Mordechai Sheves

List of Publications by Year
in descending order

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107

papers

2,890

citations

172457

29

h-index

189892

50

g-index

111

all docs

111

docs citations

111

times ranked

2340

citing authors

#	ARTICLE	IF	CITATIONS
1	Photoactivated Bacteriorhodopsin/SiN_{<i>x</i>} Nanopore-Based Biological Nanofluidic Generator with Single-Protein Sensitivity. ACS Nano, 2022, 16, 1589-1599.	14.6	7
2	Reversible Conjugation of Non-ionic Detergent Micelles Promotes Partitioning of Membrane Proteins under Non-denaturing Conditions. Langmuir, 2022, 38, 2626-2633.	3.5	3
3	Conjugated detergent micelles as a platform for IgM purification. Biotechnology and Bioengineering, 2022, , .	3.3	3
4	Nonionic detergent micelle aggregates: An economical alternative to protein A chromatography. New Biotechnology, 2021, 61, 90-98.	4.4	6
5	Conformation-dependent charge transport through short peptides. Nanoscale, 2021, 13, 3002-3009.	5.6	18
6	Inelastic Electron Tunneling Spectroscopic Analysis of Biasâ€Induced Structural Changes in a Solidâ€State Protein Junction. Small, 2021, 17, e2008218.	10.0	5
7	Purification of antibody fragments via interaction with detergent micellar aggregates. Scientific Reports, 2021, 11, 11697.	3.3	4
8	Electronic Transport Through Organophosphonate-Grafted Bacteriorhodopsin Films on Titanium Nitride. , 2021, , .		2
9	The role of carotenoids in proton-pumping rhodopsin as a primitive solar energy conversion system. Journal of Photochemistry and Photobiology B: Biology, 2021, 221, 112241.	3.8	7
10	Light-Induced Conformational Alterations in Heliorhodopsin Triggered by the Retinal Excited State. Journal of Physical Chemistry B, 2021, 125, 8797-8804.	2.6	5
11	Spectroscopy and photoisomerization of protonated Schiff-base retinal derivatives in vacuo. Physical Chemistry Chemical Physics, 2021, 23, 27227-27233.	2.8	3
12	What Can We Learn from Protein-Based Electron Transport Junctions?. Journal of Physical Chemistry Letters, 2021, 12, 11598-11603.	4.6	18
13	Solid-State Electron Transport via the Protein Azurin is Temperature-Independent Down to 4 K. Journal of Physical Chemistry Letters, 2020, 11, 144-151.	4.6	28
14	Promoting crystallization of intrinsic membrane proteins with conjugated micelles. Scientific Reports, 2020, 10, 12199.	3.3	4
15	Protein Binding and Orientation Matter: Bias-Induced Conductance Switching in a Mutated Azurin Junction. Journal of the American Chemical Society, 2020, 142, 19217-19225.	13.7	18
16	The chirality origin of retinal-carotenoid complex in gloeobacter rhodopsin: a temperature-dependent excitonic coupling. Scientific Reports, 2020, 10, 13992.	3.3	7
17	Coherent Electron Transport across a 3 nm Bioelectronic Junction Made of Multi-Heme Proteins. Journal of Physical Chemistry Letters, 2020, 11, 9766-9774.	4.6	42
18	Conjugation of native membranes via linear oligo-amines. Colloids and Surfaces B: Biointerfaces, 2020, 193, 111101.	5.0	0

