Edward A Lemke

List of Publications by Year
in descending order

104	10,945	43973	33814
papers	citations	48 h-index	99 g-index

117	117	117	12645
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Molecular Anatomy of a Trafficking Organelle. Cell, 2006, 127, 831-846.	13.5	1,985
2	A near-infrared fluorophore for live-cell super-resolution microscopy of cellular proteins. Nature Chemistry, 2013, 5, 132-139.	6.6	779
3	Interplay of Î±-synuclein binding and conformational switching probed by single-molecule fluorescence. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5645-5650.	3.3	379
4	In situ structural analysis of the human nuclear pore complex. Nature, 2015, 526, 140-143.	13.7	361
5	Precision and accuracy of single-molecule FRET measurementsâ€"a multi-laboratory benchmark study. Nature Methods, 2018, 15, 669-676.	9.0	350
6	Amino Acids for Dielsâ€"Alder Reactions in Living Cells. Angewandte Chemie - International Edition, 2012, 51, 4166-4170.	7.2	298
7	A natively unfolded yeast prion monomer adopts an ensemble of collapsed and rapidly fluctuating structures. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2649-2654.	3.3	296
8	Cell typeâ€specific nuclear pores: a case in point for contextâ€dependent stoichiometry of molecular machines. Molecular Systems Biology, 2013, 9, 648.	3.2	277
9	Genetically Encoded Copperâ€Free Click Chemistry. Angewandte Chemie - International Edition, 2011, 50, 3878-3881.	7.2	269
10	Fourier ring correlation as a resolution criterion for super-resolution microscopy. Journal of Structural Biology, 2013, 183, 363-367.	1.3	269
11	Single-molecule biophysics: at the interface of biology, physics and chemistry. Journal of the Royal Society Interface, 2008, 5, 15-45.	1.5	263
12	Plasticity of an Ultrafast Interaction between Nucleoporins and Nuclear Transport Receptors. Cell, 2015, 163, 734-745.	13.5	255
13	Minimal Tags for Rapid Dualâ€Color Liveâ€Cell Labeling and Superâ€Resolution Microscopy. Angewandte Chemie - International Edition, 2014, 53, 2245-2249.	7.2	254
14	Control of protein phosphorylation with a genetically encoded photocaged amino acid. Nature Chemical Biology, 2007, 3, 769-772.	3.9	208
15	Decoupling of size and shape fluctuations in heteropolymeric sequences reconciles discrepancies in SAXS vs. FRET measurements. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6342-E6351.	3.3	195
16	Genetic Incorporation of a Small, Environmentally Sensitive, Fluorescent Probe into Proteins in Saccharomyces cerevisiae. Journal of the American Chemical Society, 2009, 131, 12921-12923.	6.6	183
17	A General and Efficient Method for the Site-Specific Dual-Labeling of Proteins for Single Molecule Fluorescence Resonance Energy Transfer. Journal of the American Chemical Society, 2008, 130, 17664-17665.	6.6	159
18	Associating HIV-1 envelope glycoprotein structures with states on theÂvirus observed by smFRET. Nature, 2019, 568, 415-419.	13.7	156

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19	Genetic Encoding of a Bicyclo[6.1.0]nonyneâ€Charged Amino Acid Enables Fast Cellular Protein Imaging by Metalâ€Free Ligation. ChemBioChem, 2012, 13, 2094-2099.	1.3	153
20	FRET-based dynamic structural biology: Challenges, perspectives and an appeal for open-science practices. ELife, 2021, 10, .	2.8	152
21	Designer membraneless organelles enable codon reassignment of selected mRNAs in eukaryotes. Science, 2019, 363, .	6.0	129
22	Visualizing a one-way protein encounter complex by ultrafast single-molecule mixing. Nature Methods, 2011, 8, 239-241.	9.0	128
23	Labeling proteins on live mammalian cells using click chemistry. Nature Protocols, 2015, 10, 780-791.	5.5	127
24	Direct Visualization of the Conformational Dynamics of Single Influenza Hemagglutinin Trimers. Cell, 2018, 174, 926-937.e12.	13.5	118
25	Debugging Eukaryotic Genetic Code Expansion for Siteâ€Specific Clickâ€PAINT Superâ€Resolution Microscopy. Angewandte Chemie - International Edition, 2016, 55, 16172-16176.	7.2	117
26	Conserved features of intermediates in amyloid assembly determine their benign or toxic states. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11172-11177.	3.3	115
27	Click Strategies for Single-Molecule Protein Fluorescence. Journal of the American Chemical Society, 2012, 134, 5187-5195.	6.6	106
28	Principles for designing fluorescent sensors and reporters. Nature Chemical Biology, 2011, 7, 480-483.	3.9	97
29	Single Molecule Study of the Intrinsically Disordered FG-Repeat Nucleoporin 153. Biophysical Journal, 2011, 101, 1710-1719.	0.2	97
30	PED in 2021: a major update of the protein ensemble database for intrinsically disordered proteins. Nucleic Acids Research, 2021, 49, D404-D411.	6.5	95
31	The liquid state of FG-nucleoporins mimics permeability barrier properties of nuclear pore complexes. Journal of Cell Biology, 2020, 219, .	2.3	93
32	Monomeric Huntingtin Exon 1 Has Similar Overall Structural Features for Wild-Type and Pathological Polyglutamine Lengths. Journal of the American Chemical Society, 2017, 139, 14456-14469.	6.6	87
33	The Multiple Faces of Disordered Nucleoporins. Journal of Molecular Biology, 2016, 428, 2011-2024.	2.0	82
34	Floppy but not sloppy: Interaction mechanism of FG-nucleoporins and nuclear transport receptors. Seminars in Cell and Developmental Biology, 2017, 68, 34-41.	2.3	81
35	Facilitated aggregation of FG nucleoporins under molecular crowding conditions. EMBO Reports, 2013, 14, 178-183.	2.0	78
36	Visualization of Synaptic Vesicle Movement in Intact Synaptic Boutons Using Fluorescence Fluctuation Spectroscopy. Biophysical Journal, 2005, 89, 2091-2102.	0.2	76

