

# Michael BÄrsch

## List of Publications by Year in descending order

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87  
papers

3,551  
citations

147801

31  
h-index

144013

57  
g-index

93  
all docs

93  
docs citations

93  
times ranked

3365  
citing authors

#	ARTICLE	IF	CITATIONS
1	Proton-powered subunit rotation in single membrane-bound FOF1-ATP synthase. <i>Nature Structural and Molecular Biology</i> , 2004, 11, 135-141.	8.2	392
2	Sequential bottom-up assembly of mechanically stabilized synthetic cells by microfluidics. <i>Nature Materials</i> , 2018, 17, 89-96.	27.5	314
3	Fluorescence and Spin Properties of Defects in Single Digit Nanodiamonds. <i>ACS Nano</i> , 2009, 3, 1959-1965.	14.6	309
4	Engineering the Structural Properties of DNA Block Copolymer Micelles by Molecular Recognition. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 1172-1175.	13.8	151
5	Movements of the $\epsilon$ -subunit during catalysis and activation in single membrane-bound H <sup>+</sup> -ATP synthase. <i>EMBO Journal</i> , 2005, 24, 2053-2063.	7.8	116
6	36° step size of proton-driven c-ring rotation in FoF1-ATP synthase. <i>EMBO Journal</i> , 2009, 28, 2689-2696.	7.8	114
7	Stepwise rotation of the $\hat{\epsilon}$ -subunit of EFOF1-ATP synthase observed by intramolecular single-molecule fluorescence resonance energy transfer. <i>FEBS Letters</i> , 2002, 527, 147-152.	2.8	113
8	Exploiting the Nitrilotriacetic Acid Moiety for Biolabeling with Ultrastable Perylene Dyes. <i>Journal of the American Chemical Society</i> , 2008, 130, 5398-5399.	13.7	100
9	Poly(BODIPY)s: A New Class of Tunable Polymeric Dyes. <i>Macromolecules</i> , 2009, 42, 6529-6536.	4.8	89
10	Dynamic Ligand-induced Conformational Rearrangements in P-glycoprotein as Probed by Fluorescence Resonance Energy Transfer Spectroscopy. <i>Journal of Biological Chemistry</i> , 2012, 287, 1112-1127.	3.4	87
11	Real-Time pH Microscopy down to the Molecular Level by Combined Scanning Electrochemical Microscopy/Single-Molecule Fluorescence Spectroscopy. <i>Analytical Chemistry</i> , 2004, 76, 3473-3481.	6.5	86
12	Conformational changes of the H <sup>+</sup> -ATPase from <i>Escherichia coli</i> upon nucleotide binding detected by single molecule fluorescence. <i>FEBS Letters</i> , 1998, 437, 251-254.	2.8	82
13	Enzymatic Control of the Size of DNA Block Copolymer Nanoparticles. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 974-976.	13.8	76
14	Diffusion Measurements of Swimming Enzymes with Fluorescence Correlation Spectroscopy. <i>Accounts of Chemical Research</i> , 2018, 51, 1911-1920.	15.6	67
15	Crystal Structure of the Archaeal A1AO ATP Synthase Subunit B from <i>Methanosarcina mazei</i> GÅ71: Implications of Nucleotide-binding Differences in the Major A1AO Subunits A and B. <i>Journal of Molecular Biology</i> , 2006, 358, 725-740.	4.2	60
16	The Proton-translocating $\alpha$ Subunit of FOF1-ATP Synthase Is Allocated Asymmetrically to the Peripheral Stalk. <i>Journal of Biological Chemistry</i> , 2008, 283, 33602-33610.	3.4	55
17	Evidence for major structural changes in subunit C of the vacuolar ATPase due to nucleotide binding. <i>FEBS Letters</i> , 2005, 579, 1961-1967.	2.8	51
18	Diffusion in Model Networks as Studied by NMR and Fluorescence Correlation Spectroscopy. <i>Macromolecules</i> , 2009, 42, 4681-4689.	4.8	47

