Claus AÂ m Seidel

List of Publications by Year
in descending order

96 papers	11,632 citations	32410 55 h-index	43601 95 g-index
104 all docs	104 docs citations	104 times ranked	10999 citing authors

#	Article	IF	Citations
1	Unraveling multi-state molecular dynamics in single-molecule FRET experiments. I. Theory of FRET-lines. Journal of Chemical Physics, 2022, 156, 141501.	1.2	23
2	Phase-separating RNA-binding proteins form heterogeneous distributions of clusters in subsaturated solutions. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	107
3	Fundamental photophysics of isomorphic and expanded fluorescent nucleoside analogues. Chemical Society Reviews, 2021, 50, 7062-7107.	18.7	47
4	FRET-based dynamic structural biology: Challenges, perspectives and an appeal for open-science practices. ELife, 2021, 10, .	2.8	152
5	Automated and optimally FRET-assisted structural modeling. Nature Communications, 2020, 11, 5394.	5.8	39
6	Specific Conformational Dynamics and Expansion Underpin a Multi-Step Mechanism for Specific Binding of p27 with Cdk2/Cyclin A. Journal of Molecular Biology, 2020, 432, 2998-3017.	2.0	26
7	Resolving dynamics and function of transient states in single enzyme molecules. Nature Communications, 2020, 11, 1231.	5.8	71
8	Structural and dynamic insights revealing how lipase binding domain MD1 of Pseudomonas aeruginosa foldase affects lipase activation. Scientific Reports, 2020, 10, 3578.	1.6	12
9	Dynamics of the nucleosomal histone H3 N-terminal tail revealed by high precision single-molecule FRET. Nucleic Acids Research, 2020, 48, 1551-1571.	6.5	34
10	Dynamic anticipation by Cdk2/Cyclin A-bound p27 mediates signal integration in cell cycle regulation. Nature Communications, 2019, 10, 1676.	5.8	71
11	Integrated NMR, Fluorescence, and Molecular Dynamics Benchmark Study of Protein Mechanics and Hydrodynamics. Journal of Physical Chemistry B, 2019, 123, 1453-1480.	1.2	29
12	Single-molecule FRET reveals multiscale chromatin dynamics modulated by HP1Î±. Nature Communications, 2018, 9, 235.	5.8	113
13	High precision FRET studies reveal reversible transitions in nucleosomes between microseconds and minutes. Nature Communications, 2018, 9, 4628.	5.8	58
14	Precision and accuracy of single-molecule FRET measurementsâ€”a multi-laboratory benchmark study. Nature Methods, 2018, 15, 669-676.	9.0	350
15	Uptake dynamics of graphene quantum dots into primary human blood cells following in vitro exposure. RSC Advances, 2017, 7, 12208-12216.	1.7	27
16	Combining Graphical and Analytical Methods with Molecular Simulations To Analyze Time-Resolved FRET Measurements of Labeled Macromolecules Accurately. Journal of Physical Chemistry B, 2017, 121, 8211-8241.	1.2	71
17	Quantitative FRET studies and integrative modeling unravel the structure and dynamics of biomolecular systems. Current Opinion in Structural Biology, 2016, 40, 163-185.	2.6	156
18	Structural assemblies of the di- and oligomeric G-protein coupled receptor TGR5 in live cells: an MFIS-FRET and integrative modelling study. Scientific Reports, 2016, 6, 36792.	1.6	23

