# Oded Beja

List of Publications by Year
in descending order



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|---|---|---|---|
| 98 papers | 7,495 citations | 50276 46 h-index | 58581 82 g-index |
| 180 all docs | 180 docs citations | 180 times ranked | 5392 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Proteorhodopsin phototrophy in the ocean. Nature, 2001, 411, 786-789. | 27.8 | 740 |
| 2 | Unsuspected diversity among marine aerobic anoxygenic phototrophs. Nature, 2002, 415, 630-633. | 27.8 | 380 |
| 3 | Construction and analysis of bacterial artificial chromosome libraries from a marine microbial assemblage. Environmental Microbiology, 2000, 2, 516-529. | 3.8 | 313 |
| 4 | Diversification and spectral tuning in marine proteorhodopsins. EMBO Journal, 2003, 22, 1725-1731. | 7.8 | 284 |
| 5 | Proteorhodopsin genes are distributed among divergent marine bacterial taxa. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 12830-12835. | 7.1 | 255 |
| 6 | New Insights into Metabolic Properties of Marine Bacteria Encoding Proteorhodopsins. PLoS Biology, 2005, 3, e273. | 5.6 | 218 |
| 7 | Photosystem I gene cassettes are present in marine virus genomes. Nature, 2009, 461, 258-262. | 27.8 | 195 |
| 8 | A distinct abundant group of microbial rhodopsins discovered using functional metagenomics. Nature, 2018, 558, 595-599. | 27.8 | 190 |
| 9 | Marine Bacterial and Archaeal Ion-Pumping Rhodopsins: Genetic Diversity, Physiology, and Ecology. Microbiology and Molecular Biology Reviews, 2016, 80, 929-954. | 6.6 | 173 |
| 10 | Comparative Genomic Analysis of Archaeal Genotypic Variants in a Single Population and in Two Different Oceanic Provinces. Applied and Environmental Microbiology, 2002, 68, 335-345. | 3.1 | 164 |
| 11 | Reverse dissimilatory sulfite reductase as phylogenetic marker for a subgroup of sulfurâ€oxidizing prokaryotes. Environmental Microbiology, 2009, 11, 289-299. | 3.8 | 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. Environmental Microbiology, 2007, 9, 1464-1475. | 3.8 | 156 |
| 13 | Phylogenetic analysis of ribosomal RNA operons from uncultivated coastal marine bacterioplankton. Environmental Microbiology, 2001, 3, 323-331. | 3.8 | 152 |
| 14 | Isolation and characterization of Erythrobacter sp. strains from the upper ocean. Archives of Microbiology, 2003, 180, 327-338. | 2.2 | 149 |
| 15 | Potential photosynthesis gene recombination between Prochlorococcus and Synechococcus via viral intermediates. Environmental Microbiology, 2005, 7, 1505-1513. | 3.8 | 149 |
| 16 | Comparative metagenomics of microbial traits within oceanic viral communities. ISME Journal, 2011, 5, 1178-1190. | 9.8 | 135 |
| 17 | The Light-Driven Proton Pump Proteorhodopsin Enhances Bacterial Survival during Tough Times. PLoS Biology, 2010, 8, e1000359. | 5.6 | 124 |
| 18 | Viral photosynthetic reaction center genes and transcripts in the marine environment. ISME Journal, 2007, 1, 492-501. | 9.8 | 122 |

