

Joachim Heberle

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175 papers	8,244 citations	49 h-index	86 g-index
202 ext. papers	9,051 ext. citations	6.5 avg, IF	5.94 L-index

#	Paper	IF	Citations
175	Assembly of tau protein into Alzheimer paired helical filaments depends on a local sequence motif ((306)VQIVYK(311)) forming beta structure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000 , 97, 5129-34	11.5	743
174	Proton migration along the membrane surface and retarded surface to bulk transfer. <i>Nature</i> , 1994 , 370, 379-82	50.4	280
173	Oriented attachment and membrane reconstitution of His-tagged cytochrome c oxidase to a gold electrode: in situ monitoring by surface-enhanced infrared absorption spectroscopy. <i>Journal of the American Chemical Society</i> , 2004 , 126, 16199-206	16.4	258
172	Structural analysis and mapping of individual protein complexes by infrared nanospectroscopy. <i>Nature Communications</i> , 2013 , 4, 2890	17.4	245
171	The protein-tethered lipid bilayer: a novel mimic of the biological membrane. <i>Biophysical Journal</i> , 2004 , 87, 3213-20	2.9	214
170	Phot-LOV1: photocycle of a blue-light receptor domain from the green alga <i>Chlamydomonas reinhardtii</i> . <i>Biophysical Journal</i> , 2003 , 84, 1192-201	2.9	210
169	Proteorhodopsin is a light-driven proton pump with variable vectoriality. <i>Journal of Molecular Biology</i> , 2002 , 321, 821-38	6.5	208
168	Biochemical applications of surface-enhanced infrared absorption spectroscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2007 , 388, 47-54	4.4	188
167	Photosynthetic hydrogen production by a hybrid complex of photosystem I and [NiFe]-hydrogenase. <i>ACS Nano</i> , 2009 , 3, 4055-61	16.7	181
166	Functional vibrational spectroscopy of a cytochrome c monolayer: SEIDAS probes the interaction with different surface-modified electrodes. <i>Journal of the American Chemical Society</i> , 2004 , 126, 9445-57	16.4	162
165	Surface-bound optical probes monitor protein translocation and surface potential changes during the bacteriorhodopsin photocycle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1992 , 89, 5996-6000	11.5	161
164	In situ determination of transient pKa changes of internal amino acids of bacteriorhodopsin by using time-resolved attenuated total reflection Fourier-transform infrared spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999 , 96, 5498-503	11.5	158
163	Protons @ interfaces: implications for biological energy conversion. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2006 , 1757, 913-30	4.6	144
162	Transient protonation changes in channelrhodopsin-2 and their relevance to channel gating. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E1273-81	11.5	127
161	Proton transfer reactions across bacteriorhodopsin and along the membrane. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2000 , 1458, 135-47	4.6	125
160	Tailoring the properties and the reactivity of the spinel cobalt oxide. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 9224-32	3.6	116
159	Resolving voltage-dependent structural changes of a membrane photoreceptor by surface-enhanced IR difference spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 12113-7	11.5	116

158	D38 is an essential part of the proton translocation pathway in bacteriorhodopsin. <i>Biochemistry</i> , 1996 , 35, 6635-43	3.2	112
157	Surface-enhanced infrared absorption spectroscopy (SEIRAS) to probe monolayers of membrane proteins. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013 , 1828, 2283-93	3.8	108
