

Genetically Encoding Photoswitchable Click Amino Acids in Mammalian Cells

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Citation Report

#	ARTICLE	IF	CITATIONS
1	A Straightforward Approach towards Cyclic Photoactivatable Tubulysin Derivatives. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 11356-11360.	7.2	14
2	Click Chemistry in Complex Mixtures: Bioorthogonal Bioconjugation. <i>Chemistry and Biology</i> , 2014, 21, 1075-1101.	6.2	627
4	EPR Distance Measurements in Native Proteins with Genetically Encoded Spin Labels. <i>ACS Chemical Biology</i> , 2015, 10, 2764-2771.	1.6	39
5	Genetically Encoded Spin Labels for In Vitro and In-Cell EPR Studies of Native Proteins. <i>Methods in Enzymology</i> , 2015, 563, 483-502.	0.4	16
6	Synthesis and Site-Specific Incorporation of Red-Shifted Azobenzene Amino Acids into Proteins. <i>Organic Letters</i> , 2015, 17, 6258-6261.	2.4	38
7	Photosensitive GFP mutants containing an azobenzene unnatural amino acid. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2015, 25, 470-473.	1.0	8
8	In Situ Formation of an Azo Bridge on Proteins Controllable by Visible Light. <i>Journal of the American Chemical Society</i> , 2015, 137, 11218-11221.	6.6	104
9	Synthesis of Hetero-bifunctional Azobenzene Glycoconjugates for Bioorthogonal Cross-Linking of Proteins. <i>European Journal of Organic Chemistry</i> , 2016, 2016, 1669-1672.	1.2	12
10	Allosteric regulation in NMDA receptors revealed by the genetically encoded photo-cross-linkers. <i>Scientific Reports</i> , 2016, 6, 34751.	1.6	26
11	Rewiring Multidomain Protein Switches: Transforming a Fluorescent Zn ²⁺ Sensor into a Light-Responsive Zn ²⁺ Binding Protein. <i>ACS Synthetic Biology</i> , 2016, 5, 698-709.	1.9	9
12	Incorporation of Unnatural Amino Acids into Proteins Expressed in Mammalian Cells. <i>Methods in Enzymology</i> , 2016, 580, 89-107.	0.4	20
13	Noncovalent Interactions with Proteins Modify the Physicochemical Properties of a Molecular Switch. <i>ChemPlusChem</i> , 2016, 81, 44-48.	1.3	14
14	Azobenzene photocontrol of peptides and proteins. <i>Chemical Communications</i> , 2016, 52, 12262-12277.	2.2	168
15	Molecular tools for acute spatiotemporal manipulation of signal transduction. <i>Current Opinion in Chemical Biology</i> , 2016, 34, 135-142.	2.8	16
16	Using Protein-Confined Proximity To Determine Chemical Reactivity. <i>Journal of the American Chemical Society</i> , 2016, 138, 14832-14835.	6.6	46
17	Orthogonal Protein Translation Using Pyrrolysyl-tRNA Synthetases for Single- and Multiple-Noncanonical Amino Acid Mutagenesis. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2016, 162, 1-19.	0.6	6
18	Optical Control of a Neuronal Protein Using a Genetically Encoded Unnatural Amino Acid in Neurons. <i>Journal of Visualized Experiments</i> , 2016, , e53818.	0.2	5
19	Chemical Protein Modification through Cysteine. <i>ChemBioChem</i> , 2016, 17, 529-553.	1.3	291

#	ARTICLE	IF	CITATIONS
20	Photochromic Materials in Biochemistry. , 0, , 361-391.		1
21	Externally stimulated click reactions for macromolecular syntheses. Progress in Polymer Science, 2016, 52, 19-78.	11.8	103
22	Labeling and Single-Molecule Methods To Monitor G Protein-Coupled Receptor Dynamics. Chemical Reviews, 2017, 117, 186-245.	23.0	104
23	Optical control of a receptor-linked guanylyl cyclase using a photoswitchable peptidic hormone. Chemical Science, 2017, 8, 4644-4653.	3.7	23
24	Dynamic Modulation of Enzyme Activity by Near-Infrared Light. Angewandte Chemie - International Edition, 2017, 56, 6767-6772.	7.2	86
25	Dynamic Modulation of Enzyme Activity by Near-Infrared Light. Angewandte Chemie, 2017, 129, 6871-6876.	1.6	28
26	Let there be light: how to use photoswitchable cross-linker to reprogram proteins. Biochemical Society Transactions, 2017, 45, 831-837.	1.6	8
27	Site-specific incorporation of phosphotyrosine using an expanded genetic code. Nature Chemical Biology, 2017, 13, 842-844.	3.9	82
28	Tuning the Effects of Bacterial Membrane Permeability through Photoisomerization of Antimicrobial Cationic Amphiphiles. Chemistry - A European Journal, 2017, 23, 12724-12728.	1.7	18
29	Engineering the Genetic Code in Cells and Animals: Biological Considerations and Impacts. Accounts of Chemical Research, 2017, 50, 2767-2775.	7.6	94
30	Precise modulation of neuronal activity with synthetic photoswitchable ligands. Current Opinion in Neurobiology, 2017, 45, 202-209.	2.0	33
31	Genetically encoding new bioreactivity. New Biotechnology, 2017, 38, 16-25.	2.4	59
32	Spontaneous and specific chemical cross-linking in live cells to capture and identify protein interactions. Nature Communications, 2017, 8, 2240.	5.8	74
33	Optocontrol of glutamate receptor activity by single side-chain photoisomerization. ELife, 2017, 6, .	2.8	41
34	Probing Ion Channel Structure and Function Using Light-Sensitive Amino Acids. Trends in Biochemical Sciences, 2018, 43, 436-451.	3.7	26
35	Palladium Oxidative Addition Complexes for Peptide and Protein Cross-linking. Journal of the American Chemical Society, 2018, 140, 3128-3133.	6.6	93
36	Genetically Encoding Unnatural Amino Acids in Neurons In Vitro and in the Embryonic Mouse Brain for Optical Control of Neuronal Proteins. Methods in Molecular Biology, 2018, 1728, 263-277.	0.4	2
37	Optical Control of a Biological Reaction's Diffusion System. Angewandte Chemie, 2018, 130, 2386-2390.	1.6	7