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|---|---|---|---|
| 19 | Novel Proteorhodopsin variants from the Mediterranean and Red Seas. Environmental Microbiology, 2003, 5, 842-849. | 3.8 | 109 |
| 20 | Different SAR86 subgroups harbour divergent proteorhodopsins. Environmental Microbiology, 2004, 6, 903-910. | 3.8 | 106 |
| 21 | Molecular ecology of nifH genes and transcripts in the eastern Mediterranean Sea. Environmental Microbiology, 2007, 9, 2354-2363. | 3.8 | 105 |
| 22 | Global abundance of microbial rhodopsins. ISME Journal, 2013, 7, 448-451. | 9.8 | 104 |
| 23 | Comparative community genomics in the Dead Sea: an increasingly extreme environment. ISME Journal, 2010, 4, 399-407. | 9.8 | 101 |
| 24 | Microbial Rhodopsins: The Last Two Decades. Annual Review of Microbiology, 2021, 75, 427-447. | 7.3 | 98 |
| 25 | Widespread distribution of proteorhodopsins in freshwater and brackish ecosystems. ISME Journal, 2008, 2, 656-662. | 9.8 | 97 |
| 26 | Darwinian adaptation of proteorhodopsin to different light intensities in the marine environment. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14824-14829. | 7.1 | 96 |
| 27 | Casting light on Asgardarchaeota metabolism in a sunlit microoxic niche. Nature Microbiology, 2019, 4, 1129-1137. | 13.3 | 96 |
| 28 | Molecular diversity among marine picophytoplankton as revealed by psbA analyses. Environmental Microbiology, 2003, 5, 212-216. | 3.8 | 94 |
| 29 | Bacterial anoxygenic photosynthesis on plant leaf surfaces. Environmental Microbiology Reports, 2012, 4, 209-216. | 2.4 | 94 |
| 30 | Novel Abundant Oceanic Viruses of Uncultured Marine Group II Euryarchaeota. Current Biology, 2017, 27, 1362-1368. | 3.9 | 81 |
| 31 | Novel Primers Reveal Wider Diversity among Marine Aerobic Anoxygenic Phototrophs. Applied and Environmental Microbiology, 2005, 71, 8958-8962. | 3.1 | 80 |
| 32 | Roseobacter -Like Bacteria in Red and Mediterranean Sea Aerobic Anoxygenic Photosynthetic Populations. Applied and Environmental Microbiology, 2005, 71, 344-353. | 3.1 | 78 |
| 33 | Microbial rhodopsins on leaf surfaces of terrestrial plants. Environmental Microbiology, 2012, 14, 140-146. | 3.8 | 78 |
| 34 | Potential for phosphite and phosphonate utilization by <i>Prochlorococcus</i>. ISME Journal, 2012, 6, 827-834. | 9.8 | 77 |
| 35 | Seasonal dynamics of the endosymbiotic, nitrogen-fixing cyanobacterium <i>Richelia intracellularis</i> in the eastern Mediterranean Sea. ISME Journal, 2008, 2, 911-923. | 9.8 | 76 |
| 36 | A myovirus encoding both photosystem I and II proteins enhances cyclic electron flow in infected Prochlorococcus cells. Nature Microbiology, 2017, 2, 1350-1357. | 13.3 | 74 |

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|---|---|---|---|
| 37 | Proteorhodopsin-Bearing Bacteria in Antarctic Sea Ice. Applied and Environmental Microbiology, 2010, 76, 5918-5925. | 3.1 | 71 |
| 38 | Crystal structure of heliorhodopsin. Nature, 2019, 574, 132-136. | 27.8 | 71 |
| 39 | Microbial community genomics in eastern Mediterranean Sea surface waters. ISME Journal, 2010, 4, 78-87. | 9.8 | 66 |
| 40 | Comparative metagenomic analyses reveal viral-induced shifts of host metabolism towards nucleotide biosynthesis. Microbiome, 2014, 2, 9. | 11.1 | 66 |
| 41 | Adaptation and spectral tuning in divergent marine proteorhodopsins from the eastern Mediterranean and the Sargasso Seas. ISME Journal, 2007, 1, 48-55. | 9.8 | 65 |
| 42 | Schizorhodopsins: A family of rhodopsins from Asgard archaea that function as light-driven inward H <sup>+</sup> pumps. Science Advances, 2020, 6, eaaz2441. | 10.3 | 65 |
| 43 | Is dinitrogen fixation significant in the Levantine Basin, East Mediterranean Sea?. Environmental Microbiology, 2011, 13, 854-871. | 3.8 | 64 |
| 44 | Bacterial, archaeal and viralâ€like rhodopsins from the <scp>R</scp>ed <scp>S</scp>ea. Environmental Microbiology Reports, 2013, 5, 475-482. | 2.4 | 60 |
| 45 | To BAC or not to BAC: marine ecogenomics. Current Opinion in Biotechnology, 2004, 15, 187-190. | 6.6 | 56 |
| 46 | MerMAIDs: a family of metagenomically discovered marine anion-conducting and intensely desensitizing channelrhodopsins. Nature Communications, 2019, 10, 3315. | 12.8 | 56 |
| 47 | Natureâ€™s toolkit for microbial rhodopsin ion pumps. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6538-6539. | 7.1 | 55 |
| 48 | Cyanophage tRNAs may have a role in cross-infectivity of oceanic <i>Prochlorococcus</i> and <i>Synechococcus</i> hosts. ISME Journal, 2012, 6, 619-628. | 9.8 | 50 |
| 49 | Characterization of RS29, a blue-green proteorhodopsin variant from the Red Sea. Photochemical and Photobiological Sciences, 2004, 3, 459-462. | 2.9 | 46 |
| 50 | Reconstructing a puzzle: existence of cyanophages containing both photosystemâ€I and photosystemâ€II gene suites inferred from oceanic metagenomic datasets. Environmental Microbiology, 2011, 13, 24-32. | 3.8 | 46 |
| 51 | Diversity of active marine picoeukaryotes in the Eastern Mediterranean Sea unveiled using photosystem-II <i>psbA</i> transcripts. ISME Journal, 2010, 4, 1044-1052. | 9.8 | 43 |
| 52 | Lateral Gene Transfer of Anion-Conducting Channelrhodopsins between Green Algae and Giant Viruses. Current Biology, 2020, 30, 4910-4920.e5. | 3.9 | 42 |
| 53 | Adaptation to sub-optimal hosts is a driver of viral diversification in the ocean. Nature Communications, 2018, 9, 4698. | 12.8 | 39 |
| 54 | Functional metagenomic screen reveals new and diverse microbial rhodopsins. ISME Journal, 2016, 10, 2331-2335. | 9.8 | 38 |