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19	Solid-State Protein Junctions: Cross-Laboratory Study Shows Preservation of Mechanism at Varying Electronic Coupling. IScience, 2020, 23, 101099.	4.1	30
20	Oriented bacteriorhodopsin/polyaniline hybrid bio-nanofilms as photo-assisted electrodes for high performance supercapacitors. Journal of Materials Chemistry A, 2020, 8, 8268-8272.	10.3	16
21	InnenrÃ¼cktitelbild: A Solidâ€State Protein Junction Serves as a Biasâ€Induced Current Switch (Angew.) Tj ETQq1 1 0.784314 rgBT /Ov	2.0	0
22	A Solidâ€State Protein Junction Serves as a Biasâ€Induced Current Switch. Angewandte Chemie, 2019, 131, 11978-11985.	2.0	1
23	Molecular mechanism for thermal denaturation of thermophilic rhodopsin. Chemical Science, 2019, 10, 7365-7374.	7.4	7
24	A Solidâ€State Protein Junction Serves as a Biasâ€Induced Current Switch. Angewandte Chemie - International Edition, 2019, 58, 11852-11859.	13.8	26
25	Controlled micelle conjugation via charged peptide amphiphiles. Journal of Peptide Science, 2019, 25, e3174.	1.4	2
26	Protein conformational alterations induced by the retinal excited state in proton and sodium pumping rhodopsins. Physical Chemistry Chemical Physics, 2019, 21, 9450-9455.	2.8	3
27	Backbone-Constrained Peptides: Temperature and Secondary Structure Affect Solid-State Electron Transport. Journal of Physical Chemistry B, 2019, 123, 10951-10958.	2.6	5
28	Retinalâ€"Salinixanthin Interactions in a Thermophilic Rhodopsin. Journal of Physical Chemistry B, 2019, 123, 10-20.	2.6	15
29	Structural and Functional Consequences of the Weak Binding of Chlorin e6 to Bovine Rhodopsin. Photochemistry and Photobiology, 2019, 95, 787-802.	2.5	4
30	A general platform for antibody purification utilizing engineered-micelles. MAbs, 2019, 11, 583-592.	5.2	8
31	Electronic structure of dipeptides in the gas-phase and as an adsorbed monolayer. Physical Chemistry Chemical Physics, 2018, 20, 6860-6867.	2.8	9
32	Protein bioelectronics: a review of what we do and do not know. Reports on Progress in Physics, 2018, 81, 026601.	20.1	180
33	Tunneling explains efficient electron transport via protein junctions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4577-E4583.	7.1	81
34	Transistor configuration yields energy level control in protein-based junctions. Nanoscale, 2018, 10, 21712-21720.	5.6	24
35	Interface Electrostatics Dictates the Electron Transport via Bioelectronic Junctions. ACS Applied Materials & Interfaces, 2018, 10, 41599-41607.	8.0	18
36	Protein Electronics: Chemical Modulation of Contacts Control Energy Level Alignment in Gold-Azurin-Gold Junctions. Journal of the American Chemical Society, 2018, 140, 13317-13326.	13.7	53