156	Light-driven water splitting for (bio-)hydrogen production: photosystem 2 as the central part of a bioelectrochemical device. <i>Photochemistry and Photobiology</i> , 2006 , 82, 1385-90	3.6	106
155	Channelrhodopsin unchained: structure and mechanism of a light-gated cation channel. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2014 , 1837, 626-42	4.6	100
154	Structural equilibrium fluctuations in mesophilic and thermophilic alpha-amylase. <i>Biophysical Journal</i> , 2000 , 79, 1629-36	2.9	99
153	Conformational changes of channelrhodopsin-2. <i>Journal of the American Chemical Society</i> , 2009 , 131, 7313-9	16.4	98
152	Blue-light-induced changes in Arabidopsis cryptochrome 1 probed by FTIR difference spectroscopy. <i>Biochemistry</i> , 2006 , 45, 2472-9	3.2	97
151	Infrared Difference Spectra of the Intermediates L, M, N, and O of the Bacteriorhodopsin Photoreaction Obtained by Time-Resolved Attenuated Total Reflection Spectroscopy. <i>Journal of Physical Chemistry B</i> , 1997 , 101, 10542-10547	3.4	93
150	High-Field High-Repetition-Rate Sources for the Coherent THz Control of Matter. <i>Scientific Reports</i> , 2016 , 6, 22256	4.9	89
149	Vibrational spectroscopy of an algal Phot-LOV1 domain probes the molecular changes associated with blue-light reception. <i>Biophysical Journal</i> , 2003 , 84, 466-74	2.9	88
148	Thinner, smaller, faster: IR techniques to probe the functionality of biological and biomimetic systems. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 5416-24	16.4	86
147	Direct observation of protonation reactions during the catalytic cycle of cytochrome c oxidase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 8715-20	11.5	86
146	Transient binding of CO to Cu(B) in cytochrome c oxidase is dynamically linked to structural changes around a carboxyl group: a time-resolved step-scan Fourier transform infrared investigation. <i>Biophysical Journal</i> , 2002 , 82, 1-10	2.9	82
145	Electrochemically induced surface-enhanced infrared difference absorption (SEIDA) spectroscopy of a protein monolayer. <i>Journal of the American Chemical Society</i> , 2003 , 125, 4986-7	16.4	81
144	Evidence for the isomerization and decarboxylation in the photoconversion of the red fluorescent protein DsRed. <i>Journal of the American Chemical Society</i> , 2005 , 127, 8977-84	16.4	73
143	The DC gate in Channelrhodopsin-2: crucial hydrogen bonding interaction between C128 and D156. <i>Photochemical and Photobiological Sciences</i> , 2010 , 9, 194-8	4.2	69
142	Bacteriorhodopsin: the functional details of a molecular machine are being resolved. <i>Biophysical Chemistry</i> , 2000 , 85, 229-48	3.5	68
141	Time-resolved Fourier transform infrared study on photoadduct formation and secondary structural changes within the phototropin LOV domain. <i>Biophysical Journal</i> , 2009 , 96, 1462-70	2.9	67

140	Orientational control of the physiological reaction of cytochrome c oxidase tethered to a gold electrode. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 9339-47	3.4	65
139	Three-dimensional view of ultrafast dynamics in photoexcited bacteriorhodopsin. <i>Nature Communications</i> , 2019 , 10, 3177	17.4	63
138	Bacteriorhodopsin in ice. Accelerated proton transfer from the purple membrane surface. <i>FEBS Letters</i> , 1990 , 277, 277-80	3.8	61
137	The retinal structure of channelrhodopsin-2 assessed by resonance Raman spectroscopy. <i>FEBS Letters</i> , 2009 , 583, 3676-80	3.8	60
136	Blue light induces radical formation and autophosphorylation in the light-sensitive domain of <i>Chlamydomonas</i> cryptochrome. <i>Journal of Biological Chemistry</i> , 2007 , 282, 21720-8	5.4	60
135	Chromophore composition of a heterologously expressed BLUF-domain. <i>Photochemical and Photobiological Sciences</i> , 2004 , 3, 1011-6	4.2	58
