

Claus A&m Seidel

List of Publications by Year in descending order

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Version: 2024-02-01

96
papers

11,632
citations

28274

55
h-index

38395

95
g-index

104
all docs

104
docs citations

104
times ranked

9700
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. | 3.0 | 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, . | 7.1 | 107 |
| 3 | Fundamental photophysics of isomorphous and expanded fluorescent nucleoside analogues. Chemical Society Reviews, 2021, 50, 7062-7107. | 38.1 | 47 |
| 4 | FRET-based dynamic structural biology: Challenges, perspectives and an appeal for open-science practices. ELife, 2021, 10, . | 6.0 | 152 |
| 5 | Automated and optimally FRET-assisted structural modeling. Nature Communications, 2020, 11, 5394. | 12.8 | 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. | 4.2 | 26 |
| 7 | Resolving dynamics and function of transient states in single enzyme molecules. Nature Communications, 2020, 11, 1231. | 12.8 | 71 |
| 8 | Structural and dynamic insights revealing how lipase binding domain MD1 of Pseudomonas aeruginosa foldase affects lipase activation. Scientific Reports, 2020, 10, 3578. | 3.3 | 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. | 14.5 | 34 |
| 10 | Dynamic anticipation by Cdk2/Cyclin A-bound p27 mediates signal integration in cell cycle regulation. Nature Communications, 2019, 10, 1676. | 12.8 | 71 |
| 11 | Integrated NMR, Fluorescence, and Molecular Dynamics Benchmark Study of Protein Mechanics and Hydrodynamics. Journal of Physical Chemistry B, 2019, 123, 1453-1480. | 2.6 | 29 |
| 12 | Single-molecule FRET reveals multiscale chromatin dynamics modulated by HP1. Nature Communications, 2018, 9, 235. | 12.8 | 113 |
| 13 | High precision FRET studies reveal reversible transitions in nucleosomes between microseconds and minutes. Nature Communications, 2018, 9, 4628. | 12.8 | 58 |
| 14 | Precision and accuracy of single-molecule FRET measurementsâ€”a multi-laboratory benchmark study. Nature Methods, 2018, 15, 669-676. | 19.0 | 350 |
| 15 | Uptake dynamics of graphene quantum dots into primary human blood cells following in vitro exposure. RSC Advances, 2017, 7, 12208-12216. | 3.6 | 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. | 2.6 | 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. | 5.7 | 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. | 3.3 | 23 |

