

Oded Beja

List of Publications by Year in descending order

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98
papers

7,495
citations

50170

46
h-index

58464

82
g-index

180
all docs

180
docs citations

180
times ranked

5392
citing authors

#	ARTICLE	IF	CITATIONS
1	Proteorhodopsin phototrophy in the ocean. <i>Nature</i> , 2001, 411, 786-789.	13.7	740
2	Unsuspected diversity among marine aerobic anoxygenic phototrophs. <i>Nature</i> , 2002, 415, 630-633.	13.7	380
3	Construction and analysis of bacterial artificial chromosome libraries from a marine microbial assemblage. <i>Environmental Microbiology</i> , 2000, 2, 516-529.	1.8	313
4	Diversification and spectral tuning in marine proteorhodopsins. <i>EMBO Journal</i> , 2003, 22, 1725-1731.	3.5	284
5	Proteorhodopsin genes are distributed among divergent marine bacterial taxa. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 12830-12835.	3.3	255
6	New Insights into Metabolic Properties of Marine Bacteria Encoding Proteorhodopsins. <i>PLoS Biology</i> , 2005, 3, e273.	2.6	218
7	Photosystem I gene cassettes are present in marine virus genomes. <i>Nature</i> , 2009, 461, 258-262.	13.7	195
8	A distinct abundant group of microbial rhodopsins discovered using functional metagenomics. <i>Nature</i> , 2018, 558, 595-599.	13.7	190
9	Marine Bacterial and Archaeal Ion-Pumping Rhodopsins: Genetic Diversity, Physiology, and Ecology. <i>Microbiology and Molecular Biology Reviews</i> , 2016, 80, 929-954.	2.9	173
10	Comparative Genomic Analysis of Archaeal Genotypic Variants in a Single Population and in Two Different Oceanic Provinces. <i>Applied and Environmental Microbiology</i> , 2002, 68, 335-345.	1.4	164
11	Reverse dissimilatory sulfite reductase as phylogenetic marker for a subgroup of sulfur-oxidizing prokaryotes. <i>Environmental Microbiology</i> , 2009, 11, 289-299.	1.8	162
12	Assessing diversity and biogeography of aerobic anoxygenic phototrophic bacteria in surface waters of the Atlantic and Pacific Oceans using the Global Ocean Sampling expedition metagenomes. <i>Environmental Microbiology</i> , 2007, 9, 1464-1475.	1.8	156
13	Phylogenetic analysis of ribosomal RNA operons from uncultivated coastal marine bacterioplankton. <i>Environmental Microbiology</i> , 2001, 3, 323-331.	1.8	152
14	Isolation and characterization of <i>Erythrobacter</i> sp. strains from the upper ocean. <i>Archives of Microbiology</i> , 2003, 180, 327-338.	1.0	149
15	Potential photosynthesis gene recombination between <i>Prochlorococcus</i> and <i>Synechococcus</i> via viral intermediates. <i>Environmental Microbiology</i> , 2005, 7, 1505-1513.	1.8	149
16	Comparative metagenomics of microbial traits within oceanic viral communities. <i>ISME Journal</i> , 2011, 5, 1178-1190.	4.4	135
17	The Light-Driven Proton Pump Proteorhodopsin Enhances Bacterial Survival during Tough Times. <i>PLoS Biology</i> , 2010, 8, e1000359.	2.6	124
18	Viral photosynthetic reaction center genes and transcripts in the marine environment. <i>ISME Journal</i> , 2007, 1, 492-501.	4.4	122

