

Luke D Lavis

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

125
papers

9,052
citations

46
h-index

94
g-index

154
ext. papers

11,550
ext. citations

11.9
avg, IF

6.67
L-index

#	Paper	IF	Citations
125	Bright ideas for chemical biology. <i>ACS Chemical Biology</i> , 2008 , 3, 142-55	4.9	937
124	A general method to improve fluorophores for live-cell and single-molecule microscopy. <i>Nature Methods</i> , 2015 , 12, 244-50, 3 p following 250	21.6	845
123	Imaging dynamic and selective low-complexity domain interactions that control gene transcription. <i>Science</i> , 2018 , 361,	33.3	454
122	Imaging live-cell dynamics and structure at the single-molecule level. <i>Molecular Cell</i> , 2015 , 58, 644-59	17.6	330
121	Bright building blocks for chemical biology. <i>ACS Chemical Biology</i> , 2014 , 9, 855-66	4.9	319
120	A general method to fine-tune fluorophores for live-cell and in vivo imaging. <i>Nature Methods</i> , 2017 , 14, 987-994	21.6	289
119	Rhodium(III)-catalyzed indazole synthesis by C-H bond functionalization and cyclative capture. <i>Journal of the American Chemical Society</i> , 2013 , 135, 7122-5	16.4	247
118	A platform for brain-wide imaging and reconstruction of individual neurons. <i>ELife</i> , 2016 , 5, e10566	8.9	246
117	Real-time quantification of single RNA translation dynamics in living cells. <i>Science</i> , 2016 , 352, 1425-9	33.3	242
116	Bright photoactivatable fluorophores for single-molecule imaging. <i>Nature Methods</i> , 2016 , 13, 985-988	21.6	214
115	Bright and photostable chemigenetic indicators for extended in vivo voltage imaging. <i>Science</i> , 2019 , 365, 699-704	33.3	206
114	Advances in the chemistry of small molecule fluorescent probes. <i>Current Opinion in Chemical Biology</i> , 2011 , 15, 752-9	9.7	197
113	Steroid Receptors Reprogram FoxA1 Occupancy through Dynamic Chromatin Transitions. <i>Cell</i> , 2016 , 165, 593-605	56.2	193
112	High-density three-dimensional localization microscopy across large volumes. <i>Nature Methods</i> , 2016 , 13, 359-65	21.6	192
111	Fluorogenic label for biomolecular imaging. <i>ACS Chemical Biology</i> , 2006 , 1, 252-60	4.9	170
110	3D imaging of Sox2 enhancer clusters in embryonic stem cells. <i>ELife</i> , 2014 , 3, e04236	8.9	146
109	Carbofluoresceins and carborhodamines as scaffolds for high-contrast fluorogenic probes. <i>ACS Chemical Biology</i> , 2013 , 8, 1303-10	4.9	140