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19	Subunit movements in membrane-integrated F <sub>1</sub> F <sub>o</sub> -ATPase during ATP synthesis detected by single-molecule spectroscopy. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2006, 1757, 311-319.	1.0	46
20	Distances between the b-subunits in the tether domain of F <sub>1</sub> F <sub>o</sub> -ATP synthase from <i>E. coli</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2005, 1708, 143-153.	1.0	44
21	Mechanistic basis for differential inhibition of the F <sub>1</sub> F <sub>o</sub> -ATPase by aurovertin. <i>Biopolymers</i> , 2009, 91, 830-840.	2.4	42
22	The regulatory subunit $\epsilon$ in <i>Escherichia coli</i> F <sub>1</sub> F <sub>o</sub> -ATP synthase. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, 775-788.	1.0	41
23	Binding of the b-Subunit in the ATP Synthase from <i>Escherichia coli</i> . <i>Biochemistry</i> , 2004, 43, 1054-1064.	2.5	40
24	Twisting and subunit rotation in single F <sub>1</sub> F <sub>o</sub> -ATP synthase. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013, 368, 20120024.	4.0	40
25	Microstructuring of solid-supported lipid layers using SAM pattern generation by scanning electrochemical microscopy and the chemical lens. <i>Bioelectrochemistry</i> , 2000, 52, 103-110.	4.6	39
26	Both Rotor and Stator Subunits Are Necessary for Efficient Binding of F <sub>1</sub> to F <sub>o</sub> in Functionally Assembled <i>Escherichia coli</i> ATP Synthase. <i>Journal of Biological Chemistry</i> , 2005, 280, 33338-33345.	3.4	37
27	Elastic deformations of the rotary double motor of single F <sub>1</sub> F <sub>o</sub> -ATP synthases detected in real time by Förster resonance energy transfer. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 1722-1731.	1.0	36
28	Structural organization of the V-ATPase and its implications for regulatory assembly and disassembly. <i>Biochemical Society Transactions</i> , 2008, 36, 1027-1031.	3.4	35
29	Three-color Förster resonance energy transfer within single F <sub>1</sub> F <sub>o</sub> -ATP synthases: monitoring elastic deformations of the rotary double motor in real time. <i>Journal of Biomedical Optics</i> , 2012, 17, 011004.	2.6	35
30	K <sup>+</sup> -Translocating KdpFABC P-Type ATPase from <i>Escherichia coli</i> Acts as a Functional and Structural Dimer. <i>Biochemistry</i> , 2008, 47, 3564-3575.	2.5	32
31	YidC-Driven Membrane Insertion of Single Fluorescent Pf3 Coat Proteins. <i>Journal of Molecular Biology</i> , 2011, 412, 165-175.	4.2	32
32	Spotlighting motors and controls of single F <sub>1</sub> F <sub>o</sub> -ATP synthase. <i>Biochemical Society Transactions</i> , 2013, 41, 1219-1226.	3.4	32
33	Light-Driven ATP Regeneration in Diblock/Grafted Hybrid Vesicles. <i>ChemBioChem</i> , 2020, 21, 2149-2160.	2.6	32
34	Real Time Observation of Single Membrane Protein Insertion Events by the <i>Escherichia coli</i> Insertase YidC. <i>PLoS ONE</i> , 2013, 8, e59023.	2.5	29
35	Binding of single nucleotides to H <sup>+</sup> -ATP synthases observed by fluorescence resonance energy transfer. <i>Bioelectrochemistry</i> , 2004, 63, 79-85.	4.6	28
36	Improving FRET-Based Monitoring of Single Chemomechanical Rotary Motors at Work. <i>ChemPhysChem</i> , 2011, 12, 542-553.	2.1	27

