Stefan W Hell

List of Publications by Citations

197 papers	30,113 citations	82 h-index	173 g-index
218 ext. papers	35,347 ext. citations	11.9 avg, IF	7.6 L-index

#	Paper	IF	Citations
197	Breaking the diffraction resolution limit by stimulated emission: stimulated-emission-depletion fluorescence microscopy. *Optics Letters*, **1994**, 19, 780-2	3	3873
196	Far-field optical nanoscopy. *Science*, **2007**, 316, 1153-8	33.3	2288
195	Direct observation of the nanoscale dynamics of membrane lipids in a living cell. *Nature*, **2009**, 457, 1159-62	50.4	1200
194	STED microscopy reveals that synaptotagmin remains clustered after synaptic vesicle exocytosis. *Nature*, **2006**, 440, 935-9	50.4	851
193	Microscopy and its focal switch. *Nature Methods*, **2009**, 6, 24-32	21.6	816
192	Bruchpilot promotes active zone assembly, Ca2+ channel clustering, and vesicle release. *Science*, **2006**, 312, 1051-4	33.3	802
191	Toward fluorescence nanoscopy. *Nature Biotechnology*, **2003**, 21, 1347-55	44.5	766
190	Breaking the diffraction barrier in fluorescence microscopy at low light intensities by using reversibly photoswitchable proteins. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 17565-9	11.5	632
189	Fluorescence nanoscopy by ground-state depletion and single-molecule return. *Nature Methods*, **2008**, 5, 943-5	21.6	628
188	Video-rate far-field optical nanoscopy dissects synaptic vesicle movement. *Science*, **2008**, 320, 246-9	33.3	612
187	STED microscopy reveals crystal colour centres with nanometric resolution. *Nature Photonics*, **2009**, 3, 144-147	33.9	604
186	Fluorescence nanoscopy in cell biology. *Nature Reviews Molecular Cell Biology*, **2017**, 18, 685-701	48.7	520
185	Fluorogenic probes for live-cell imaging of the cytoskeleton. *Nature Methods*, **2014**, 11, 731-3	21.6	507
184	Nanometer resolution imaging and tracking of fluorescent molecules with minimal photon fluxes. *Science*, **2017**, 355, 606-612	33.3	485
183	Macromolecular-scale resolution in biological fluorescence microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 11440-5	11.5	404
182	STED microscopy with continuous wave beams. *Nature Methods*, **2007**, 4, 915-8	21.6	390
181	Properties of a 4Pi confocal fluorescence microscope. *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, **1992**, 9, 2159	1.8	366

180	Diffraction-unlimited all-optical imaging and writing with a photochromic GFP. *Nature*, **2011**, 478, 204-8	50.4	353
179	Nanoscale resolution in the focal plane of an optical microscope. *Physical Review Letters*, **2005**, 94, 143903	7.4	331
178	Sharper low-power STED nanoscopy by time gating. *Nature Methods*, **2011**, 8, 571-3	21.6	319
177	Resolution scaling in STED microscopy. *Optics Express*, **2008**, 16, 4154-62	3.3	310
176	Live-cell imaging of dendritic spines by STED microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 18982-7	11.5	308
175	Nanoscopy in a living mouse brain. *Science*, **2012**, 335, 551	33.3	270
174	Photoswitchable fluorescent proteins enable monochromatic multilabel imaging and dual color fluorescence nanoscopy. *Nature Biotechnology*, **2008**, 26, 1035-40	44.5	251
173	Tuning of synapse number, structure and function in the cochlea. *Nature Neuroscience*, **2009**, 12, 444-53	25.5	241
172	Breaking the diffraction barrier in fluorescence microscopy by optical shelving. *Physical Review Letters*, **2007**, 98, 218103	7.4	235
171	Fluorescence nanoscopy in whole cells by asynchronous localization of photoswitching emitters. *Biophysical Journal*, **2007**, 93, 3285-90	2.9	227
