Michelle C Y Chang

List of Publications by Year
in descending order

43 papers	5,479 citations	304368 22 h-index	276539 41 g-index
45 all docs	45 docs citations	45 times ranked	7377 citing authors

#	Article	IF	Citations
1	Production of the antimalarial drug precursor artemisinic acid in engineered yeast. Nature, 2006, 440, 940-943.	13.7	2,498
2	A Selective, Cell-Permeable Optical Probe for Hydrogen Peroxide in Living Cells. Journal of the American Chemical Society, 2004, 126, 15392-15393.	6.6	594
3	Exploring bacterial lignin degradation. Current Opinion in Chemical Biology, 2014, 19, 1-7.	2.8	339
4	Enzyme mechanism as a kinetic control element for designing synthetic biofuel pathways. Nature Chemical Biology, 2011, 7, 222-227.	3.9	319
5	Hybrid bioinorganic approach to solar-to-chemical conversion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11461-11466.	3.3	234
6	Identification and Characterization of a Multifunctional Dye Peroxidase from a Lignin-Reactive Bacterium. ACS Chemical Biology, 2012, 7, 2074-2081.	1.6	184
7	Expanding the Fluorine Chemistry of Living Systems Using Engineered Polyketide Synthase Pathways. Science, 2013, 341, 1089-1094.	6.0	166
8	Structural insight into magnetochrome-mediated magnetite biomineralization. Nature, 2013, 502, 681-684.	13.7	119
9	Harnessing energy from plant biomass. Current Opinion in Chemical Biology, 2007, 11, 677-684.	2.8	116
10	Discovery and Characterization of Heme Enzymes from Unsequenced Bacteria: Application to Microbial Lignin Degradation. Journal of the American Chemical Society, 2011, 133, 18006-18009.	6.6	100
11	Natural and engineered biosynthesis of fluorinated natural products. Chemical Society Reviews, 2014, 43, 6527-6536.	18.7	100
12	A family of radical halogenases for the engineering of amino-acid-based products. Nature Chemical Biology, 2019, 15, 1009-1016.	3.9	85
13	Genetic and biochemical investigations of the role of MamP in redox control of iron biomineralization in Magnetospirillum magneticum. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3904-3909.	3.3	62
14	Production of advanced biofuels in engineered E. coli. Current Opinion in Chemical Biology, 2013, 17, 472-479.	2.8	49
15	MamO Is a Repurposed Serine Protease that Promotes Magnetite Biomineralization through Direct Transition Metal Binding in Magnetotactic Bacteria. PLoS Biology, 2016, 14, e1002402.	2.6	43
16	Constructing de Novo Biosynthetic Pathways for Chemical Synthesis inside Living Cells. Biochemistry, 2011, 50, 5404-5418.	1.2	35
17	Engineered Fluorine Metabolism and Fluoropolymer Production in Living Cells. Angewandte Chemie - International Edition, 2017, 56, 13637-13640.	7.2	34
18	Chemoenzymatic Platform for Synthesis of Chiral Organofluorines Based on Typeâ€…II Aldolases. Angewandte Chemie - International Edition, 2019, 58, 11841-11845.	7.2	34

#	Article	IF	Citations
19	Structural and Biochemical Studies of a Fluoroacetyl-CoA-Specific Thioesterase Reveal a Molecular Basis for Fluorine Selectivity. Biochemistry, 2010, 49, 9269-9279.	1.2	31
20	Catalytic control of enzymatic fluorine specificity. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19667-19672.	3.3	27
21	Fluorothreonyl-tRNA deacylase prevents mistranslation in the organofluorine producer Streptomyces cattleya. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11920-11925.	3.3	27
22	Synthetic Biology Approaches to Fluorinated Polyketides. Accounts of Chemical Research, 2015, 48, 584-592.	7.6	25
23	Elucidating the mechanism of fluorinated extender unit loading for improved production of fluorine-containing polyketides. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E660-E668.	3.3	25
24	Reaction pathway engineering converts a radical hydroxylase into a halogenase. Nature Chemical Biology, 2022, 18, 171-179.	3.9	25
25	Engineering site-selective incorporation of fluorine into polyketides. Nature Chemical Biology, 2022, 18, 886-893.	3.9	23
26	Engineering in Vivo Production of Î±-Branched Polyesters. Journal of the American Chemical Society, 2019, 141, 16877-16883.	6.6	21
27	Molecular Recognition of Fluorine Impacts Substrate Selectivity in the Fluoroacetyl-CoA Thioesterase FlK. Biochemistry, 2014, 53, 2053-2063.	1.2	20
28	Biochemical and Structural Characterization of the trans-Enoyl-CoA Reductase from Treponema denticola. Biochemistry, 2012, 51, 6827-6837.	1.2	19
29	Temporal and Fluoride Control of Secondary Metabolism Regulates Cellular Organofluorine Biosynthesis. ACS Chemical Biology, 2012, 7, 1576-1585.	1.6	18
30	Discovery and Engineering of Pathways for Production of Î±-Branched Organic Acids. Journal of the American Chemical Society, 2017, 139, 14526-14532.	6.6	16
31	Structural and Biochemical Studies of Substrate Selectivity in Ascaris suum Thiolases. Biochemistry, 2018, 57, 3155-3166.	1.2	14
32	Chemoenzymatic Platform for Synthesis of Chiral Organofluorines Based on Typeâ€…II Aldolases. Angewandte Chemie, 2019, 131, 11967-11971.	1.6	14
33	Substrate-Triggered Î¼-Peroxodiiron(III) Intermediate in the 4-Chloro-<scp>l</scp>-Lysine-Fragmenting Heme-Oxygenase-like Diiron Oxidase (HDO) BesC: Substrate Dissociation from, and C4 Targeting by, the Intermediate. Biochemistry, 2022, 61, 689-702.	1.2	13
34	A dual cellularâ€“heterogeneous catalyst strategy for the production of olefins from glucose. Nature Chemistry, 2021, 13, 1178-1185.	6.6	12
35	Entropy drives selective fluorine recognition in the fluoroacetylâ€“CoA thioesterase from Streptomyces cattleya. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E2193-E2201.	3.3	11
36	Engineering nonphotosynthetic carbon fixation for production of bioplastics by methanogenic archaea. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	9

#	Article	IF	Citations
37	Biocatalytic Asymmetric Construction of Secondary and Tertiary Fluorides from Î²â€Fluoroâ€Î±â€Ketoacids**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	5
38	High-yield chemical synthesis by reprogramming central metabolism. Nature Biotechnology, 2016, 34, 1129-1129.	9.4	4
39	Engineered Fluorine Metabolism and Fluoropolymer Production in Living Cells. Angewandte Chemie, 2017, 129, 13825-13828.	1.6	4
40	Structural Basis for Branched Substrate Selectivity in a Ketoreductase from Ascaris suum. ACS Catalysis, 2021, 11, 8948-8955.	5.5	3
41	Editorial overview: Opportunities and challenges in synthetic biology. Current Opinion in Chemical Biology, 2015, 28, v-vi.	2.8	1
42	Synthetic Biology Approaches To New Chemistry. FASEB Journal, 2019, 33, 95.1.	0.2	0
43	Biocatalytic Asymmetric Construction of Secondary and Tertiary Fluorides from Î²â€Fluoroâ€Î±â€Ketoacids**. Angewandte Chemie, 0, , .	1.6	0