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37	Analyzing conformational dynamics of single P-glycoprotein transporters by Förster resonance energy transfer using hidden Markov models. <i>Methods</i> , 2014, 66, 168-179.	3.8	26
38	In situ temperature measurements via ruby R lines of sapphire substrate based InGaN light emitting diodes during operation. <i>Journal of Applied Physics</i> , 2001, 89, 3091-3094.	2.5	25
39	Asymmetry of rotational catalysis of single membrane-bound F <sub>0</sub> F <sub>1</sub> -ATP synthase. , 2005, , .		23
40	Quantum dots for single-pair fluorescence resonance energy transfer in membrane-integrated EFoF1. <i>Biochemical Society Transactions</i> , 2008, 36, 1017-1021.	3.4	21
41	Detection of ligand-induced CNTF receptor dimers in living cells by fluorescence cross correlation spectroscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2009, 1788, 1890-1900.	2.6	21
42	Simultaneous monitoring of the two coupled motors of a single F <sub>o</sub> F <sub>1</sub> -ATP synthase by three-color FRET using duty cycle-optimized triple-ALEX. <i>Proceedings of SPIE</i> , 2009, , .	0.8	21
43	The regulatory switch of F <sub>1</sub> -ATPase studied by single-molecule FRET in the ABEL trap. <i>Proceedings of SPIE</i> , 2014, 8950, 89500H.	0.8	21
44	Structural Asymmetry and Kinetic Limping of Single Rotary F-ATP Synthases. <i>Molecules</i> , 2019, 24, 504.	3.8	21
45	ATP Synthase – A Paradigmatic Molecular Machine. , 2011, , 208-238.		20
46	Single-molecule fluorescence resonance energy transfer techniques on rotary ATP synthases. <i>Biological Chemistry</i> , 2011, 392, 135-42.	2.5	20
47	Monitoring the rotary motors of single F <sub>o</sub> F <sub>1</sub> -ATP synthase by synchronized multi channel TCSPC. , 2007, , .		18
48	Binding affinities and protein ligand complex geometries of nucleotides at the F <sub>1</sub> part of the mitochondrial ATP synthase obtained by ligand docking calculations. <i>FEBS Letters</i> , 2002, 530, 99-103.	2.8	17
49	Detecting substeps in the rotary motors of F <sub>o</sub> F <sub>1</sub> -ATP synthase by Hidden Markov Models. , 2007, , .		17
50	Stepwise rotation of the $\hat{\beta}$ -subunit of EF <sub>o</sub> F <sub>1</sub> -ATP synthase during ATP synthesis: a single-molecule FRET approach. , 2003, , .		16
51	Analyzing the Dynamics of Single TBP-DNA-NC2 Complexes Using Hidden Markov Models. <i>Biophysical Journal</i> , 2018, 115, 2310-2326.	0.5	16
52	Light- and magnetically actuated FePt microswimmers. <i>European Physical Journal E</i> , 2021, 44, 74.	1.6	16
53	Fluorescent nanodiamonds for FRET-based monitoring of a single biological nanomotor F <sub>o</sub> F <sub>1</sub> -ATP synthase. <i>Proceedings of SPIE</i> , 2009, , .	0.8	14
54	Monitoring single membrane protein dynamics in a liposome manipulated in solution by the ABELtrap. <i>Proceedings of SPIE</i> , 2011, , .	0.8	14

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55	Measuring nanoparticle diffusion in an ABELtrap. <i>Journal of Optics (United Kingdom)</i> , 2018, 20, 034006.	2.2	14
56	Subunit movement in individual H <sup>+</sup> -ATP synthases during ATP synthesis and hydrolysis revealed by fluorescence resonance energy transfer. <i>Biochemical Society Transactions</i> , 2005, 33, 878-882.	3.4	13
57	3D-localization of the a-subunit in F <sub>0</sub> F <sub>1</sub> -ATP synthase by time resolved single-molecule FRET. , 2006, , .		13
58	Observing conformations of single FoF <sub>1</sub> -ATP synthases in a fast anti-Brownian electrokinetic trap. , 2015, , .		12
59	Subunit rotation in a single F <sub>o</sub> F <sub>1</sub> -ATP synthase in a living bacterium monitored by FRET. , 2011, , .		11
60	Regulatory conformational changes of the ε-subunit in single FRET-labeled F <sub>0</sub> F <sub>1</sub> -ATP synthase. <i>Proceedings of SPIE</i> , 2014, 8948, 89481J.	0.8	11
61	Design of an allosterically modulated doxycycline and doxorubicin drug-binding protein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5744-5749.	7.1	11
62	Visualizing Mitochondrial FoF <sub>1</sub> -ATP Synthase as the Target of the Immunomodulatory Drug Bz-423. <i>Frontiers in Physiology</i> , 2018, 9, 803.	2.8	11
63	Monitoring the conformational dynamics of a single potassium transporter by ALEX-FRET. <i>Proceedings of SPIE</i> , 2008, , .	0.8	9
64	Microscopy of single F <sub>0</sub> F <sub>1</sub> -ATP synthases” The unraveling of motors, gears, and controls. <i>IUBMB Life</i> , 2013, 65, 227-237.	3.4	9
65	Confining Brownian motion of single nanoparticles in an ABELtrap. <i>Proceedings of SPIE</i> , 2017, , .	0.8	9
66	Conformational dynamics of the rotary subunit F in the A <sub>3</sub> B <sub>3</sub> DF complex of <i>Methanosarcina mazei</i> C <sub>1</sub> A <sub>1</sub> A <sub>1</sub> -ATP synthase monitored by single-molecule FRET. <i>FEBS Letters</i> , 2017, 591, 854-862.	2.8	8
67	Fast ATP-Dependent Subunit Rotation in Reconstituted F <sub>0</sub> F <sub>1</sub> -ATP Synthase Trapped in Solution. <i>Journal of Physical Chemistry B</i> , 2021, 125, 7638-7650.	2.6	7
68	Regulatory assembly of the vacuolar proton pump V <sub>o</sub> V <sub>1</sub> -ATPase in yeast cells by FLIM-FRET. , 2010, , .		6
69	Step size of the rotary proton motor in single F <sub>o</sub> F <sub>1</sub> -ATP synthase from a thermoalkaliphilic bacterium by DCO-ALEX FRET. , 2012, , .		6
70	Monitoring transient elastic energy storage within the rotary motors of single FoF <sub>1</sub> -ATP synthase by DCO-ALEX FRET. , 2012, , .		6
71	Drug transport mechanism of P-glycoprotein monitored by single molecule fluorescence resonance energy transfer. <i>Proceedings of SPIE</i> , 2011, , .	0.8	5
72	Diffusion properties of single FoF <sub>1</sub> -ATP synthases in a living bacterium unraveled by localization microscopy. <i>Proceedings of SPIE</i> , 2012, , .	0.8	5