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|---|---|---|---|
| 55 | Functional marine metagenomic screening for anti-quorum sensing and anti-biofilm activity. Biofouling, 2017, 33, 1-13. | 2.2 | 35 |
| 56 | Identification of a tRNA-like molecule that copurifies with the 7SL RNA of Trypanosoma brucei. Molecular and Biochemical Parasitology, 1993, 57, 223-229. | 1.1 | 33 |
| 57 | Putative novel photosynthetic reaction centre organizations in marine aerobic anoxygenic photosynthetic bacteria: insights from metagenomics and environmental genomics. Environmental Microbiology, 2005, 7, 2027-2033. | 3.8 | 33 |
| 58 | Resonance Raman Investigation of the Chromophore Structure of Heliorhodopsins. Journal of Physical Chemistry Letters, 2018, 9, 6431-6436. | 4.6 | 33 |
| 59 | Mutation Study of Heliorhodopsin 48C12. Biochemistry, 2018, 57, 5041-5049. | 2.5 | 32 |
| 60 | Metagenomic retrieval of a ribosomal DNA repeat array from an uncultured marine alveolate. Environmental Microbiology, 2008, 10, 1335-1343. | 3.8 | 31 |
| 61 | Genomic and transcriptomic evidence of light-sensing, porphyrin biosynthesis, Calvin-Benson-Bassham cycle, and urea production in Bathyarchaeota. Microbiome, 2020, 8, 43. | 11.1 | 31 |
| 62 | The use of DGGE analyses to explore eastern Mediterranean and Red Sea marine picophytoplankton assemblages. Environmental Microbiology, 2004, 6, 528-534. | 3.8 | 30 |
| 63 | Heliorhodopsins are absent in diderm (Gramâ€negative) bacteria: Some thoughts and possible implications for activity. Environmental Microbiology Reports, 2019, 11, 419-424. | 2.4 | 29 |
| 64 | Seasonal and diel patterns of abundance and activity of viruses in the Red Sea. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29738-29747. | 7.1 | 27 |
| 65 | Ultrafast Dynamics of Heliorhodopsins. Journal of Physical Chemistry B, 2019, 123, 2507-2512. | 2.6 | 24 |
| 66 | Marine cyanophages: tinkering with the electron transport chain. ISME Journal, 2011, 5, 1568-1570. | 9.8 | 23 |
| 67 | New biosynthetic pathway for pink pigments from uncultured oceanic viruses. Environmental Microbiology, 2016, 18, 4337-4347. | 3.8 | 23 |
| 68 | Cyanophage-encoded lipid desaturases: oceanic distribution, diversity and function. ISME Journal, 2018, 12, 343-355. | 9.8 | 23 |
| 69 | Rhodopsin-bestrophin fusion proteins from unicellular algae form gigantic pentameric ion channels. Nature Structural and Molecular Biology, 2022, 29, 592-603. | 8.2 | 23 |
| 70 | Diverse heliorhodopsins detected via functional metagenomics in freshwater <i>Actinobacteria</i>, <i>Chloroflexi</i> and <i>Archaea</i>. Environmental Microbiology, 2022, 24, 110-121. | 3.8 | 22 |
| 71 | The trypanosomatid Leptomonas collosoma 7SL RNA gene. Analysis of elements controlling its expression. Nucleic Acids Research, 1997, 25, 4977-4984. | 14.5 | 21 |
| 72 | BchY-Based Degenerate Primers Target All Types of Anoxygenic Photosynthetic Bacteria in a Single PCR. Applied and Environmental Microbiology, 2009, 75, 7556-7559. | 3.1 | 21 |

