Gregory Stephanopoulos

List of Publications by Year in Descending Order

386 papers	30,813 citations	89 h-index	166 g-index
435 ext. papers	34,620 ext. citations	8.9 avg, IF	7.57 L-index

#	Paper	IF	Citations
386	Removal of lycopene substrate inhibition enables high carotenoid productivity in Yarrowia lipolytica.. *Nature Communications*, **2022**, 13, 572	17.4	8
385	Optimization of the Isopentenol Utilization Pathway for Isoprenoid Synthesis in .. *Journal of Agricultural and Food Chemistry*, **2022**, 70, 3512-3520	5.7	1
384	Enabling commercial success of industrial biotechnology.. *Science*, **2021**, 374, 1563-1565	33.3	2
383	Targeting pathway expression to subcellular organelles improves astaxanthin synthesis in Yarrowia lipolytica. *Metabolic Engineering*, **2021**, 68, 152-161	9.7	7
382	Partitioning metabolism between growth and product synthesis for coordinated production of wax esters in Acinetobacter baylyi ADP1. *Biotechnology and Bioengineering*, **2021**, 118, 2283-2292	4.9	1
381	Differential substrate use in EGF- and oncogenic KRAS-stimulated human mammary epithelial cells. *FEBS Journal*, **2021**, 288, 5629-5649	5.7	1
380	Deep learning classification of lipid droplets in quantitative phase images. *PLoS ONE*, **2021**, 16, e0249196	3.7	3
379	What We Can Learn from Measuring Metabolic Fluxes in Cyanobacteria **2021**, 89-122		
378	Quantitative Metabolic Flux Analysis Based on Isotope Labeling **2021**, 73-136		0
377	Metabolic Engineering of Bacillus New Tools, Strains, and Concepts **2021**, 469-518		1
376	Metabolic Engineering of Corynebacterium glutamicum **2021**, 403-468		
375	Enzymes in biotechnology: Critical platform technologies for bioprocess development. *Current Opinion in Biotechnology*, **2021**, 69, 91-102	11.4	11
374	Metabolic Engineering of Escherichia coli **2021**, 339-402		
373	Metabolic Engineering Perspectives **2021**, 1-21		
372	Engineered yeast tolerance enables efficient production from toxified lignocellulosic feedstocks. *Science Advances*, **2021**, 7,	14.3	5
371	Metabolic Engineering and the Synthetic Biology Toolbox for Clostridium **2021**, 611-651		
370	Harness Yarrowia lipolytica to Make Small Molecule Products **2021**, 735-764		

369	Constructing an ethanol utilization pathway in Escherichia coli to produce acetyl-CoA derived compounds. *Metabolic Engineering*, **2021**, 65, 223-231	9.7	13
368	Monoterpenoid biosynthesis by engineered microbes. *Journal of Industrial Microbiology and Biotechnology*, **2021**,	4.2	3
367	Protein Engineering by Efficient Sequence Space Exploration Through Combination of Directed Evolution and Computational Design Methodologies **2021**, 153-176		1
366	Data-driven Protein Engineering **2021**, 133-151		0
365	Programming Novel Cancer Therapeutics: Design Principles for Chimeric Antigen Receptors **2021**, 353-375		
364	Development of Novel Cellular Imaging Tools Using Protein Engineering **2021**, 377-402		
363	Iterative Saturation Mutagenesis for Semi-rational Enzyme Design **2021**, 105-132		2
362	High-Throughput Mass Spectrometry Complements Protein Engineering **2021**, 57-79		0
361	Recent Advances in Cell Surface Display Technologies for Directed Protein Evolution **2021**, 81-103		
360	Heterologous production of β-carotene in Corynebacterium glutamicum using a multi-copy chromosomal integration method. *Bioresource Technology*, **2021**, 341, 125782	11	4
359	Aldehyde dehydrogenase 3a2 protects AML cells from oxidative death and the synthetic lethality of ferroptosis inducers. *Blood*, **2020**, 136, 1303-1316	2.2	31
358	Protein engineering strategies for microbial production of isoprenoids. *Metabolic Engineering Communications*, **2020**, 11, e00129	6.5	5
357	Novel Strategies and Platforms for Industrial Isoprenoid Engineering. *Trends in Biotechnology*, **2020**, 38, 811-822	15.1	18
356	Using biopolymer bodies for encapsulation of hydrophobic products in bacterium. *Metabolic Engineering*, **2020**, 61, 206-214	9.7	8
355	Dissecting Mammalian Cell Metabolism through 13C- and 2H-Isotope Tracing: Interpretations at the Molecular and Systems Levels. *Industrial & Engineering Chemistry Research*, **2020**, 59, 2593-2610	3.9	1
354	Engineering E. coli to Grow on Methanol. *Joule*, **2020**, 4, 2070-2072	27.8	
353	Metabolic engineering strategies to overcome precursor limitations in isoprenoid biosynthesis. *Current Opinion in Biotechnology*, **2020**, 66, 171-178	11.4	11
352	Synthesis of high-titer alka(e)nes in Yarrowia lipolytica is enabled by a discovered mechanism. *Nature Communications*, **2020**, 11, 6198	17.4	11