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37	Ultrafast Carotenoid to Retinal Energy Transfer in Xanthorhodopsin Revealed by the Combination of Transient Absorption and Twoâ€Dimensional Electronic Spectroscopy. Chemistry - A European Journal, 2018, 24, 12084-12092.	3.3	2
38	Direct evidence for heme-assisted solid-state electronic conduction in multi-heme<i>c</i>-type cytochromes. Chemical Science, 2018, 9, 7304-7310.	7.4	39
39	Action and Ion Mobility Spectroscopy of a Shortened Retinal Derivative. Journal of the American Society for Mass Spectrometry, 2018, 29, 2152-2159.	2.8	5
40	Membrane Independence of Ultrafast Photochemistry in Pharaonis Halorhodopsin: Testing the Role of Bacterioruberin. Journal of Physical Chemistry B, 2017, 121, 2319-2325.	2.6	1
41	Cation Binding to Xanthorhodopsin: Electron Paramagnetic Resonance and Magnetic Studies. Journal of Physical Chemistry B, 2017, 121, 4333-4340.	2.6	1
42	Retinal Binding to Apo-Gloeobacter Rhodopsin: The Role of pH and Retinalâ€“Carotenoid Interaction. Journal of Physical Chemistry B, 2017, 121, 10759-10769.	2.6	9
43	Modulation of thermal noise and spectral sensitivity in Lake Baikal cottoid fish rhodopsins. Scientific Reports, 2016, 6, 38425.	3.3	26
44	Isotope Labeling Study of Retinal Chromophore Fragmentation. Journal of Physical Chemistry A, 2016, 120, 2547-2549.	2.5	4
45	Electron transport via a soluble photochromic photoreceptor. Physical Chemistry Chemical Physics, 2016, 18, 25671-25675.	2.8	5
46	Membrane protein crystallization in micelles conjugated by nucleoside base-pairing: A different concept. Journal of Structural Biology, 2016, 195, 379-386.	2.8	5
47	Temperature Independence of Ultrafast Photoisomerization in Thermophilic Rhodopsin: Assessment versus Other Microbial Proton Pumps. Journal of the American Chemical Society, 2016, 138, 12401-12407.	13.7	23
48	Tuning electronic transport via hepta-alanine peptides junction by tryptophan doping. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10785-10790.	7.1	77
49	Frontispiece: Direct Measurement of the Isomerization Barrier of the Isolated Retinal Chromophore. Angewandte Chemie - International Edition, 2015, 54, .	13.8	0
50	Protein Electronic Conductors: Heminâ€“Substrate Bonding Dictates Transport Mechanism and Efficiency across Myoglobin. Angewandte Chemie, 2015, 127, 12556-12560.	2.0	2
51	Protein Electronic Conductors: Heminâ€“Substrate Bonding Dictates Transport Mechanism and Efficiency across Myoglobin. Angewandte Chemie - International Edition, 2015, 54, 12379-12383.	13.8	13
52	Bacteriorhodopsin/Ag Nanoparticle-Based Hybrid Nano-Bio Electrocatalyst for Efficient and Robust H₂ Evolution from Water. Journal of the American Chemical Society, 2015, 137, 2840-2843.	13.7	59
53	Origin of Circular Dichroism of Xanthorhodopsin. A Study with Artificial Pigments. Journal of Physical Chemistry B, 2015, 119, 456-464.	2.6	12
54	Efficient Femtosecond Energy Transfer from Carotenoid to Retinal in Gloeobacter Rhodopsinâ€“Salinixanthin Complex. Journal of Physical Chemistry B, 2015, 119, 2345-2349.	2.6	17

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55	Electronic Transport via Homopeptides: The Role of Side Chains and Secondary Structure. Journal of the American Chemical Society, 2015, 137, 9617-9626.	13.7	101
56	Cation Binding to Halorhodopsin. Biochemistry, 2015, 54, 3164-3172.	2.5	5
57	Electron Transfer Proteins as Electronic Conductors: Significance of the Metal and Its Binding Site in the Blue Cu Protein, Azurin. Advanced Science, 2015, 2, 1400026.	11.2	39
58	Insights into Solid-State Electron Transport through Proteins from Inelastic Tunneling Spectroscopy: The Case of Azurin. ACS Nano, 2015, 9, 9955-9963.	14.6	54
59	Conjugated Cofactor Enables Efficient Temperature-Independent Electronic Transport Across â^¼6 nm Long Halorhodopsin. Journal of the American Chemical Society, 2015, 137, 11226-11229.	13.7	26
60	The role of retinal light induced dipole in halorhodopsin structural alteration. FEBS Letters, 2015, 589, 3576-3580.	2.8	3
61	Engineered-membranes and engineered-micelles as efficient tools for purification of halorhodopsin and bacteriorhodopsin. Analyst, The, 2015, 140, 204-212.	3.5	9
62	Electronic Transport via Proteins. Advanced Materials, 2014, 26, 7142-7161.	21.0	175
63	Nanoscale Electron Transport and Photodynamics Enhancement in Lipid-Depleted Bacteriorhodopsin Monomers. ACS Nano, 2014, 8, 7714-7722.	14.6	24
64	Solid-state electron transport via cytochrome <i>c</i> depends on electronic coupling to electrodes and across the protein. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5556-5561.	7.1	55
65	Redox activity distinguishes solid-state electron transport from solution-based electron transfer in a natural and artificial protein: cytochrome C and hemin-doped human serum albumin. Physical Chemistry Chemical Physics, 2013, 15, 17142.	2.8	44
66	Retinal Î²-Ionone Ringâ€"Salinixanthin Interactions in Xanthorhodopsin: A Study Using Artificial Pigments. Biochemistry, 2013, 52, 1290-1301.	2.5	12
67	Engineered-membranes: A novel concept for clustering of native lipid bilayers. Journal of Colloid and Interface Science, 2012, 388, 300-305.	9.4	4
68	Doping Human Serum Albumin with Retinoate Markedly Enhances Electron Transport across the Protein. Journal of the American Chemical Society, 2012, 134, 18221-18224.	13.7	31
69	Temperature and Force Dependence of Nanoscale Electron Transport <i>via</i> the Cu Protein Azurin. ACS Nano, 2012, 6, 10816-10824.	14.6	63
70	Temperature-Dependent Solid-State Electron Transport through Bacteriorhodopsin: Experimental Evidence for Multiple Transport Paths through Proteins. Journal of the American Chemical Society, 2012, 134, 4169-4176.	13.7	59
71	Investigating excited state dynamics of salinixanthin and xanthorhodopsin in the near-infrared. Physical Chemistry Chemical Physics, 2011, 13, 3782-3787.	2.8	11
72	Solid-State Electron Transport across Azurin: From a Temperature-Independent to a Temperature-Activated Mechanism. Journal of the American Chemical Society, 2011, 133, 2421-2423.	13.7	78

