Michelle C Y Chang

List of Publications by Year
in descending order

43 papers	5,479 citations	304743 22 h-index	276875 41 g-index
45 all docs	45 docs citations	45 times ranked	7377 citing authors

#	Article	IF	Citations
1	Biocatalytic Asymmetric Construction of Secondary and Tertiary Fluorides from Î²â€Fluoroâ€Î±â€Ketoacids**. Angewandte Chemie - International Edition, 2022, 61, .	13.8	5
2	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.	2.5	13
3	Reaction pathway engineering converts a radical hydroxylase into a halogenase. Nature Chemical Biology, 2022, 18, 171-179.	8.0	25
4	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, .	7.1	9
5	Engineering site-selective incorporation of fluorine into polyketides. Nature Chemical Biology, 2022, 18, 886-893.	8.0	23
6	Structural Basis for Branched Substrate Selectivity in a Ketoreductase from Ascaris suum. ACS Catalysis, 2021, 11, 8948-8955.	11.2	3
7	A dual cellularâ€“heterogeneous catalyst strategy for the production of olefins from glucose. Nature Chemistry, 2021, 13, 1178-1185.	13.6	12
8	Chemoenzymatic Platform for Synthesis of Chiral Organofluorines Based on Typeâ€…II Aldolases. Angewandte Chemie, 2019, 131, 11967-11971.	2.0	14
9	Engineering in Vivo Production of Î±-Branched Polyesters. Journal of the American Chemical Society, 2019, 141, 16877-16883.	13.7	21
10	A family of radical halogenases for the engineering of amino-acid-based products. Nature Chemical Biology, 2019, 15, 1009-1016.	8.0	85
11	Chemoenzymatic Platform for Synthesis of Chiral Organofluorines Based on Typeâ€…II Aldolases. Angewandte Chemie - International Edition, 2019, 58, 11841-11845.	13.8	34
12	Synthetic Biology Approaches To New Chemistry. FASEB Journal, 2019, 33, 95.1.	0.5	0
13	Structural and Biochemical Studies of Substrate Selectivity in Ascaris suum Thiolases. Biochemistry, 2018, 57, 3155-3166.	2.5	14
14	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.	7.1	11
15	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.	7.1	25
16	Discovery and Engineering of Pathways for Production of Î±-Branched Organic Acids. Journal of the American Chemical Society, 2017, 139, 14526-14532.	13.7	16
17	Engineered Fluorine Metabolism and Fluoropolymer Production in Living Cells. Angewandte Chemie, 2017, 129, 13825-13828.	2.0	4
18	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.	7.1	27

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19	Engineered Fluorine Metabolism and Fluoropolymer Production in Living Cells. Angewandte Chemie - International Edition, 2017, 56, 13637-13640.	13.8	34
20	High-yield chemical synthesis by reprogramming central metabolism. Nature Biotechnology, 2016, 34, 1129-1129.	17.5	4
21	MamO Is a Repurposed Serine Protease that Promotes Magnetite Biomineralization through Direct Transition Metal Binding in Magnetotactic Bacteria. PLoS Biology, 2016, 14, e1002402.	5.6	43
22	Synthetic Biology Approaches to Fluorinated Polyketides. Accounts of Chemical Research, 2015, 48, 584-592.	15.6	25
23	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.	7.1	62
24	Editorial overview: Opportunities and challenges in synthetic biology. Current Opinion in Chemical Biology, 2015, 28, v-vi.	6.1	1
25	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.	7.1	234
26	Natural and engineered biosynthesis of fluorinated natural products. Chemical Society Reviews, 2014, 43, 6527-6536.	38.1	100
27	Molecular Recognition of Fluorine Impacts Substrate Selectivity in the Fluoroacetyl-CoA Thioesterase FlK. Biochemistry, 2014, 53, 2053-2063.	2.5	20
28	Exploring bacterial lignin degradation. Current Opinion in Chemical Biology, 2014, 19, 1-7.	6.1	339
29	Structural insight into magnetochrome-mediated magnetite biomineralization. Nature, 2013, 502, 681-684.	27.8	119
30	Expanding the Fluorine Chemistry of Living Systems Using Engineered Polyketide Synthase Pathways. Science, 2013, 341, 1089-1094.	12.6	166
31	Production of advanced biofuels in engineered E. coli. Current Opinion in Chemical Biology, 2013, 17, 472-479.	6.1	49
32	Catalytic control of enzymatic fluorine specificity. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19667-19672.	7.1	27
33	Identification and Characterization of a Multifunctional Dye Peroxidase from a Lignin-Reactive Bacterium. ACS Chemical Biology, 2012, 7, 2074-2081.	3.4	184
34	Biochemical and Structural Characterization of the trans-Enoyl-CoA Reductase from Treponema denticola. Biochemistry, 2012, 51, 6827-6837.	2.5	19
35	Temporal and Fluoride Control of Secondary Metabolism Regulates Cellular Organofluorine Biosynthesis. ACS Chemical Biology, 2012, 7, 1576-1585.	3.4	18
36	Constructing de Novo Biosynthetic Pathways for Chemical Synthesis inside Living Cells. Biochemistry, 2011, 50, 5404-5418.	2.5	35

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37	Discovery and Characterization of Heme Enzymes from Unsequenced Bacteria: Application to Microbial Lignin Degradation. Journal of the American Chemical Society, 2011, 133, 18006-18009.	13.7	100
38	Enzyme mechanism as a kinetic control element for designing synthetic biofuel pathways. Nature Chemical Biology, 2011, 7, 222-227.	8.0	319
39	Structural and Biochemical Studies of a Fluoroacetyl-CoA-Specific Thioesterase Reveal a Molecular Basis for Fluorine Selectivity. Biochemistry, 2010, 49, 9269-9279.	2.5	31
40	Harnessing energy from plant biomass. Current Opinion in Chemical Biology, 2007, 11, 677-684.	6.1	116
41	Production of the antimalarial drug precursor artemisinic acid in engineered yeast. Nature, 2006, 440, 940-943.	27.8	2,498
42	A Selective, Cell-Permeable Optical Probe for Hydrogen Peroxide in Living Cells. Journal of the American Chemical Society, 2004, 126, 15392-15393.	13.7	594
43	Biocatalytic Asymmetric Construction of Secondary and Tertiary Fluorides from Î²â€²Fluoroâ€Î±â€Ketoacids**. Angewandte Chemie, 0, , .	2.0	0