170	STED nanoscopy of actin dynamics in synapses deep inside living brain slices. *Biophysical Journal*, **2011**, 101, 1277-84	2.9	226
169	Concepts for nanoscale resolution in fluorescence microscopy. *Current Opinion in Neurobiology*, **2004**, 14, 599-609	7.6	226
168	Structural basis for reversible photoswitching in Dronpa. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 13005-9	11.5	223
167	Structure and mechanism of the reversible photoswitch of a fluorescent protein. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 13070-4	11.5	222
166	Major signal increase in fluorescence microscopy through dark-state relaxation. *Nature Methods*, **2007**, 4, 81-6	21.6	219
165	A reversibly photoswitchable GFP-like protein with fluorescence excitation decoupled from switching. *Nature Biotechnology*, **2011**, 29, 942-7	44.5	217
164	Coaligned dual-channel STED nanoscopy and molecular diffusion analysis at 20 nm resolution. *Biophysical Journal*, **2013**, 105, L01-3	2.9	213
163	The 2015 super-resolution microscopy roadmap. *Journal Physics D: Applied Physics*, **2015**, 48, 443001	3	211

162	STED nanoscopy reveals the ubiquity of subcortical cytoskeleton periodicity in living neurons. *Cell Reports*, **2015**, 10, 1246-51	10.6	208
161	MINFLUX nanoscopy delivers 3D multicolor nanometer resolution in cells. *Nature Methods*, **2020**, 17, 217-224	21.6	204
160	RIM-binding protein, a central part of the active zone, is essential for neurotransmitter release. *Science*, **2011**, 334, 1565-9	33.3	193
159	Nanoscopy with more than 100,000 RdoughnutsR *Nature Methods*, **2013**, 10, 737-40	21.6	190
158	Recycling, clustering, and endocytosis jointly maintain PIN auxin carrier polarity at the plasma membrane. *Molecular Systems Biology*, **2011**, 7, 540	12.2	188
157	Red-emitting rhodamine dyes for fluorescence microscopy and nanoscopy. *Chemistry - A European Journal*, **2010**, 16, 158-66	4.8	188
156	Simultaneous multi-lifetime multi-color STED imaging for colocalization analyses. *Optics Express*, **2011**, 19, 3130-43	3.3	177
155	Multicolor far-field fluorescence nanoscopy through isolated detection of distinct molecular species. *Nano Letters*, **2008**, 8, 2463-8	11.5	175
154	SiR-Hoechst is a far-red DNA stain for live-cell nanoscopy. *Nature Communications*, **2015**, 6, 8497	17.4	171
153	Fluorescence fluctuation spectroscopy in subdiffraction focal volumes. *Physical Review Letters*, **2005**, 94, 178104	7.4	169
152	Two-color nanoscopy of three-dimensional volumes by 4Pi detection of stochastically switched fluorophores. *Nature Methods*, **2011**, 8, 353-9	21.6	166
151	Nanoscopy with Focused Light (Nobel Lecture). *Angewandte Chemie - International Edition*, **2015**, 54, 8054-66	16.4	156
150	rsEGFP2 enables fast RESOLFT nanoscopy of living cells. *ELife*, **2012**, 1, e00248	8.9	155
149	Fluorogenic Probes for Multicolor Imaging in Living Cells. *Journal of the American Chemical Society*, **2016**, 138, 9365-8	16.4	149
148	Multicolor fluorescence nanoscopy in fixed and living cells by exciting conventional fluorophores with a single wavelength. *Biophysical Journal*, **2010**, 99, 2686-94	2.9	149
147	Fluorescent Rhodamines and Fluorogenic Carbopyronines for Super-Resolution STED Microscopy in Living Cells. *Angewandte Chemie - International Edition*, **2016**, 55, 3290-4	16.4	149
146	Fast molecular tracking maps nanoscale dynamics of plasma membrane lipids. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 6829-34	11.5	148
145	Reversible red fluorescent molecular switches. *Angewandte Chemie - International Edition*, **2006**, 45, 7462-5	16.4	146