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19	Novel Proteorhodopsin variants from the Mediterranean and Red Seas. <i>Environmental Microbiology</i> , 2003, 5, 842-849.	1.8	109
20	Different SAR86 subgroups harbour divergent proteorhodopsins. <i>Environmental Microbiology</i> , 2004, 6, 903-910.	1.8	106
21	Molecular ecology of nifH genes and transcripts in the eastern Mediterranean Sea. <i>Environmental Microbiology</i> , 2007, 9, 2354-2363.	1.8	105
22	Global abundance of microbial rhodopsins. <i>ISME Journal</i> , 2013, 7, 448-451.	4.4	104
23	Comparative community genomics in the Dead Sea: an increasingly extreme environment. <i>ISME Journal</i> , 2010, 4, 399-407.	4.4	101
24	Microbial Rhodopsins: The Last Two Decades. <i>Annual Review of Microbiology</i> , 2021, 75, 427-447.	2.9	98
25	Widespread distribution of proteorhodopsins in freshwater and brackish ecosystems. <i>ISME Journal</i> , 2008, 2, 656-662.	4.4	97
26	Darwinian adaptation of proteorhodopsin to different light intensities in the marine environment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 14824-14829.	3.3	96
27	Casting light on Asgardarchaeota metabolism in a sunlit microoxic niche. <i>Nature Microbiology</i> , 2019, 4, 1129-1137.	5.9	96
28	Molecular diversity among marine picophytoplankton as revealed by psbA analyses. <i>Environmental Microbiology</i> , 2003, 5, 212-216.	1.8	94
29	Bacterial anoxygenic photosynthesis on plant leaf surfaces. <i>Environmental Microbiology Reports</i> , 2012, 4, 209-216.	1.0	94
30	Novel Abundant Oceanic Viruses of Uncultured Marine Group II Euryarchaeota. <i>Current Biology</i> , 2017, 27, 1362-1368.	1.8	81
31	Novel Primers Reveal Wider Diversity among Marine Aerobic Anoxygenic Phototrophs. <i>Applied and Environmental Microbiology</i> , 2005, 71, 8958-8962.	1.4	80
32	Roseobacter -Like Bacteria in Red and Mediterranean Sea Aerobic Anoxygenic Photosynthetic Populations. <i>Applied and Environmental Microbiology</i> , 2005, 71, 344-353.	1.4	78
33	Microbial rhodopsins on leaf surfaces of terrestrial plants. <i>Environmental Microbiology</i> , 2012, 14, 140-146.	1.8	78
34	Potential for phosphite and phosphonate utilization by <i>Prochlorococcus</i> . <i>ISME Journal</i> , 2012, 6, 827-834.	4.4	77
35	Seasonal dynamics of the endosymbiotic, nitrogen-fixing cyanobacterium <i>Richelia intracellularis</i> in the eastern Mediterranean Sea. <i>ISME Journal</i> , 2008, 2, 911-923.	4.4	76
36	A myovirus encoding both photosystem I and II proteins enhances cyclic electron flow in infected <i>Prochlorococcus</i> cells. <i>Nature Microbiology</i> , 2017, 2, 1350-1357.	5.9	74

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37	Proteorhodopsin-Bearing Bacteria in Antarctic Sea Ice. <i>Applied and Environmental Microbiology</i> , 2010, 76, 5918-5925.	1.4	71
38	Crystal structure of heliorhodopsin. <i>Nature</i> , 2019, 574, 132-136.	13.7	71
39	Microbial community genomics in eastern Mediterranean Sea surface waters. <i>ISME Journal</i> , 2010, 4, 78-87.	4.4	66
40	Comparative metagenomic analyses reveal viral-induced shifts of host metabolism towards nucleotide biosynthesis. <i>Microbiome</i> , 2014, 2, 9.	4.9	66
41	Adaptation and spectral tuning in divergent marine proteorhodopsins from the eastern Mediterranean and the Sargasso Seas. <i>ISME Journal</i> , 2007, 1, 48-55.	4.4	65
42	Schizorhodopsins: A family of rhodopsins from Asgard archaea that function as light-driven inward H ⁺ pumps. <i>Science Advances</i> , 2020, 6, eaaz2441.	4.7	65
43	Is dinitrogen fixation significant in the Levantine Basin, East Mediterranean Sea?. <i>Environmental Microbiology</i> , 2011, 13, 854-871.	1.8	64
44	Bacterial, archaeal and viral-like rhodopsins from the Red Sea. <i>Environmental Microbiology Reports</i> , 2013, 5, 475-482.	1.0	60
45	To BAC or not to BAC: marine ecogenomics. <i>Current Opinion in Biotechnology</i> , 2004, 15, 187-190.	3.3	56
46	MerMAIDs: a family of metagenomically discovered marine anion-conducting and intensely desensitizing channelrhodopsins. <i>Nature Communications</i> , 2019, 10, 3315.	5.8	56
47	Nature's toolkit for microbial rhodopsin ion pumps. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 6538-6539.	3.3	55
48	Cyanophage tRNAs may have a role in cross-infectivity of oceanic <i>Prochlorococcus</i> and <i>Synechococcus</i> hosts. <i>ISME Journal</i> , 2012, 6, 619-628.	4.4	50
49	Characterization of RS29, a blue-green proteorhodopsin variant from the Red Sea. <i>Photochemical and Photobiological Sciences</i> , 2004, 3, 459-462.	1.6	46
50	Reconstructing a puzzle: existence of cyanophages containing both photosystem-II and photosystem-III gene suites inferred from oceanic metagenomic datasets. <i>Environmental Microbiology</i> , 2011, 13, 24-32.	1.8	46
51	Diversity of active marine picoeukaryotes in the Eastern Mediterranean Sea unveiled using photosystem-II <i>psbA</i> transcripts. <i>ISME Journal</i> , 2010, 4, 1044-1052.	4.4	43
52	Lateral Gene Transfer of Anion-Conducting Channelrhodopsins between Green Algae and Giant Viruses. <i>Current Biology</i> , 2020, 30, 4910-4920.e5.	1.8	42
53	Adaptation to sub-optimal hosts is a driver of viral diversification in the ocean. <i>Nature Communications</i> , 2018, 9, 4698.	5.8	39
54	Functional metagenomic screen reveals new and diverse microbial rhodopsins. <i>ISME Journal</i> , 2016, 10, 2331-2335.	4.4	38