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38	Optical Control of a Biological Reactionâ€“Diffusion System. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 2362-2366.	7.2	25
39	Genetically Encoding Fluorosulfate-<sc>I</sc>-tyrosine To React with Lysine, Histidine, and Tyrosine via SuFEx in Proteins <i>in Vivo</i>. <i>Journal of the American Chemical Society</i> , 2018, 140, 4995-4999.	6.6	156
40	Oxidation-induced generation of a mild electrophile for proximity-enhanced proteinâ€“protein crosslinking. <i>Chemical Communications</i> , 2018, 54, 4172-4175.	2.2	6
41	A recognition-gated azobenzene photoswitch. <i>New Journal of Chemistry</i> , 2018, 42, 5660-5663.	1.4	4
42	Optochemical Control of Biological Processes in Cells and Animals. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 2768-2798.	7.2	331
43	Optochemische Steuerung biologischer VorgÃnge in Zellen und Tieren. <i>Angewandte Chemie</i> , 2018, 130, 2816-2848.	1.6	94
44	Reversible and Tunable Photoswitching of Protein Function through Genetic Encoding of Azobenzene Amino Acids in Mammalian Cells. <i>ChemBioChem</i> , 2018, 19, 2178-2185.	1.3	40
45	Application of non-canonical crosslinking amino acids to study proteinâ€“protein interactions in live cells. <i>Current Opinion in Chemical Biology</i> , 2018, 46, 156-163.	2.8	53
46	Recent advances in the optical control of protein function through genetic code expansion. <i>Current Opinion in Chemical Biology</i> , 2018, 46, 99-107.	2.8	94
47	Optimizing the Genetic Incorporation of Chemical Probes into GPCRs for Photo-crosslinking Mapping and Bioorthogonal Chemistry in Live Mammalian Cells. <i>Journal of Visualized Experiments</i> , 2018, , .	0.2	4
48	Expanding the Genetic Code to Study Proteinâ€“Protein Interactions. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 14350-14361.	7.2	84
49	Expanding the Genetic Code to Study Proteinâ€“Protein Interactions. <i>Angewandte Chemie</i> , 2018, 130, 14548-14559.	1.6	13
50	Genetically Encoding Quinoline Reverses Chromophore Charge and Enables Fluorescent Protein Brightening in Acidic Vesicles. <i>Journal of the American Chemical Society</i> , 2018, 140, 11058-11066.	6.6	20
51	Genetically Encoding Photocaged Quinone Methide to Multitarget Protein Residues Covalently in Vivo. <i>Journal of the American Chemical Society</i> , 2019, 141, 9458-9462.	6.6	60
52	Using genetically incorporated unnatural amino acids to control protein functions in mammalian cells. <i>Essays in Biochemistry</i> , 2019, 63, 237-266.	2.1	72
53	Genetically encoding photoswitchable click amino acids for general optical control of conformation and function of proteins. <i>Methods in Enzymology</i> , 2019, 624, 249-264.	0.4	9
54	Contemporary approaches to site-selective protein modification. <i>Nature Reviews Chemistry</i> , 2019, 3, 147-171.	13.8	325
55	Recent Implementations of Molecular Photoswitches into Smart Materials and Biological Systems. <i>Chemistry - A European Journal</i> , 2019, 25, 5128-5144.	1.7	232

