Tobias Fuhrer

List of Publications by Year in descending order

50 papers	6,986 citations	109321 35 h-index	197818 49 g-index
55 all docs	55 docs citations	55 times ranked	11845 citing authors

#	Article	IF	Citations
1	L-Arginine Modulates T Cell Metabolism and Enhances Survival and Anti-tumor Activity. Cell, 2016, 167, 829-842.e13.	28.9	1,077
2	The maternal microbiota drives early postnatal innate immune development. Science, 2016, 351, 1296-1302.	12.6	871
3	The outer mucus layer hosts a distinct intestinal microbial niche. Nature Communications, 2015, 6, 8292.	12.8	390
4	A Map of Protein-Metabolite Interactions Reveals Principles of Chemical Communication. Cell, 2018, 172, 358-372.e23.	28.9	350
5	Experimental Identification and Quantification of Glucose Metabolism in Seven Bacterial Species. Journal of Bacteriology, 2005, 187, 1581-1590.	2.2	340
6	High-Throughput, Accurate Mass Metabolome Profiling of Cellular Extracts by Flow Injectionâ€“Time-of-Flight Mass Spectrometry. Analytical Chemistry, 2011, 83, 7074-7080.	6.5	324
7	Pseudomonas putida KT2440 Strain Metabolizes Glucose through a Cycle Formed by Enzymes of the Entner-Doudoroff, Embden-Meyerhof-Parnas, and Pentose Phosphate Pathways. Journal of Biological Chemistry, 2015, 290, 25920-25932.	3.4	269
8	Convergent Peripheral Pathways Catalyze Initial Glucose Catabolism in Pseudomonas putida : Genomic and Flux Analysis. Journal of Bacteriology, 2007, 189, 5142-5152.	2.2	231
9	Real-time metabolome profiling of the metabolic switch between starvation and growth. Nature Methods, 2015, 12, 1091-1097.	19.0	209
10	High-throughput discovery metabolomics. Current Opinion in Biotechnology, 2015, 31, 73-78.	6.6	203
11	Determination of Metabolic Flux Ratios From 13C-Experiments and Gas Chromatography-Mass Spectrometry Data. Methods in Molecular Biology, 2007, 358, 177-197.	0.9	168
12	Reserve Flux Capacity in the Pentose Phosphate Pathway Enables Escherichia coli's Rapid Response to Oxidative Stress. Cell Systems, 2018, 6, 569-578.e7.	6.2	162
13	Protein acetylation affects acetate metabolism, motility and acid stress response in Escherichia coli. Molecular Systems Biology, 2014, 10, 762.	7.2	159
14	Different Biochemical Mechanisms Ensure Network-Wide Balancing of Reducing Equivalents in Microbial Metabolism. Journal of Bacteriology, 2009, 191, 2112-2121.	2.2	136
15	Hepatic mTORC1 controls locomotor activity, body temperature, and lipid metabolism through FGF21. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11592-11599.	7.1	134
16	Nontargeted in vitro metabolomics for high-throughput identification of novel enzymes in Escherichia coli. Nature Methods, 2017, 14, 187-194.	19.0	125
17	Multiple and Interconnected Pathways for l -Lysine Catabolism in Pseudomonas putida KT2440. Journal of Bacteriology, 2005, 187, 7500-7510.	2.2	122
18	Antibodies Set Boundaries Limiting Microbial Metabolite Penetration and the Resultant Mammalian Host Response. Immunity, 2018, 49, 545-559.e5.	14.3	121