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55	Functional marine metagenomic screening for anti-quorum sensing and anti-biofilm activity. <i>Biofouling</i> , 2017, 33, 1-13.	0.8	35
56	Identification of a tRNA-like molecule that copurifies with the 7SL RNA of <i>Trypanosoma brucei</i> . <i>Molecular and Biochemical Parasitology</i> , 1993, 57, 223-229.	0.5	33
57	Putative novel photosynthetic reaction centre organizations in marine aerobic anoxygenic photosynthetic bacteria: insights from metagenomics and environmental genomics. <i>Environmental Microbiology</i> , 2005, 7, 2027-2033.	1.8	33
58	Resonance Raman Investigation of the Chromophore Structure of Heliorhodopsins. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6431-6436.	2.1	33
59	Mutation Study of Heliorhodopsin 48C12. <i>Biochemistry</i> , 2018, 57, 5041-5049.	1.2	32
60	Metagenomic retrieval of a ribosomal DNA repeat array from an uncultured marine alveolate. <i>Environmental Microbiology</i> , 2008, 10, 1335-1343.	1.8	31
61	Genomic and transcriptomic evidence of light-sensing, porphyrin biosynthesis, Calvin-Benson-Bassham cycle, and urea production in Bathyarchaeota. <i>Microbiome</i> , 2020, 8, 43.	4.9	31
62	The use of DGGE analyses to explore eastern Mediterranean and Red Sea marine picophytoplankton assemblages. <i>Environmental Microbiology</i> , 2004, 6, 528-534.	1.8	30
63	Heliorhodopsins are absent in diderm (Gram-negative) bacteria: Some thoughts and possible implications for activity. <i>Environmental Microbiology Reports</i> , 2019, 11, 419-424.	1.0	29
64	Seasonal and diel patterns of abundance and activity of viruses in the Red Sea. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 29738-29747.	3.3	27
65	Ultrafast Dynamics of Heliorhodopsins. <i>Journal of Physical Chemistry B</i> , 2019, 123, 2507-2512.	1.2	24
66	Marine cyanophages: tinkering with the electron transport chain. <i>ISME Journal</i> , 2011, 5, 1568-1570.	4.4	23
67	New biosynthetic pathway for pink pigments from uncultured oceanic viruses. <i>Environmental Microbiology</i> , 2016, 18, 4337-4347.	1.8	23
68	Cyanophage-encoded lipid desaturases: oceanic distribution, diversity and function. <i>ISME Journal</i> , 2018, 12, 343-355.	4.4	23
69	Rhodopsin-bestrophin fusion proteins from unicellular algae form gigantic pentameric ion channels. <i>Nature Structural and Molecular Biology</i> , 2022, 29, 592-603.	3.6	23
70	Diverse heliorhodopsins detected via functional metagenomics in freshwater <i>Actinobacteria</i> , <i>Chloroflexi</i> and <i>Archaea</i> . <i>Environmental Microbiology</i> , 2022, 24, 110-121.	1.8	22
71	The trypanosomatid <i>Leptomonas collosoma</i> 7SL RNA gene. Analysis of elements controlling its expression. <i>Nucleic Acids Research</i> , 1997, 25, 4977-4984.	6.5	21
72	BchY-Based Degenerate Primers Target All Types of Anoxygenic Photosynthetic Bacteria in a Single PCR. <i>Applied and Environmental Microbiology</i> , 2009, 75, 7556-7559.	1.4	21