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73	Probing and Modeling the Absorption of Retinal Protein Chromophores inâ€…Vacuo. Angewandte Chemie - International Edition, 2010, 49, 1790-1793.	13.8	72
74	Proteins as Solid-State Electronic Conductors. Accounts of Chemical Research, 2010, 43, 945-953.	15.6	118
75	Photoselective Ultrafast Investigation of Xanthorhodopsin and Its Carotenoid Antenna Salinixanthin. Journal of Physical Chemistry B, 2010, 114, 3038-3045.	2.6	30
76	Proteins as Electronic Materials: Electron Transport through Solid-State Protein Monolayer Junctions. Journal of the American Chemical Society, 2010, 132, 4131-4140.	13.7	156
77	Ultrafast Protein Conformational Alterations in Bacteriorhodopsin and Its Locked Analogue BR5.12. Journal of Physical Chemistry B, 2009, 113, 7851-7860.	2.6	13
78	6-<i>s-cis</i> Conformation and Polar Binding Pocket of the Retinal Chromophore in the Photoactivated State of Rhodopsin. Journal of the American Chemical Society, 2009, 131, 15160-15169.	13.7	38
79	Retinalâ€“Protein Interactions in Halorhodopsin from Natronomonas pharaonis: Binding and Retinal Thermal Isomerization Catalysis. Journal of Molecular Biology, 2009, 394, 472-484.	4.2	3
80	Retinalâˆ'Salinixanthin Interactions in Xanthorodopsin: A Circular Dichroism (CD) Spectroscopy Study with Artificial Pigments. Biochemistry, 2009, 48, 8179-8188.	2.5	20
81	Covalent Attachment of Bacteriorhodopsin Monolayer to Bromoâ€terminated Solid Supports: Preparation, Characterization, and Protein Stability. Chemistry - an Asian Journal, 2008, 3, 1146-1155.	3.3	2
82	Chromophore Interaction in Xanthorhodopsinâ€"Retinal Dependence of Salinixanthin Binding^{â€}. Photochemistry and Photobiology, 2008, 84, 977-984.	2.5	26
83	Bacteriorhodopsin as an electronic conduction medium for biomolecular electronics. Chemical Society Reviews, 2008, 37, 2422.	38.1	93
84	Photoreduction of Bacteriorhodopsin Schiff Base at Low Humidity. A Study with C13=C14 Nonisomerizable Artificial PigmentsÂ¶. Photochemistry and Photobiology, 2007, 75, 668-674.	2.5	0
85	Chemically induced enhancement of the opto-electronic response of Halobacterium purple membrane monolayer. Chemical Communications, 2006, , 1310.	4.1	7
86	The Protonated Schiff Base of Halorhodopsin from Natronobacterium pharaonis is Hydrolyzed at Elevated Temperatures. Photochemistry and Photobiology, 2006, 82, 1414-1421.	2.5	4
87	Bacteriorhodopsin (bR) as an electronic conduction medium: Current transport through bR-containing monolayers. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 8601-8606.	7.1	91
88	Proteinâˆ'Î²-Ionone Ring Interactions Enhance the Light-Induced Dipole of the Chromophore in Bacteriorhodopsin. Journal of Physical Chemistry B, 2003, 107, 6221-6225.	2.6	20
89	Heterogeneity Effects in the Binding ofAll-TransRetinal to Bacterio-opsinâ€. Biochemistry, 2003, 42, 11281-11288.	2.5	19
90	Light-Induced Charge Redistribution in the Retinal Chromophore Is Required for Initiating the Bacteriorhodopsin Photocycle. Journal of the American Chemical Society, 2002, 124, 11844-11845.	13.7	34