108	RNA Polymerase II cluster dynamics predict mRNA output in living cells. <i>ELife</i> , 2016 , 5,	8.9	140
107	Selective esterase-ester pair for targeting small molecules with cellular specificity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 4756-61	11.5	126
106	Tuning the pK(a) of fluorescein to optimize binding assays. <i>Analytical Chemistry</i> , 2007 , 79, 6775-82	7.8	126
105	Teaching Old Dyes New Tricks: Biological Probes Built from Fluoresceins and Rhodamines. <i>Annual Review of Biochemistry</i> , 2017 , 86, 825-843	29.1	122
104	Synthesis of a Far-Red Photoactivatable Silicon-Containing Rhodamine for Super-Resolution Microscopy. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 1723-7	16.4	107
103	Robust model-based analysis of single-particle tracking experiments with Spot-On. <i>ELife</i> , 2018 , 7,	8.9	104
102	Development of photostable fluorophores for molecular imaging. <i>Current Opinion in Chemical Biology</i> , 2017 , 39, 32-38	9.7	101
101	Glutamate-induced RNA localization and translation in neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E6877-E6886	11.5	101
100	General Synthetic Method for Si-Fluoresceins and Si-Rhodamines. <i>ACS Central Science</i> , 2017 , 3, 975-985	16.8	93
99	Facile and general synthesis of photoactivatable xanthene dyes. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 11206-9	16.4	93
98	The chemistry of small-molecule fluorogenic probes. <i>Progress in Molecular Biology and Translational Science</i> , 2013 , 113, 1-34	4	92
97	Ester bonds in prodrugs. <i>ACS Chemical Biology</i> , 2008 , 3, 203-6	4.9	91
96	Synthesis of rhodamines from fluoresceins using Pd-catalyzed C-N cross-coupling. <i>Organic Letters</i> , 2011 , 13, 6354-7	6.2	78
95	Excitation spectra and brightness optimization of two-photon excited probes. <i>Biophysical Journal</i> , 2012 , 102, 934-44	2.9	76
94	Synthesis and utility of fluorogenic acetoxymethyl ethers. <i>Chemical Science</i> , 2011 , 2, 521-530	9.4	71
93	Live-cell single-molecule tracking reveals co-recognition of H3K27me3 and DNA targets polycomb Cbx7-PRC1 to chromatin. <i>ELife</i> , 2016 , 5,	8.9	67
92	Deconstructing behavioral neuropharmacology with cellular specificity. <i>Science</i> , 2017 , 356,	33.3	66
91	Rational Design of Fluorogenic and Spontaneously Blinking Labels for Super-Resolution Imaging. <i>ACS Central Science</i> , 2019 , 5, 1602-1613	16.8	66

90	Chemistry Is Dead. Long Live Chemistry!. <i>Biochemistry</i> , 2017 , 56, 5165-5170	3.2	66
89	Nuclear microenvironments modulate transcription from low-affinity enhancers. <i>ELife</i> , 2017 , 6,	8.9	65
88	Whole-Cell, 3D, and Multicolor STED Imaging with Exchangeable Fluorophores. <i>Nano Letters</i> , 2019 , 19, 500-505	11.5	64
87	Integrated action of pheromone signals in promoting courtship behavior in male mice. <i>ELife</i> , 2014 , 3, e03025	8.9	62
86	Multi-Color Single-Molecule Imaging Uncovers Extensive Heterogeneity in mRNA Decoding. <i>Cell</i> , 2019 , 178, 458-472.e19	56.2	59
85	A general method to optimize and functionalize red-shifted rhodamine dyes. <i>Nature Methods</i> , 2020 , 17, 815-821	21.6	58
84	Semisynthetic fluorescent pH sensors for imaging exocytosis and endocytosis. <i>Nature Communications</i> , 2017 , 8, 1412	17.4	53
83	Single-molecule tracking of the transcription cycle by sub-second RNA detection. <i>ELife</i> , 2014 , 3, e01775	8.9	50
82	Quantifying transcription factor binding dynamics at the single-molecule level in live cells. <i>Methods</i> , 2017 , 123, 76-88	4.6	49
81	Bioorthogonal labeling with tetrazine-dyes for super-resolution microscopy. <i>Communications Biology</i> , 2019 , 2, 261	6.7	47
80	Real-time imaging of Huntingtin aggregates diverting target search and gene transcription. <i>ELife</i> , 2016 , 5,	8.9	47
79	Visualizing long-term single-molecule dynamics in vivo by stochastic protein labeling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 343-348	11.5	46
78	Synthesis of Janelia Fluor HaloTag and SNAP-Tag Ligands and Their Use in Cellular Imaging Experiments. <i>Methods in Molecular Biology</i> , 2017 , 1663, 179-188	1.4	46
77	Cytotoxic ribonucleases: the dichotomy of Coulombic forces. <i>Biochemistry</i> , 2007 , 46, 10308-16	3.2	46
76	Evolved differences in larval social behavior mediated by novel pheromones. <i>ELife</i> , 2014 , 3, e04205	8.9	46
75	Virginia Orange: A Versatile, Red-Shifted Fluorescein Scaffold for Single- and Dual-Input Fluorogenic Probes. <i>Bioconjugate Chemistry</i> , 2016 , 27, 474-80	6.3	44
74	Cohesin Can Remain Associated with Chromosomes during DNA Replication. <i>Cell Reports</i> , 2017 , 20, 2749-2755	11.5	43
73	Chemistry of Photosensitive Fluorophores for Single-Molecule Localization Microscopy. <i>ACS Chemical Biology</i> , 2019 , 14, 1077-1090	4.9	42