144	STED nanoscopy with fluorescent quantum dots. *Nature Communications*, **2015**, 6, 7127	17.4	144
143	EFGP and DsRed expressing cultures of Escherichia coli imaged by confocal, two-photon and fluorescence lifetime microscopy. *FEBS Letters*, **2000**, 479, 131-5	3.8	136
142	Fluorescent Photoswitchable Diarylethenes for Biolabeling and Single-Molecule Localization Microscopies with Optical Superresolution. *Journal of the American Chemical Society*, **2017**, 139, 6611-6620	16.4	134
141	Room temperature high-fidelity holonomic single-qubit gate on a solid-state spin. *Nature Communications*, **2014**, 5, 4870	17.4	134
140	Rhodamines NN: a novel class of caged fluorescent dyes. *Angewandte Chemie - International Edition*, **2010**, 49, 3520-3	16.4	132
139	Multi-protein assemblies underlie the mesoscale organization of the plasma membrane. *Nature Communications*, **2014**, 5, 4509	17.4	127
138	Generation of monomeric reversibly switchable red fluorescent proteins for far-field fluorescence nanoscopy. *Biophysical Journal*, **2008**, 95, 2989-97	2.9	126
137	Confocal microscopy with an increased detection aperture: type-B 4Pi confocal microscopy. *Optics Letters*, **1994**, 19, 222	3	124
136	Molecular orientation affects localization accuracy in superresolution far-field fluorescence microscopy. *Nano Letters*, **2011**, 11, 209-13	11.5	118
135	Stimulated emission depletion nanoscopy of living cells using SNAP-tag fusion proteins. *Biophysical Journal*, **2010**, 98, 158-63	2.9	113
134	CRISPR/Cas9-mediated endogenous protein tagging for RESOLFT super-resolution microscopy of living human cells. *Scientific Reports*, **2015**, 5, 9592	4.9	108
133	Active zone scaffolds differentially accumulate Unc13 isoforms to tune Ca(2+) channel-vesicle coupling. *Nature Neuroscience*, **2016**, 19, 1311-20	25.5	107
132	Nanoscopy of living brain slices with low light levels. *Neuron*, **2012**, 75, 992-1000	13.9	106
131	Diffraction-unlimited three-dimensional optical nanoscopy with opposing lenses. *Nature Photonics*, **2009**, 3, 381-387	33.9	104
130	Developmental refinement of hair cell synapses tightens the coupling of Ca2+ influx to exocytosis. *EMBO Journal*, **2014**, 33, 247-64	13	102
129	Lens-based fluorescence nanoscopy. *Quarterly Reviews of Biophysics*, **2015**, 48, 178-243	7	101
128	Nanoscale distribution of mitochondrial import receptor Tom20 is adjusted to cellular conditions and exhibits an inner-cellular gradient. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 13546-51	11.5	100
127	Analytical description of STED microscopy performance. *Optics Express*, **2010**, 18, 26417-29	3.3	100

126	Rhodamine spiroamides for multicolor single-molecule switching fluorescent nanoscopy. *Chemistry - A European Journal*, **2009**, 15, 10762-76	4.8	97
125	Carboxylated Photoswitchable Diarylethenes for Biolabeling and Super-Resolution RESOLFT Microscopy. *Angewandte Chemie - International Edition*, **2016**, 55, 15429-15433	16.4	95
124	Single-molecule STED microscopy with photostable organic fluorophores. *Small*, **2010**, 6, 1379-84	11	95
123	Solid immersion facilitates fluorescence microscopy with nanometer resolution and sub-Ångström emitter localization. *Advanced Materials*, **2012**, 24, OP309-13	24	94
122	Hydrophobic mismatch sorts SNARE proteins into distinct membrane domains. *Nature Communications*, **2015**, 6, 5984	17.4	89
121	Parallelized STED fluorescence nanoscopy. *Optics Express*, **2011**, 19, 23716-26	3.3	89
120	Photostability of a fluorescent marker under pulsed excited-state depletion through stimulated emission. *Applied Optics*, **2003**, 42, 5123-9	1.7	87