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37	Direct single-molecule observation of a protein living in two opposed native structures. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10153-10158.	3.3	72
38	Kirkwoodâ€“Buff Approach Rescues Overcollapse of a Disordered Protein in Canonical Protein Force Fields. Journal of Physical Chemistry B, 2015, 119, 7975-7984.	1.2	70
39	Genetic code expansion enabled site-specific dual-color protein labeling: superresolution microscopy and beyond. Current Opinion in Chemical Biology, 2015, 28, 164-173.	2.8	65
40	Genetic code expansion for multiprotein complex engineering. Nature Methods, 2016, 13, 997-1000.	9.0	63
41	Microfluidic Device for Single-Molecule Experiments with Enhanced Photostability. Journal of the American Chemical Society, 2009, 131, 13610-13612.	6.6	61
42	Highly Stable transâ€Cyclooctene Amino Acids for Liveâ€Cell Labeling. Chemistry - A European Journal, 2015, 21, 12266-12270.	1.7	58
43	New Redâ€Emitting Tetrazineâ€Phenoxazine Fluorogenic Labels for Liveâ€Cell Intracellular Bioorthogonal Labeling Schemes. Chemistry - A European Journal, 2016, 22, 8972-8979.	1.7	58
44	Bio-orthogonal Red and Far-Red Fluorogenic Probes for Wash-Free Live-Cell and Super-resolution Microscopy. ACS Central Science, 2021, 7, 1561-1571.	5.3	57
45	A Versatile Tool for Live-Cell Imaging and Super-Resolution Nanoscopy Studies of HIV-1 Env Distribution and Mobility. Cell Chemical Biology, 2017, 24, 635-645.e5.	2.5	55
46	Orthogonal spin labeling using click chemistry for in vitro and in vivo applications. Journal of Magnetic Resonance, 2017, 275, 38-45.	1.2	54
47	Continuous throughput and long-term observation of single-molecule FRET without immobilization. Nature Methods, 2014, 11, 297-300.	9.0	53
48	Cargo transport through the nuclear pore complex at a glance. Journal of Cell Science, 2021, 134, .	1.2	53
49	Schnelle, zweifarbige Proteinmarkierung an lebenden Zellen fÃ¼r die hochauflÃ¶sende Mikroskopie. Angewandte Chemie, 2014, 126, 2278-2282.	1.6	51
50	Single Synaptic Vesicle Tracking in Individual Hippocampal Boutons at Rest and during Synaptic Activity. Journal of Neuroscience, 2005, 25, 11034-11044.	1.7	49
51	Large-Scale Conformational Dynamics Control H5N1 Influenza Polymerase PB2 Binding to Importin Î±. Journal of the American Chemical Society, 2015, 137, 15122-15134.	6.6	49
52	A new family of bioorthogonally applicable fluorogenic labels. Organic and Biomolecular Chemistry, 2013, 11, 3297.	1.5	46
53	The Exploding Genetic Code. ChemBioChem, 2014, 15, 1691-1694.	1.3	44
54	Origin of Orthogonality of Strainâ€Promoted Click Reactions. Chemistry - A European Journal, 2015, 21, 12431-12435.	1.7	44