72	Nanoscale subcellular architecture revealed by multicolor three-dimensional salvaged fluorescence imaging. <i>Nature Methods</i> , 2020 , 17, 225-231	21.6	41
71	Onconase cytotoxicity relies on the distribution of its positive charge. <i>FEBS Journal</i> , 2009 , 276, 3846-57	5.7	40
70	Latent blue and red fluorophores based on the trimethyl lock. <i>ChemBioChem</i> , 2006 , 7, 1151-4	3.8	40
69	A toolbox for multiplexed super-resolution imaging of the E. coli nucleoid and membrane using novel PAINT labels. <i>Scientific Reports</i> , 2018 , 8, 14768	4.9	40
68	Cellular uptake of ribonuclease A relies on anionic glycans. <i>Biochemistry</i> , 2010 , 49, 10666-73	3.2	38
67	Directed Evolution of a Selective and Sensitive Serotonin Sensor via Machine Learning. <i>Cell</i> , 2020 , 183, 1986-2002.e26	56.2	34
66	Rapid dynamics of general transcription factor TFIIB binding during preinitiation complex assembly revealed by single-molecule analysis. <i>Genes and Development</i> , 2016 , 30, 2106-2118	12.6	34
65	Synthesis of a Far-Red Photoactivatable Silicon-Containing Rhodamine for Super-Resolution Microscopy. <i>Angewandte Chemie</i> , 2016 , 128, 1755-1759	3.6	32
64	A dynamic interplay of enhancer elements regulates expression in naïve pluripotency. <i>Genes and Development</i> , 2017 , 31, 1795-1808	12.6	31
63	Cell-Specific Chemical Delivery Using a Selective Nitroreductase-Nitroaryl Pair. <i>ACS Chemical Biology</i> , 2018 , 13, 2888-2896	4.9	27
62	The structural basis for the narrow substrate specificity of an acetyl esterase from <i>Thermotoga maritima</i> . <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2012 , 1824, 1024-30	4	27
61	Synthetic and genetically encoded fluorescent neural activity indicators. <i>Current Opinion in Neurobiology</i> , 2018 , 50, 101-108	7.6	26
60	Photoactivatable drugs for nicotinic optopharmacology. <i>Nature Methods</i> , 2018 , 15, 347-350	21.6	26
59	A highly sensitive fluorogenic probe for cytochrome P450 activity in live cells. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2008 , 18, 5864-6	2.9	26
58	Desensitized D2 autoreceptors are resistant to trafficking. <i>Scientific Reports</i> , 2017 , 7, 4379	4.9	25
57	Large scale structural rearrangement of a serine hydrolase from <i>Francisella tularensis</i> facilitates catalysis. <i>Journal of Biological Chemistry</i> , 2013 , 288, 10522-35	5.4	25
56	Nicotinic Cholinergic Receptors in VTA Glutamate Neurons Modulate Excitatory Transmission. <i>Cell Reports</i> , 2018 , 23, 2236-2244	10.6	25
55	3D ATAC-PALM: super-resolution imaging of the accessible genome. <i>Nature Methods</i> , 2020 , 17, 430-436	21.6	24