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56	Expanding the enzyme universe with genetically encoded unnatural amino acids. <i>Nature Catalysis</i> , 2020, 3, 193-202.	16.1	131
57	Cell-Free Approach for Non-canonical Amino Acids Incorporation Into Polypeptides. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 1031.	2.0	26
58	Suzuki Cross-Coupling Reaction with Genetically Encoded Fluorosulfates for Fluorogenic Protein Labeling. <i>Chemistry - A European Journal</i> , 2020, 26, 15938-15943.	1.7	8
59	Acid-brightening fluorescent protein (abFP) for imaging acidic vesicles and organelles. <i>Methods in Enzymology</i> , 2020, 639, 167-189.	0.4	1
60	Expanding the Genetic Code for Neuronal Studies. <i>ChemBioChem</i> , 2020, 21, 3169-3179.	1.3	24
61	Covalent peptides and proteins for therapeutics. <i>Bioorganic and Medicinal Chemistry</i> , 2021, 29, 115896.	1.4	38
62	InÂvitro display evolution of IL-6R-binding unnatural peptides ribosomally initiated and cyclized with m-(chloromethyl)benzoic acid. <i>Biochemical and Biophysical Research Communications</i> , 2021, 535, 47-53.	1.0	6
63	Genetically Encoding Light-Responsive Protein-Polymers Using Translation Machinery for the Multi-Site Incorporation of Photo-Switchable Unnatural Amino Acids. <i>Advanced Functional Materials</i> , 2021, 31, 2011276.	7.8	15
64	Protein Macrocyclization for Tertiary Structure Stabilization. <i>ChemBioChem</i> , 2021, 22, 2672-2679.	1.3	18
65	A Genetically Encoded Fluorosulfonyloxybenzoyl-lysine for Expansive Covalent Bonding of Proteins via SuFEx Chemistry. <i>Journal of the American Chemical Society</i> , 2021, 143, 10341-10351.	6.6	50
66	Visible-Light-Mediated Modification and Manipulation of Biomacromolecules. <i>Chemical Reviews</i> , 2022, 122, 1752-1829.	23.0	93
67	Computational design and experimental characterization of a photo-controlled mRNA-cap guanine-N7 methyltransferase. <i>RSC Chemical Biology</i> , 2021, 2, 1484-1490.	2.0	2
68	Molecular photoswitches in aqueous environments. <i>Chemical Society Reviews</i> , 2021, 50, 12377-12449.	18.7	170
69	Genetically encoded selective cross-linkers and emerging applications. <i>Biochemical Society Transactions</i> , 2020, 48, 1807-1817.	1.6	4
70	Genetic Code. <i>Biological and Medical Physics Series</i> , 2020, , 417-475.	0.3	0
71	Genetic Code Expansion and Optoproteomics. <i>Yale Journal of Biology and Medicine</i> , 2017, 90, 599-610.	0.2	8
72	New covalent bonding ability for proteins. <i>Protein Science</i> , 2022, 31, 312-322.	3.1	15
73	Genetically encoding latent bioreactive amino acids and the development of covalent protein drugs. <i>Current Opinion in Chemical Biology</i> , 2022, 66, 102106.	2.8	13

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74	The Pyrrolysyl-tRNA Synthetase Activity can be Improved by a P188 Mutation that Stabilizes the Full-Length Enzyme. <i>Journal of Molecular Biology</i> , 2022, 434, 167453.	2.0	9
75	Combinatorial Approaches for Efficient Design of Photoswitchable Protein-Protein Interactions as In Vivo Actuators. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 844405.	2.0	1
76	Using azobenzene photocontrol to set proteins in motion. <i>Nature Reviews Chemistry</i> , 2022, 6, 112-124.	13.8	27
77	Expanding the functionality of proteins with genetically encoded dibenzo[<i>b,f</i>][1,4,5]thiadiazepine: a photo-transducer for photo-click decoration. <i>Chemical Science</i> , 2022, 13, 3571-3581.	3.7	9
78	A guide to designing photocontrol in proteins: methods, strategies and applications. <i>Biological Chemistry</i> , 2022, 403, 573-613.	1.2	14
79	A Designed, Highly Efficient Pyrrolysyl-tRNA Synthetase Mutant Binds o-Chlorophenylalanine Using Two Halogen Bonds. <i>Journal of Molecular Biology</i> , 2022, 434, 167534.	2.0	5
83	Engineering of enzymes using non-natural amino acids. <i>Bioscience Reports</i> , 2022, 42, .	1.1	9
84	Halogenation of tyrosine perturbs large-scale protein self-organization. <i>Nature Communications</i> , 2022, 13, .	5.8	7
85	Expanding the chemical repertoire of protein-based polymers for drug-delivery applications. <i>Advanced Drug Delivery Reviews</i> , 2022, 190, 114460.	6.6	2
86	Programmable Synthesis of Biobased Materials Using Cell-Free Systems. <i>Advanced Materials</i> , 2023, 35, .	11.1	3
87	Fluorescent azobenzene-confined coiled-coil mesofibers. <i>Soft Matter</i> , 2023, 19, 497-501.	1.2	2
88	Photo-regulated genetic encoding of dibenzo[<i>c,g</i>][1,2]diazocine on proteins via configuration switching. <i>Chemical Communications</i> , 0, , .	2.2	0
89	Rational design, production and in vitro analysis of photoxenoproteins. <i>Methods in Enzymology</i> , 2023, , 247-288.	0.4	0