119	Cortical actin networks induce spatio-temporal confinement of phospholipids in the plasma membrane--a minimally invasive investigation by STED-FCS. *Scientific Reports*, **2015**, 5, 11454	4.9	85
118	Adaptive-illumination STED nanoscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 9797-9802	11.5	83
117	Spectroscopic rationale for efficient stimulated-emission depletion microscopy fluorophores. *Journal of the American Chemical Society*, **2010**, 132, 5021-3	16.4	83
116	A Versatile Route to Red-Emitting Carbopyronine Dyes for Optical Microscopy and Nanoscopy. *European Journal of Organic Chemistry*, **2010**, 2010, 3593-3610	3.2	82
115	Ultrafast, temporally stochastic STED nanoscopy of millisecond dynamics. *Nature Methods*, **2015**, 12, 827-30	21.6	80
114	Cell-Permeant Large Stokes Shift Dyes for Transfection-Free Multicolor Nanoscopy. *Journal of the American Chemical Society*, **2017**, 139, 12378-12381	16.4	77
113	Multicolour Multilevel STED nanoscopy of Actin/Spectrin Organization at Synapses. *Scientific Reports*, **2016**, 6, 26725	4.9	77
112	New fluorinated rhodamines for optical microscopy and nanoscopy. *Chemistry - A European Journal*, **2010**, 16, 4477-88	4.8	77
111	3D reconstruction of high-resolution STED microscope images. *Microscopy Research and Technique*, **2008**, 71, 644-50	2.8	75
110	Subcortical cytoskeleton periodicity throughout the nervous system. *Scientific Reports*, **2016**, 6, 22741	4.9	74
109	Strong signal increase in STED fluorescence microscopy by imaging regions of subdiffraction extent. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 2125-2130	11.5	71

108	Novel red fluorophores with superior performance in STED microscopy. *Optical Nanoscopy*, **2012**, 1, 7		68
107	Nanoscopy of filamentous actin in cortical dendrites of a living mouse. *Biophysical Journal*, **2014**, 106, L01-3	2.9	67
106	Dysregulated expression of neuregulin-1 by cortical pyramidal neurons disrupts synaptic plasticity. *Cell Reports*, **2014**, 8, 1130-45	10.6	66
105	STED with wavelengths closer to the emission maximum. *Optics Express*, **2012**, 20, 5225-36	3.3	66
104	Photostable, amino reactive and water-soluble fluorescent labels based on sulfonated rhodamine with a rigidized xanthene fragment. *Chemistry - A European Journal*, **2008**, 14, 1784-92	4.8	66
103	MINFLUX monitors rapid molecular jumps with superior spatiotemporal resolution. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 6117-6122	11.5	65
102	Stable Positioning of Unc13 Restricts Synaptic Vesicle Fusion to Defined Release Sites to Promote Synchronous Neurotransmission. *Neuron*, **2017**, 95, 1350-1364.e12	13.9	64
101	Uniquantal release through a dynamic fusion pore is a candidate mechanism of hair cell exocytosis. *Neuron*, **2014**, 83, 1389-403	13.9	63
100	Ultrastructural anatomy of nodes of Ranvier in the peripheral nervous system as revealed by STED microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E191-E199	11.5	61
99	Coordinate-targeted fluorescence nanoscopy with multiple off states. *Nature Photonics*, **2016**, 10, 122-128	35.9	61
98	Far-field optical nanoscopy with reduced number of state transition cycles. *Optics Express*, **2011**, 19, 5644-57	3.3	60
97	Isotropic 3D Nanoscopy based on single emitter switching. *Optics Express*, **2008**, 16, 20774-88	3.3	60
96	STED-FLCS: An Advanced Tool to Reveal Spatiotemporal Heterogeneity of Molecular Membrane Dynamics. *Nano Letters*, **2015**, 15, 5912-8	11.5	59
95	Strongly enhanced bacterial bioluminescence with the operon for single-cell imaging. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 962-967	11.5	58
