Kathrin Lang

List of Publications by Year
in descending order

56 papers	5,377 citations	136950 32 h-index	161849 54 g-index
61 all docs	61 docs citations	61 times ranked	5080 citing authors

#	Article	IF	Citations
1	Cellular Incorporation of Unnatural Amino Acids and Bioorthogonal Labeling of Proteins. Chemical Reviews, 2014, 114, 4764-4806.	47.7	861
2	Bioorthogonal Reactions for Labeling Proteins. ACS Chemical Biology, 2014, 9, 16-20.	3.4	467
3	Genetic Encoding of Bicyclononynes and <i>trans</i>-Cyclooctenes for Site-Specific Protein Labeling in Vitro and in Live Mammalian Cells via Rapid Fluorogenic Dielsâ€"Alder Reactions. Journal of the American Chemical Society, 2012, 134, 10317-10320.	13.7	456
4	Genetically encoded norbornene directs site-specific cellular protein labelling via a rapid bioorthogonal reaction. Nature Chemistry, 2012, 4, 298-304.	13.6	424
5	Optimized orthogonal translation of unnatural amino acids enables spontaneous protein double-labelling and FRET. Nature Chemistry, 2014, 6, 393-403.	13.6	233
6	Bioorthogonal chemistry. Nature Reviews Methods Primers, 2021, 1, .	21.2	201
7	Dissociation of antibacterial activity and aminoglycoside ototoxicity in the 4-monosubstituted 2-deoxystreptamine apramycin. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10984-10989.	7.1	185
8	Expanding the genetic code of Drosophila melanogaster. Nature Chemical Biology, 2012, 8, 748-750.	8.0	177
9	Ligand-Induced Folding of the Adenosine Deaminase A-Riboswitch and Implications on Riboswitch Translational Control. ChemBioChem, 2007, 8, 896-902.	2.6	167
10	Traceless and Site-Specific Ubiquitination of Recombinant Proteins. Journal of the American Chemical Society, 2011, 133, 10708-10711.	13.7	161
11	Proteome labeling and protein identification in specific tissues and at specific developmental stages in an animal. Nature Biotechnology, 2014, 32, 465-472.	17.5	161
12	Genetic Code Expansion Enables Live-Cell and Super-Resolution Imaging of Site-Specifically Labeled Cellular Proteins. Journal of the American Chemical Society, 2015, 137, 4602-4605.	13.7	152
13	Ligand-induced folding of the thiM TPP riboswitch investigated by a structure-based fluorescence spectroscopic approach. Nucleic Acids Research, 2007, 35, 5370-5378.	14.5	146
14	Selective, rapid and optically switchable regulation of protein function in live mammalian cells. Nature Chemistry, 2015, 7, 554-561.	13.6	136
15	Syntheses of RNAs with up to 100 Nucleotides Containing Site-Specific 2â€˜-Methylseleno Labels for Use in X-ray Crystallography. Journal of the American Chemical Society, 2005, 127, 12035-12045.	13.7	98
16	Site-specific ubiquitylation and SUMOylation using genetic-code expansion and sortase. Nature Chemical Biology, 2019, 15, 276-284.	8.0	96
17	The Role of 23S Ribosomal RNA Residue A2451 in Peptide Bond Synthesis Revealed by AtomicÂMutagenesis. Chemistry and Biology, 2008, 15, 485-492.	6.0	88
18	Expanding the Genetic Code to Study Proteinâ€"Protein Interactions. Angewandte Chemie - International Edition, 2018, 57, 14350-14361.	13.8	84

