Martin Engqvist

List of Publications by Year
in descending order

45 papers	2,438 citations	257450 24 h-index	233421 45 g-index
55 all docs	55 docs citations	55 times ranked	3325 citing authors

#	Article	IF	Citations
1	HAG2/MYB76 and HAG3/MYB29 exert a specific and coordinated control on the regulation of aliphatic glucosinolate biosynthesis in <i>Arabidopsis thaliana</i>. New Phytologist, 2008, 177, 627-642.	7.3	283
2	Effect of poly(ethylene glycol) on enzymatic hydrolysis and adsorption of cellulase enzymes to pretreated lignocellulose. Enzyme and Microbial Technology, 2007, 41, 186-195.	3.2	203
3	Expanding functional protein sequence spaces using generative adversarial networks. Nature Machine Intelligence, 2021, 3, 324-333.	16.0	165
4	The influence of alternative pathways of respiration that utilize branchedâ€chain amino acids following water shortage in <i>Arabidopsis</i>. Plant, Cell and Environment, 2016, 39, 1304-1319.	5.7	139
5	Transgenic Introduction of a Glycolate Oxidative Cycle into A. thaliana Chloroplasts Leads to Growth Improvement. Frontiers in Plant Science, 2012, 3, 38.	3.6	137
6	Archaerhodopsin variants with enhanced voltage-sensitive fluorescence in mammalian and Caenorhabditis elegans neurons. Nature Communications, 2014, 5, 4894.	12.8	124
7	Two d-2-Hydroxy-acid Dehydrogenases in Arabidopsis thaliana with Catalytic Capacities to Participate in the Last Reactions of the Methylglyoxal and Î²-Oxidation Pathways. Journal of Biological Chemistry, 2009, 284, 25026-25037.	3.4	110
8	Machine Learning Applied to Predicting Microorganism Growth Temperatures and Enzyme Catalytic Optima. ACS Synthetic Biology, 2019, 8, 1411-1420.	3.8	100
9	Deep learning-based kcat prediction enables improved enzyme-constrained model reconstruction. Nature Catalysis, 2022, 5, 662-672.	34.4	98
10	Directed Evolution of Gloeobacter violaceus Rhodopsin Spectral Properties. Journal of Molecular Biology, 2015, 427, 205-220.	4.2	85
11	Directed evolution of a far-red fluorescent rhodopsin. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13034-13039.	7.1	84
12	2-Hydroxy Acids in Plant Metabolism. The Arabidopsis Book, 2015, 13, e0182.	0.5	69
13	Plant d-2-Hydroxyglutarate Dehydrogenase Participates in the Catabolism of Lysine Especially during Senescence. Journal of Biological Chemistry, 2011, 286, 11382-11390.	3.4	63
14	A synthesis of bacterial and archaeal phenotypic trait data. Scientific Data, 2020, 7, 170.	5.3	59
15	Nucleotide pools dictate the identity and frequency of ribonucleotide incorporation in mitochondrial DNA. PLoS Genetics, 2017, 13, e1006628.	3.5	55
16	Correlating enzyme annotations with a large set of microbial growth temperatures reveals metabolic adaptations to growth at diverse temperatures. BMC Microbiology, 2018, 18, 177.	3.3	53
17	Applications of Protein Engineering and Directed Evolution in Plant Research. Plant Physiology, 2019, 179, 907-917.	4.8	53
18	Quantitative analysis of amino acid metabolism in liver cancer links glutamate excretion to nucleotide synthesis. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10294-10304.	7.1	45