94	Molecular basis of the light-driven switching of the photochromic fluorescent protein Padron. *Journal of Biological Chemistry*, **2010**, 285, 14603-9	5.4	58
93	2000-fold parallelized dual-color STED fluorescence nanoscopy. *Optics Express*, **2015**, 23, 211-23	3.3	55
92	Mapping molecules in scanning far-field fluorescence nanoscopy. *Nature Communications*, **2015**, 6, 7977	17.4	55
91	Triarylmethane Fluorophores Resistant to Oxidative Photobluing. *Journal of the American Chemical Society*, **2019**, 141, 981-989	16.4	55

90	Breaking the diffraction limit of light-sheet fluorescence microscopy by RESOLFT. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 3442-6	11.5	54
89	Robust nanoscopy of a synaptic protein in living mice by organic-fluorophore labeling. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E8047-E8056	11.5	53
88	Hydroxylated Fluorescent Dyes for Live-Cell Labeling: Synthesis, Spectra and Super-Resolution STED. *Chemistry - A European Journal*, **2017**, 23, 12114-12119	4.8	52
87	Masked rhodamine dyes of five principal colors revealed by photolysis of a 2-diazo-1-indanone caging group: synthesis, photophysics, and light microscopy applications. *Chemistry - A European Journal*, **2014**, 20, 13162-73	4.8	48
86	Fluorescent dyes and probes for super-resolution microscopy of microtubules and tracheoles in living cells and tissues. *Chemical Science*, **2018**, 9, 3324-3334	9.4	47
85	Quantitative optical nanophysiology of Ca signaling at inner hair cell active zones. *Nature Communications*, **2018**, 9, 290	17.4	46
84	Reversibly Photoswitchable Fluorescent Diarylethenes Resistant against Photobleaching in Aqueous Solutions. *Journal of the American Chemical Society*, **2019**, 141, 16471-16478	16.4	44
83	Rhodamine-Hoechst positional isomers for highly efficient staining of heterochromatin. *Chemical Science*, **2019**, 10, 1962-1970	9.4	43
82	MICOS assembly controls mitochondrial inner membrane remodeling and crista junction redistribution to mediate cristae formation. *EMBO Journal*, **2020**, 39, e104105	13	43
81	Masked red-emitting carbopyronine dyes with photosensitive 2-diazo-1-indanone caging group. *Photochemical and Photobiological Sciences*, **2012**, 11, 522-32	4.2	43
80	4Pi-RESOLFT nanoscopy. *Nature Communications*, **2016**, 7, 10504	17.4	43
79	Two-Color 810 nm STED Nanoscopy of Living Cells with Endogenous SNAP-Tagged Fusion Proteins. *ACS Chemical Biology*, **2018**, 13, 475-480	4.9	42
78	Polar red-emitting rhodamine dyes with reactive groups: synthesis, photophysical properties, and two-color STED nanoscopy applications. *Chemistry - A European Journal*, **2014**, 20, 146-57	4.8	42
77	SRpHi ratiometric pH biosensors for super-resolution microscopy. *Nature Communications*, **2017**, 8, 577	17.4	41
76	Multicolour nanoscopy of fixed and living cells with a single STED beam and hyperspectral detection. *Scientific Reports*, **2017**, 7, 46492	4.9	40
75	Phosphorylated 3-heteroarylcoumarins and their use in fluorescence microscopy and nanoscopy. *Chemistry - A European Journal*, **2012**, 18, 16339-48	4.8	40
74	Two-color RESOLFT nanoscopy with green and red fluorescent photochromic proteins. *ChemPhysChem*, **2014**, 15, 655-63	3.2	39
73	Rab3-interacting molecules 2□and 2□promote the abundance of voltage-gated CaV1.3 Ca2+ channels at hair cell active zones. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E3141-9	11.5	39

72	Dual channel RESOLFT nanoscopy by using fluorescent state kinetics. *Nano Letters*, **2015**, 15, 103-6	11.5	37
