Troy E Sandberg

List of Publications by Year
in descending order

22 papers	1,540 citations	516710 16 h-index	677142 22 g-index
27 all docs	27 docs citations	27 times ranked	1848 citing authors

#	Article	IF	Citations
1	The emergence of adaptive laboratory evolution as an efficient tool for biological discovery and industrial biotechnology. Metabolic Engineering, 2019, 56, 1-16.	7.0	307
2	Use of Adaptive Laboratory Evolution To Discover Key Mutations Enabling Rapid Growth of Escherichia coli K-12 MG1655 on Glucose Minimal Medium. Applied and Environmental Microbiology, 2015, 81, 17-30.	3.1	235
3	Human Protein Arginine Methyltransferase 7 (PRMT7) Is a Type III Enzyme Forming ï‰-N-Monomethylated Arginine Residues. Journal of Biological Chemistry, 2012, 287, 7859-7870.	3.4	208
4	Evolution of Escherichia coli to 42 Â°C and Subsequent Genetic Engineering Reveals Adaptive Mechanisms and Novel Mutations. Molecular Biology and Evolution, 2014, 31, 2647-2662.	8.9	145
5	Cellular responses to reactive oxygen species are predicted from molecular mechanisms. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14368-14373.	7.1	79
6	Laboratory Evolution to Alternating Substrate Environments Yields Distinct Phenotypic and Genetic Adaptive Strategies. Applied and Environmental Microbiology, 2017, 83, .	3.1	76
7	Evolution of gene knockout strains of E. coli reveal regulatory architectures governed by metabolism. Nature Communications, 2018, 9, 3796.	12.8	59
8	Evolution of E. coli on [U-13C]Glucose Reveals a Negligible Isotopic Influence on Metabolism and Physiology. PLoS ONE, 2016, 11, e0151130.	2.5	54
9	Enzyme promiscuity shapes adaptation to novel growth substrates. Molecular Systems Biology, 2019, 15, e8462.	7.2	52
10	OxyR Is a Convergent Target for Mutations Acquired during Adaptation to Oxidative Stress-Prone Metabolic States. Molecular Biology and Evolution, 2020, 37, 660-667.	8.9	52
11	Adaptive laboratory evolution resolves energy depletion to maintain high aromatic metabolite phenotypes in Escherichia coli strains lacking the Phosphotransferase System. Metabolic Engineering, 2018, 48, 233-242.	7.0	43
12	Adaptation to the coupling of glycolysis to toxic methylglyoxal production in tpiA deletion strains of Escherichia coli requires synchronized and counterintuitive genetic changes. Metabolic Engineering, 2018, 48, 82-93.	7.0	38
13	Laboratory evolution reveals a two-dimensional rate-yield tradeoff in microbial metabolism. PLoS Computational Biology, 2019, 15, e1007066.	3.2	33
14	Growth Adaptation of gnd and sdhCB Escherichia coli Deletion Strains Diverges From a Similar Initial Perturbation of the Transcriptome. Frontiers in Microbiology, 2018, 9, 1793.	3.5	23
15	Causal mutations from adaptive laboratory evolution are outlined by multiple scales of genome annotations and condition-specificity. BMC Genomics, 2020, 21, 514.	2.8	23
16	Multiple Optimal Phenotypes Overcome Redox and Glycolytic Intermediate Metabolite Imbalances in Escherichia coli pgi Knockout Evolutions. Applied and Environmental Microbiology, 2018, 84, .	3.1	22
17	Pseudogene repair driven by selection pressure applied in experimental evolution. Nature Microbiology, 2019, 4, 386-389.	13.3	21
18	The genetic basis for adaptation of model-designed syntrophic co-cultures. PLoS Computational Biology, 2019, 15, e1006213.	3.2	17

#	Article	IF	Citations
19	Bacterial fitness landscapes stratify based on proteome allocation associated with discrete aero-types. PLoS Computational Biology, 2021, 17, e1008596.	3.2	14
20	Synthetic cross-phyla gene replacement and evolutionary assimilation of major enzymes. Nature Ecology and Evolution, 2020, 4, 1402-1409.	7.8	13
21	The Bitome: digitized genomic features reveal fundamental genome organization. Nucleic Acids Research, 2020, 48, 10157-10163.	14.5	11
22	Fast Metabolic Response to Drug Intervention Through Analysis on a Miniaturized, Highly Integrated Molecular Imaging System. Journal of Nuclear Medicine, 2013, 54, 1820-1824.	5.0	10