

# Joachim Heberle

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/632217/joachim-heberle-publications-by-year.pdf>

**Version:** 2024-04-09

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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

| #   | Paper   | IF   | Citations |
|-----|---|------|-----------|
| 175 | pH-induced insertion of pHLIP into a lipid bilayer: In-situ SEIRAS characterization of a folding intermediate at neutral pH.. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , <b>2022</b> , 1864, 183873              | 3.8  | 1         |
| 174 | The Photoreaction of the Proton-Pumping Rhodopsin 1 From the Maize Pathogenic Basidiomycete .. <i>Frontiers in Molecular Biosciences</i> , <b>2022</b> , 9, 826990  | 5.6  | 0         |
| 173 | Dynamics and mechanism of a light-driven chloride pump.. <i>Science</i> , <b>2022</b> , 375, eabj6663   | 33.3 | 4         |
| 172 | Protein conformational changes and protonation dynamics probed by a single shot using quantum-cascade-laser-based IR spectroscopy. <i>Journal of Chemical Physics</i> , <b>2022</b> , 156, 204201                           | 3.9  | 0         |
| 171 | Near-Infrared Activation of Sensory Rhodopsin II Mediated by NIR-to-Blue Upconversion Nanoparticles.. <i>Frontiers in Molecular Biosciences</i> , <b>2021</b> , 8, 782688   | 5.6  | 0         |
| 170 | Infrared nanoscopy and tomography of intracellular structures. <i>Communications Biology</i> , <b>2021</b> , 4, 1341  | 6.7  | 4         |
| 169 | Hydrophobicity of Self-Assembled Monolayers of Alkanes: Fluorination, Density, Roughness, and Lennard-Jones Cutoffs. <i>Langmuir</i> , <b>2021</b> , 37, 13846-13858  | 4    | 1         |
| 168 | Surface-Enhanced Raman Scattering and Surface-Enhanced Infrared Absorption by Plasmon Polaritons in Three-Dimensional Nanoparticle Supercrystals. <i>ACS Nano</i> , <b>2021</b> , 15, 5523-5533                             | 16.7 | 23        |
| 167 | Quantification of Local Electric Field Changes at the Active Site of Cytochrome Oxidase by Fourier Transform Infrared Spectroelectrochemical Titrations. <i>Frontiers in Chemistry</i> , <b>2021</b> , 9, 669452            | 5    | 2         |
| 166 | Confined hydration in nanometer-graded plasma polymer films: Insights from surface-enhanced infrared absorption spectroscopy. <i>Surfaces and Interfaces</i> , <b>2021</b> , 23, 100922                                     | 4.1  | 2         |
| 165 | Ultra-rapid electro-optic sampling of octave-spanning mid-infrared waveforms. <i>Optics Express</i> , <b>2021</b> , 29, 20747-20764   | 3.3  | 3         |
| 164 | A Resonance Raman Marker Band Characterizes the Slow and Fast Form of Cytochrome Oxidase. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 2769-2776  | 16.4 | 4         |
| 163 | Real-Time Tracking of Proton Transfer from the Reactive Cysteine to the Flavin Chromophore of a Photosensing Light Oxygen Voltage Protein. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 12535-12542 | 16.4 | 1         |
| 162 | Electron inventory of the iron-sulfur scaffold complex HypCD essential in [NiFe]-hydrogenase cofactor assembly. <i>Biochemical Journal</i> , <b>2021</b> , 478, 3281-3295   | 3.8  | 1         |
| 161 | Femtosecond-to-millisecond structural changes in a light-driven sodium pump. <i>Nature</i> , <b>2020</b> , 583, 314-318   | 50.4 | 48        |
| 160 | Characterisation of the Cyanate Inhibited State of Cytochrome c Oxidase. <i>Scientific Reports</i> , <b>2020</b> , 10, 3863   | 4.9  | 3         |
| 159 | Spectroscopic investigations under whole-cell conditions provide new insight into the metal hydride chemistry of [FeFe]-hydrogenase. <i>Chemical Science</i> , <b>2020</b> , 11, 4608-4617                                  | 9.4  | 23        |

|     |   |      |    |
|-----|---|------|----|