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55	Physics of the nuclear pore complex: Theory, modeling and experiment. Physics Reports, 2021, 921, 1-53.	10.3	44
56	Shining a Light on Phase Separation in the Cell. Cell, 2017, 168, 11-13.	13.5	42
57	Two Differential Binding Mechanisms of FG-Nucleoporins and Nuclear Transport Receptors. Cell Reports, 2018, 22, 3660-3671.	2.9	41
58	Hydrophilic transâ€Cyclooctenylated Noncanonical Amino Acids for Fast Intracellular Protein Labeling. ChemBioChem, 2016, 17, 1518-1524.	1.3	39
59	The CD27L and CTP1L Endolysins Targeting Clostridia Contain a Built-in Trigger and Release Factor. PLoS Pathogens, 2014, 10, e1004228.	2.1	37
60	Mapping Multivalency and Differential Affinities within Large Intrinsically Disordered Protein Complexes with Segmental Motion Analysis. Angewandte Chemie - International Edition, 2014, 53, 7364-7367.	7.2	37
61	New Generation of Bioorthogonally Applicable Fluorogenic Dyes with Visible Excitations and Large Stokes Shifts. Bioconjugate Chemistry, 2014, 25, 1370-1374.	1.8	34
62	Labeling of virus components for advanced, quantitative imaging analyses. FEBS Letters, 2016, 590, 1896-1914.	1.3	34
63	Intramolecular three-colour single pair FRET of intrinsically disordered proteins with increased dynamic range. Molecular BioSystems, 2012, 8, 2531.	2.9	32
64	Molecular determinants of large cargo transport into the nucleus. ELife, 2020, 9, .	2.8	31
65	Genetically Encoded Click Chemistry for Single-Molecule FRET of Proteins. Methods in Cell Biology, 2013, 113, 169-187.	0.5	30
66	Application of Noncanonical Amino Acids for Protein Labeling in a Genomically Recoded Escherichia coli. ACS Synthetic Biology, 2017, 6, 233-255.	1.9	29
67	Architecture of TAF11/TAF13/TBP complex suggests novel regulation properties of general transcription factor TFIID. ELife, 2017, 6, .	2.8	29
68	Dual film-like organelles enable spatial separation of orthogonal eukaryotic translation. Cell, 2021, 184, 4886-4903.e21.	13.5	28
69	Comment on â€œInnovative scattering analysis shows that hydrophobic disordered proteins are expanded in waterâ€. Science, 2018, 361, .	6.0	27
70	Site-Specific Labeling of Proteins for Single-Molecule FRET Measurements Using Genetically Encoded Ketone Functionalities. Methods in Molecular Biology, 2011, 751, 3-15.	0.4	26
71	Super-resolution Microscopy of Clickable Amino Acids Reveals the Effects of Fluorescent Protein Tagging on Protein Assemblies. ACS Nano, 2015, 9, 11034-11041.	7.3	26
72	Identification and mutational studies of conserved amino acids in the outer membrane receptor protein, FepA, which affect transport but not binding of ferric-enterobactin in Escherichia coli. BioMetals, 2003, 16, 507-518.	1.8	25