134	Long distance electron transfer in cytochrome c oxidase immobilised on electrodes. A surface enhanced resonance Raman spectroscopic study. <i>Physical Chemistry Chemical Physics</i> , 2006 , 8, 759-66	3.6	57
133	Functional variations among LOV domains as revealed by FT-IR difference spectroscopy. <i>Photochemical and Photobiological Sciences</i> , 2004 , 3, 575-9	4.2	57
132	Atr/Ft-Ir Difference Spectroscopy of Biological Matter with Microsecond Time Resolution. <i>Applied Spectroscopy</i> , 1996 , 50, 588-596	3.1	57
131	Active site structure and redox processes of cytochrome c oxidase immobilised in a novel biomimetic lipid membrane on an electrode. <i>Chemical Communications</i> , 2004 , 2376-7	5.8	54
130	Perfusion-induced redox differences in cytochrome c oxidase: ATR/FT-IR spectroscopy. <i>FEBS Letters</i> , 2001 , 505, 63-7	3.8	52
129	The Grateful Infrared: Sequential Protein Structural Changes Resolved by Infrared Difference Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2017 , 121, 335-350	3.4	50
128	Viscous hydrophilic injection matrices for serial crystallography. <i>IUCrJ</i> , 2017 , 4, 400-410	4.7	50
127	Structural differences between the closed and open states of channelrhodopsin-2 as observed by EPR spectroscopy. <i>FEBS Letters</i> , 2013 , 587, 3309-13	3.8	49
126	Time-resolved methods in biophysics. 10. Time-resolved FT-IR difference spectroscopy and the application to membrane proteins. <i>Photochemical and Photobiological Sciences</i> , 2009 , 8, 1517-28	4.2	49
125	Femtosecond-to-millisecond structural changes in a light-driven sodium pump. <i>Nature</i> , 2020 , 583, 314-318	18.4	48
124	Assessing the functionality of a membrane protein in a three-dimensional crystal. <i>Journal of Molecular Biology</i> , 1998 , 281, 587-92	6.5	48
123	HypD is the scaffold protein for Fe-(CN) ₂ CO cofactor assembly in [NiFe]-hydrogenase maturation. <i>Biochemistry</i> , 2013 , 52, 3289-96	3.2	46

122	Decoupling of photo- and proton cycle in the Asp85-->Glu mutant of bacteriorhodopsin.. <i>EMBO Journal</i> , 1993 , 12, 3721-3727	13	44
121	Solid-state photo-CIDNP effect observed in phototropin LOV1-C57S by (13)C magic-angle spinning NMR spectroscopy. <i>Journal of the American Chemical Society</i> , 2010 , 132, 15542-3	16.4	43
120	Stepwise isotope editing of [FeFe]-hydrogenases exposes cofactor dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 8454-9	11.5	42
119	Ultrafast infrared spectroscopy on channelrhodopsin-2 reveals efficient energy transfer from the retinal chromophore to the protein. <i>Journal of the American Chemical Society</i> , 2013 , 135, 6968-76	16.4	42
118	Use of surface enhanced infrared absorption spectroscopy (SEIRA) to probe the functionality of a protein monolayer. <i>Biopolymers</i> , 2006 , 82, 415-9	2.2	42
117	The molecular mechanism of membrane proteins probed by evanescent infrared waves. <i>ChemBioChem</i> , 2004 , 5, 431-6	3.8	40
116	Sequential conformational transitions and helical supercoiling regulate a sensor histidine kinase. <i>Nature Communications</i> , 2017 , 8, 284	17.4	39
115	Temporal evolution of helix hydration in a light-gated ion channel correlates with ion conductance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E5796-804	11.5	38
114	Immobilization of the [FeFe]-hydrogenase CrHydA1 on a gold electrode: design of a catalytic surface for the production of molecular hydrogen. <i>Journal of Biotechnology</i> , 2009 , 142, 3-9	3.7	38
113	Time-resolved microspectroscopy on a single crystal of bacteriorhodopsin reveals lattice-induced differences in the photocycle kinetics. <i>Biophysical Journal</i> , 2006 , 91, 1441-51	2.9	37