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|----|---|------|-----------|
| 19 | Diffusion of macromolecules in a polymer hydrogel: from microscopic to macroscopic scales. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 12860-12876. | 2.8 | 65 |
| 20 | Guanylate binding proteins directly attack <i>Toxoplasma gondii</i> via supramolecular complexes. <i>ELife</i> , 2016, 5, . | 6.0 | 114 |
| 21 | Structures of adsorption layers of surfactant mixtures on nonpolar solid surfaces. <i>Colloid and Polymer Science</i> , 2015, 293, 3107-3117. | 2.1 | 2 |
| 22 | Temperature-cycle microscopy reveals single-molecule conformational heterogeneity. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 6532-6544. | 2.8 | 6 |
| 23 | Real-time dynamics of peptide ligandâ€dependent receptor complex formation in planta. <i>Science Signaling</i> , 2015, 8, ra76. | 3.6 | 84 |
| 24 | Outcome of the First wwPDB Hybrid/Integrative Methods Task Force Workshop. <i>Structure</i> , 2015, 23, 1156-1167. | 3.3 | 159 |
| 25 | Fine tuning of sub-millisecond conformational dynamics controls metabotropic glutamate receptors agonist efficacy. <i>Nature Communications</i> , 2014, 5, 5206. | 12.8 | 89 |
| 26 | Molecules under pressure. <i>Nature Nanotechnology</i> , 2014, 9, 164-165. | 31.5 | 25 |
| 27 | High-precision FRET analysis of the G-protein coupled receptor TGR5 in live cells. <i>European Journal of Medical Research</i> , 2014, 19, . | 2.2 | 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. <i>Biochemistry</i> , 2014, 53, 4590-4600. | 2.5 | 42 |
| 29 | Moderation of Arabidopsis Root Stemness by CLAVATA1 and ARABIDOPSIS CRINKLY4 Receptor Kinase Complexes. <i>Current Biology</i> , 2013, 23, 362-371. | 3.9 | 347 |
| 30 | Impact of human autoantibodies on β 1-adrenergic receptor conformation, activity, and internalization. <i>Cardiovascular Research</i> , 2013, 97, 472-480. | 3.8 | 50 |
| 31 | Analyzing FÃrster Resonance Energy Transfer with Fluctuation Algorithms. <i>Methods in Enzymology</i> , 2013, 519, 39-85. | 1.0 | 38 |
| 32 | dNTP-dependent Conformational Transitions in the Fingers Subdomain of KlenTaq1 DNA Polymerase. <i>Journal of Biological Chemistry</i> , 2013, 288, 13575-13591. | 3.4 | 27 |
| 33 | The GTPase Activity of Murine Guanylate-binding Protein 2 (mGBP2) Controls the Intracellular Localization and Recruitment to the Parasitophorous Vacuole of <i>Toxoplasma gondii</i> . <i>Journal of Biological Chemistry</i> , 2012, 287, 27452-27466. | 3.4 | 46 |
| 34 | Supertertiary structure of the synaptic MAGuK scaffold proteins is conserved. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 15775-15780. | 7.1 | 66 |
| 35 | Single-molecule multiparameter fluorescence spectroscopy reveals directional MutS binding to mismatched bases in DNA. <i>Nucleic Acids Research</i> , 2012, 40, 5448-5464. | 14.5 | 44 |
| 36 | A toolkit and benchmark study for FRET-restrained high-precision structural modeling. <i>Nature Methods</i> , 2012, 9, 1218-1225. | 19.0 | 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. | 1.3 | 15 |
| 38 | Combining MFD and PIE for Accurate Singleâ€Pair FÃ¶rster Resonance Energy Transfer Measurements. ChemPhysChem, 2012, 13, 1060-1078. | 2.1 | 168 |
| 39 | Filtered FCS: Species Autoâ€and Crossâ€Correlation Functions Highlight Binding and Dynamics in Biomolecules. ChemPhysChem, 2012, 13, 1036-1053. | 2.1 | 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. | 13.7 | 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. | 2.5 | 108 |
| 42 | Diphenylhexatrienes as Photoprotective Agents for Ultrasensitive Fluorescence Detection. Journal of Physical Chemistry A, 2010, 114, 4099-4108. | 2.5 | 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. | 2.6 | 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. | 2.6 | 96 |
| 45 | The Conformational Dynamics of the Mitochondrial Hsp70 Chaperone. Molecular Cell, 2010, 38, 89-100. | 9.7 | 150 |
| 46 | Accurate Single-Molecule FRET Studies Using Multiparameter Fluorescence Detection. Methods in Enzymology, 2010, 475, 455-514. | 1.0 | 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. | 7.1 | 171 |
| 49 | Fluorophores as Optical Sensors for Local Forces. ChemPhysChem, 2009, 10, 2041-2048. | 2.1 | 17 |
| 50 | Stem Cell Signaling in Arabidopsis Requires CRN to Localize CLV2 to the Plasma Membrane. Plant Physiology, 2009, 152, 166-176. | 4.8 | 283 |
| 51 | Multiparameter fluorescence imagespectroscopy to study molecular interactions. Photochemical and Photobiological Sciences, 2009, 8, 470-480. | 2.9 | 64 |
| 52 | Dynamics of Supramolecular Association Monitored by Fluorescence Correlation Spectroscopy. ChemPhysChem, 2008, 9, 1819-1827. | 2.1 | 56 |