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73	Synthetic biomolecular condensates to engineer eukaryotic cells. Current Opinion in Chemical Biology, 2021, 64, 174-181.	2.8	25
74	Single-molecule FRET and crosslinking studies in structural biology enabled by noncanonical amino acids. Current Opinion in Structural Biology, 2015, 32, 66-73.	2.6	24
75	Sampling Long- versus Short-Range Interactions Defines the Ability of Force Fields To Reproduce the Dynamics of Intrinsically Disordered Proteins. Journal of Chemical Theory and Computation, 2017, 13, 3964-3974.	2.3	22
76	Nanoscale devices for linkerless long-term single-molecule observation. Current Opinion in Biotechnology, 2016, 39, 105-112.	3.3	21
77	Bisazide Cyanine Dyes as Fluorogenic Probes for Bis-Cyclooctynylated Peptide Tags and as Fluorogenic Cross-Linkers of Cyclooctynylated Proteins. Bioconjugate Chemistry, 2017, 28, 1552-1559.	1.8	20
78	Bistetrazineâ€Cyanines as Doubleâ€Clicking Fluorogenic Twoâ€Point Binder or Crosslinker Probes. Chemistry - A European Journal, 2018, 24, 8841-8847.	1.7	19
79	Mechanismâ€Dependent Modulation of Ultrafast Interfacial Water Dynamics in Intrinsically Disordered Protein Complexes. Angewandte Chemie - International Edition, 2019, 58, 4720-4724.	7.2	19
80	What precisionâ€proteinâ€tuning and nanoâ€resolved single molecule sciences can do for each other. BioEssays, 2013, 35, 65-74.	1.2	16
81	Beyond the Transport Function of Import Receptors: Whatâ€™s All the FUS about?. Cell, 2018, 173, 549-553.	13.5	14
82	Synthesis and Evaluation of Novel Ringâ€Strained Noncanonical Amino Acids for Residueâ€Specific Bioorthogonal Reactions in Living Cells. Chemistry - A European Journal, 2021, 27, 6094-6099.	1.7	14
83	Unnatural Amino Acid Mutagenesis Reveals Dimerization As a Negative Regulatory Mechanism of VHRâ€™s Phosphatase Activity. ACS Chemical Biology, 2014, 9, 1451-1459.	1.6	12
84	Palladium-unleashed proteins: gentle aldehyde decaging for site-selective protein modification. Chemical Communications, 2018, 54, 1501-1504.	2.2	12
85	Precision Control of Cellular Pathways with Light. ChemBioChem, 2010, 11, 1825-1827.	1.3	11
86	Verbesserte Erweiterung des eukaryotischen genetischen Codes fÃ¼r seitenspezifische, hochauflÃ¶sende Clickâ€PAINTâ€Mikroskopie. Angewandte Chemie, 2016, 128, 16406-16410.	1.6	11
87	Raising the ribosomal repertoire. Nature Chemistry, 2020, 12, 503-504.	6.6	10
88	Comparative analysis of the coordinated motion of Hsp70s from different organelles observed by single-molecule three-color FRET. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	10
89	Multifunctionality of F-rich nucleoporins. Biochemical Society Transactions, 2020, 48, 2603-2614.	1.6	10
90	Detektion von Mehrbindigkeit und differenziellen AffinitÃten in groÃŸen, intrinsisch ungeordneten Proteinen mithilfe von Segmentbewegungsanalyse. Angewandte Chemie, 2014, 126, 7492-7496.	1.6	7

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91	Synthesis of Azidoâ€Glycans for Chemical Glycomodification of Proteins. European Journal of Organic Chemistry, 2018, 2018, 4296-4305.	1.2	7
92	Inducible Genetic Code Expansion in Eukaryotes. ChemBioChem, 2020, 21, 3216-3219.	1.3	7
93	Role of Solvent Compatibility in the Phase Behavior of Binary Solutions of Weakly Associating Multivalent Polymers. Biomacromolecules, 2022, 23, 349-364.	2.6	7
94	Condensed, Microtubule-coating Thin Organelles for Orthogonal Translation in Mammalian Cells. Journal of Molecular Biology, 2022, 434, 167454.	2.0	6
95	There is plenty of room in protein-RNA condensates. Biophysical Journal, 2021, 120, 1121-1122.	0.2	5
96	MultiBacTAG-Genetic Code Expansion Using the Baculovirus Expression System in Sf21 Cells. Methods in Molecular Biology, 2018, 1728, 297-311.	0.4	4
97	Fluorogenic Tetrazine-Siliconrhodamine Probe for the Labeling of Noncanonical Amino Acid Tagged Proteins. Methods in Molecular Biology, 2018, 1728, 337-363.	0.4	2
98	MechanismusabhÃngige Regulation der ultraschnellen Dynamik von Wasser an GrenzflÃchen in Komplexen mit intrinsisch ungeordneten Proteinen. Angewandte Chemie, 2019, 131, 4769-4774.	1.6	2
99	Phase Separation Comes of Age: From Phenomenology to Single Molecules. Molecular Cell, 2019, 74, 413-415.	4.5	2
100	Probing Differential Binding Mechanisms of Phenylalanine-Glycine-Rich Nucleoporins by Single-Molecule FRET. Methods in Enzymology, 2018, 611, 327-346.	0.4	1
101	Faces, facets, and functions of biomolecular condensates driven by multivalent proteins and nucleic acids. Biophysical Journal, 2021, 120, E1-E4.	0.2	1
102	When two become one: Integrating FRET and EPR into one structural model. Biophysical Journal, 2021, 120, 4637-4638.	0.2	1
103	Frontispiece: Highly Stabletrans-Cyclooctene Amino Acids for Live-Cell Labeling. Chemistry - A European Journal, 2015, 21, n/a-n/a.	1.7	0
104	Titelbild: Verbesserte Erweiterung des eukaryotischen genetischen Codes fÃ¼r seitenspezifische, hochauflÃ¶sende Click-PAINT-Mikroskopie (Angew. Chem. 52/2016). Angewandte Chemie, 2016, 128, 16163-16163.	1.6	0