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19	Diffusion of macromolecules in a polymer hydrogel: from microscopic to macroscopic scales. Physical Chemistry Chemical Physics, 2016, 18, 12860-12876.	1.3	65
20	Guanylate binding proteins directly attack Toxoplasma gondii via supramolecular complexes. ELife, 2016, 5, .	2.8	114
21	Structures of adsorption layers of surfactant mixtures on nonpolar solid surfaces. Colloid and Polymer Science, 2015, 293, 3107-3117.	1.0	2
22	Temperature-cycle microscopy reveals single-molecule conformational heterogeneity. Physical Chemistry Chemical Physics, 2015, 17, 6532-6544.	1.3	6
23	Real-time dynamics of peptide ligandâ€“dependent receptor complex formation in planta. Science Signaling, 2015, 8, ra76.	1.6	84
24	Outcome of the First wwPDB Hybrid/Integrative Methods Task Force Workshop. Structure, 2015, 23, 1156-1167.	1.6	159
25	Fine tuning of sub-millisecond conformational dynamics controls metabotropic glutamate receptors agonist efficacy. Nature Communications, 2014, 5, 5206.	5.8	89
26	Molecules under pressure. Nature Nanotechnology, 2014, 9, 164-165.	15.6	25
27	High-precision FRET analysis of the G-protein coupled receptor TGR5 in live cells. European Journal of Medical Research, 2014, 19, .	0.9	1
28	Triphosphate Induced Dimerization of Human Guanylate Binding Protein 1 Involves Association of the C-Terminal Helices: A Joint Double Electronâ€“Electron Resonance and FRET Study. Biochemistry, 2014, 53, 4590-4600.	1.2	42
29	Moderation of Arabidopsis Root Stemness by CLAVATA1 and ARABIDOPSIS CRINKLY4 Receptor Kinase Complexes. Current Biology, 2013, 23, 362-371.	1.8	347
30	Impact of human autoantibodies on Î²1-adrenergic receptor conformation, activity, and internalization. Cardiovascular Research, 2013, 97, 472-480.	1.8	50
31	Analyzing FÃ¶rster Resonance Energy Transfer with Fluctuation Algorithms. Methods in Enzymology, 2013, 519, 39-85.	0.4	38
32	dNTP-dependent Conformational Transitions in the Fingers Subdomain of Klentaq1 DNA Polymerase. Journal of Biological Chemistry, 2013, 288, 13575-13591.	1.6	27
33	The GTPase Activity of Murine Guanylate-binding Protein 2 (mGBP2) Controls the Intracellular Localization and Recruitment to the Parasitophorous Vacuole of Toxoplasma gondii. Journal of Biological Chemistry, 2012, 287, 27452-27466.	1.6	46
34	Supertertiary structure of the synaptic MAGuK scaffold proteins is conserved. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15775-15780.	3.3	66
35	Single-molecule multiparameter fluorescence spectroscopy reveals directional MutS binding to mismatched bases in DNA. Nucleic Acids Research, 2012, 40, 5448-5464.	6.5	44
36	A toolkit and benchmark study for FRET-restrained high-precision structural modeling. Nature Methods, 2012, 9, 1218-1225.	9.0	400

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37	Note: A 4 ns hardware photon correlator based on a general-purpose field-programmable gate array development board implemented in a compact setup for fluorescence correlation spectroscopy. Review of Scientific Instruments, 2012, 83, 096105.	0.6	15
38	Combining MFD and PIE for Accurate Singleâ€Pair FÃ¶rster Resonance Energy Transfer Measurements. ChemPhysChem, 2012, 13, 1060-1078.	1.0	168
39	Filtered FCS: Species Autoâ€•and Crossâ€Correlation Functions Highlight Binding and Dynamics in Biomolecules. ChemPhysChem, 2012, 13, 1036-1053.	1.0	90
40	Accurate Distance Determination of Nucleic Acids via FÃ¶rster Resonance Energy Transfer: Implications of Dye Linker Length and Rigidity. Journal of the American Chemical Society, 2011, 133, 2463-2480.	6.6	248
41	Structural Heterogeneity and Quantitative FRET Efficiency Distributions of Polyprolines through a Hybrid Atomistic Simulation and Monte Carlo Approach. PLoS ONE, 2011, 6, e19791.	1.1	108
42	Diphenylhexatrienes as Photoprotective Agents for Ultrasensitive Fluorescence Detection. Journal of Physical Chemistry A, 2010, 114, 4099-4108.	1.1	21
43	Detection of Structural Dynamics by FRET: A Photon Distribution and Fluorescence Lifetime Analysis of Systems with Multiple States. Journal of Physical Chemistry B, 2010, 114, 7983-7995.	1.2	170
44	On the Origin of Broadening of Single-Molecule FRET Efficiency Distributions beyond Shot Noise Limits. Journal of Physical Chemistry B, 2010, 114, 6197-6206.	1.2	96
45	The Conformational Dynamics of the Mitochondrial Hsp70 Chaperone. Molecular Cell, 2010, 38, 89-100.	4.5	150
46	Accurate Single-Molecule FRET Studies Using Multiparameter Fluorescence Detection. Methods in Enzymology, 2010, 475, 455-514.	0.4	234
47	Filtered FCS and species cross correlation function. , 2009, , .		8
48	Nucleosome disassembly intermediates characterized by single-molecule FRET. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 15308-15313.	3.3	171
49	Fluorophores as Optical Sensors for Local Forces. ChemPhysChem, 2009, 10, 2041-2048.	1.0	17
50	Stem Cell Signaling in Arabidopsis Requires CRN to Localize CLV2 to the Plasma Membrane. Plant Physiology, 2009, 152, 166-176.	2.3	283
51	Multiparameter fluorescence imagespectroscopy to study molecular interactions. Photochemical and Photobiological Sciences, 2009, 8, 470-480.	1.6	64
52	Dynamics of Supramolecular Association Monitored by Fluorescence Correlation Spectroscopy. ChemPhysChem, 2008, 9, 1819-1827.	1.0	56
53	Structural Changes of Yellow Cameleon Domains Observed by Quantitative FRET Analysis and Polarized Fluorescence Correlation Spectroscopy. Biophysical Journal, 2008, 95, 5399-5411.	0.2	59
54	Characterizing Multiple Molecular States in Single-Molecule Multiparameter Fluorescence Detection by Probability Distribution Analysis. Journal of Physical Chemistry B, 2008, 112, 8361-8374.	1.2	65