351	Improving CRISPR/Cas9-mediated genome editing efficiency in Yarrowia lipolytica using direct tRNA-sgRNA fusions. *Metabolic Engineering*, **2020**, 62, 106-115	9.7	13
350	Enhancing isoprenoid synthesis in Yarrowia lipolytica by expressing the isopentenol utilization pathway and modulating intracellular hydrophobicity. *Metabolic Engineering*, **2020**, 61, 344-351	9.7	33
349	Mixed carbon substrates: a necessary nuisance or a missed opportunity?. *Current Opinion in Biotechnology*, **2020**, 62, 15-21	11.4	32
348	Engineering Yarrowia lipolytica for the utilization of acid whey. *Metabolic Engineering*, **2020**, 57, 43-50	9.7	20
347	Synergistic substrate cofeeding stimulates reductive metabolism. *Nature Metabolism*, **2019**, 1, 643-651	14.6	35
346	Limitations in converting waste gases to fuels and chemicals. *Current Opinion in Biotechnology*, **2019**, 59, 39-45	11.4	20
345	Phage-Assisted Evolution of Bacillus methanolicus Methanol Dehydrogenase 2. *ACS Synthetic Biology*, **2019**, 8, 796-806	5.7	37
344	Cell free biosynthesis of isoprenoids from isopentenol. *Biotechnology and Bioengineering*, **2019**, 116, 3269-3281	4.9	21
343	Engineering Corynebacterium glutamicum for high-titer biosynthesis of hyaluronic acid. *Metabolic Engineering*, **2019**, 55, 276-289	9.7	39
342	Platform Technology for Therapeutic Protein Production **2019**, 1-22		2
341	Cell Line Development for Therapeutic Protein Production **2019**, 23-47		3
340	CHO Cell Engineering for Improved Process Performance and Product Quality **2019**, 207-250		2
339	Metabolite Profiling of Mammalian Cells **2019**, 251-277		
338	Current Considerations and Future Advances in Chemically Defined Medium Development for the Production of Protein Therapeutics in CHO Cells **2019**, 279-294		
337	Host Cell Proteins During Biomanufacturing **2019**, 295-311		3
336	Mammalian Fed-batch Cell Culture for Biopharmaceuticals **2019**, 313-345		1
335	Continuous Biomanufacturing **2019**, 347-364		1
334	Process Analytical Technology and Quality by Design for Animal Cell Culture **2019**, 365-390		1