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19	Genomewide landscape of geneâ€“metabolome associations in Escherichia coli. Molecular Systems Biology, 2017, 13, 907.	7.2	109
20	Identification of Transcriptional and Metabolic Programs Related to Mammalian Cell Size. Current Biology, 2014, 24, 598-608.	3.9	108
21	d-Xylose Degradation Pathway in the Halophilic Archaeon Haloferax volcanii. Journal of Biological Chemistry, 2009, 284, 27290-27303.	3.4	92
22	Escherichia coli limits Salmonella Typhimurium infections after diet shifts and fat-mediated microbiota perturbation in mice. Nature Microbiology, 2019, 4, 2164-2174.	13.3	88
23	Metabolic Remodeling during Liver Regeneration. Developmental Cell, 2018, 47, 425-438.e5.	7.0	86
24	Dynamic 3D proteomes reveal protein functional alterations at high resolution in situ. Cell, 2021, 184, 545-559.e22.	28.9	82
25	Reconfiguration of metabolic fluxes in Pseudomonas putida as a response to sub-lethal oxidative stress. ISME Journal, 2021, 15, 1751-1766.	9.8	79
26	The thioredoxin-1 system is essential for fueling DNA synthesis during T-cell metabolic reprogramming and proliferation. Nature Communications, 2018, 9, 1851.	12.8	77
27	Metabolism of Pentose Sugars in the Hyperthermophilic Archaea Sulfolobus solfataricus and Sulfolobus acidocaldarius. Journal of Biological Chemistry, 2010, 285, 33701-33709.	3.4	76
28	Acetate scavenging activity in Escherichia coli: interplay of acetylâ€“CoA synthetase and the PEPâ€“glyoxylate cycle in chemostat cultures. Applied Microbiology and Biotechnology, 2012, 93, 2109-2124.	3.6	71
29	Synthesis and degradation of FtsZ quantitatively predict the first cell division in starved bacteria. Molecular Systems Biology, 2018, 14, e8623.	7.2	66
30	Glycolysis without pyruvate kinase in Clostridium thermocellum. Metabolic Engineering, 2017, 39, 169-180.	7.0	62
31	Long-term evolution and short-term adaptation of microbiota strains and sub-strains in mice. Cell Host and Microbe, 2021, 29, 650-663.e9.	11.0	58
32	Computational Prediction and Experimental Verification of the Gene Encoding the NAD⁺/NADP⁺-Dependent Succinate Semialdehyde Dehydrogenase inEscherichia coli. Journal of Bacteriology, 2007, 189, 8073-8078.	2.2	57
33	Global probabilistic annotation of metabolic networks enables enzyme discovery. Nature Chemical Biology, 2012, 8, 848-854.	8.0	53
34	The Nonphosphorylative Entner-Doudoroff Pathway in the Thermoacidophilic Euryarchaeon Picrophilus torridus Involves a Novel 2-Keto-3-Deoxygluconate- Specific Aldolase. Journal of Bacteriology, 2010, 192, 964-974.	2.2	50
35	Derailing the aspartate pathway of Mycobacterium tuberculosis to eradicate persistent infection. Nature Communications, 2019, 10, 4215.	12.8	48
36	Metabolomic Markers of Kidney Function Decline in Patients With Diabetes: Evidence From the Chronic Renal Insufficiency Cohort (CRIC) Study. American Journal of Kidney Diseases, 2020, 76, 511-520.	1.9	45

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37	Reserve Flux Capacity in the Pentose Phosphate Pathway by NADPH Binding Is Conserved across Kingdoms. IScience, 2019, 19, 1133-1144.	4.1	44
38	(p)ppGpp Regulates a Bacterial Nucleosidase by an Allosteric Two-Domain Switch. Molecular Cell, 2019, 74, 1239-1249.e4.	9.7	39
39	Coâ€catabolism of arginine and succinate drives symbiotic nitrogen fixation. Molecular Systems Biology, 2020, 16, e9419.	7.2	33
40	² H/ ¹ H variation in microbial lipids is controlled by NADPH metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12173-12182.	7.1	27
41	Hidden resources in the Escherichia coli genome restore PLP synthesis and robust growth after deletion of the essential gene pdxB. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24164-24173.	7.1	23
42	Maternal microbiota and antibodies as advocates of neonatal health. Gut Microbes, 2017, 8, 479-485.	9.8	21
43	Glycolysis/gluconeogenesis specialization in microbes is driven by biochemical constraints of flux sensing. Molecular Systems Biology, 2022, 18, e10704.	7.2	21
44	Cra regulates the crossâ€talk between the two branches of the phosphoenolpyruvateâ€ƒ:â€ƒphosphotransferase system of Pseudomonas putida. Environmental Microbiology, 2013, 15, 121-132.	3.8	18
45	High-Throughput Metabolomics and Diabetic Kidney Disease Progression: Evidence from the Chronic Renal Insufficiency (CRIC) Study. American Journal of Nephrology, 2022, 53, 215-225.	3.1	14
46	Genome-wide RNAi screen identifies novel players in human 60S subunit biogenesis including key enzymes of polyamine metabolism. Nucleic Acids Research, 2022, 50, 2872-2888.	14.5	11
47	Purity by design: Reducing impurities in bioproduction by stimulus-controlled global translational downregulation of non-product proteins. Metabolic Engineering, 2019, 52, 110-123.	7.0	10
48	Distinct N and C Cross-Feeding Networks in a Synthetic Mouse Gut Consortium. MSystems, 2022, 7, e0148421.	3.8	9
49	Bifunctional Malic/Malolactic Enzyme Provides a Novel Mechanism for NADPH-Balancing in Bacillus subtilis. MBio, 2021, 12, .	4.1	6
50	Determination of Metabolic Flux Ratios From ¹³C-Experiments and Gas Chromatography-Mass Spectrometry Data: Protocol and Principles. , 0, , 177-198.		4