Ryan A Mehl

List of Publications by Year
in descending order

70 papers	3,898 citations	136950 32 h-index	128289 60 g-index
81 all docs	81 docs citations	81 times ranked	4239 citing authors

#	Article	IF	Citations
1	Peroxynitrite nitration of Tyr 56 in Hsp90 induces PC12Âcell death through P2X7R-dependent PTEN activation. Redox Biology, 2022, 50, 102247.	9.0	10
2	Creating a Selective Nanobody Against 3-Nitrotyrosine Containing Proteins. Frontiers in Chemistry, 2022, 10, 835229.	3.6	3
3	Nanobody assemblies with fully flexible topology enabled by genetically encoded tetrazine amino acids. Science Advances, 2022, 8, eabm6909.	10.3	7
4	Selection and validation of orthogonal tRNA/synthetase pairs for the encoding of unnatural amino acids across kingdoms. Methods in Enzymology, 2021, 654, 3-18.	1.0	2
5	Faster Surface Ligation Reactions Improve Immobilized Enzyme Structure and Activity. Journal of the American Chemical Society, 2021, 143, 7154-7163.	13.7	22
6	Genetic Incorporation of Two Mutually Orthogonal Bioorthogonal Amino Acids That Enable Efficient Protein Dual-Labeling in Cells. ACS Chemical Biology, 2021, 16, 2612-2622.	3.4	27
7	Genetic encoding of a highly photostable, long lifetime fluorescent amino acid for imaging in mammalian cells. Chemical Science, 2021, 12, 11955-11964.	7.4	16
8	An improved fluorescent noncanonical amino acid for measuring conformational distributions using time-resolved transition metal ion FRET. ELife, 2021, 10, .	6.0	11
9	Temporal Control of Efficient In Vivo Bioconjugation Using a Genetically Encoded Tetrazine-Mediated Inverse-Electron-Demand Dielsâ€“Alder Reaction. Bioconjugate Chemistry, 2020, 31, 2456-2464.	3.6	9
10	Overcoming Near-Cognate Suppression in a Release Factor 1-Deficient Host with an Improved Nitro-Tyrosine tRNA Synthetase. Journal of Molecular Biology, 2020, 432, 4690-4704.	4.2	23
11	Dissecting Optical Response and Molecular Structure of Fluorescent Proteins With Non-canonical Chromophores. Frontiers in Molecular Biosciences, 2020, 7, 131.	3.5	10
12	Efficient Site-Specific Prokaryotic and Eukaryotic Incorporation of Halotyrosine Amino Acids into Proteins. ACS Chemical Biology, 2020, 15, 562-574.	3.4	13
13	Access to Faster Eukaryotic Cell Labeling with Encoded Tetrazine Amino Acids. Journal of the American Chemical Society, 2020, 142, 7245-7249.	13.7	50
14	Tyrosine nitration on calmodulin enhances calcium-dependent association and activation of nitric-oxide synthase. Journal of Biological Chemistry, 2020, 295, 2203-2211.	3.4	16
15	Unraveling the effects of peroxiredoxin 2 nitration; role of C-terminal tyrosine 193. Free Radical Biology and Medicine, 2019, 141, 492-501.	2.9	12
16	Engineering Spatial Orthogonality into Protein Translation. Biochemistry, 2019, 58, 3325-3327.	2.5	1
17	Immobilization of Proteins with Controlled Load and Orientation. ACS Applied Materials & Interfaces, 2019, 11, 36391-36398.	8.0	36
18	A Highly Versatile Expression System for the Production of Multiply Phosphorylated Proteins. ACS Chemical Biology, 2019, 14, 1564-1572.	3.4	33