333	Development and Qualification of a Cell Culture Scale-Down Model **2019**, 391-405		0
332	Transient Gene Expression-Based Protein Production in Recombinant Mammalian Cells **2019**, 49-72		1
331	Enhancing Product and Bioprocess Attributes Using Genome-Scale Models of CHO Metabolism **2019**, 73-95		1
330	Genome Variation, the Epigenome and Cellular Phenotypes **2019**, 97-126		1
329	Adaption of Generic Metabolic Models to Specific Cell Lines for Improved Modeling of Biopharmaceutical Production and Prediction of Processes **2019**, 127-162		
328	Toward Integrated Multi-omics Analysis for Improving CHO Cell Bioprocessing **2019**, 163-184		
327	CRISPR Toolbox for Mammalian Cell Engineering **2019**, 185-206		0
326	Critical Roles of the Pentose Phosphate Pathway and GLN3 in Isobutanol-Specific Tolerance in Yeast. *Cell Systems*, **2019**, 9, 534-547.e5	10.6	18
325	Epigenetic Activation of the pH Regulator MCT4 in Acute Myeloid Leukemia Exploits a Fundamental Metabolic Process of Enhancing Cell Growth through Proton Shifting. *Blood*, **2019**, 134, 3765-3765	2.2	1
324	Two-step pathway for isoprenoid synthesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 506-511	11.5	88
323	Biosynthesis of monoethylene glycol in Saccharomyces cerevisiae utilizing native glycolytic enzymes. *Metabolic Engineering*, **2019**, 51, 20-31	9.7	17
322	Enhancing hydrogen-dependent growth of and carbon dioxide fixation by Clostridium ljungdahlii through nitrate supplementation. *Biotechnology and Bioengineering*, **2019**, 116, 294-306	4.9	28
321	Harnessing a methane-fueled, sediment-free mixed microbial community for utilization of distributed sources of natural gas. *Biotechnology and Bioengineering*, **2018**, 115, 1450-1464	4.9	3
320	Simple glycolipids of microbes: Chemistry, biological activity and metabolic engineering. *Synthetic and Systems Biotechnology*, **2018**, 3, 3-19	4.2	41
319	Constitutive and Regulated Promoters in Yeast: How to Design and Make Use of Promoters in S. cerevisiae **2018**, 107-130		3
318	Metabolic engineering of Escherichia coli for the production of isoprenoids. *FEMS Microbiology Letters*, **2018**, 365,	2.9	36
317	Development of a formaldehyde biosensor with application to synthetic methylotrophy. *Biotechnology and Bioengineering*, **2018**, 115, 206-215	4.9	31
316	Metabolic engineering in the host Yarrowia lipolytica. *Metabolic Engineering*, **2018**, 50, 192-208	9.7	95