| 158 | Magneto-Seebeck microscopy of domain switching in collinear antiferromagnet CuMnAs. <i>Physical Review Materials</i> , <b>2020</b> , 4,   | 3.2  | 9  |
| 157 | Mid-infrared waveform measurement by rapid mechanical scanning. <i>EPJ Web of Conferences</i> , <b>2020</b> , 243, 16002  | 0.3  | 0  |
| 156 | Thermoelectric nanospectroscopy for the imaging of molecular fingerprints. <i>Nanophotonics</i> , <b>2020</b> , 9, 4347-4354  | 6.3  | 0  |
| 155 | Mechanism of Inward Proton Transport in an Antarctic Microbial Rhodopsin. <i>Journal of Physical Chemistry B</i> , <b>2020</b> , 124, 4851-4872   | 3.4  | 16 |
| 154 | Lipid Composition Affects the Efficiency in the Functional Reconstitution of the Cytochrome Oxidase. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 21,   | 6.3  | 1  |
| 153 | Infrared Scattering-Type Scanning Near-Field Optical Microscopy of Biomembranes in Water. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 8183-8188  | 6.4  | 11 |
| 152 | Geometry of the Catalytic Active Site in [FeFe]-Hydrogenase Is Determined by Hydrogen Bonding and Proton Transfer. <i>ACS Catalysis</i> , <b>2019</b> , 9, 9140-9149  | 13.1 | 21 |
| 151 | How [FeFe]-Hydrogenase Facilitates Bidirectional Proton Transfer. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 17394-17403  | 16.4 | 19 |
| 150 | Light-Induced Structuring of Photosensitive Polymer Brushes. <i>ACS Applied Polymer Materials</i> , <b>2019</b> , 1, 3017-3026  | 4.3  | 6  |
| 149 | The Two-Photon Reversible Reaction of the Bistable Jumping Spider Rhodopsin-1. <i>Biophysical Journal</i> , <b>2019</b> , 116, 1248-1258  | 2.9  | 11 |
| 148 | Three-dimensional view of ultrafast dynamics in photoexcited bacteriorhodopsin. <i>Nature Communications</i> , <b>2019</b> , 10, 3177   | 17.4 | 63 |
| 147 | Atomistic Insight into the Role of Threonine 127 in the Functional Mechanism of Channelrhodopsin-2. <i>Applied Sciences (Switzerland)</i> , <b>2019</b> , 9, 4905   | 2.6  | 2  |
| 146 | Orientation of non-spherical protonated water clusters revealed by infrared absorption dichroism. <i>Nature Communications</i> , <b>2018</b> , 9, 311   | 17.4 | 16 |
| 145 | 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> , <b>2018</b> , 188, 666-674 | 4.4  | 23 |
| 144 | Molecular details of the unique mechanism of chloride transport by a cyanobacterial rhodopsin. <i>Physical Chemistry Chemical Physics</i> , <b>2018</b> , 20, 3184-3199   | 3.6  | 18 |
| 143 | Photoexcitation of the P State Induces a Secondary Photocycle That Potentially Desensitizes Channelrhodopsin-2. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 9899-9903                      | 16.4 | 14 |
| 142 | Disc Antenna Enhanced Infrared Spectroscopy: From Self-Assembled Monolayers to Membrane Proteins. <i>ACS Sensors</i> , <b>2018</b> , 3, 984-991   | 9.2  | 19 |
| 141 | Near-field magneto-caloritronic nanoscopy on ferromagnetic nanostructures. <i>AIP Advances</i> , <b>2018</b> , 8, 125329  | 1.5  | 6  |

|     |   |      |    |
|-----|---|------|----|
| 140 | 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> , <b>2018</b> , 115, E12172-E12181 | 11.5 | 17 |
| 139 | Characterization of the Blue-Light-Activated Adenylyl Cyclase mPAC by Flash Photolysis and FTIR Spectroscopy. <i>Photochemistry and Photobiology</i> , <b>2017</b> , 93, 857-864  | 3.6  | 3  |
| 138 | Structure formation during translocon-unassisted co-translational membrane protein folding. <i>Scientific Reports</i> , <b>2017</b> , 7, 8021   | 4.9  | 30 |
| 137 | Sequential conformational transitions and helical supercoiling regulate a sensor histidine kinase. <i>Nature Communications</i> , <b>2017</b> , 8, 284  | 17.4 | 39 |
| 136 | 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> , <b>2017</b> , 114, E10909-E10918                               | 11.5 | 19 |