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73	Manipulating freely diffusing single 20-nm particles in an Anti-Brownian Electrokinetic Trap (ABELtrap). , 2013, , .		5
74	Monitoring subunit rotation in single FRET-labeled FoF1-ATP synthase in an anti-Brownian electrokinetic trap. , 2013, , .		5
75	Subunit rotation in single FRET-labeled F1-ATPase hold in solution by an anti-Brownian electrokinetic trap. , 2013, , .		5
76	Observing monomer: dimer transitions of neurotensin receptors 1 in single SMALPs by homofRET and in an ABELtrap. , 2019, , .		5
77	Targeting cytochrome C oxidase in mitochondria with Pt(II)-porphyrins for photodynamic therapy. Proceedings of SPIE, 2010, , .	0.8	4
78	3D-localization microscopy and tracking of FoF1-ATP synthases in living bacteria. Proceedings of SPIE, 2015, , .	0.8	4
79	Optimized green fluorescent protein fused to FoF1-ATP synthase for single-molecule FRET using a fast anti-Brownian electrokinetic trap. , 2016, , .		4
80	Observing single FoF1-ATP synthase at work using an improved fluorescent protein mNeonGreen as FRET donor. , 2016, , .		3
81	Imaging cytochrome C oxidase and F <sub>o</sub> F <sub>1</sub> -ATP synthase in mitochondrial cristae of living human cells by FLIM and superresolution microscopy. Proceedings of SPIE, 2017, , .	0.8	3
82	Towards monitoring conformational changes of the GPCR neurotensin receptor 1 by single-molecule FRET. , 2018, 10498, .		2
83	Binding of the immunomodulatory drug Bz-423 to mitochondrial F <sub>o</sub> F <sub>1</sub> -ATP synthase in living cells by FRET acceptor photobleaching. Proceedings of SPIE, 2016, , .	0.8	1
84	Unraveling the Rotary Motors in FoF1-ATP Synthase by Time-Resolved Single-Molecule FRET. Springer Series in Chemical Physics, 2015, , 309-338.	0.2	1
85	Ligand-induced oligomerization of the human GPCR neurotensin receptor 1 monitored in living HEK293T cells. , 2019, , .		1
86	Analyzing conformational changes in single FRET-labeled A1 parts of archaeal A1AO-ATP synthase. , 2018, , .		0
87	Rotation of the $\hat{\gamma}$ -subunit in single membrane-bound H <sup>+</sup> -ATP synthases from chloroplasts during ATP synthesis. Advances in Botanical Research, 2020, 96, 119-149.	1.1	0