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19	Genetically Encoded Protein Tyrosine Nitration in Mammalian Cells. ACS Chemical Biology, 2019, 14, 1328-1336.	3.4	21
20	Structural and Functional Characterization of Sulfonium Carbonâ€“Oxygen Hydrogen Bonding in the Deoxyamino Sugar Methyltransferase TylM1. Biochemistry, 2019, 58, 2152-2159.	2.5	0
21	Unnatural Chemical Biology: Research-Based Laboratory Course Utilizing Genetic Code Expansion. Journal of Chemical Education, 2019, 96, 66-74.	2.3	11
22	Structural Characterization of Rosetta Designed Amino Acylâ€tRNA Synthetase Active Sites for Genetic Code Expansion. FASEB Journal, 2019, 33, 630.1.	0.5	0
23	Site-Specific Protein Labeling with Tetrazine Amino Acids. Methods in Molecular Biology, 2018, 1728, 201-217.	0.9	8
24	Structural insights into a thermostable variant of human carbonic anhydrase II. Protein Science, 2018, 27, 573-577.	7.6	10
25	Chemically-defined lactose-based autoinduction medium for site-specific incorporation of non-canonical amino acids into proteins. RSC Advances, 2018, 8, 25558-25567.	3.6	9
26	Genetic Code Expansion: A Powerful Tool for Understanding the Physiological Consequences of Oxidative Stress Protein Modifications. Oxidative Medicine and Cellular Longevity, 2018, 2018, 1-14.	4.0	14
27	Engineering Heterodimeric Kinesins through Genetic Incorporation of Noncanonical Amino Acids. ACS Chemical Biology, 2018, 13, 2229-2236.	3.4	7
28	Increasing Enzyme Stability and Activity through Hydrogen Bond-Enhanced Halogen Bonds. Biochemistry, 2018, 57, 4135-4147.	2.5	74
29	Improving target amino acid selectivity in a permissive aminoacyl tRNA synthetase through counter-selection. Organic and Biomolecular Chemistry, 2017, 15, 3603-3610.	2.8	31
30	Cyclopropenones for Metabolic Targeting and Sequential Bioorthogonal Labeling. Journal of the American Chemical Society, 2017, 139, 7370-7375.	13.7	58
31	Structureâ€“Energy Relationships of Halogen Bonds in Proteins. Biochemistry, 2017, 56, 2794-2802.	2.5	54
32	Computationally guided discovery of a reactive, hydrophilic trans-5-oxocene dienophile for bioorthogonal labeling. Organic and Biomolecular Chemistry, 2017, 15, 6640-6644.	2.8	37
33	Monitoring Replication Protein A (RPA) dynamics in homologous recombination through site-specific incorporation of non-canonical amino acids. Nucleic Acids Research, 2017, 45, 9413-9426.	14.5	43
34	Doping of Green Fluorescent Protein into Superfluid Helium Droplets: Size and Velocity of Doped Droplets. Journal of Physical Chemistry A, 2017, 121, 6671-6678.	2.5	20
35	A Systematic Investigation of Structure/Function Requirements for the Apolipoprotein A-I/Lecithin Cholesterol Acyltransferase Interaction Loop of High-density Lipoprotein. Journal of Biological Chemistry, 2016, 291, 6386-6395.	3.4	18
36	Improved Incorporation of Noncanonical Amino Acids by an Engineered tRNA^{Tyr} Suppressor. Biochemistry, 2016, 55, 618-628.	2.5	31

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37	Nitration of Hsp90 on Tyrosine 33 Regulates Mitochondrial Metabolism. Journal of Biological Chemistry, 2015, 290, 19055-19066.	3.4	34
38	Ideal Bioorthogonal Reactions Using A Site-Specifically Encoded Tetrazine Amino Acid. Journal of the American Chemical Society, 2015, 137, 10044-10047.	13.7	103
39	1,2,4-Triazines Are Versatile Bioorthogonal Reagents. Journal of the American Chemical Society, 2015, 137, 8388-8391.	13.7	123
40	Well-defined biohybrids using reversible-deactivation radical polymerization procedures. Journal of Controlled Release, 2015, 205, 45-57.	9.9	57
41	Incorporation of Non-Canonical Amino Acids. Advances in Experimental Medicine and Biology, 2015, 869, 119-151.	1.6	34
42	Gleaning Unexpected Fruits from Hardâ€Won Synthetases: Probing Principles of Permissivity in Nonâ€canonical Amino Acidâ€“tRNA Synthetases. ChemBioChem, 2014, 15, 1810-1819.	2.6	35
43	Cooperative, Reversible Selfâ€Assembly of Covalently Preâ€Linked Proteins into Giant Fibrous Structures. Angewandte Chemie - International Edition, 2014, 53, 8050-8055.	13.8	32
44	Site-specific Nitration of Apolipoprotein A-I at Tyrosine 166 Is Both Abundant within Human Atherosclerotic Plaque and Dysfunctional. Journal of Biological Chemistry, 2014, 289, 10276-10292.	3.4	84
45	Optimized orthogonal translation of unnatural amino acids enables spontaneous protein double-labelling and FRET. Nature Chemistry, 2014, 6, 393-403.	13.6	233
46	Structural Basis of Improved Second-Generation 3-Nitro-tyrosine tRNA Synthetases. Biochemistry, 2014, 53, 1916-1924.	2.5	51
47	Conformationally strained trans-cyclooctene with improved stability and excellent reactivity in tetrazine ligation. Chemical Science, 2014, 5, 3770-3776.	7.4	201
48	Characterization of the Lipid Binding Properties of Otoferlin Reveals Specific Interactions between PI(4,5)P2 and the C2C and C2F Domains. Biochemistry, 2014, 53, 5023-5033.	2.5	39
49	Manipulating Unconventional CH-Based Hydrogen Bonding in a Methyltransferase via Noncanonical Amino Acid Mutagenesis. ACS Chemical Biology, 2014, 9, 1692-1697.	3.4	23
50	Mechanistic insight into the conserved allosteric regulation of periplasmic proteolysis by the signaling molecule cyclic-di-GMP. ELife, 2014, 3, e03650.	6.0	41
51	Proteinâ€“polymer hybrids: Conducting ARGET ATRP from a genetically encoded cleavable ATRP initiator. European Polymer Journal, 2013, 49, 2919-2924.	5.4	25
52	Efficient Synthesis and In Vivo Incorporation of Acridon-2-ylalanine, a Fluorescent Amino Acid for Lifetime and FÃ¶rster Resonance Energy Transfer/Luminescence Resonance Energy Transfer Studies. Journal of the American Chemical Society, 2013, 135, 18806-18814.	13.7	86
53	Conservation and Functional Importance of Carbonâ€“Oxygen Hydrogen Bonding in AdoMet-Dependent Methyltransferases. Journal of the American Chemical Society, 2013, 135, 15536-15548.	13.7	92
54	Nitration of Hsp90 induces cell death. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E1102-11.	7.1	122