| 135 | Retraction: The reductive phase of <i>Rhodobacter sphaeroides</i> cytochrome c oxidase disentangled by CO ligation. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 32143  | 3.6  |    |
| 134 | Reply to "Comment on Transient Conformational Changes of Sensory Rhodopsin II Investigated by Vibrational Stark Effect Probes". <i>Journal of Physical Chemistry B</i> , <b>2017</b> , 121, 7397-7399   | 3.4  |    |
| 133 | The Grateful Infrared: Sequential Protein Structural Changes Resolved by Infrared Difference Spectroscopy. <i>Journal of Physical Chemistry B</i> , <b>2017</b> , 121, 335-350  | 3.4  | 50 |
| 132 | Viscous hydrophilic injection matrices for serial crystallography. <i>IUCrJ</i> , <b>2017</b> , 4, 400-410  | 4.7  | 50 |
| 131 | Crystal structure of <i>Halobacterium salinarum</i> halorhodopsin with a partially depopulated primary chloride-binding site. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , <b>2016</b> , 72, 692-9                    | 1.1  | 5  |
| 130 | Stepwise isotope editing of [FeFe]-hydrogenases exposes cofactor dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 8454-9   | 11.5 | 42 |
| 129 | High-Field High-Repetition-Rate Sources for the Coherent THz Control of Matter. <i>Scientific Reports</i> , <b>2016</b> , 6, 22256  | 4.9  | 89 |
| 128 | Transient Conformational Changes of Sensory Rhodopsin II Investigated by Vibrational Stark Effect Probes. <i>Journal of Physical Chemistry B</i> , <b>2016</b> , 120, 4383-7  | 3.4  | 14 |
| 127 | Vibronic Dynamics of the Ultrafast all-trans to 13-cis Photoisomerization of Retinal in Channelrhodopsin-1. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 4757-62  | 16.4 | 36 |
| 126 | In-Situ Observation of Membrane Protein Folding during Cell-Free Expression. <i>PLoS ONE</i> , <b>2016</b> , 11, e0151051   | 1.5  | 23 |
| 125 | Femtosecond infrared spectroscopy of channelrhodopsin-1 chromophore isomerization. <i>Structural Dynamics</i> , <b>2016</b> , 3, 043208   | 3.2  | 10 |
| 124 | New ultrarapid-scanning interferometer for FT-IR spectroscopy with microsecond time-resolution. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 063113  | 1.7  | 24 |
| 123 | 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> , <b>2015</b> , 119, 9586-91                                   | 3.4  | 22 |

|     |  |      |     |
|-----|--|------|-----|
| 122 | Kinetic and vibrational isotope effects of proton transfer reactions in channelrhodopsin-2. <i>Biophysical Journal</i> , <b>2015</b> , 109, 287-97   | 2.9  | 21  |
| 121 | Structure of Halorhodopsin from Halobacterium salinarum in a new crystal form that imposes little restraint on the E-F loop. <i>Journal of Structural Biology</i> , <b>2015</b> , 190, 373-8   | 3.4  | 12  |
| 120 | The primary photoreaction of channelrhodopsin-1: wavelength dependent photoreactions induced by ground-state heterogeneity. <i>Frontiers in Molecular Biosciences</i> , <b>2015</b> , 2, 41  | 5.6  | 7   |
| 119 | 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> , <b>2015</b> , 112, E5796-804                                      | 11.5 | 38  |
| 118 | Pre-gating conformational changes in the ChETA variant of channelrhodopsin-2 monitored by nanosecond IR spectroscopy. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 1850-61   | 16.4 | 33  |
| 117 | Gating in channelrhodopsin. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2014</b> , 1837, e105  | 4.6  |     |
| 116 | Resonance Raman and FTIR spectroscopic characterization of the closed and open states of channelrhodopsin-1. <i>FEBS Letters</i> , <b>2014</b> , 588, 2301-6   | 3.8  | 24  |
| 115 | Proton transfer and protein conformation dynamics in photosensitive proteins by time-resolved step-scan Fourier-transform infrared spectroscopy. <i>Journal of Visualized Experiments</i> , <b>2014</b> , e51622   | 1.6  | 12  |