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55	Single-molecule FRET measures bends and kinks in DNA. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18337-18342.	3.3	172
56	Orientational and Dynamical Heterogeneity of Rhodamine 6G Terminally Attached to a DNA Helix Revealed by NMR and Single-Molecule Fluorescence Spectroscopy. Journal of the American Chemical Society, 2007, 129, 12746-12755.	6.6	56
57	Dye-Exchange Dynamics in Micellar Solutions Studied by Fluorescence Correlation Spectroscopy. Journal of Physical Chemistry B, 2007, 111, 3614-3624.	1.2	41
58	Strategies to Improve Photostabilities in Ultrasensitive Fluorescence Spectroscopy. Journal of Physical Chemistry A, 2007, 111, 429-440.	1.1	207
59	Probability Distribution Analysis of Single-Molecule Fluorescence Anisotropy and Resonance Energy Transfer. Journal of Physical Chemistry B, 2007, 111, 10253-10262.	1.2	76
60	Fluorescence detection with high time resolution: From optical microscopy to simultaneous force and fluorescence spectroscopy. Microscopy Research and Technique, 2007, 70, 433-441.	1.2	20
61	Single-Molecule Detection and Identification of Multiple Species by Multiparameter Fluorescence Detection. Analytical Chemistry, 2006, 78, 2039-2050.	3.2	203
62	Separating Structural Heterogeneities from Stochastic Variations in Fluorescence Resonance Energy Transfer Distributions via Photon Distribution Analysis. Journal of Physical Chemistry B, 2006, 110, 6970-6978.	1.2	208
63	Analysis of Photobleaching in Single-Molecule Multicolor Excitation and FÃ¶rster Resonance Energy Transfer Measurements. Journal of Physical Chemistry A, 2006, 110, 2979-2995.	1.1	139
64	Monitoring dynamic systems with multiparameter fluorescence imaging. Analytical and Bioanalytical Chemistry, 2006, 387, 71-82.	1.9	38
65	Optical Characteristics of Atomic Force Microscopy Tips for Single-Molecule Fluorescence Applications. ChemPhysChem, 2005, 6, 976-983.	1.0	35
66	Molecular Photobleaching Kinetics of Rhodamine 6G by One- and Two-Photon Induced Confocal Fluorescence Microscopy. ChemPhysChem, 2005, 6, 791-804.	1.0	241
67	Detecting protein-induced folding of the U4 snRNA kink-turn by single-molecule multiparameter FRET measurements. Rna, 2005, 11, 1545-1554.	1.6	46
68	Fluorescence Correlation Spectroscopy, a Tool to Investigate Supramolecular Dynamics:Â Inclusion Complexes of Pyronines with Cyclodextrin. Journal of the American Chemical Society, 2005, 127, 8775-8784.	6.6	121
69	Full correlation from picoseconds to seconds by time-resolved and time-correlated single photon detection. Review of Scientific Instruments, 2005, 76, 083104.	0.6	131
70	Determinants of liposome fusion mediated by synaptic SNARE proteins. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 2858-2863.	3.3	176
71	Proton-powered subunit rotation in single membrane-bound F0F1-ATP synthase. Nature Structural and Molecular Biology, 2004, 11, 135-141.	3.6	392
72	Multiparameter single-molecule fluorescence spectroscopy reveals heterogeneity of HIV-1 reverse transcriptase:primer/template complexes. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 1655-1660.	3.3	224