71	STED nanoscopy of the centrosome linker reveals a CEP68-organized, periodic rootletin network anchored to a C-Nap1 ring at centrioles. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E2246-E2253	11.5	37
70	Far-Red Emitting Fluorescent Dyes for Optical Nanoscopy: Fluorinated Silicon-Rhodamines (SiRF Dyes) and Phosphorylated Oxazines. *Chemistry - A European Journal*, **2015**, 21, 13344-56	4.8	36
69	Red-emitting rhodamines with hydroxylated, sulfonated, and phosphorylated dye residues and their use in fluorescence nanoscopy. *Chemistry - A European Journal*, **2012**, 18, 12986-98	4.8	36
68	Photobleaching in STED nanoscopy and its dependence on the photon flux applied for reversible silencing of the fluorophore. *Scientific Reports*, **2017**, 7, 11354	4.9	35
67	Nobel Lecture: Nanoscopy with freely propagating light*. *Reviews of Modern Physics*, **2015**, 87, 1169-1181	40.5	35
66	Presynaptic spinophilin tunes neurexin signalling to control active zone architecture and function. *Nature Communications*, **2015**, 6, 8362	17.4	34
65	A STED MICROSCOPE DESIGNED FOR ROUTINE BIOMEDICAL APPLICATIONS (Invited Paper). *Progress in Electromagnetics Research*, **2014**, 147, 57-68	3.8	32
64	Nanoscale separation of molecular species based on their rotational mobility. *Optics Express*, **2008**, 16, 21093-104	3.3	32
63	New GM1 Ganglioside Derivatives for Selective Single and Double Labelling of the Natural Glycosphingolipid Skeleton. *European Journal of Organic Chemistry*, **2009**, 2009, 5162-5177	3.2	31
62	In vivo super-resolution RESOLFT microscopy of Drosophila melanogaster. *ELife*, **2016**, 5,	8.9	31
61	Fluoreszierende Rhodamine und fluorogene Carbopyronine f□die STED-Mikroskopie lebender Zellen. *Angewandte Chemie*, **2016**, 128, 3350-3355	3.6	31
60	Mic60 exhibits a coordinated clustered distribution along and across yeast and mammalian mitochondria. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 9853-9858	11.5	28
59	Monitoring the excited state of a fluorophore in a microscope by stimulated emission. *Bioimaging*, **1995**, 3, 147-153		27
58	MINFLUX nanometer-scale 3D imaging and microsecond-range tracking on a common fluorescence microscope. *Nature Communications*, **2021**, 12, 1478	17.4	26
57	Autonomous bioluminescence imaging of single mammalian cells with the bacterial bioluminescence system. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**,	11.5	26
56	Stimulated Emission Depletion Nanoscopy Reveals Time-Course of Human Immunodeficiency Virus Proteolytic Maturation. *ACS Nano*, **2016**, 10, 8215-22	16.7	25
55	Multicolor 3D MINFLUX nanoscopy of mitochondrial MICOS proteins. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 20607-20614	11.5	25

54	STED nanoscopy with wavelengths at the emission maximum. *Journal Physics D: Applied Physics*, **2016**, 49, 365102	3	24
53	PONy Dyes: Direct Addition of P(III) Nucleophiles to Organic Fluorophores. *Organic Letters*, **2018**, 20, 1261-1264	6.2	23
52	Super-resolution Microscopy of Clickable Amino Acids Reveals the Effects of Fluorescent Protein Tagging on Protein Assemblies. *ACS Nano*, **2015**, 9, 11034-41	16.7	22
51	Near-infrared STED nanoscopy with an engineered bacterial phytochrome. *Nature Communications*, **2018**, 9, 4762	17.4	22
50	Achromatic light patterning and improved image reconstruction for parallelized RESOLFT nanoscopy. *Scientific Reports*, **2017**, 7, 44619	4.9	20
49	Flexible Microdomain Specific Staining of Block Copolymers for 3D Optical Nanoscopy. *Macromolecules*, **2011**, 44, 7508-7510	5.5	20