112	Proton transfer dynamics at membrane/water interface and mechanism of biological energy conversion. <i>Biochemistry (Moscow)</i> , 2005 , 70, 251-6	2.9	37
111	Vibronic Dynamics of the Ultrafast all-trans to 13-cis Photoisomerization of Retinal in Channelrhodopsin-1. <i>Journal of the American Chemical Society</i> , 2016 , 138, 4757-62	16.4	36
110	Changes in the hydrogen-bonding strength of internal water molecules and cysteine residues in the conductive state of channelrhodopsin-1. <i>Journal of Chemical Physics</i> , 2014 , 141, 22D507	3.9	36
109	Molecular impact of the membrane potential on the regulatory mechanism of proton transfer in sensory rhodopsin II. <i>Journal of the American Chemical Society</i> , 2010 , 132, 10808-15	16.4	36
108	Influence of the Molecular Structure of Carboxyl-Terminated Self-Assembled Monolayer on the Electron Transfer of Cytochrome c Adsorbed on an Au Electrode: In Situ Observation by Surface-Enhanced Infrared Absorption Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 813-819	3.8	36
107	The crystal structure of the L1 intermediate of halorhodopsin at 1.9 angstroms resolution. <i>Photochemistry and Photobiology</i> , 2007 , 83, 369-77	3.6	35
106	Proton translocation by bacteriorhodopsin in the absence of substantial conformational changes. <i>Journal of Molecular Biology</i> , 2002 , 319, 555-65	6.5	35
105	In vitro hydrogen production--using energy from the sun. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 47-57	3.6	34

104	Pre-gating conformational changes in the ChETA variant of channelrhodopsin-2 monitored by nanosecond IR spectroscopy. <i>Journal of the American Chemical Society</i> , 2015 , 137, 1850-61	16.4	33
103	Indication for a radical intermediate preceding the signaling state in the LOV domain photocycle. <i>Photochemistry and Photobiology</i> , 2011 , 87, 548-53	3.6	31
102	Structure formation during translocon-unassisted co-translational membrane protein folding. <i>Scientific Reports</i> , 2017 , 7, 8021	4.9	30
101	[NiFe]-hydrogenase maturation: isolation of a HypC-HypD complex carrying diatomic CO and CN-ligands. <i>FEBS Letters</i> , 2012 , 586, 3882-7	3.8	30
100	Exploring the possible role of Glu286 in CcO by electrostatic energy computations combined with molecular dynamics. <i>Journal of Physical Chemistry B</i> , 2013 , 117, 12432-41	3.4	29
99	The photochemistry of the light-, oxygen-, and voltage-sensitive domains in the algal blue light receptor phot. <i>Biopolymers</i> , 2006 , 82, 373-8	2.2	29
98	Functional characterization of sensory rhodopsin II from <i>Halobacterium salinarum</i> expressed in <i>Escherichia coli</i> . <i>FEBS Letters</i> , 2005 , 579, 3147-51	3.8	29
97	Time-resolved FT-IR spectroscopic investigation of the pH-dependent proton transfer reactions in the E194Q mutant of bacteriorhodopsin. <i>Biochemical and Biophysical Research Communications</i> , 2001 , 283, 57-63	3.4	29
96	The [NiFe]-hydrogenase accessory chaperones HypC and HybG of <i>Escherichia coli</i> are iron- and carbon dioxide-binding proteins. <i>FEBS Letters</i> , 2013 , 587, 2512-6	3.8	28
95	Single amino acid substitution reveals latent photolyase activity in <i>Arabidopsis cry1</i> . <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 9356-60	16.4	28
94	Time-resolved flow-flash FT-IR difference spectroscopy: the kinetics of CO photodissociation from myoglobin revisited. <i>Analytical and Bioanalytical Chemistry</i> , 2009 , 394, 1869-77	4.4	27
93	Kinetics of proton release and uptake by channelrhodopsin-2. <i>FEBS Letters</i> , 2012 , 586, 1344-8	3.8	26