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73	Single-molecule fluorescence resonance energy transfer reveals a dynamic equilibrium between closed and open conformations of syntaxin 1. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 15516-15521.	3.3	268
74	Data registration and selective single-molecule analysis using multi-parameter fluorescence detection. Journal of Biotechnology, 2001, 86, 163-180.	1.9	265
75	An Experimental Comparison of the Maximum Likelihood Estimation and Nonlinear Least-Squares Fluorescence Lifetime Analysis of Single Molecules. Analytical Chemistry, 2001, 73, 2078-2086.	3.2	224
76	Two New Concepts to Measure Fluorescence Resonance Energy Transfer via Fluorescence Correlation Spectroscopy:â€‰ Theory and Experimental Realizations. Journal of Physical Chemistry A, 2001, 105, 6851-6866.	1.1	93
77	Homogeneity, Transport, and Signal Properties of Single Ag Particles Studied by Single-Molecule Surface-Enhanced Resonance Raman Scattering. Journal of Physical Chemistry A, 2001, 105, 3673-3679.	1.1	63
78	Physikalische Chemie 2000. Nachrichten Aus Der Chemie, 2001, 49, 346-358.	0.0	1
79	Principles of Single Molecule Multiparameter Fluorescence Spectroscopy. Single Molecules, 2001, 2, 251-254.	1.7	104
80	Principles of Single Molecule Multiparameter Fluorescence Spectroscopy. Single Molecules, 2001, 2, 251-254.	1.7	8
81	Manipulation and characterization of photo-induced transient states of Merocyanine 540 by fluorescence correlation spectroscopy. Physical Chemistry Chemical Physics, 2000, 2, 3435-3441.	1.3	66
82	Photochromicity and Fluorescence Lifetimes of Green Fluorescent Protein. Journal of Physical Chemistry B, 1999, 103, 8612-8617.	1.2	308
83	Identification of Single Molecules in Aqueous Solution by Time-Resolved Fluorescence Anisotropy. Journal of Physical Chemistry A, 1999, 103, 331-336.	1.1	170
84	Conformational changes of the H+-ATPase fromEscherichia coliupon nucleotide binding detected by single molecule fluorescence. FEBS Letters, 1998, 437, 251-254.	1.3	82
85	Quantitative Identification of Different Single Molecules by Selective Time-Resolved Confocal Fluorescence Spectroscopy. Journal of Physical Chemistry A, 1998, 102, 6601-6613.	1.1	178
86	Photobleaching of Fluorescent Dyes under Conditions Used for Single-Molecule Detection:Â Evidence of Two-Step Photolysis. Analytical Chemistry, 1998, 70, 2651-2659.	3.2	625
87	Monitoring conformational dynamics of a single molecule by selective fluorescence spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 1556-1561.	3.3	346
88	Single-Molecule Detection of Coumarin-120. Nucleosides & Nucleotides, 1997, 16, 551-556.	0.5	7
89	Single-Molecule Identification of Coumarin-120 by Time-Resolved Fluorescence Detection:â€‰ Comparison of One- and Two-Photon Excitation in Solution. Journal of Physical Chemistry A, 1997, 101, 4313-4321.	1.1	121
90	Nucleobase-Specific Quenching of Fluorescent Dyes. 1. Nucleobase One-Electron Redox Potentials and Their Correlation with Static and Dynamic Quenching Efficiencies. The Journal of Physical Chemistry, 1996, 100, 5541-5553.	2.9	988

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91	Detection and characterization of single molecules in aqueous solution. Applied Physics B: Lasers and Optics, 1996, 63, 517-523.	1.1	53
92	ELECTRONIC EFFECTS ON THE FLUORESCENCE OF TYROSINE IN SMALL PEPTIDES. Photochemistry and Photobiology, 1993, 58, 178-184.	1.3	24
93	Laser femtosecond MPI mass spectroscopy of dye-labeled nucleotides. IEEE Journal of Quantum Electronics, 1990, 26, 2158-2161.	1.0	3
94	A DFDL UV picosecond fluorescence spectrometer: Application to aqueous solutions of peptides and nucleotide dye conjugates. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1989, 93, 342-346.	0.9	3
95	Fluorescence Labeling of RNA for Single Molecule Studies. , 0, , 453-474.		0
96	Unraveling multi-state molecular dynamics in single-molecule FRET experiments. II. Quantitative analysis of multi-state kinetic networks. Journal of Chemical Physics, 0, , .	1.2	8