48	Synthesis of Photochromic Compounds for Aqueous Solutions and Focusable Light. *European Journal of Organic Chemistry*, **2011**, 2011, 3301-3312	3.2	18
47	A high affinity RIM-binding protein/Aplip1 interaction prevents the formation of ectopic axonal active zones. *ELife*, **2015**, 4,	8.9	18
46	MINSTED fluorescence localization and nanoscopy. *Nature Photonics*, **2021**, 15, 361-366	33.9	18
45	Nanoparticle-Assisted STED Nanoscopy with Gold Nanospheres. *ACS Photonics*, **2018**, 5, 2574-2583	6.3	18
44	Ground State Depletion Nanoscopy Resolves Semiconductor Nanowire Barcode Segments at Room Temperature. *Nano Letters*, **2017**, 17, 2652-2659	11.5	17
43	"Reduced" Coumarin Dyes with an O-Phosphorylated 2,2-Dimethyl-4-(hydroxymethyl)-1,2,3,4-tetrahydroquinoline Fragment: Synthesis, Spectra, and STED Microscopy. *Chemistry - A European Journal*, **2016**, 22, 11631-42	4.8	17
42	Reorganization of Lipid Diffusion by Myelin Basic Protein as Revealed by STED Nanoscopy. *Biophysical Journal*, **2016**, 110, 2441-2450	2.9	17
41	Photoactivatable Rhodamine Spiroamides and Diazoketones Decorated with "Universal Hydrophilizer" or Hydroxyl Groups. *Journal of Organic Chemistry*, **2018**, 83, 6466-6476	4.2	17
40	Asymmetric Diarylethenes with Oxidized 2-Alkylbenzothiophen-3-yl Units: Chemistry, Fluorescence, and Photoswitching. *Advanced Optical Materials*, **2019**, 7, 1801746	8.1	17
39	Carboxylierte photoschaltbare Diarylethene als Biomarkierungen f□hochaufl□sende RESOLFT-Mikroskopie. *Angewandte Chemie*, **2016**, 128, 15655-15659	3.6	15
38	Novel reversibly switchable fluorescent proteins for RESOLFT and STED nanoscopy engineered from the bacterial photoreceptor YtvA. *Scientific Reports*, **2018**, 8, 2724	4.9	14
37	Adenosine receptors regulate gap junction coupling of the human cerebral microvascular endothelial cells hCMEC/D3 by Ca influx through cyclic nucleotide-gated channels. *Journal of Physiology*, **2017**, 595, 2497-2517	3.9	13

36	High-resolution tracking of single-molecule diffusion in membranes by confocalized and spatially differentiated fluorescence photon stream recording. *ChemPhysChem*, **2014**, 15, 771-83	3.2	13
35	Functionalization of the meso-Phenyl Ring of Rhodamine Dyes Through SNAr with Sulfur Nucleophiles: Synthesis, Biophysical Characterizations, and Comprehensive NMR Analysis. *European Journal of Organic Chemistry*, **2015**, 2015, 337-349	3.2	12
34	Bichromophoric Compounds with Orthogonally and Parallelly Arranged Chromophores Separated by Rigid Spacers. *Chemistry - A European Journal*, **2017**, 23, 2469-2475	4.8	10
33	Nanoscopy with focused light. *Annalen Der Physik*, **2015**, 527, 423-445	2.6	10
32	Turn-on mode diarylethenes for bioconjugation and fluorescence microscopy of cellular structures. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	10
31	Photoactivatable Fluorophore for Stimulated Emission Depletion (STED) Microscopy and Bioconjugation Technique for Hydrophobic Labels. *Chemistry - A European Journal*, **2021**, 27, 451-458	4.8	10
30	High-Resolution 3D Light Microscopy with STED and RESOLFT **2019**, 3-32		9
29	Synthesis of Fluorescent Jasplakinolide Analogues for Live-Cell STED Microscopy of Actin. *Journal of Organic Chemistry*, **2020**, 85, 7267-7275	4.2	8
28	Multicolour fluorescent "sulfide-sulfone" diarylethenes with high photo-fatigue resistance. *Chemical Communications*, **2020**, 56, 2198-2201	5.8	8
27	Sharp Spherical Focal Spot by Dark Ring 4Pi-Confocal Microscopy. *Single Molecules*, **2001**, 2, 207-210		8
26	Negatively Charged Yellow-Emitting 1-Aminopyrene Dyes for Reductive Amination and Fluorescence Detection of Glycans. *Angewandte Chemie - International Edition*, **2020**, 59, 5505-5509	16.4	8