92	Time-resolved FT-IR spectroscopy traces signal relay within the blue-light receptor AppA. <i>ChemPhysChem</i> , 2007 , 8, 1787-9	3.2	26
91	Crystallization in lipidic cubic phases: a case study with bacteriorhodopsin. <i>Methods in Molecular Biology</i> , 2003 , 228, 305-16	1.4	26
90	Photoactive mitochondria: in vivo transfer of a light-driven proton pump into the inner mitochondrial membrane of <i>Schizosaccharomyces pombe</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1994 , 91, 9367-71	11.5	26
89	Resonance Raman and FTIR spectroscopic characterization of the closed and open states of channelrhodopsin-1. <i>FEBS Letters</i> , 2014 , 588, 2301-6	3.8	24
88	Bacteriorhodopsin expressed in <i>Schizosaccharomyces pombe</i> pumps protons through the plasma membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1993 , 90, 3578-82	11.5	24
87	New ultrarapid-scanning interferometer for FT-IR spectroscopy with microsecond time-resolution. <i>Review of Scientific Instruments</i> , 2016 , 87, 063113	1.7	24

86	Spectroscopic investigations under whole-cell conditions provide new insight into the metal hydride chemistry of [FeFe]-hydrogenase. <i>Chemical Science</i> , 2020 , 11, 4608-4617	9.4	23
85	Protein dynamics observed by tunable mid-IR quantum cascade lasers across the time range from 10ns to 1s. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 188, 666-674	4.4	23
84	Surface-Enhanced Raman Scattering and Surface-Enhanced Infrared Absorption by Plasmon Polaritons in Three-Dimensional Nanoparticle Supercrystals. <i>ACS Nano</i> , 2021 , 15, 5523-5533	16.7	23
83	In-Situ Observation of Membrane Protein Folding during Cell-Free Expression. <i>PLoS ONE</i> , 2016 , 11, e0151051	3.951	23
82	Surface Enhanced Resonance Raman Spectroscopy Reveals Potential Induced Redox and Conformational Changes of Cytochrome c Oxidase on Electrodes. <i>Journal of Physical Chemistry B</i> , 2015 , 119, 9586-91	3.4	22
81	In situ monitoring of the orientated assembly of strep-tagged membrane proteins on the gold surface by surface enhanced infrared absorption spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2008 , 10, 6381-7	3.6	22
80	Geometry of the Catalytic Active Site in [FeFe]-Hydrogenase Is Determined by Hydrogen Bonding and Proton Transfer. <i>ACS Catalysis</i> , 2019 , 9, 9140-9149	13.1	21
79	Kinetic and vibrational isotope effects of proton transfer reactions in channelrhodopsin-2. <i>Biophysical Journal</i> , 2015 , 109, 287-97	2.9	21
78	How [FeFe]-Hydrogenase Facilitates Bidirectional Proton Transfer. <i>Journal of the American Chemical Society</i> , 2019 , 141, 17394-17403	16.4	19
77	Disc Antenna Enhanced Infrared Spectroscopy: From Self-Assembled Monolayers to Membrane Proteins. <i>ACS Sensors</i> , 2018 , 3, 984-991	9.2	19
76	pH-sensitive vibrational probe reveals a cytoplasmic protonated cluster in bacteriorhodopsin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E10909-E10918	11.5	19
75	Binding of Ca ²⁺ to glutamic acid-rich polypeptides from the rod outer segment. <i>Biophysical Journal</i> , 2007 , 92, 3207-14	2.9	19
74	PROTON TRANSLOCATION and CONFORMATIONAL CHANGES DURING THE BACTERIORHODOPSIN PHOTOCYCLE: TIME-RESOLVED STUDIES WITH MEMBRANE-BOUND OPTICAL PROBES and X-RAY DIFFRACTION*. <i>Photochemistry and Photobiology</i> , 1991 , 54, 881-887	3.6	19
73	Molecular details of the unique mechanism of chloride transport by a cyanobacterial rhodopsin. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 3184-3199	3.6	18
72	Scanning near-field IR microscopy of proteins in lipid bilayers. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 21432-6	3.6	18
