	An Ocean-Colour Time Series for Use in Climate Studies: The Experience of the Ocean-Colour Climate Change Initiative (OC-CCI). Sensors, 2019, 19, 4285.	2.1	239
9	Regionally and seasonally differentiated primary production in the North Atlantic. Deep-Sea Research Part I: Oceanographic Research Papers, 1995, 42, 1773-1802.	0.6	221
10	Biological control of surface temperature in the Arabian Sea. Nature, 1991, 349, 54-56.	13.7	207
11	Remote sensing of phytoplankton functional types. Remote Sensing of Environment, 2008, 112, 3366-3375.	4.6	207
12	Ocean primary production and available light: further algorithms for remote sensing. Deep-sea Research Part A, Oceanographic Research Papers, 1988, 35, 855-879.	1.6	202
13	Phytoplankton phenology in the global ocean. Ecological Indicators, 2012, 14, 152-163.	2.6	192
14	Basinâ€scale estimates of oceanic primary production by remote sensing: The North Atlantic. Journal of Geophysical Research, 1991, 96, 15147-15159.	3.3	174
15	Estimation of new production in the ocean by compound remote sensing. Nature, 1991, 353, 129-133.	13.7	173
16	Effect of the particle-size distribution on the backscattering ratio in seawater. Applied Optics, 1994, 33, 7070.	2.1	171
17	Ecological indicators for the pelagic zone of the ocean from remote sensing. Remote Sensing of Environment, 2008, 112, 3426-3436.	4.6	170
18	The spectral irradiance field at the surface and in the interior of the ocean: A model for applications in oceanography and remote sensing. Journal of Geophysical Research, 1988, 93, 9270-9280.	3.3	162

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19	The Ocean Colour Climate Change Initiative: III. A round-robin comparison on in-water bio-optical algorithms. Remote Sensing of Environment, 2015, 162, 271-294.	4.6	161
20	Satellite Ocean Colour: Current Status and Future Perspective. Frontiers in Marine Science, 2019, 6, .	1.2	156
21	Estimators of primary production for interpretation of remotely sensed data on ocean color. Journal of Geophysical Research, 1993, 98, 14561-14576.	3.3	134
22	Remote sensing of oceanic primary production: computations using a spectral model. Deep-sea Research Part A, Oceanographic Research Papers, 1989, 36, 431-453.	1.6	132
23	A three component classification of phytoplankton absorption spectra: Application to ocean-color data. Remote Sensing of Environment, 2011, 115, 2255-2266.	4.6	126
24	Nutrient control of phytoplankton photosynthesis in the Western North Atlantic. Nature, 1992, 356, 229-231.	13.7	120
25	An improved optical classification scheme for the Ocean Colour Essential Climate Variable and its applications. Remote Sensing of Environment, 2017, 203, 152-161.	4.6	113
26	Dependence of light-saturated photosynthesis on temperature and community structure. Deep-Sea Research Part I: Oceanographic Research Papers, 2005, 52, 1284-1299.	0.6	106
27	Uncertainty information in climate data records from Earth observation. Earth System Science Data, 2017, 9, 511-527.	3.7	100
28	Widespread phytoplankton blooms triggered by 2019â€“2020 Australian wildfires. Nature, 2021, 597, 370-375.	13.7	99
29	Monsoon oscillations regulate fertility of the Red Sea. Geophysical Research Letters, 2015, 42, 855-862.	1.5	96
30	Copernicus Marine Service Ocean State Report. Journal of Operational Oceanography, 2018, 11, S1-S142.	0.6	96
31	The phenology of phytoplankton blooms: Ecosystem indicators from remote sensing. Ecological Modelling, 2009, 220, 3057-3069.	1.2	94
32	Influence of light in the mixed-layer on the parameters of a three-component model of phytoplankton size class. Remote Sensing of Environment, 2015, 168, 437-450.	4.6	91
33	Waterâ€column stratification governs the community structure of subtropical marine picophytoplankton. Environmental Microbiology Reports, 2011, 3, 473-482.	1.0	90
34	Phytoplankton phenology indices in coral reef ecosystems: Application to ocean-color observations in the Red Sea. Remote Sensing of Environment, 2015, 160, 222-234.	4.6	90