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|---|---|---|---|
| 73 | Comparative analyses of actinobacterial genomic fragments from Lake Kinneret. Environmental Microbiology, 2009, 11, 3189-3200. | 3.8 | 19 |
| 74 | Anion binding to mutants of the Schiff base counterion in heliorhodopsin 48C12. Physical Chemistry Chemical Physics, 2019, 21, 23663-23671. | 2.8 | 18 |
| 75 | The evolution of photosystem I in light of phage-encoded reaction centres. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 3400-3405. | 4.0 | 17 |
| 76 | Evolution and molecular mechanism of fourâ€electron reducing ferredoxinâ€dependent bilin reductases from oceanic phages. FEBS Journal, 2018, 285, 339-356. | 4.7 | 17 |
| 77 | The Use of a Chimeric Rhodopsin Vector for the Detection of New Proteorhodopsins Based on Color. Frontiers in Microbiology, 2018, 9, 439. | 3.5 | 17 |
| 78 | The use of denaturing gradient gel electrophoresis with fully degenerate pufM primers to monitor aerobic anoxygenic phototrophic assemblages. Limnology and Oceanography: Methods, 2008, 6, 427-440. | 2.0 | 15 |
| 79 | Exploration of natural red-shifted rhodopsins using a machine learning-based Bayesian experimental design. Communications Biology, 2021, 4, 362. | 4.4 | 15 |
| 80 | Viral clones from the GOS expedition with an unusual photosystem-I gene cassette organization. ISME Journal, 2012, 6, 1617-1620. | 9.8 | 14 |
| 81 | Bias in assessments of marine SAR11 biodiversity in environmental fosmid and BAC libraries?. ISME Journal, 2009, 3, 1117-1119. | 9.8 | 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> â€˜relicâ€™ prophage. Environmental Microbiology Reports, 2019, 11, 598-604. | 2.4 | 13 |
| 84 | Saccharibacteria harness light energy using type-1 rhodopsins that may rely on retinal sourced from microbial hosts. ISME Journal, 2022, 16, 2056-2059. | 9.8 | 13 |
| 85 | Unique Photochemistry Observed in a New Microbial Rhodopsin. Journal of Physical Chemistry Letters, 2019, 10, 5117-5121. | 4.6 | 11 |
| 86 | Diversity of viral photosystem-I <i>psaA</i> genes. ISME Journal, 2015, 9, 1892-1898. | 9.8 | 10 |
| 87 | TAT Rhodopsin Is an Ultraviolet-Dependent Environmental pH Sensor. Biochemistry, 2021, 60, 899-907. | 2.5 | 9 |
| 88 | An elusive marine photosynthetic bacterium is finally unveiled. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2561-2562. | 7.1 | 8 |
| 89 | <scp>D</scp>ead <scp>S</scp>ea rhodopsins revisited. Environmental Microbiology Reports, 2012, 4, 617-621. | 2.4 | 7 |
| 90 | Closing the gaps on the viral photosystemâ€<scp>I</scp>â€…<i>psa<scp>DCAB</scp></i> gene organization. Environmental Microbiology, 2015, 17, 5100-5108. | 3.8 | 7 |

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|---|---|---|---|
| 91 | Engineered Functional Recovery of Microbial Rhodopsin Without Retinalâ€Binding Lysine. Photochemistry and Photobiology, 2019, 95, 1116-1121. | 2.5 | 7 |
| 92 | An uncultured marine cyanophage encodes an active phycobilisome proteolysis adaptor protein NblA. Environmental Microbiology Reports, 2019, 11, 848-854. | 2.4 | 4 |
| 93 | Communityâ€Level Analysis of Phototrophy: psbA Gene Diversity. Methods in Enzymology, 2005, 397, 372-380. | 1.0 | 3 |
| 94 | [27] Functional expression of mdr and mdr-like cDNAs in Escherichia coli. Methods in Enzymology, 1998, 292, 370-382. | 1.0 | 2 |
| 95 | Karyotype analysis of the monogenetic trypanosomatid Leptomonas collosoma. Molecular and Biochemical Parasitology, 1994, 66, 71-81. | 1.1 | 1 |
| 96 | Phage biology: Stuck with dU. Current Biology, 2021, 31, R898-R900. | 3.9 | 1 |
| 97 | Preparation of BAC Libraries from Marine Microbial Populations. Methods in Enzymology, 2013, 531, 111-122. | 1.0 | 0 |
| 98 | Section 4 Update - BAC library construction from marine microbial assemblages. , 2008, , 1863-1879. | | 0 |