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91	Specific Binding Sites for Cations in Bacteriorhodopsin. Biophysical Journal, 2001, 81, 1155-1162.	0.5	30
92	Bacteriorhodpsin Experiences Light-induced Conformational Alterations in Nonisomerizable C13=C14Pigments. Journal of Biological Chemistry, 2000, 275, 21010-21016.	3.4	27
93	The Molecular Origin of the Inhibition of Transducin Activation in Rhodopsin Lacking the 9-Methyl Group of the Retinal Chromophore:Â A UVâˆ'Vis and FTIR Spectroscopic Studyâ€. Biochemistry, 2000, 39, 8895-8908.	2.5	70
94	Interaction between Asp-85 and the Proton-Releasing Group in Bacteriorhodopsin. A Study of an O-like Photocycle Intermediate. Biochemistry, 1997, 36, 4135-4148.	2.5	13
95	Complexation of the Signal Transducing Protein HtrI to Sensory Rhodopsin I and Its Effect on Thermodynamics of Signaling State Deactivation. Journal of Physical Chemistry B, 1997, 101, 109-113.	2.6	11
96	Early Photolysis Intermediates of Gecko and Bovine Artificial Visual Pigmentsâ€. Biochemistry, 1997, 36, 14593-14600.	2.5	7
97	Protein Structure Alteration Induced by Light-Activated Water Absorption. A Study with Bacteriorhodopsin. Journal of the American Chemical Society, 1996, 118, 11299-11300.	13.7	4
98	Steric Interaction between the 9-Methyl Group of the Retinal and Tryptophan 182 Controls 13-cistoall-transReisomerization and Proton Uptake in the Bacteriorhodopsin Photocycleâ€. Biochemistry, 1996, 35, 10807-10814.	2.5	55
99	Molecular Dynamics Studies of Bacteriorhodopsin's Photocycles. Israel Journal of Chemistry, 1995, 35, 447-464.	2.3	58
100	Probing Bacteriorhodopsin Photochemistry with Nonlinear Optics: Comparing the Second Harmonic Generation of bR and the Photochemically Induced Intermediate K. The Journal of Physical Chemistry, 1995, 99, 10648-10657.	2.9	15
101	The surface potential on the purple membrane measured using a modified bacteriorhodopsin chromophore as the spectroscopic probe. FEBS Letters, 1989, 250, 179-182.	2.8	18
102	Interactions between protonated retinal schiff base and various counter ions: A study by two-dimensional NOE NMR spectroscopy. Magnetic Resonance in Chemistry, 1987, 25, 21-24.	1.9	1
103	Influence of External Negative Charges on the Absorption Maxima of Symmetrical Cyanines. A Study with Model Compounds and Artificial Bacteriorhodopsin Pigments. Angewandte Chemie International Edition in English, 1986, 25, 284-286.	4.4	6
104	On the Absorption Maxima of Protonated Retinal Schiff Bases. An Interaction with External Charges. Israel Journal of Chemistry, 1985, 25, 53-55.	2.3	4
105	Primary photochemical event in bacteriorhodopsin: study with artificial pigments. Biochemistry, 1985, 24, 1260-1265.	2.5	56
106	Cï£¾C Stretching Frequencies in Model Compounds of the Protonated Retinal Schiff Base. Angewandte Chemie International Edition in English, 1984, 23, 803-804.	4.4	5
107	Conformational Analysis of Flexible <i>trans</i>â€Dienes by Polarization Spectroscopy. Israel Journal of Chemistry, 1979, 18, 359-363.	2.3	4