35	The Copernicus Marine Environment Monitoring Service Ocean State Report. Journal of Operational Oceanography, 2016, 9, s235-s320.	0.6	86
36	Spatial Structure of Pelagic Ecosystem Processes in the Global Ocean. Ecosystems, 1999, 2, 384-394.	1.6	80

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37	Impact of El NiÃ±o Variability on Oceanic Phytoplankton. Frontiers in Marine Science, 2017, 4, .	1.2	80
38	Photosynthesisâ€“irradiance parameters of marine phytoplankton: synthesis of aÂglobal data set. Earth System Science Data, 2018, 10, 251-266.	3.7	80
39	Remote sensing of ocean chlorophyll: consequence of nonuniform pigment profile. Applied Optics, 1989, 28, 490.	2.1	77
40	Computation of aquatic primary production: Extended formalism to include effect of angular and spectral distribution of light. Limnology and Oceanography, 1989, 34, 188-198.	1.6	75
41	The influence of the Indian Ocean Dipole on interannual variations in phytoplankton size structure as revealed by Earth Observation. Deep-Sea Research Part II: Topical Studies in Oceanography, 2012, 77-80, 117-127.	0.6	75
42	Model of phytoplankton absorption based on three size classes. Applied Optics, 2011, 50, 4535.	2.1	71
43	Uncertainty in Ocean-Color Estimates of Chlorophyll for Phytoplankton Groups. Frontiers in Marine Science, 2017, 4, .	1.2	71
44	Primary Production, an Index of Climate Change in the Ocean: Satellite-Based Estimates over Two Decades. Remote Sensing, 2020, 12, 826.	1.8	71
45	Bio-optical properties of the Labrador Sea. Journal of Geophysical Research, 2003, 108, .	3.3	70
46	Operational estimation of primary production at large geographical scales. Remote Sensing of Environment, 2008, 112, 3437-3448.	4.6	67
47	Regional ocean-colour chlorophyll algorithms for the Red Sea. Remote Sensing of Environment, 2015, 165, 64-85.	4.6	67
48	The Ocean Colour Climate Change Initiative: I. A methodology for assessing atmospheric correction processors based on in-situ measurements. Remote Sensing of Environment, 2015, 162, 242-256.	4.6	66
49	Copernicus Marine Service Ocean State Report, Issue 3. Journal of Operational Oceanography, 2019, 12, S1-S123.	0.6	66
50	Physical forcing and phytoplankton distributions. Scientia Marina, 2005, 69, 55-73.	0.3	65
51	The global distribution of phytoplankton size spectrum and size classes from their light-absorption spectra derived from satellite data. Remote Sensing of Environment, 2013, 139, 185-197.	4.6	64
52	An assessment of chlorophyll-a algorithms available for SeaWiFS in coastal and open areas of the Bay of Bengal and Arabian Sea. Remote Sensing of Environment, 2011, 115, 2277-2291.	4.6	63
53	Particle backscattering as a function of chlorophyll and phytoplankton size structure in the open-ocean. Optics Express, 2012, 20, 17632.	1.7	60
54	Deriving phytoplankton size classes from satellite data: Validation along a trophic gradient in the eastern Atlantic Ocean. Remote Sensing of Environment, 2013, 134, 66-77.	4.6	56

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55	Comparison of two methods to derive the size-structure of natural populations of phytoplankton. Deep-Sea Research Part I: Oceanographic Research Papers, 2014, 85, 72-79.	0.6	56
56	Validation and Intercomparison of Ocean Color Algorithms for Estimating Particulate Organic Carbon in the Oceans. Frontiers in Marine Science, 2017, 4, .	1.2	56
57	A compilation of global bio-optical in situ data for ocean-colour satellite applications. Earth System Science Data, 2016, 8, 235-252.	3.7	56
58	Seasonal variations in physiological parameters of phytoplankton across the North Atlantic. Journal of Plankton Research, 1998, 20, 17-42.	0.8	50
59	Phytoplankton phenology on the Scotian Shelf. ICES Journal of Marine Science, 2011, 68, 781-791.	1.2	50
60	Diagnostic Properties of Phytoplankton Time Series from Remote Sensing. Estuaries and Coasts, 2010, 33, 428-439.	1.0	48
61	Impact of missing data on the estimation of ecological indicators from satellite ocean-colour time-series. Remote Sensing of Environment, 2014, 152, 15-28.	4.6	47