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55	A Proteinâ€“Polymer Hybrid Mediated By DNA. Langmuir, 2012, 28, 1954-1958.	3.5	35
56	ATRP under Biologically Relevant Conditions: Grafting from a Protein. ACS Macro Letters, 2012, 1, 6-10.	4.8	224
57	Site-Specific Incorporation of Unnatural Amino Acids as Probes for Protein Conformational Changes. Methods in Molecular Biology, 2012, 794, 125-134.	0.9	35
58	Genetically Encoded Tetrazine Amino Acid Directs Rapid Site-Specific in Vivo Bioorthogonal Ligation with trans-Cyclooctenes. Journal of the American Chemical Society, 2012, 134, 2898-2901.	13.7	229
59	Engineered Unnatural Animals: Tools for Multicellular Biochemistry. ChemBioChem, 2012, 13, 186-188.	2.6	3
60	Covalently incorporated proteinâ€“nanogels using AGET ATRP in an inverse miniemulsion. Polymer Chemistry, 2011, 2, 1476.	3.9	66
61	Genetically Encoded Initiator for Polymer Growth from Proteins. Journal of the American Chemical Society, 2010, 132, 13575-13577.	13.7	122
62	Generating Permissive Site-Specific Unnatural Aminoacyl-tRNA Synthetases. Biochemistry, 2010, 49, 1667-1677.	2.5	89
63	Generating Permissive Siteâ€specific Unnatural Amino Acid Synthetases. FASEB Journal, 2010, 24, 838.7.	0.5	0
64	Probing Protein Folding Using Site-Specifically Encoded Unnatural Amino Acids as FRET Donors with Tryptophan. Biochemistry, 2009, 48, 5953-5962.	2.5	110
65	Enhancing the utility of unnatural amino acid synthetases by manipulating broad substrate specificity. Molecular BioSystems, 2009, 5, 1032.	2.9	50
66	Genetically Encoding Protein Oxidative Damage. Journal of the American Chemical Society, 2008, 130, 4028-4033.	13.7	104
67	Site-Specific Incorporation of a19F-Amino Acid into Proteins as an NMR Probe for Characterizing Protein Structure and Reactivity. Journal of the American Chemical Society, 2007, 129, 1160-1166.	13.7	180
68	Preparation of site-specifically labeled fluorinated proteins for 19F-NMR structural characterization. Nature Protocols, 2007, 2, 2601-2607.	12.0	137
69	Improving Nature's Enzyme Active Site with Genetically Encoded Unnatural Amino Acids. Journal of the American Chemical Society, 2006, 128, 11124-11127.	13.7	82
70	Generation of a Bacterium with a 21 Amino Acid Genetic Code. Journal of the American Chemical Society, 2003, 125, 935-939.	13.7	258