| 53 | Structural Changes of Yellow Cameleon Domains Observed by Quantitative FRET Analysis and Polarized Fluorescence Correlation Spectroscopy. Biophysical Journal, 2008, 95, 5399-5411. | 0.5 | 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. | 2.6 | 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. | 7.1 | 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. | 13.7 | 56 |
| 57 | Dye-Exchange Dynamics in Micellar Solutions Studied by Fluorescence Correlation Spectroscopy. Journal of Physical Chemistry B, 2007, 111, 3614-3624. | 2.6 | 41 |
| 58 | Strategies to Improve Photostabilities in Ultrasensitive Fluorescence Spectroscopy. Journal of Physical Chemistry A, 2007, 111, 429-440. | 2.5 | 207 |
| 59 | Probability Distribution Analysis of Single-Molecule Fluorescence Anisotropy and Resonance Energy Transfer. Journal of Physical Chemistry B, 2007, 111, 10253-10262. | 2.6 | 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. | 2.2 | 20 |
| 61 | Single-Molecule Detection and Identification of Multiple Species by Multiparameter Fluorescence Detection. Analytical Chemistry, 2006, 78, 2039-2050. | 6.5 | 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. | 2.6 | 208 |
| 63 | Analysis of Photobleaching in Single-Molecule Multicolor Excitation and F rster Resonance Energy Transfer Measurements. Journal of Physical Chemistry A, 2006, 110, 2979-2995. | 2.5 | 139 |
| 64 | Monitoring dynamic systems with multiparameter fluorescence imaging. Analytical and Bioanalytical Chemistry, 2006, 387, 71-82. | 3.7 | 38 |
| 65 | Optical Characteristics of Atomic Force Microscopy Tips for Single-Molecule Fluorescence Applications. ChemPhysChem, 2005, 6, 976-983. | 2.1 | 35 |
| 66 | Molecular Photobleaching Kinetics of Rhodamine 6G by One- and Two-Photon Induced Confocal Fluorescence Microscopy. ChemPhysChem, 2005, 6, 791-804. | 2.1 | 241 |
| 67 | Detecting protein-induced folding of the U4 snRNA kink-turn by single-molecule multiparameter FRET measurements. Rna, 2005, 11, 1545-1554. | 3.5 | 46 |
| 68 | Fluorescence Correlation Spectroscopy, a Tool to Investigate Supramolecular Dynamics:  Inclusion Complexes of Pyronines with Cyclodextrin. Journal of the American Chemical Society, 2005, 127, 8775-8784. | 13.7 | 121 |
| 69 | Full correlation from picoseconds to seconds by time-resolved and time-correlated single photon detection. Review of Scientific Instruments, 2005, 76, 083104. | 1.3 | 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. | 7.1 | 176 |
| 71 | Proton-powered subunit rotation in single membrane-bound FOF1-ATP synthase. Nature Structural and Molecular Biology, 2004, 11, 135-141. | 8.2 | 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. | 7.1 | 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. | 7.1 | 268 |
| 74 | Data registration and selective single-molecule analysis using multi-parameter fluorescence detection. Journal of Biotechnology, 2001, 86, 163-180. | 3.8 | 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. | 6.5 | 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. | 2.5 | 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. | 2.5 | 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. | 0.9 | 104 |
| 80 | Principles of Single Molecule Multiparameter Fluorescence Spectroscopy. Single Molecules, 2001, 2, 251-254. | 0.9 | 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. | 2.8 | 66 |
| 82 | Photochromicity and Fluorescence Lifetimes of Green Fluorescent Protein. Journal of Physical Chemistry B, 1999, 103, 8612-8617. | 2.6 | 308 |
| 83 | Identification of Single Molecules in Aqueous Solution by Time-Resolved Fluorescence Anisotropy. Journal of Physical Chemistry A, 1999, 103, 331-336. | 2.5 | 170 |
| 84 | Conformational changes of the H ⁺ -ATPase from Escherichia coli upon nucleotide binding detected by single molecule fluorescence. FEBS Letters, 1998, 437, 251-254. | 2.8 | 82 |
| 85 | Quantitative Identification of Different Single Molecules by Selective Time-Resolved Confocal Fluorescence Spectroscopy. Journal of Physical Chemistry A, 1998, 102, 6601-6613. | 2.5 | 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. | 6.5 | 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. | 7.1 | 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. | 2.5 | 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. | 2.2 | 53 |
| 92 | ELECTRONIC EFFECTS ON THE FLUORESCENCE OF TYROSINE IN SMALL PEPTIDES. Photochemistry and Photobiology, 1993, 58, 178-184. | 2.5 | 24 |
| 93 | Laser femtosecond MPI mass spectroscopy of dye-labeled nucleotides. IEEE Journal of Quantum Electronics, 1990, 26, 2158-2161. | 1.9 | 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, , . | 3.0 | 8 |