| 114 | 2P080 Surface Enhanced IR study of Protein folding dynamics at a solid support lipid layer(01E. Protein: Measurement & Analysis,Poster,The 52nd Annual Meeting of the Biophysical Society of Japan(BSJ2014)). <i>Seibutsu Butsuri</i> , <b>2014</b> , 54, S208 | 0    |     |
| 113 | Aureochrome 1 illuminated: structural changes of a transcription factor probed by molecular spectroscopy. <i>PLoS ONE</i> , <b>2014</b> , 9, e103307   | 3.7  | 15  |
| 112 | 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> , <b>2014</b> , 141, 22D507   | 3.9  | 36  |
| 111 | Channelrhodopsin unchained: structure and mechanism of a light-gated cation channel. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2014</b> , 1837, 626-42   | 4.6  | 100 |
| 110 | Structural analysis and mapping of individual protein complexes by infrared nanospectroscopy. <i>Nature Communications</i> , <b>2013</b> , 4, 2890   | 17.4 | 245 |
| 109 | Surface-enhanced infrared absorption spectroscopy (SEIRAS) to probe monolayers of membrane proteins. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , <b>2013</b> , 1828, 2283-93   | 3.8  | 108 |
| 108 | Structural differences between the closed and open states of channelrhodopsin-2 as observed by EPR spectroscopy. <i>FEBS Letters</i> , <b>2013</b> , 587, 3309-13  | 3.8  | 49  |
| 107 | Exploring the possible role of Glu286 in CcO by electrostatic energy computations combined with molecular dynamics. <i>Journal of Physical Chemistry B</i> , <b>2013</b> , 117, 12432-41   | 3.4  | 29  |
| 106 | The [NiFe]-hydrogenase accessory chaperones HypC and HybG of Escherichia coli are iron- and carbon dioxide-binding proteins. <i>FEBS Letters</i> , <b>2013</b> , 587, 2512-6   | 3.8  | 28  |
| 105 | Model peptides uncover the role of the ß-secretase transmembrane sequence in metal ion mediated oligomerization. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 19354-61   | 16.4 | 12  |

|     |   |      |     |
|-----|---|------|-----|
| 104 | HypD is the scaffold protein for Fe-(CN) <sub>2</sub> CO cofactor assembly in [NiFe]-hydrogenase maturation. <i>Biochemistry</i> , <b>2013</b> , 52, 3289-96  | 3.2  | 46  |
| 103 | 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> , <b>2013</b> , 135, 6968-76 | 16.4 | 42  |
| 102 | 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> , <b>2013</b> , 110, E1273-81   | 11.5 | 127 |
| 101 | Fermi energy shift in deposited metallic nanotubes: A Raman scattering study. <i>Physical Review B</i> , <b>2013</b> , 87,  | 3.3  | 11  |
| 100 | 2P103 Direct monitoring of membrane protein folding process during in-vitro expression by Surface Enhanced IR spectroscopy(03. Membrane proteins,Poster). <i>Seibutsu Butsuri</i> , <b>2013</b> , 53, S176        | 0    |     |
| 99  | [NiFe]-hydrogenase maturation: isolation of a HypC-HypD complex carrying diatomic CO and CN-ligands. <i>FEBS Letters</i> , <b>2012</b> , 586, 3882-7  | 3.8  | 30  |
| 98  | Single Amino Acid Substitution Reveals Latent Photolyase Activity in Arabidopsis cry1. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 9490-9494  | 3.6  | 4   |
| 97  | Single amino acid substitution reveals latent photolyase activity in Arabidopsis cry1. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 9356-60   | 16.4 | 28  |
| 96  | Kinetics of proton release and uptake by channelrhodopsin-2. <i>FEBS Letters</i> , <b>2012</b> , 586, 1344-8  | 3.8  | 26  |
| 95  | Enroute to investigating protein dynamics under selective vibrational excitation at the THz FEL FELBE. <i>Journal of Physics: Conference Series</i> , <b>2012</b> , 359, 012011                                   | 0.3  |     |
| 94  | Time-resolved FT-IR Spectroscopy of Membrane Proteins. <i>Australian Journal of Chemistry</i> , <b>2011</b> , 64, 9   | 1.2  | 9   |
| 93  | Indication for a radical intermediate preceding the signaling state in the LOV domain photocycle. <i>Photochemistry and Photobiology</i> , <b>2011</b> , 87, 548-53   | 3.6  | 31  |