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73	Comparative analyses of actinobacterial genomic fragments from Lake Kinneret. <i>Environmental Microbiology</i> , 2009, 11, 3189-3200.	1.8	19
74	Anion binding to mutants of the Schiff base counterion in heliorhodopsin 48C12. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 23663-23671.	1.3	18
75	The evolution of photosystem I in light of phage-encoded reaction centres. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2012, 367, 3400-3405.	1.8	17
76	Evolution and molecular mechanism of four electron reducing ferredoxin-dependent bilin reductases from oceanic phages. <i>FEBS Journal</i> , 2018, 285, 339-356.	2.2	17
77	The Use of a Chimeric Rhodopsin Vector for the Detection of New Proteorhodopsins Based on Color. <i>Frontiers in Microbiology</i> , 2018, 9, 439.	1.5	17
78	The use of denaturing gradient gel electrophoresis with fully degenerate pufM primers to monitor aerobic anoxygenic phototrophic assemblages. <i>Limnology and Oceanography: Methods</i> , 2008, 6, 427-440.	1.0	15
79	Exploration of natural red-shifted rhodopsins using a machine learning-based Bayesian experimental design. <i>Communications Biology</i> , 2021, 4, 362.	2.0	15
80	Viral clones from the GOS expedition with an unusual photosystem-I gene cassette organization. <i>ISME Journal</i> , 2012, 6, 1617-1620.	4.4	14
81	Bias in assessments of marine SAR11 biodiversity in environmental fosmid and BAC libraries?. <i>ISME Journal</i> , 2009, 3, 1117-1119.	4.4	13
82	Proteorhodopsins: Widespread Microbial Light-Driven Proton Pumps. , 2013, , 280-285.		13
83	A novel uncultured marine cyanophage lineage with lysogenic potential linked to a putative marine <i>Synechococcus</i> relic™ prophage. <i>Environmental Microbiology Reports</i> , 2019, 11, 598-604.	1.0	13
84	Saccharibacteria harness light energy using type-1 rhodopsins that may rely on retinal sourced from microbial hosts. <i>ISME Journal</i> , 2022, 16, 2056-2059.	4.4	13
85	Unique Photochemistry Observed in a New Microbial Rhodopsin. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 5117-5121.	2.1	11
86	Diversity of viral photosystem-I <i>psaA</i> genes. <i>ISME Journal</i> , 2015, 9, 1892-1898.	4.4	10
87	TAT Rhodopsin Is an Ultraviolet-Dependent Environmental pH Sensor. <i>Biochemistry</i> , 2021, 60, 899-907.	1.2	9
88	An elusive marine photosynthetic bacterium is finally unveiled. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 2561-2562.	3.3	8
89	<i>D</i> and <i>S</i> rhodopsins revisited. <i>Environmental Microbiology Reports</i> , 2012, 4, 617-621.	1.0	7
90	Closing the gaps on the viral photosystem <i>l</i> ... <i>psaDCAB</i> gene organization. <i>Environmental Microbiology</i> , 2015, 17, 5100-5108.	1.8	7

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91	Engineered Functional Recovery of Microbial Rhodopsin Without Retinal Binding Lysine. <i>Photochemistry and Photobiology</i> , 2019, 95, 1116-1121.	1.3	7
92	An uncultured marine cyanophage encodes an active phycobilisome proteolysis adaptor protein NblA. <i>Environmental Microbiology Reports</i> , 2019, 11, 848-854.	1.0	4
93	Community Level Analysis of Phototrophy: psbA Gene Diversity. <i>Methods in Enzymology</i> , 2005, 397, 372-380.	0.4	3
94	[27] Functional expression of mdr and mdr-like cDNAs in Escherichia coli. <i>Methods in Enzymology</i> , 1998, 292, 370-382.	0.4	2
95	Karyotype analysis of the monogenetic trypanosomatid <i>Leptomonas collosoma</i> . <i>Molecular and Biochemical Parasitology</i> , 1994, 66, 71-81.	0.5	1
96	Phage biology: Stuck with dU. <i>Current Biology</i> , 2021, 31, R898-R900.	1.8	1
97	Preparation of BAC Libraries from Marine Microbial Populations. <i>Methods in Enzymology</i> , 2013, 531, 111-122.	0.4	0
98	Section 4 Update - BAC library construction from marine microbial assemblages. , 2008, , 1863-1879.		0