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19	Deep learning allows genome-scale prediction of Michaelis constants from structural features. PLoS Biology, 2021, 19, e3001402.	5.6	44
20	GLYCOLATE OXIDASE3, a Glycolate Oxidase Homolog of Yeast l-Lactate Cytochrome <i>c</i> Oxidoreductase, Supports l-Lactate Oxidation in Roots of Arabidopsis. Plant Physiology, 2015, 169, 1042-1061.	4.8	41
21	Ribonucleotides incorporated by the yeast mitochondrial DNA polymerase are not repaired. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12466-12471.	7.1	39
22	Mitochondrial 2-hydroxyglutarate metabolism. Mitochondrion, 2014, 19, 275-281.	3.4	38
23	Plants Possess a Cyclic Mitochondrial Metabolic Pathway similar to the Mammalian Metabolic Repair Mechanism Involving Malate Dehydrogenase and l-2-Hydroxyglutarate Dehydrogenase. Plant and Cell Physiology, 2015, 56, 1820-1830.	3.1	35
24	3Dâ€Printed Phenacrylate Decarboxylase Flow Reactors for the Chemoenzymatic Synthesis of 4â€Hydroxystilbene. Chemistry - A European Journal, 2019, 25, 15998-16001.	3.3	33
25	<scp>d</scp>â€Lactate dehydrogenase as a marker gene allows positive selection of transgenic plants. FEBS Letters, 2012, 586, 36-40.	2.8	26
26	<scp>D</scp>â€2â€hydroxyglutarate metabolism is linked to photorespiration in the <i>shm1â€1</i> mutant. Plant Biology, 2013, 15, 776-784.	3.8	23
27	Experimental and computational investigation of enzyme functional annotations uncovers misannotation in the EC 1.1.3.15 enzyme class. PLoS Computational Biology, 2021, 17, e1009446.	3.2	21
28	Adaptive mutations in sugar metabolism restore growth on glucose in a pyruvate decarboxylase negative yeast strain. Microbial Cell Factories, 2015, 14, 116.	4.0	19
29	DNA polymerase Î· contributes to genome-wide lagging strand synthesis. Nucleic Acids Research, 2019, 47, 2425-2435.	14.5	17
30	Basin-scale biogeography of marine phytoplankton reflects cellular-scale optimization of metabolism and physiology. Science Advances, 2022, 8, eabl4930.	10.3	16
31	Elimination of rNMPs from mitochondrial DNA has no effect on its stability. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14306-14313.	7.1	14
32	Different Routes of Protein Folding Contribute to Improved Protein Production in Saccharomyces cerevisiae. MBio, 2020, 11, .	4.1	12
33	ANT: Software for Generating and Evaluating Degenerate Codons for Natural and Expanded Genetic Codes. ACS Synthetic Biology, 2015, 4, 935-938.	3.8	10
34	CAZyme prediction in ascomycetous yeast genomes guides discovery of novel xylanolytic species with diverse capacities for hemicellulose hydrolysis. Biotechnology for Biofuels, 2021, 14, 150.	6.2	10
35	Engineering Saccharomyces cerevisiae for the production and secretion of Affibody molecules. Microbial Cell Factories, 2022, 21, 36.	4.0	10
36	Performance of Regression Models as a Function of Experiment Noise. Bioinformatics and Biology Insights, 2021, 15, 117793222110203.	2.0	9

#	Article	IF	Citations
37	Suppressors of amyloid-Î² toxicity improve recombinant protein production in yeast by reducing oxidative stress and tuning cellular metabolism. Metabolic Engineering, 2022, 72, 311-324.	7.0	9
38	The Yeast eIF2 Kinase Gcn2 Facilitates H ₂ O ₂ -Mediated Feedback Inhibition of Both Protein Synthesis and Endoplasmic Reticulum Oxidative Folding during Recombinant Protein Production. Applied and Environmental Microbiology, 2021, 87, e0030121.	3.1	8
39	Modelingâ€Assisted Design of Thermostable Benzaldehyde Lyases from <i>Rhodococcus erythropolis</i> for Continuous Production of Î±â€Hydroxy Ketones. ChemBioChem, 2022, 23, .	2.6	8
40	Biochemical control systems for small molecule damage in plants. Plant Signaling and Behavior, 2018, 13, e1477906.	2.4	7
41	Adaptation of a Microfluidic qPCR System for Enzyme Kinetic Studies. ACS Omega, 2021, 6, 1985-1990.	3.5	6
42	Metabolic Engineering of Photorespiration. Methods in Molecular Biology, 2017, 1653, 137-155.	0.9	5
43	Discovery of two novel oxidases using a highâ€throughput activity screen. ChemBioChem, 2021, , .	2.6	4
44	Simultaneous Mapping and Quantitation of Ribonucleotides in Human Mitochondrial DNA. Journal of Visualized Experiments, 2017, , .	0.3	3
45	Highlighting the Need for Systems-Level Experimental Characterization of Plant Metabolic Enzymes. Frontiers in Plant Science, 2016, 7, 1127.	3.6	2