David F Savage

List of Publications by Year
in descending order

44 papers	3,438 citations	186209 28 h-index	243529 44 g-index
67 all docs	67 docs citations	67 times ranked	4099 citing authors

#	Article	IF	Citations
1	Spatially Ordered Dynamics of the Bacterial Carbon Fixation Machinery. Science, 2010, 327, 1258-1261.	6.0	289
2	Modularity of a carbon-fixing protein organelle. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 478-483.	3.3	231
3	Circularly permuted and PAM-modified Cas9 variants broaden the targeting scope of base editors. Nature Biotechnology, 2019, 37, 626-631.	9.4	207
4	Profiling of engineering hotspots identifies an allosteric CRISPR-Cas9 switch. Nature Biotechnology, 2016, 34, 646-651.	9.4	180
5	pH determines the energetic efficiency of the cyanobacterial CO ₂ concentrating mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5354-62.	3.3	166
6	Revisiting Trade-offs between Rubisco Kinetic Parameters. Biochemistry, 2019, 58, 3365-3376.	1.2	142
7	Accelerated RNA detection using tandem CRISPR nucleases. Nature Chemical Biology, 2021, 17, 982-988.	3.9	135
8	Controlling CRISPR-Cas9 with ligand-activated and ligand-deactivated sgRNAs. Nature Communications, 2019, 10, 2127.	5.8	133
9	Structure of the complex I-like molecule NDH ofÂoxygenic photosynthesis. Nature, 2019, 566, 411-414.	13.7	123
10	A general protocol for the crystallization of membrane proteins for X-ray structural investigation. Nature Protocols, 2009, 4, 619-637.	5.5	116
11	The Bacterial Carbon-Fixing Organelle Is Formed by Shell Envelopment of Preassembled Cargo. PLoS ONE, 2013, 8, e76127.	1.1	114
12	Multivalent interactions between CsoS2 and Rubisco mediate Î±-carboxysome formation. Nature Structural and Molecular Biology, 2020, 27, 281-287.	3.6	110
13	An open-hardware platform for optogenetics and photobiology. Scientific Reports, 2016, 6, 35363.	1.6	108
14	Rapid construction of metabolite biosensors using domain-insertion profiling. Nature Communications, 2016, 7, 12266.	5.8	104
15	Defossiling Fuel: How Synthetic Biology Can Transform Biofuel Production. ACS Chemical Biology, 2008, 3, 13-16.	1.6	91
16	Identification of a Minimal Peptide Tag for in Vivo and in Vitro Loading of Encapsulin. Biochemistry, 2016, 55, 3461-3468.	1.2	89
17	A Hard Dayâ€™s Night: Cyanobacteria in Diel Cycles. Trends in Microbiology, 2019, 27, 231-242.	3.5	89
18	The stringent response regulates adaptation to darkness in the cyanobacterium Synechococcus elongatus. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4867-76.	3.3	82

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19	Encapsulins: molecular biology of the shell. Critical Reviews in Biochemistry and Molecular Biology, 2017, 52, 583-594.	2.3	76
20	Structural context shapes the aquaporin selectivity filter. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17164-17169.	3.3	74
21	CRISPR-Cas9 Circular Permutants as Programmable Scaffolds for Genome Modification. Cell, 2019, 176, 254-267.e16.	13.5	73
22	Functional reconstitution of a bacterial CO2 concentrating mechanism in Escherichia coli. ELife, 2020, 9, .	2.8	72
23	Spatial and Temporal Organization of Chromosome Duplication and Segregation in the Cyanobacterium Synechococcus elongatus PCC 7942. PLoS ONE, 2012, 7, e47837.	1.1	57
24	Programmed Ribosomal Frameshifting Mediates Expression of the Î±-Carboxysome. Journal of Molecular Biology, 2016, 428, 153-164.	2.0	50
25	Multiplexed Charge Detection Mass Spectrometry for High-Throughput Single Ion Analysis of Large Molecules. Analytical Chemistry, 2019, 91, 7458-7465.	3.2	48
26	Discovery and characterization of a novel family of prokaryotic nanocompartments involved in sulfur metabolism. ELife, 2021, 10, .	2.8	45
27	DABs are inorganic carbon pumps found throughout prokaryotic phyla. Nature Microbiology, 2019, 4, 2204-2215.	5.9	44
28	Cas14: Big Advances from Small CRISPR Proteins. Biochemistry, 2019, 58, 1024-1025.	1.2	41
29	Recent advances on the structure and function of NDH-1: The complex I of oxygenic photosynthesis. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148254.	0.5	33
30	New discoveries expand possibilities for carboxysome engineering. Current Opinion in Microbiology, 2021, 61, 58-66.	2.3	32
31	Live-cell imaging of cyanobacteria. Photosynthesis Research, 2015, 126, 33-46.	1.6	30
32	Comprehensive deletion landscape of CRISPR-Cas9 identifies minimal RNA-guided DNA-binding modules. Nature Communications, 2021, 12, 5664.	5.8	25
33	Biofuel metabolic engineering with biosensors. Current Opinion in Chemical Biology, 2016, 35, 150-158.	2.8	24
34	Rapid and Programmable Protein Mutagenesis Using Plasmid Recombineering. ACS Synthetic Biology, 2017, 6, 1825-1833.	1.9	24
35	Protein Engineering of Cas9 for Enhanced Function. Methods in Enzymology, 2014, 546, 491-511.	0.4	23
36	Encapsulin carrier proteins for enhanced expression of antimicrobial peptides. Biotechnology and Bioengineering, 2020, 117, 603-613.	1.7	21

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37	The encapsulin from Thermotoga maritima is a flavoprotein with a symmetry matched ferritin-like cargo protein. Scientific Reports, 2021, 11, 22810.	1.6	16
38	A nanocompartment system contributes to defense against oxidative stress in Mycobacterium tuberculosis. ELife, 2021, 10, .	2.8	15
39	Protein Science by DNA Sequencing: How Advances in Molecular Biology Are Accelerating Biochemistry. Biochemistry, 2018, 57, 38-46.	1.2	12
40	Ratiometric Sensing of Redox Environments Inside Individual Carboxysomes Trapped in Solution. Journal of Physical Chemistry Letters, 2022, 13, 4455-4462.	2.1	7
41	Learning to Build a Î²-Carboxysome. Biochemistry, 2019, 58, 2091-2092.	1.2	4
42	Editorial Overview. Biofuels: At the crossroads. Current Opinion in Chemical Biology, 2016, 35, A1-A3.	2.8	1
43	Structure of the Cyanobacterial NAD(P)H Dehydrogenase-Like Complex of Oxygenic Photosynthesis. Microscopy and Microanalysis, 2019, 25, 1326-1327.	0.2	0
44	Workshop-based learning and networking: a scalable model for research capacity strengthening in low- and middle-income countries. Global Health Action, 2022, 15, .	0.7	0