| 92  | In vitro hydrogen production--using energy from the sun. <i>Physical Chemistry Chemical Physics</i> , <b>2011</b> , 13, 47-57   | 3.6  | 34  |
| 91  | Tailor-Made Modification of a Gold Surface for the Chemical Binding of a High-Activity [FeFe] Hydrogenase. <i>European Journal of Inorganic Chemistry</i> , <b>2011</b> , 2011, 1138-1146                         | 2.3  | 13  |
| 90  | Scanning near-field IR microscopy of proteins in lipid bilayers. <i>Physical Chemistry Chemical Physics</i> , <b>2011</b> , 13, 21432-6   | 3.6  | 18  |
| 89  | Time-Resolved FT-IR Spectroscopy for the Elucidation of Protein Function <b>2011</b> , 31-40  |      |     |
| 88  | 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> , <b>2010</b> , 132, 10808-15                  | 16.4 | 36  |
| 87  | The DC gate in Channelrhodopsin-2: crucial hydrogen bonding interaction between C128 and D156. <i>Photochemical and Photobiological Sciences</i> , <b>2010</b> , 9, 194-8   | 4.2  | 69  |

|    |  |      |     |
|----|--|------|-----|
| 86 | Solid-state photo-CIDNP effect observed in phototropin LOV1-C57S by $(^{13}\text{C})$ magic-angle spinning NMR spectroscopy. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 15542-3  | 16.4 | 43  |
| 85 | Düner, kleiner, schneller Wie die IR-Spektroskopie zur Aufklärung des Funktionsmechanismus biologischer und biomimetischer Systeme beiträgt. <i>Angewandte Chemie</i> , <b>2010</b> , 122, 5544-5553   | 3.6  | 15  |
| 84 | Thinner, smaller, faster: IR techniques to probe the functionality of biological and biomimetic systems. <i>Angewandte Chemie - International Edition</i> , <b>2010</b> , 49, 5416-24  | 16.4 | 86  |
| 83 | 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> , <b>2010</b> , 150, 23-8   | 3.5  | 2   |
| 82 | The retinal structure of channelrhodopsin-2 assessed by resonance Raman spectroscopy. <i>FEBS Letters</i> , <b>2009</b> , 583, 3676-80   | 3.8  | 60  |
| 81 | Time-resolved flow-flash FT-IR difference spectroscopy: the kinetics of CO photodissociation from myoglobin revisited. <i>Analytical and Bioanalytical Chemistry</i> , <b>2009</b> , 394, 1869-77  | 4.4  | 27  |
| 80 | 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> , <b>2009</b> , 142, 3-9   | 3.7  | 38  |
| 79 | Photosynthetic hydrogen production by a hybrid complex of photosystem I and [NiFe]-hydrogenase. <i>ACS Nano</i> , <b>2009</b> , 3, 4055-61   | 16.7 | 181 |
| 78 | Conformational changes of channelrhodopsin-2. <i>Journal of the American Chemical Society</i> , <b>2009</b> , 131, 7313-9  | 16.4 | 98  |
| 77 | Time-resolved Fourier transform infrared study on photoadduct formation and secondary structural changes within the phototropin LOV domain. <i>Biophysical Journal</i> , <b>2009</b> , 96, 1462-70   | 2.9  | 67  |
| 76 | Tailoring the properties and the reactivity of the spinel cobalt oxide. <i>Physical Chemistry Chemical Physics</i> , <b>2009</b> , 11, 9224-32   | 3.6  | 116 |
| 75 | Time-resolved methods in biophysics. 10. Time-resolved FT-IR difference spectroscopy and the application to membrane proteins. <i>Photochemical and Photobiological Sciences</i> , <b>2009</b> , 8, 1517-28  | 4.2  | 49  |
| 74 | 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> , <b>2008</b> , 112, 813-819 | 3.8  | 36  |
| 73 | 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> , <b>2008</b> , 10, 6381-7  | 3.6  | 22  |
| 72 | 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> , <b>2008</b> , 105, 12113-7   | 11.5 | 116 |
| 71 | Bioenergetics at the gold surface: SEIRAS probes photosynthetic and respiratory reactions at the monolayer level. <i>Biochemical Society Transactions</i> , <b>2008</b> , 36, 986-91   | 5.1  | 7   |
| 70 | FT-IR difference spectroscopy elucidates crucial interactions of sensory rhodopsin I with the cognate transducer HtrI. <i>Biochemistry</i> , <b>2007</b> , 46, 9399-405  | 3.2  | 5   |