62	Copernicus Marine Service Ocean State Report, Issue 4. Journal of Operational Oceanography, 2020, 13, S1-S172.	0.6	47
63	The response of phytoplankton to climate variability associated with the North Atlantic Oscillation. Deep-Sea Research Part II: Topical Studies in Oceanography, 2013, 93, 159-168.	0.6	44
64	Reconciling models of primary production and photoacclimation [Invited]. Applied Optics, 2020, 59, C100.	0.9	43
65	A compilation of global bio-optical in situ data for ocean-colour satellite applications â€“ version two. Earth System Science Data, 2019, 11, 1037-1068.	3.7	43
66	Biological oceanography and fisheries management: perspective after 10 years. ICES Journal of Marine Science, 2007, 64, 863-869.	1.2	40
67	Phytoplankton phenology and production around Iceland and Faroes. Continental Shelf Research, 2012, 37, 15-25.	0.9	40
68	The impact of bio-optical heating on the properties of the upper ocean: A sensitivity study using a 3-D circulation model for the Labrador Sea. Deep-Sea Research Part II: Topical Studies in Oceanography, 2007, 54, 2630-2642.	0.6	38
69	Sensing the ocean biological carbon pump from space: A review of capabilities, concepts, research gaps and future developments. Earth-Science Reviews, 2021, 217, 103604.	4.0	38
70	A multicomponent model of phytoplankton size structure. Journal of Geophysical Research: Oceans, 2014, 119, 3478-3496.	1.0	37
71	Estimating concentrations of essential omega-3 fatty acids in the ocean: supply and demand. ICES Journal of Marine Science, 2014, 71, 1885-1893.	1.2	37
72	Seasonal phytoplankton blooms in the Gulf of Aden revealed by remote sensing. Remote Sensing of Environment, 2017, 189, 56-66.	4.6	37

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73	Biological production models as elements of coupled, atmosphereâ€ocean models for climate research. Journal of Geophysical Research, 1991, 96, 2585-2592.	3.3	34
74	Towards an End-to-End Analysis and Prediction System for Weather, Climate, and Marine Applications in the Red Sea. Bulletin of the American Meteorological Society, 2021, 102, E99-E122.	1.7	31
75	Phytoplankton biomass and residual nitrate in the pelagic ecosystem. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2003, 459, 1063-1073.	1.0	30
76	Revisiting Sverdrup's critical depth hypothesis. ICES Journal of Marine Science, 2015, 72, 1892-1896.	1.2	30
77	Satellite Radiation Products for Ocean Biology and Biogeochemistry: Needs, State-of-the-Art, Gaps, Development Priorities, and Opportunities. Frontiers in Marine Science, 2018, 5, .	1.2	30
78	Retrieval of phytoplankton size from bio-optical measurements: theory and applications. Journal of the Royal Society Interface, 2011, 8, 650-660.	1.5	28
79	Inter-comparison of OC-CCI chlorophyll-<i>a</i> estimates with precursor data sets. International Journal of Remote Sensing, 2016, 37, 4337-4355.	1.3	27
80	The Ocean Colour Climate Change Initiative: II. Spatial and temporal homogeneity of satellite data retrieval due to systematic effects in atmospheric correction processors. Remote Sensing of Environment, 2015, 162, 257-270.	4.6	26
81	Size-partitioned phytoplankton carbon and carbon-to-chlorophyll ratio from ocean colour by an absorption-based bio-optical algorithm. Remote Sensing of Environment, 2017, 194, 177-189.	4.6	26
82	A Printable Device for Measuring Clarity and Colour in Lake and Nearshore Waters. Sensors, 2019, 19, 936.	2.1	26
83	Regional-scale changes in diatom distribution in the Humboldt upwelling system as revealed by remote sensing: implications for fisheries. ICES Journal of Marine Science, 2011, 68, 729-736.	1.2	25
84	Ocean surface partitioning strategies using ocean colour remote Sensing: A review. Progress in Oceanography, 2017, 155, 41-53.	1.5	25
85	An Exact Solution For Modeling Photoacclimation of the Carbon-to-Chlorophyll Ratio in Phytoplankton. Frontiers in Marine Science, 2017, 4, .	1.2	25
86	The high-nutrient, low-chlorophyll regime of the ocean: limits on biomass and nitrate before and after iron enrichment. Ecological Modelling, 2004, 171, 103-125.	1.2	24