71	Scanning probe microscopic studies of the oriented attachment and membrane reconstitution of cytochrome C oxidase to a gold electrode. <i>Langmuir</i> , 2005 , 21, 8580-3	4	18
70	A tyrosine residue deprotonates during oxygen reduction by the caa3 reductase from <i>Rhodothermus marinus</i> . <i>FEBS Letters</i> , 2006 , 580, 1350-4	3.8	18
69	Electrostatics, proton sensor, and networks governing the gating transition in GLIC, a proton-gated pentameric ion channel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E12172-E12181	11.5	17

68	Orientation of non-spherical protonated water clusters revealed by infrared absorption dichroism. <i>Nature Communications</i> , 2018 , 9, 311	17.4	16
67	A local area network of protonated water molecules. <i>Biophysical Journal</i> , 2004 , 87, 2105-6	2.9	16
66	Mechanism of Inward Proton Transport in an Antarctic Microbial Rhodopsin. <i>Journal of Physical Chemistry B</i> , 2020 , 124, 4851-4872	3.4	16
65	Aureochrome 1 illuminated: structural changes of a transcription factor probed by molecular spectroscopy. <i>PLoS ONE</i> , 2014 , 9, e103307	3.7	15
64	Düner, kleiner, schneller – Wie die IR-Spektroskopie zur Aufklärung des Funktionsmechanismus biologischer und biomimetischer Systeme beiträgt. <i>Angewandte Chemie</i> , 2010 , 122, 5544-5553	3.6	15
63	Transient Conformational Changes of Sensory Rhodopsin II Investigated by Vibrational Stark Effect Probes. <i>Journal of Physical Chemistry B</i> , 2016 , 120, 4383-7	3.4	14
62	Photoexcitation of the P State Induces a Secondary Photocycle That Potentially Desensitizes Channelrhodopsin-2. <i>Journal of the American Chemical Society</i> , 2018 , 140, 9899-9903	16.4	14
61	Characterisation of subunit III and its oligomer from spinach chloroplast ATP synthase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2003 , 1618, 59-66	3.8	14
60	Tailor-Made Modification of a Gold Surface for the Chemical Binding of a High-Activity [FeFe] Hydrogenase. <i>European Journal of Inorganic Chemistry</i> , 2011 , 2011, 1138-1146	2.3	13
59	The two photocycles of photoactive yellow protein from <i>Rhodobacter sphaeroides</i> . <i>Journal of Biological Chemistry</i> , 2003 , 278, 8442-51	5.4	13
58	Decoupling of photo- and proton cycle in the Asp85-->Glu mutant of bacteriorhodopsin. <i>EMBO Journal</i> , 1993 , 12, 3721-7	13	13
57	Structure of Halorhodopsin from <i>Halobacterium salinarum</i> in a new crystal form that imposes little restraint on the E-F loop. <i>Journal of Structural Biology</i> , 2015 , 190, 373-8	3.4	12
56	Proton transfer and protein conformation dynamics in photosensitive proteins by time-resolved step-scan Fourier-transform infrared spectroscopy. <i>Journal of Visualized Experiments</i> , 2014 , e51622	1.6	12
55	Model peptides uncover the role of the ß-secretase transmembrane sequence in metal ion mediated oligomerization. <i>Journal of the American Chemical Society</i> , 2013 , 135, 19354-61	16.4	12
54	The Two-Photon Reversible Reaction of the Bistable Jumping Spider Rhodopsin-1. <i>Biophysical Journal</i> , 2019 , 116, 1248-1258	2.9	11
53	Fermi energy shift in deposited metallic nanotubes: A Raman scattering study. <i>Physical Review B</i> , 2013 , 87,	3.3	11
52	Infrared Scattering-Type Scanning Near-Field Optical Microscopy of Biomembranes in Water. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 8183-8188	6.4	11
51	Femtosecond infrared spectroscopy of channelrhodopsin-1 chromophore isomerization. <i>Structural Dynamics</i> , 2016 , 3, 043208	3.2	10

50	Time-resolved FT-IR Spectroscopy of Membrane Proteins. <i>Australian Journal of Chemistry</i> , 2011 , 64, 9	1.2	9