| 69 | Binding of $\text{Ca}^{2+}$ to glutamic acid-rich polypeptides from the rod outer segment. <i>Biophysical Journal</i> , <b>2007</b> , 92, 3207-14  | 2.9  | 19  |



|    |   |      |     |
|----|---|------|-----|
| 68 | Time-resolved FT-IR spectroscopy traces signal relay within the blue-light receptor AppA. <i>ChemPhysChem</i> , <b>2007</b> , 8, 1787-9   | 3.2  | 26  |
| 67 | The crystal structure of the L1 intermediate of halorhodopsin at 1.9 angstroms resolution. <i>Photochemistry and Photobiology</i> , <b>2007</b> , 83, 369-77  | 3.6  | 35  |
| 66 | Biochemical applications of surface-enhanced infrared absorption spectroscopy. <i>Analytical and Bioanalytical Chemistry</i> , <b>2007</b> , 388, 47-54   | 4.4  | 188 |
| 65 | Blue light induces radical formation and autophosphorylation in the light-sensitive domain of <i>Chlamydomonas</i> cryptochrome. <i>Journal of Biological Chemistry</i> , <b>2007</b> , 282, 21720-8            | 5.4  | 60  |
| 64 | Biophysics and bioinformatics reveal structural differences of the two peripheral stalk subunits in chloroplast ATP synthase. <i>Journal of Biochemistry</i> , <b>2007</b> , 141, 411-20                        | 3.1  | 9   |
| 63 | Use of surface enhanced infrared absorption spectroscopy (SEIRA) to probe the functionality of a protein monolayer. <i>Biopolymers</i> , <b>2006</b> , 82, 415-9  | 2.2  | 42  |
| 62 | The photochemistry of the light-, oxygen-, and voltage-sensitive domains in the algal blue light receptor phot. <i>Biopolymers</i> , <b>2006</b> , 82, 373-8  | 2.2  | 29  |
| 61 | Long distance electron transfer in cytochrome c oxidase immobilised on electrodes. A surface enhanced resonance Raman spectroscopic study. <i>Physical Chemistry Chemical Physics</i> , <b>2006</b> , 8, 759-66 | 3.6  | 57  |
| 60 | Time-resolved microspectroscopy on a single crystal of bacteriorhodopsin reveals lattice-induced differences in the photocycle kinetics. <i>Biophysical Journal</i> , <b>2006</b> , 91, 1441-51                 | 2.9  | 37  |
| 59 | Protons @ interfaces: implications for biological energy conversion. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2006</b> , 1757, 913-30  | 4.6  | 144 |
| 58 | MITCHELL MEDAL LECTURE. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2006</b> , 1757, 1-551  | 4.6  | 1   |
| 57 | Blue-light-induced changes in Arabidopsis cryptochrome 1 probed by FTIR difference spectroscopy. <i>Biochemistry</i> , <b>2006</b> , 45, 2472-9   | 3.2  | 97  |
| 56 | Orientalional control of the physiological reaction of cytochrome c oxidase tethered to a gold electrode. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 9339-47                                   | 3.4  | 65  |
| 55 | A tyrosine residue deprotonates during oxygen reduction by the caa3 reductase from <i>Rhodothermus marinus</i> . <i>FEBS Letters</i> , <b>2006</b> , 580, 1350-4  | 3.8  | 18  |
| 54 | Light-driven water splitting for (bio-)hydrogen production: photosystem 2 as the central part of a bioelectrochemical device. <i>Photochemistry and Photobiology</i> , <b>2006</b> , 82, 1385-90                | 3.6  | 106 |
| 53 | Evidence for the isomerization and decarboxylation in the photoconversion of the red fluorescent protein DsRed. <i>Journal of the American Chemical Society</i> , <b>2005</b> , 127, 8977-84                    | 16.4 | 73  |
| 52 | Scanning probe microscopic studies of the oriented attachment and membrane reconstitution of cytochrome C oxidase to a gold electrode. <i>Langmuir</i> , <b>2005</b> , 21, 8580-3                               | 4    | 18  |
| 51 | Functional characterization of sensory rhodopsin II from <i>Halobacterium salinarum</i> expressed in <i>Escherichia coli</i> . <i>FEBS Letters</i> , <b>2005</b> , 579, 3147-51                                 | 3.8  | 29  |