315	Holistic Approaches in Lipid Production by Yarrowia lipolytica. *Trends in Biotechnology*, **2018**, 36, 1157-1170	15.1	65
314	Rediverting carbon flux in Clostridium ljungdahlii using CRISPR interference (CRISPRi). *Metabolic Engineering*, **2018**, 48, 243-253	9.7	54
313	Improving formaldehyde consumption drives methanol assimilation in engineered E. coli. *Nature Communications*, **2018**, 9, 2387	17.4	45
312	Glyceraldehyde 3-phosphate dehydrogenase modulates nonoxidative pentose phosphate pathway to provide anabolic precursors in hypoxic tumor cells. *AICHE Journal*, **2018**, 64, 4289-4296	3.6	5
311	Metabolic engineering of Escherichia coli for the production of L-malate from xylose. *Metabolic Engineering*, **2018**, 48, 25-32	9.7	23
310	Lipid production in Yarrowia lipolytica is maximized by engineering cytosolic redox metabolism. *Nature Biotechnology*, **2017**, 35, 173-177	44.5	263
309	Review of metabolic pathways activated in cancer cells as determined through isotopic labeling and network analysis. *Metabolic Engineering*, **2017**, 43, 113-124	9.7	40
308	Key Role of the Carboxyl Terminus of Hyaluronan Synthase in Processive Synthesis and Size Control of Hyaluronic Acid Polymers. *Biomacromolecules*, **2017**, 18, 1064-1073	6.9	6
307	Exploring biochemical pathways for mono-ethylene glycol (MEG) synthesis from synthesis gas. *Metabolic Engineering*, **2017**, 41, 173-181	9.7	18
306	In Vitro Metabolic Engineering of Amorpha-4,11-diene Biosynthesis at Enhanced Rate and Specific Yield of Production. *ACS Synthetic Biology*, **2017**, 6, 1691-1700	5.7	20
305	Application of metabolic controls for the maximization of lipid production in semicontinuous fermentation. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E5308-E5316	11.5	50
304	Designing a New Entry Point into Isoprenoid Metabolism by Exploiting Fructose-6-Phosphate Aldolase Side Reactivity of Escherichia coli. *ACS Synthetic Biology*, **2017**, 6, 1416-1426	5.7	22
303	Engineering oxidative stress defense pathways to build a robust lipid production platform in Yarrowia lipolytica. *Biotechnology and Bioengineering*, **2017**, 114, 1521-1530	4.9	125
302	Direct evidence for cancer-cell-autonomous extracellular protein catabolism in pancreatic tumors. *Nature Medicine*, **2017**, 23, 235-241	50.5	199
301	Metabolic engineering of Escherichia coli for the synthesis of the quadripolymer poly(glycolate-co-lactate-co-3-hydroxybutyrate-co-4-hydroxybutyrate) from glucose. *Metabolic Engineering*, **2017**, 44, 38-44	9.7	15
300	Enhanced Biosynthesis of Hyaluronic Acid Using Engineered Corynebacterium glutamicum Via Metabolic Pathway Regulation. *Biotechnology Journal*, **2017**, 12, 1700191	5.6	30
299	Theoretical analysis of natural gas recovery from marginal wells with a deep well reactor. *AICHE Journal*, **2017**, 63, 3642-3650	3.6	1
298	Engineering of Taxadiene Synthase for Improved Selectivity and Yield of a Key Taxol Biosynthetic Intermediate. *ACS Synthetic Biology*, **2017**, 6, 201-205	5.7	34

297	Engineering Yarrowia lipolytica for poly-3-hydroxybutyrate production. *Journal of Industrial Microbiology and Biotechnology*, **2017**, 44, 605-612	4.2	21
296	Improving Metabolic Pathway Efficiency by Statistical Model-Based Multivariate Regulatory Metabolic Engineering. *ACS Synthetic Biology*, **2017**, 6, 148-158	5.7	82
295	Glutaminase and poly(ADP-ribose) polymerase inhibitors suppress pyrimidine synthesis and VHL-deficient renal cancers. *Journal of Clinical Investigation*, **2017**, 127, 1631-1645	15.9	54
294	Exploiting Bioprocessing Fluctuations to Elicit the Mechanistics of De Novo Lipogenesis in Yarrowia lipolytica. *PLoS ONE*, **2017**, 12, e0168889	3.7	3
293	Akt regulation of glycolysis mediates bioenergetic stability in epithelial cells. *ELife*, **2017**, 6,	8.9	36
292	Metabolic requirements for cancer cell proliferation. *Cancer & Metabolism*, **2016**, 4, 16	5.4	75
291	Engineering Yarrowia lipolytica as a platform for synthesis of drop-in transportation fuels and oleochemicals. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 10848-53	11.5	276
290	Engineering Microbes to Synthesize Plant Isoprenoids. *Methods in Enzymology*, **2016**, 575, 225-45	1.7	3
289	High-titer biosynthesis of hyaluronic acid by recombinant Corynebacterium glutamicum. *Biotechnology Journal*, **2016**, 11, 574-84	5.6	47
288	Efflux transporter engineering markedly improves amorphadiene production in Escherichia coli. *Biotechnology and Bioengineering*, **2016**, 113, 1755-63	4.9	53
287	Biosynthesis of poly(glycolate-co-lactate-co-3-hydroxybutyrate) from glucose by metabolically engineered Escherichia coli. *Metabolic Engineering*, **2016**, 35, 1-8	9.7	30
286	Functional overexpression and characterization of lipogenesis-related genes in the oleaginous yeast Yarrowia lipolytica. *Applied Microbiology and Biotechnology*, **2016**, 100, 3781-98	5.7	67
285	Integrated bioprocess for conversion of gaseous substrates to liquids. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 3773-8	11.5	107
284	Overcoming heterologous protein interdependency to optimize P450-mediated Taxol precursor synthesis in Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 3209-14	11.5	139
283	Efficient utilization of pentoses for bioproduction of the renewable two-carbon compounds ethylene glycol and glycolate. *Metabolic Engineering*, **2016**, 34, 80-87	9.7	64
282	Mechanistic Insights into Taxadiene Epoxidation by Taxadiene-5-Hydroxylase. *ACS Chemical Biology*, **2016**, 11, 460-9	4.9	27
281	Accessing Nature's diversity through metabolic engineering and synthetic biology. *F1000Research*, **2016**, 5,	3.6	33
280	Merkel Cell Polyomavirus Small T Antigen Promotes Pro-Glycolytic Metabolic Perturbations Required for Transformation. *PLoS Pathogens*, **2016**, 12, e1006020	7.6	46