54	Ketamine inside neurons?. <i>American Journal of Psychiatry</i> , 2015 , 172, 1064-6	11.9	23
53	Isomeric Tuning Yields Bright and Targetable Red Ca Indicators. <i>Journal of the American Chemical Society</i> , 2019 , 141, 13734-13738	16.4	23
52	Live-cell single particle imaging reveals the role of RNA polymerase II in histone H2A.Z eviction. <i>ELife</i> , 2020 , 9,	8.9	22
51	Caged naloxone reveals opioid signaling deactivation kinetics. <i>Molecular Pharmacology</i> , 2013 , 84, 687-95	4.3	21
50	The HaloTag as a general scaffold for far-red tunable chemigenetic indicators. <i>Nature Chemical Biology</i> , 2021 , 17, 718-723	11.7	21
49	Fluorogenic affinity label for the facile, rapid imaging of proteins in live cells. <i>Organic and Biomolecular Chemistry</i> , 2009 , 7, 3969-75	3.9	19
48	A general approach to engineer positive-going eFRET voltage indicators. <i>Nature Communications</i> , 2020 , 11, 3444	17.4	18
47	Unraveling cell-to-cell signaling networks with chemical biology. <i>Nature Chemical Biology</i> , 2017 , 13, 564-568	5.7	17
46	A Sensitive and Robust Enzyme Kinetic Experiment Using Microplates and Fluorogenic Ester Substrates. <i>Journal of Chemical Education</i> , 2015 , 92, 385-388	2.4	17
45	Trimethyl lock: a stable chromogenic substrate for esterases. <i>Molecules</i> , 2008 , 13, 204-11	4.8	17
44	A General Method to Improve Fluorophores Using Deuterated Auxochromes. <i>Jacs Au</i> , 2021 , 1, 690-696		17
43	Distinct substrate selectivity of a metabolic hydrolase from <i>Mycobacterium tuberculosis</i> . <i>Biochemistry</i> , 2014 , 53, 7386-95	3.2	16
42	Decoupled roles for the atypical, bifurcated binding pocket of the ybF hydrolase. <i>ChemBioChem</i> , 2013 , 14, 1134-44	3.8	15
41	Facile and General Synthesis of Photoactivatable Xanthene Dyes. <i>Angewandte Chemie</i> , 2011 , 123, 11402-3	14.05	15
40	Evaluation of the Ser-His Dipeptide, a Putative Catalyst of Amide and Ester Hydrolysis. <i>Organic Letters</i> , 2016 , 18, 3518-21	6.2	15
39	Improved HaloTag Ligand Enables BRET Imaging With NanoLuc. <i>Frontiers in Chemistry</i> , 2019 , 7, 938	5	13
38	Optimization of fluorophores for chemical tagging and immunohistochemistry of <i>Drosophila</i> neurons. <i>PLoS ONE</i> , 2018 , 13, e0200759	3.7	12
37	Histochemistry: live and in color. <i>Journal of Histochemistry and Cytochemistry</i> , 2011 , 59, 139-45	3.4	12