|    |   |      |     |
|----|---|------|-----|
| 50 | Proton transfer dynamics at membrane/water interface and mechanism of biological energy conversion. <i>Biochemistry (Moscow)</i> , <b>2005</b> , 70, 251-6  | 2.9  | 37  |
| 49 | Vibrational Spectroscopy Explores the Photoreaction of LOV Domains <b>2005</b> , 155-161  |      |     |
| 48 | The molecular mechanism of membrane proteins probed by evanescent infrared waves. <i>ChemBioChem</i> , <b>2004</b> , 5, 431-6   | 3.8  | 40  |
| 47 | Functional variations among LOV domains as revealed by FT-IR difference spectroscopy. <i>Photochemical and Photobiological Sciences</i> , <b>2004</b> , 3, 575-9  | 4.2  | 57  |
| 46 | Active site structure and redox processes of cytochrome c oxidase immobilised in a novel biomimetic lipid membrane on an electrode. <i>Chemical Communications</i> , <b>2004</b> , 2376-7   | 5.8  | 54  |
| 45 | 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> , <b>2004</b> , 126, 9445-57   | 16.4 | 162 |
| 44 | 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> , <b>2004</b> , 126, 16199-206 | 16.4 | 258 |
| 43 | The protein-tethered lipid bilayer: a novel mimic of the biological membrane. <i>Biophysical Journal</i> , <b>2004</b> , 87, 3213-20  | 2.9  | 214 |
| 42 | A local area network of protonated water molecules. <i>Biophysical Journal</i> , <b>2004</b> , 87, 2105-6   | 2.9  | 16  |
| 41 | Chromophore composition of a heterologously expressed BLUF-domain. <i>Photochemical and Photobiological Sciences</i> , <b>2004</b> , 3, 1011-6  | 4.2  | 58  |
| 40 | 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> , <b>2003</b> , 100, 8715-20   | 11.5 | 86  |
| 39 | Electrochemically induced surface-enhanced infrared difference absorption (SEIDA) spectroscopy of a protein monolayer. <i>Journal of the American Chemical Society</i> , <b>2003</b> , 125, 4986-7  | 16.4 | 81  |
| 38 | Characterisation of subunit III and its oligomer from spinach chloroplast ATP synthase. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , <b>2003</b> , 1618, 59-66   | 3.8  | 14  |
| 37 | Vibrational spectroscopy of an algal Phot-LOV1 domain probes the molecular changes associated with blue-light reception. <i>Biophysical Journal</i> , <b>2003</b> , 84, 466-74  | 2.9  | 88  |
| 36 | Phot-LOV1: photocycle of a blue-light receptor domain from the green alga <i>Chlamydomonas reinhardtii</i> . <i>Biophysical Journal</i> , <b>2003</b> , 84, 1192-201  | 2.9  | 210 |
| 35 | Crystallization in lipidic cubic phases: a case study with bacteriorhodopsin. <i>Methods in Molecular Biology</i> , <b>2003</b> , 228, 305-16   | 1.4  | 26  |
| 34 | The two photocycles of photoactive yellow protein from <i>Rhodobacter sphaeroides</i> . <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 8442-51   | 5.4  | 13  |
| 33 | Proton translocation by bacteriorhodopsin in the absence of substantial conformational changes. <i>Journal of Molecular Biology</i> , <b>2002</b> , 319, 555-65   | 6.5  | 35  |

|    |   |      |     |
|----|---|------|-----|
| 32 | Proteorhodopsin is a light-driven proton pump with variable vectoriality. <i>Journal of Molecular Biology</i> , <b>2002</b> , 321, 821-38   | 6.5  | 208 |
| 31 | 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> , <b>2002</b> , 82, 1-10   | 2.9  | 82  |
| 30 | 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> , <b>2001</b> , 283, 57-63   | 3.4  | 29  |
| 29 | Perfusion-induced redox differences in cytochrome c oxidase: ATR/FT-IR spectroscopy. <i>FEBS Letters</i> , <b>2001</b> , 505, 63-7  | 3.8  | 52  |
| 28 | Time-resolved observation of proton transfer reactions across and along energy-transducing membranes. <i>Biochemical Society Transactions</i> , <b>2000</b> , 28, A110-A110   | 5.1  |     |
| 27 | ATR/FTIR Spectroscopy with Microsecond Time Resolution: Dynamics of Membrane Proteins on the Single Residue Level. <i>Biochemical Society Transactions</i> , <b>2000</b> , 28, A187-A187  | 5.1  |     |