87	Unravelling region-specific environmental drivers of phytoplankton across a complex marine domain (off SW Iberia). Remote Sensing of Environment, 2017, 203, 162-184.	4.6	24
88	On the temporal consistency of chlorophyll products derived from three ocean-colour sensors. ISPRS Journal of Photogrammetry and Remote Sensing, 2014, 97, 171-184.	4.9	23
89	Effect of phytoplankton size classes on bio-optical properties of phytoplankton in the Western Iberian coast: Application of models. Remote Sensing of Environment, 2015, 156, 537-550.	4.6	21
90	Scratching Beneath the Surface: A Model to Predict the Vertical Distribution of Prochlorococcus Using Remote Sensing. Remote Sensing, 2018, 10, 847.	1.8	21

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91	Environmental Reservoirs of Vibrio cholerae: Challenges and Opportunities for Ocean-Color Remote Sensing. Remote Sensing, 2019, 11, 2763.	1.8	21
92	Consistency of Satellite Climate Data Records for Earth System Monitoring. Bulletin of the American Meteorological Society, 2020, 101, E1948-E1971.	1.7	21
93	Effect of Precipitation on Chlorophyll-a in an Upwelling Dominated Region Along the West Coast of India. Journal of Coastal Research, 2019, 86, 218.	0.1	21
94	Ocean response to attenuation of visible light by phytoplankton in the Gulf of St. Lawrence. Journal of Marine Systems, 2011, 88, 285-297.	0.9	20
95	Ocean Colour Climate Change Initiative — Approach and initial results. , 2012, , .		20
96	Sequential variations of phytoplankton growth and mortality in an NPZ model: A remote-sensing-based assessment. Journal of Marine Systems, 2012, 92, 16-29.	0.9	19
97	Intercomparison of Ocean Color Algorithms for Picophytoplankton Carbon in the Ocean. Frontiers in Marine Science, 2017, 4, .	1.2	19
98	A 55-Year Time Series Station for Primary Production in the Adriatic Sea: Data Correction, Extraction of Photosynthesis Parameters and Regime Shifts. Remote Sensing, 2018, 10, 1460.	1.8	18
99	Effect of Reduced Anthropogenic Activities on Water Quality in Lake Vembanad, India. Remote Sensing, 2021, 13, 1631.	1.8	18
100	DIFFERENCES BETWEEN IN VIVO ABSORPTION AND FLUORESCENCE EXCITATION SPECTRA IN NATURAL SAMPLES OF PHYTOPLANKTON. Journal of Phycology, 1998, 34, 214-227.	1.0	17
101	A summer phytoplankton bloom triggered by high wind events in the Labrador Sea, July 2006. Geophysical Research Letters, 2008, 35, .	1.5	17
102	Canopy Reflectance Modeling of Aquatic Vegetation for Algorithm Development: Global Sensitivity Analysis. Remote Sensing, 2018, 10, 837.	1.8	17
103	Citizen Scientists Contribute to Real-Time Monitoring of Lake Water Quality Using 3D Printed Mini Secchi Disks. Frontiers in Water, 2021, 3, .	1.0	17
104	Vertical structure in chlorophyll profiles: influence on primary production in the Arctic Ocean. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190351.	1.6	16
105	Size Class Dependent Relationships between Temperature and Phytoplankton Photosynthesis-Irradiance Parameters in the Atlantic Ocean. Frontiers in Marine Science, 2018, 4, .	1.2	15
106	The Influence of Temperature and Community Structure on Light Absorption by Phytoplankton in the North Atlantic. Sensors, 2019, 19, 4182.	2.1	15
107	Citizen Science Tools Reveal Changes in Estuarine Water Quality Following Demolition of Buildings. Remote Sensing, 2021, 13, 1683.	1.8	15
108	Spatio-temporal variability of chlorophyll-<i>a</i> in response to coastal upwelling and mesoscale eddies in the South Eastern Arabian Sea. International Journal of Remote Sensing, 2021, 42, 4836-4863.	1.3	15

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109	Seasonal and geographic variations in phytoplankton losses from the mixed layer on the Northwest Atlantic Shelf. Journal of Marine Systems, 2010, 80, 36-46.	0.9	14
110	Net Primary Production & Stratification in the Ocean. Geophysical Monograph Series, 0, , 247-254.	0.1	14
111	Analytical solution for the vertical profile of daily production in the ocean. Journal of Geophysical Research: Oceans, 2016, 121, 3532-3548.	1.0	14
