Bernd Rieger

List of Publications by Year
in descending order

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43 papers	3,722 citations	279701 23 h-index	289141 40 g-index
51 all docs	51 docs citations	51 times ranked	3981 citing authors

#	Article	IF	Citations
1	Measuring image resolution in optical nanoscopy. Nature Methods, 2013, 10, 557-562.	9.0	650
2	Fast, single-molecule localization that achieves theoretically minimum uncertainty. Nature Methods, 2010, 7, 373-375.	9.0	470
3	Superresolution by localization of quantum dots using blinking statistics. Optics Express, 2005, 13, 7052.	1.7	332
4	Super-resolution imaging visualizes the eightfold symmetry of gp210 proteins around the nuclear pore complex and resolves the central channel with nanometer resolution. Journal of Cell Science, 2012, 125, 570-575.	1.2	285
5	Super-resolution fight club: assessment of 2D and 3D single-molecule localization microscopy software. Nature Methods, 2019, 16, 387-395.	9.0	251
6	Reaching out for signals. Journal of Cell Biology, 2005, 170, 619-626.	2.3	220
7	Accuracy of the Gaussian Point Spread Function model in 2D localization microscopy. Optics Express, 2010, 18, 24461.	1.7	183
8	Localization microscopy at doubled precision with patterned illumination. Nature Methods, 2020, 17, 59-63.	9.0	138
9	The Lateral and Axial Localization Uncertainty in Superâ€Resolution Light Microscopy. ChemPhysChem, 2014, 15, 664-670.	1.0	109
10	ERK Nuclear Translocation Is Dimerization-independent but Controlled by the Rate of Phosphorylation. Journal of Biological Chemistry, 2010, 285, 3092-3102.	1.6	92
11	Image formation modeling in cryo-electron microscopy. Journal of Structural Biology, 2013, 183, 19-32.	1.3	90
12	One- and two-photon photoactivation of a paGFP-fusion protein in liveDrosophilaembryos. FEBS Letters, 2005, 579, 325-330.	1.3	76
13	Template-free 2D particle fusion in localization microscopy. Nature Methods, 2018, 15, 781-784.	9.0	63
14	Resolution improvement by 3D particle averaging in localization microscopy. Methods and Applications in Fluorescence, 2015, 3, 014003.	1.1	56
15	The role of photon statistics in fluorescence anisotropy imaging. IEEE Transactions on Image Processing, 2005, 14, 1237-1245.	6.0	54
16	Quantitative Localization Microscopy: Effects of Photophysics and Labeling Stoichiometry. PLoS ONE, 2015, 10, e0127989.	1.1	50
17	Phasor based single-molecule localization microscopy in 3D (pSMLM-3D): An algorithm for MHz localization rates using standard CPUs. Journal of Chemical Physics, 2018, 148, 123311.	1.2	50
18	Position and orientation estimation of fixed dipole emitters using an effective Hermite point spread function model. Optics Express, 2012, 20, 5896.	1.7	48

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19	Nuclear accessibility of Î²-actin mRNA is measured by 3D single-molecule real-time tracking. Journal of Cell Biology, 2015, 209, 609-619.	2.3	48
20	Fully automatic evaluation of the corneal endothelium from in vivo confocal microscopy. BMC Medical Imaging, 2015, 15, 13.	1.4	46
21	When to use the projection assumption and the weak-phase object approximation in phase contrast cryo-EM. Ultramicroscopy, 2014, 136, 61-66.	0.8	42
22	Simultaneous orientation and 3D localization microscopy with a Vortex point spread function. Nature Communications, 2021, 12, 5934.	5.8	39
23	A fast algorithm for computing and correcting the CTF for tilted, thick specimens in TEM. Ultramicroscopy, 2011, 111, 1029-1036.	0.8	37
24	3D particle averaging and detection of macromolecular symmetry in localization microscopy. Nature Communications, 2021, 12, 2847.	5.8	32
25	Probability-based particle detection that enables threshold-free and robust in vivo single-molecule tracking. Molecular Biology of the Cell, 2015, 26, 4057-4062.	0.9	30
26	Photon Yield Enhancement of Red Fluorophores at Cryogenic Temperatures. ChemPhysChem, 2018, 19, 1774-1780.	1.0	27
27	Adaptive illumination reduces photobleaching in structured illumination microscopy. Biomedical Optics Express, 2016, 7, 4263.	1.5	25
28	Precise and unbiased estimation of astigmatism and defocus in transmission electron microscopy. Ultramicroscopy, 2012, 116, 115-134.	0.8	22
29	Fast, spatially varying CTF correction in TEM. Ultramicroscopy, 2012, 118, 26-34.	0.8	21
30	Co-Orientation: Quantifying Simultaneous Co-Localization and Orientational Alignment of Filaments in Light Microscopy. PLoS ONE, 2015, 10, e0131756.	1.1	21
31	Quantifying resolution limiting factors in subtomogram averaged cryo-electron tomography using simulations. Journal of Structural Biology, 2014, 187, 103-111.	1.3	19
32	High-speed multicolor structured illumination microscopy using a hexagonal single mode fiber array. Biomedical Optics Express, 2021, 12, 1181.	1.5	16
33	Detecting structural heterogeneity in single-molecule localization microscopy data. Nature Communications, 2021, 12, 3791.	5.8	14
34	Impact of optical aberrations on axial position determination by photometry. Nature Methods, 2018, 15, 989-990.	9.0	13
35	Automatic correction of nonlinear damping effects in HAADFâ€“STEM tomography for nanomaterials of discrete compositions. Ultramicroscopy, 2018, 184, 57-65.	0.8	8
36	Fluorescence Polarization Control for Onâ€“Off Switching of Single Molecules at Cryogenic Temperatures. Small Methods, 2018, 2, 1700323.	4.6	6

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37	Joint registration of multiple point clouds for fast particle fusion in localization microscopy. Bioinformatics, 2022, 38, 3281-3287.	1.8	6
38	Photon efficient orientation estimation using polarization modulation in single-molecule localization microscopy. Biomedical Optics Express, 2022, 13, 2835.	1.5	5
39	A Multichannel Cross-Modal Fusion Framework for Electron Tomography. IEEE Transactions on Image Processing, 2019, 28, 4206-4218.	6.0	4
40	No-Reference Weighting Factor Selection for Bimodal Tomography. , 2018, , .		1
41	Image Fusion of X-Ray and Electron Tomograms. , 2018, , .		1
42	Single-Molecule Switching: Fluorescence Polarization Control for On-Off Switching of Single Molecules at Cryogenic Temperatures (Small Methods 9/2018). Small Methods, 2018, 2, 1800044.	4.6	0
43	Polarized stimulated-emission depletion and dark-state lifetime at vacuum and cryogenic temperature conditions. Physical Review A, 2021, 104, .	1.0	0