| 26 | Time-resolved vibrational spectroscopy of the halorhodopsin photocycle. <i>Biochemical Society Transactions</i> , <b>2000</b> , 28, A188-A188   | 5.1  |     |
| 25 | Bacteriorhodopsin: the functional details of a molecular machine are being resolved. <i>Biophysical Chemistry</i> , <b>2000</b> , 85, 229-48  | 3.5  | 68  |
| 24 | 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> , <b>2000</b> , 97, 5129-34   | 11.5 | 743 |
| 23 | Structural equilibrium fluctuations in mesophilic and thermophilic alpha-amylase. <i>Biophysical Journal</i> , <b>2000</b> , 79, 1629-36  | 2.9  | 99  |
| 22 | Proton transfer reactions across bacteriorhodopsin and along the membrane. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , <b>2000</b> , 1458, 135-47  | 4.6  | 125 |
| 21 | Structure, Dynamics and Function of the Proton Pump Bacteriorhodopsin <b>2000</b> , 225-240   |      |     |
| 20 | 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> , <b>1999</b> , 96, 5498-503 | 11.5 | 158 |
| 19 | Assessing the functionality of a membrane protein in a three-dimensional crystal. <i>Journal of Molecular Biology</i> , <b>1998</b> , 281, 587-92   | 6.5  | 48  |
| 18 | Structure, dynamics, and function of bacteriorhodopsin. <i>The Protein Journal</i> , <b>1998</b> , 17, 536-8  |      | 3   |
| 17 | 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> , <b>1997</b> , 101, 10542-10547  | 3.4  | 93  |
| 16 | Ph Dependence of Proton Transfer Reactions within Bacteriorhodopsin: A Time-Resolved ATR/FT-IR Study <b>1997</b> , 117-118  |      | 1   |
| 15 | D38 is an essential part of the proton translocation pathway in bacteriorhodopsin. <i>Biochemistry</i> , <b>1996</b> , 35, 6635-43  | 3.2  | 112 |

|    |   |      |     |
|----|---|------|-----|
| 14 | Atr/Ft-Ir Difference Spectroscopy of Biological Matter with Microsecond Time Resolution. <i>Applied Spectroscopy</i> , <b>1996</b> , 50, 588-596  | 3.1  | 57  |
| 13 | Time-Resolved ATR-FTIR-Measurements of the Bacteriorhodopsin Photocycle <b>1995</b> , 177-178   |      |     |
| 12 | Proton migration along the membrane surface and retarded surface to bulk transfer. <i>Nature</i> , <b>1994</b> , 370, 379-82  | 50.4 | 280 |
| 11 | 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> , <b>1994</b> , 91, 9367-71 | 11.5 | 26  |
| 10 | 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> , <b>1993</b> , 90, 3578-82   | 11.5 | 24  |
| 9  | Decoupling of photo- and proton cycle in the Asp85-->Glu mutant of bacteriorhodopsin.. <i>EMBO Journal</i> , <b>1993</b> , 12, 3721-3727  | 13   | 44  |
| 8  | Decoupling of photo- and proton cycle in the Asp85-->Glu mutant of bacteriorhodopsin. <i>EMBO Journal</i> , <b>1993</b> , 12, 3721-7  | 13   | 13  |
| 7  | 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> , <b>1992</b> , 89, 5996-6000                  | 11.5 | 161 |
| 6  | Proton Transfer in the Light-Harvesting Protein Bacteriorhodopsin: An Investigation with Optical pH-Indicators. <i>NATO ASI Series Series B: Physics</i> , <b>1992</b> , 187-197  |      | 5   |
| 5  | 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> , <b>1992</b> , 69-84                              |      | 8   |
| 4  | Light-Triggered Opening and Closing of an Hydrophobic Gate Controls Vectorial Proton Transfer Across Bacteriorhodopsin. <i>NATO ASI Series Series B: Physics</i> , <b>1992</b> , 171-185  |      | 8   |
| 3  | 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> , <b>1991</b> , 54, 881-887                            | 3.6  | 19  |
| 2  | Bacteriorhodopsin in ice. Accelerated proton transfer from the purple membrane surface. <i>FEBS Letters</i> , <b>1990</b> , 277, 277-80   | 3.8  | 61  |
| 1  | Time-Resolved and Surface-Enhanced Infrared Spectroscopy245-268   |      | 1   |