112	Comparison of Seasonal Cycles of Phytoplankton Chlorophyll, Aerosols, Winds and Sea-Surface Temperature off Somalia. Frontiers in Marine Science, 2017, 4, .	1.2	14
113	Patterns and drivers of phytoplankton phenology off SW Iberia: A phenoregion based perspective. Progress in Oceanography, 2018, 165, 233-256.	1.5	14
114	Dynamics of Vibrio cholerae in a Typical Tropical Lake and Estuarine System: Potential of Remote Sensing for Risk Mapping. Remote Sensing, 2021, 13, 1034.	1.8	14
115	Attenuation of visible light by phytoplankton in a vertically structured ocean: solutions and applications. Journal of Plankton Research, 1994, 16, 1461-1487.	0.8	12
116	Recovery of photosynthesis parameters from<i>in situ</i>profiles of phytoplankton production. ICES Journal of Marine Science, 2016, 73, 275-285.	1.2	12
117	Optical Classification of the Coastal Waters of the Northern Indian Ocean. Frontiers in Marine Science, 0, 5, .	1.2	12
118	Remotely Sensing the Biophysical Drivers of Sardinella aurita Variability in Ivorian Waters. Remote Sensing, 2018, 10, 785.	1.8	11
119	A model study of seasonal mixed-layer primary production in the Arabian Sea. Journal of Earth System Science, 1994, 103, 163-176.	0.6	11
120	Estimation of phytoplankton loss rate by remote sensing. Geophysical Research Letters, 2008, 35, .	1.5	10
121	Models for estimating photosynthesis parameters from in situ production profiles. Progress in Oceanography, 2017, 159, 255-266.	1.5	10
122	Extraction of Photosynthesis Parameters from Time Series Measurements of In Situ Production: Bermuda Atlantic Time-Series Study. Remote Sensing, 2018, 10, 915.	1.8	9
123	Primary Production: Sensitivity to Surface Irradiance and Implications for Archiving Data. Frontiers in Marine Science, 2017, 4, .	1.2	8
124	ChloroGIN: Use of Satellite and In Situ Data in Support of Ecosystem-Based Management of Marine Resources. , 2010, , .		8
125	Stability and resilience in a nutrient-phytoplankton marine ecosystem model. ICES Journal of Marine Science, 2020, 77, 1556-1572.	1.2	7
126	Building Capacity and Resilience Against Diseases Transmitted via Water Under Climate Perturbations and Extreme Weather Stress. Studies in Space Policy, 2020, , 281-298.	0.3	7

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127	A Conceptual Approach to Partitioning a Vertical Profile of Phytoplankton Biomass Into Contributions From Two Communities. Journal of Geophysical Research: Oceans, 2022, 127, .	1.0	7
128	Photosynthesis characteristics of the phytoplankton in the Celtic Sea during late spring. Fisheries Oceanography, 1993, 2, 191-201.	0.9	6
129	Trends in Winter Light Environment Over the Arctic Ocean: A Perspective From Two Decades of Ocean Color Data. Geophysical Research Letters, 2020, 47, e2020GL089037.	1.5	6
130	Canopy modeling of aquatic vegetation: A geometric optical approach (AVGO). Remote Sensing of Environment, 2020, 245, 111829.	4.6	6
131	Extended Formulations and Analytic Solutions for Watercolumn Production Integrals. Frontiers in Marine Science, 2017, 4, .	1.2	5
132	High photosynthetic rates associated with pico and nanophytoplankton communities and high stratification index in the North West Atlantic. Continental Shelf Research, 2018, 171, 126-139.	0.9	5
133	Phytoplankton assemblages and optical properties in a coastal region of the South Brazil Bight. Continental Shelf Research, 2021, 227, 104509.	0.9	5
134	New production and mixed-layer physics. Journal of Earth System Science, 1994, 103, 177-188.	0.6	4
135	A Statistical Modeling Framework for Characterising Uncertainty in Large Datasets: Application to Ocean Colour. Remote Sensing, 2018, 10, 695.	1.8	3
136	Special Issue on Remote Sensing of Ocean Color: Theory and Applications. Sensors, 2020, 20, 3445.	2.1	3
137	Sverdrup meets Lambert: analytical solution for Sverdrupâ€™s critical depth. ICES Journal of Marine Science, 2021, 78, 1398-1408.	1.2	2
138	Seasonality in carbon chemistry of Cochin backwaters. Regional Studies in Marine Science, 2021, 46, 101893.	0.4	2