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19	Efficient Ribosomal Peptidyl Transfer Critically Relies on the Presence of the Ribose 2â€˜-OH at A2451 of 23S rRNA. Journal of the American Chemical Society, 2006, 128, 4453-4459.	13.7	83
20	The preparation of site-specifically modified riboswitch domains as an example for enzymatic ligation of chemically synthesized RNA fragments. Nature Protocols, 2008, 3, 1457-1466.	12.0	81
21	Chemical engineering of the peptidyl transferase center reveals an important role of the 2'-hydroxyl group of A2451. Nucleic Acids Research, 2005, 33, 1618-1627.	14.5	75
22	Synthesis, Oxidation Behavior, Crystallization and Structure of 2â€˜-Methylseleno Guanosine Containing RNAs. Journal of the American Chemical Society, 2006, 128, 9909-9918.	13.7	68
23	4â€²-O-substitutions determine selectivity of aminoglycoside antibiotics. Nature Communications, 2014, 5, 3112.	12.8	68
24	Tetrazines in Inverse-Electron-Demand Dielsâ€“Alder Cycloadditions and Their Use in Biology. Synthesis, 2017, 49, 830-848.	2.3	62
25	Photoâ€‐induced and Rapid Labeling of Tetrazineâ€‐Bearing Proteins via Cyclopropenoneâ€‐Caged Bicyclononynes. Angewandte Chemie - International Edition, 2019, 58, 15876-15882.	13.8	57
26	Proximityâ€‐Triggered Covalent Stabilization of Lowâ€‐Affinity Protein Complexes In Vitro and In Vivo. Angewandte Chemie - International Edition, 2017, 56, 15737-15741.	13.8	56
27	Structural basis for VPS34 kinase activation by Rab1 and Rab5 on membranes. Nature Communications, 2021, 12, 1564.	12.8	50
28	A fast selenium derivatization strategy for crystallization and phasing of RNA structures. Rna, 2009, 15, 707-715.	3.5	47
29	Structural basis for 16S ribosomal RNA cleavage by the cytotoxic domain of colicin E3. Nature Structural and Molecular Biology, 2010, 17, 1241-1246.	8.2	44
30	Binding of Aminoglycoside Antibiotics to the Duplex Form of the HIVâ€‐1 Genomic RNA Dimerization Initiation Site. Angewandte Chemie - International Edition, 2008, 47, 4110-4113.	13.8	40
31	Evidence for Pseudoknot Formation of Class I preQ₁ Riboswitch Aptamers. ChemBioChem, 2009, 10, 1141-1144.	2.6	39
32	Site-Specific Glycoconjugation of Protein via Bioorthogonal Tetrazine Cycloaddition with a Genetically Encoded <i>trans</i>-Cyclooctene or Bicyclononyne. Bioconjugate Chemistry, 2015, 26, 802-806.	3.6	39
33	A modular toolbox to generate complex polymeric ubiquitin architectures using orthogonal sortase enzymes. Nature Communications, 2021, 12, 6515.	12.8	35
34	Identification of permissive amber suppression sites for efficient non-canonical amino acid incorporation in mammalian cells. Nucleic Acids Research, 2021, 49, e62-e62.	14.5	30
35	A methylated lysine is a switch point for conformational communication in the chaperone Hsp90. Nature Communications, 2020, 11, 1219.	12.8	24
36	Site-Specific Protein Labeling and Generation of Defined Ubiquitin-Protein Conjugates Using an Asparaginyl Endopeptidase. Journal of the American Chemical Society, 2022, 144, 13118-13126.	13.7	19

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37	Genetic Encoding of Unnatural Amino Acids for Labeling Proteins. Methods in Molecular Biology, 2015, 1266, 217-228.	0.9	18
38	Increasing the chemical space of proteins in living cells via genetic code expansion. Current Opinion in Chemical Biology, 2020, 58, 112-120.	6.1	16
39	Substrate Profiling of Mitochondrial Caseinolytic Protease P via a Siteâ€Specific Photocrosslinking Approach. Angewandte Chemie - International Edition, 2022, 61, .	13.8	15
40	ProximitÃtsâ€vermittelte kovalente Stabilisierung niedrigâ€affiner Proteinkomplexe inâ€…vitro und inâ€…vivo. Angewandte Chemie, 2017, 129, 15943-15947.	2.0	14
41	Rab1-AMPylation by Legionella DrrA is allosterically activated by Rab1. Nature Communications, 2021, 12, 460.	12.8	14
42	Expanding the Genetic Code to Study Proteinâ€"Protein Interactions. Angewandte Chemie, 2018, 130, 14548-14559.	2.0	13
43	Photoâ€induced and Rapid Labeling of Tetrazineâ€Bearing Proteins via Cyclopropenoneâ€Caged Bicyclononynes. Angewandte Chemie, 2019, 131, 16023-16029.	2.0	13
44	Siteâ€Specific Protein Labeling with Fluorophores as a Tool To Monitor Protein Turnover. ChemBioChem, 2020, 21, 1861-1867.	2.6	10
45	Shining a light into live cells. Nature Chemistry, 2013, 5, 81-82.	13.6	9
46	Expanding the genetic code with a lysine derivative bearing an enzymatically removable phenylacetyl group. Chemical Communications, 2019, 55, 4793-4796.	4.1	8
47	Preparation of 2â€²â€Deoxyâ€2â€²â€Methylselenoâ€Modified Phosphoramidites and RNA. Current Protocols in Nucleic Acid Chemistry, 2006, 27, Unit 1.15.	0.5	5
48	Decorating proteins with LACE. Nature Chemistry, 2020, 12, 980-982.	13.6	3
49	Building Peptide Bonds in Haifa: The Seventh Chemical Protein Synthesis (CPS) Meeting. ChemBioChem, 2018, 19, 115-120.	2.6	2
50	Installing Terminal-Alkyne Reactivity into Proteins in Engineered Bacteria. Biochemistry, 2019, 58, 2703-2705.	2.5	2
51	Substrate profiling of mitochondrial caseinolytic protease P via a siteâ€specific photocrosslinking approach. Angewandte Chemie, 0, , .	2.0	2
52	Chemie in lebenden Systemen. Nachrichten Aus Der Chemie, 2016, 64, 301-305.	0.0	1
53	Genetically Encoded Biotin Analogues: Incorporation and Application in Bacterial and Mammalian Cells. ChemBioChem, 2019, 20, 1795-1798.	2.6	1
54	Biochemie 2016: Chemie bringt Zellen im Innern zum Leuchten. Nachrichten Aus Der Chemie, 2017, 65, 305-309.	0.0	0

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55	Chemical synthesis in RNA research: from riboswitch to ribosome function. , 2008, , .		0
56	CHAPTER 5.2. Genetic Code Expansion Approaches to Introduce Artificial Covalent Bonds into Proteins <i>In Vivo</i>. Chemical Biology, 2018, , 399-420.	0.2	0