36	Enabling Photocatalytic Activation of Rapid Bioorthogonal Chemistry by Repurposing Silicon-Rhodamine Fluorophores as Cytocompatible Far-Red Photocatalysts. <i>Journal of the American Chemical Society</i> , 2021 , 143, 10793-10803	16.4	12
35	Accurate measurement of fast endocytic recycling kinetics in real time. <i>Journal of Cell Science</i> , 2020 , 133,	5.3	12
34	Spatiotemporal coordination of transcription preinitiation complex assembly in live cells. <i>Molecular Cell</i> , 2021 , 81, 3560-3575.e6	17.6	11
33	Design and Synthesis of a Calcium-Sensitive Photocage. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 8363-6	16.4	10
32	Bright and photostable chemigenetic indicators for extended in vivo voltage imaging		10
31	Intraspecies regulation of ribonucleolytic activity. <i>Biochemistry</i> , 2007 , 46, 13131-40	3.2	9
30	Measuring the Global Substrate Specificity of Mycobacterial Serine Hydrolases Using a Library of Fluorogenic Ester Substrates. <i>ACS Infectious Diseases</i> , 2018 , 4, 904-911	5.5	7
29	Fluorogenic structure activity library pinpoints molecular variations in substrate specificity of structurally homologous esterases. <i>Journal of Biological Chemistry</i> , 2018 , 293, 13851-13862	5.4	7
28	Rational Design of Bioavailable Photosensitizers for Manipulation and Imaging of Biological Systems. <i>Cell Chemical Biology</i> , 2020 , 27, 1063-1072.e7	8.2	7
27	Spatio-Temporal Coordination of Transcription Preinitiation Complex Assembly in Live Cells		6
26	Bright photoactivatable fluorophores for single-molecule imaging		5
25	Bright and tunable far-red chemigenetic indicators		5
24	Caveat fluorophore: an insiders guide to small-molecule fluorescent labels.. <i>Nature Methods</i> , 2021 ,	21.6	5
23	Probing Nicotinic Acetylcholine Receptor Function in Mouse Brain Slices via Laser Flash Photolysis of Photoactivatable Nicotine. <i>Journal of Visualized Experiments</i> , 2019 ,	1.6	4
22	Making biology transparent. <i>Nature Biotechnology</i> , 2014 , 32, 1104-5	44.5	4
21	Dynamic and Selective Low-Complexity Domain Interactions Revealed by Live-Cell Single-Molecule Imaging		4
20	Super-resolution Imaging Reveals 3D Structure and Organizing Mechanism of Accessible Chromatin		3
19	Novel Fluorescent Ligands Enable Single-Molecule Localization Microscopy of the Dopamine Transporter. <i>ACS Chemical Neuroscience</i> , 2020 , 11, 3288-3300	5.7	3

18	Single-molecule imaging of chromatin remodelers reveals role of ATPase in promoting fast kinetics of target search and dissociation from chromatin. <i>ELife</i> , 2021 , 10,	8.9	3
17	Design and Synthesis of a Calcium-Sensitive Photocage. <i>Angewandte Chemie</i> , 2016 , 128, 8503-8506	3.6	2
16	Author response: 3D imaging of Sox2 enhancer clusters in embryonic stem cells 2014 ,		2
15	Biosensors based on peptide exposure show single molecule conformations in live cells. <i>Cell</i> , 2021 , 184, 5670-5685.e23	56.2	2
14	Spot-On: robust model-based analysis of single-particle tracking experiments		2
13	Optimization and functionalization of red-shifted rhodamine dyes		2
12	Deuteration improves small-molecule fluorophores		2
11	Multi-color single molecule imaging uncovers extensive heterogeneity in mRNA decoding		2
10	Live and Let Dye. <i>Biochemistry</i> , 2021 , 60, 3539-3546	3.2	2
9	What if we just give everything away?. <i>ELife</i> , 2021 , 10,	8.9	1
8	Sensitivity optimization of a rhodopsin-based fluorescent voltage indicator		1
7	Time-tagged ticker tapes for intracellular recordings		1
6	Kinetic principles underlying pioneer function of GAGA transcription factor in live cells		1
5	Cohesin can remain associated with chromosomes during DNA replication		1
4	A general method to fine-tune fluorophores for live-cell and in vivo imaging		1
3	Direct detection of SARS-CoV-2 RNA using high-contrast pH-sensitive dyes		1
2	Direct detection of SARS-CoV-2 RNA using high-contrast pH-sensitive dyes.. <i>Journal of Biomolecular Techniques</i> , 2021 , 32, 121-133	1.1	0
1	Innenrücktitelbild: Synthesis of a Far-Red Photoactivatable Silicon-Containing Rhodamine for Super-Resolution Microscopy (Angew. Chem. 5/2016). <i>Angewandte Chemie</i> , 2016 , 128, 1961-1961	3.6	