49	Biophysics and bioinformatics reveal structural differences of the two peripheral stalk subunits in chloroplast ATP synthase. <i>Journal of Biochemistry</i> , 2007 , 141, 411-20	3.1	9
48	Magneto-Seebeck microscopy of domain switching in collinear antiferromagnet CuMnAs. <i>Physical Review Materials</i> , 2020 , 4,	3.2	9
47	What Do Neutrons, X-ray Synchrotron Radiation, Optical pH-indicators, and Mutagenesis Tell us About the Light-driven Proton Pump Bacteriorhodopsin?. <i>Jerusalem Symposia on Quantum Chemistry and Biochemistry</i> , 1992 , 69-84		8
46	Light-Triggered Opening and Closing of an Hydrophobic Gate Controls Vectorial Proton Transfer Across Bacteriorhodopsin. <i>NATO ASI Series Series B: Physics</i> , 1992 , 171-185		8
45	The primary photoreaction of channelrhodopsin-1: wavelength dependent photoreactions induced by ground-state heterogeneity. <i>Frontiers in Molecular Biosciences</i> , 2015 , 2, 41	5.6	7
44	Bioenergetics at the gold surface: SEIRAS probes photosynthetic and respiratory reactions at the monolayer level. <i>Biochemical Society Transactions</i> , 2008 , 36, 986-91	5.1	7
43	Light-Induced Structuring of Photosensitive Polymer Brushes. <i>ACS Applied Polymer Materials</i> , 2019 , 1, 3017-3026	4.3	6
42	Near-field magneto-caloritronic nanoscopy on ferromagnetic nanostructures. <i>AIP Advances</i> , 2018 , 8, 125329	1.5	6
41	Crystal structure of Halobacterium salinarum halorhodopsin with a partially depopulated primary chloride-binding site. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2016 , 72, 692-9	1.1	5
40	FT-IR difference spectroscopy elucidates crucial interactions of sensory rhodopsin I with the cognate transducer HtrI. <i>Biochemistry</i> , 2007 , 46, 9399-405	3.2	5
39	Proton Transfer in the Light-Harvesting Protein Bacteriorhodopsin: An Investigation with Optical pH-Indicators. <i>NATO ASI Series Series B: Physics</i> , 1992 , 187-197		5
38	Single Amino Acid Substitution Reveals Latent Photolyase Activity in Arabidopsis cry1. <i>Angewandte Chemie</i> , 2012 , 124, 9490-9494	3.6	4
37	Infrared nanoscopy and tomography of intracellular structures. <i>Communications Biology</i> , 2021 , 4, 1341	6.7	4
36	A Resonance Raman Marker Band Characterizes the Slow and Fast Form of Cytochrome Oxidase. <i>Journal of the American Chemical Society</i> , 2021 , 143, 2769-2776	16.4	4
35	Dynamics and mechanism of a light-driven chloride pump.. <i>Science</i> , 2022 , 375, eabj6663	33.3	4
34	Characterization of the Blue-Light-Activated Adenylyl Cyclase mPAC by Flash Photolysis and FTIR Spectroscopy. <i>Photochemistry and Photobiology</i> , 2017 , 93, 857-864	3.6	3
33	Characterisation of the Cyanate Inhibited State of Cytochrome c Oxidase. <i>Scientific Reports</i> , 2020 , 10, 3863	4.9	3

32	Ultra-rapid electro-optic sampling of octave-spanning mid-infrared waveforms. <i>Optics Express</i> , 2021 , 29, 20747-20764	3.3	3
31	Structure, dynamics, and function of bacteriorhodopsin. <i>The Protein Journal</i> , 1998 , 17, 536-8		3
30	Signal relay from sensory rhodopsin I to the cognate transducer HtrI: assessing the critical change in hydrogen-bonding between Tyr-210 and Asn-53. <i>Biophysical Chemistry</i> , 2010 , 150, 23-8	3.5	2
29	Quantification of Local Electric Field Changes at the Active Site of Cytochrome Oxidase by Fourier Transform Infrared Spectroelectrochemical Titrations. <i>Frontiers in Chemistry</i> , 2021 , 9, 669452	5	2
28	Confined hydration in nanometer-graded plasma polymer films: Insights from surface-enhanced infrared absorption spectroscopy. <i>Surfaces and Interfaces</i> , 2021 , 23, 100922	4.1	2
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