25	High-Affinity Functional Fluorescent Ligands for Human Adrenoceptors. *Scientific Reports*, **2017**, 7, 12319	4.9	7
24	Mono- and bithiophene-substituted diarylethene photoswitches with emissive open or closed forms. *Beilstein Journal of Organic Chemistry*, **2019**, 15, 2344-2354	2.5	6
23	Photoactivatable Fluorescent Dyes with Hydrophilic Caging Groups and Their Use in Multicolor Nanoscopy. *Journal of the American Chemical Society*, **2021**, 143, 18388-18393	16.4	6
22	Nanoscale Resolution in Far-Field Fluorescence Microscopy **2007**, 790-834		5
21	Negatively Charged Red-Emitting Acridine Dyes for Facile Reductive Amination, Separation, and Fluorescent Detection of Glycans. *Analytical Chemistry*, **2020**, 92, 5329-5336	7.8	4
20	RESOLFT Nanoscopy of Fixed Cells Using a Z-Domain Based Fusion Protein for Labelling. *PLoS ONE*, **2015**, 10, e0136233	3.7	4
19	Molecular contribution function in RESOLFT nanoscopy. *Optics Express*, **2019**, 27, 21956-21987	3.3	4

18	Fluorescence Microscopy with Nanometer Resolution. *Springer Handbooks*, **2019**, 1089-1143	1.3	4
17	MINFLUX nanoscopy delivers multicolor nanometer 3D-resolution in (living) cells		4
16	Rhodamines with a Chloronicotinic Acid Fragment for Live Cell Superresolution STED Microscopy*. *Chemistry - A European Journal*, **2021**, 27, 6070-6076	4.8	4
15	Fluorescence Assisted Capillary Electrophoresis of Glycans Enabled by the Negatively Charged Auxochromes in 1-Aminopyrenes. *Angewandte Chemie - International Edition*, **2021**, 60, 3720-3726	16.4	4
14	Inside a Shell-Organometallic Catalysis Inside Encapsulin Nanoreactors. *Angewandte Chemie - International Edition*, **2021**, 60, 23835-23841	16.4	4
13	MINSTED fluorescence localization and nanoscopy		3
12	Negativ geladene gelb emittierende 1-Aminopyrene f□reduktive Aminierung und Fluoreszenznachweis von Glykanen. *Angewandte Chemie*, **2020**, 132, 5547-5551	3.6	3
11	Cytoplasmic Localization of Prostate-Specific Membrane Antigen Inhibitors May Confer Advantages for Targeted Cancer Therapies. *Cancer Research*, **2021**, 81, 2234-2245	10.1	3
10	Live-cell RESOLFT nanoscopy of transgenic. *Plant Direct*, **2020**, 4, e00261	3.3	2
9	The Positive Switching Fluorescent Protein Padron2 Enables Live-Cell Reversible Saturable Optical Linear Fluorescence Transitions (RESOLFT) Nanoscopy without Sequential Illumination Steps. *ACS Nano*, **2021**, 15, 9509-9521	16.7	2
8	Inside a Shell□Organometallic Catalysis Inside Encapsulin Nanoreactors. *Angewandte Chemie*, **2021**, 133, 24028	3.6	2
7	Masked Rhodamine Dyes of Five Principal Colors Revealed by Photolysis of a 2-Diazo-1-Indanone Caging Group: Synthesis, Photophysics, and Light Microscopy Applications. *Chemistry - A European Journal*, **2014**, 20, 13044-13044	4.8	1
6	TIMP□ Plays a Functional Role in CD34. + Hematopoietic Stem and Progenitor Cells.. *Blood*, **2009**, 114, 1487-1487	2.2	1
5	The Positive Switching RSFP Padron2 Enables Live-Cell RESOLFT Nanoscopy Without Sequential Irradiation Steps		1
4	Fluorescence Assisted Capillary Electrophoresis of Glycans Enabled by the Negatively Charged Auxochromes in 1-Aminopyrenes. *Angewandte Chemie*, **2021**, 133, 3764-3770	3.6	1
3	Optimal precision and accuracy in 4Pi-STORM using dynamic spline PSF models.. *Nature Methods*, **2022**, 19, 603-612	21.6	1
2	Plenary Special Lectures. *Microscopy and Microanalysis*, **2011**, 17, 32-34	0.5	
1	Quantifying Molecule Numbers in STED/RESOLFT Fluorescence Nanoscopy. *Topics in Applied Physics*, **2020**, 205-226	0.5	