279	C Metabolic Flux Analysis of acetate conversion to lipids by Yarrowia lipolytica. *Metabolic Engineering*, **2016**, 38, 86-97	9.7	43
278	Engineering a novel biosynthetic pathway in Escherichia coli for production of renewable ethylene glycol. *Biotechnology and Bioengineering*, **2016**, 113, 376-83	4.9	45
277	Engineering of a high lipid producing Yarrowia lipolytica strain. *Biotechnology for Biofuels*, **2016**, 9, 77	7.8	106
276	Metabolic engineering of microbial competitive advantage for industrial fermentation processes. *Science*, **2016**, 353, 583-6	33.3	92
275	Co-culture engineering for microbial biosynthesis of 3-amino-benzoic acid in Escherichia coli. *Biotechnology Journal*, **2016**, 11, 981-7	5.6	55
274	Letter from AIChE President. *Bioengineering and Translational Medicine*, **2016**, 1, 3	14.8	
273	A roadmap for interpreting (13)C metabolite labeling patterns from cells. *Current Opinion in Biotechnology*, **2015**, 34, 189-201	11.4	368
272	Engineering lipid overproduction in the oleaginous yeast Yarrowia lipolytica. *Metabolic Engineering*, **2015**, 29, 56-65	9.7	233
271	Transcriptional control of autophagy-lysosome function drives pancreatic cancer metabolism. *Nature*, **2015**, 524, 361-5	50.4	475
270	Investigating Moorella thermoacetica metabolism with a genome-scale constraint-based metabolic model. *Integrative Biology (United Kingdom)*, **2015**, 7, 869-82	3.7	27
269	Engineering Escherichia coli coculture systems for the production of biochemical products. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 8266-71	11.5	192
268	Experimental design-aided systematic pathway optimization of glucose uptake and deoxyxylulose phosphate pathway for improved amorphadiene production. *Applied Microbiology and Biotechnology*, **2015**, 99, 3825-37	5.7	34
267	The oxidative pentose phosphate pathway is the primary source of NADPH for lipid overproduction from glucose in Yarrowia lipolytica. *Metabolic Engineering*, **2015**, 30, 27-39	9.7	186
266	Engineering E. coli-E. coli cocultures for production of muconic acid from glycerol. *Microbial Cell Factories*, **2015**, 14, 134	6.4	66
265	Metabolomic and (13)C-metabolic flux analysis of a xylose-consuming Saccharomyces cerevisiae strain expressing xylose isomerase. *Biotechnology and Bioengineering*, **2015**, 112, 470-83	4.9	59
264	Pyruvate kinase isoform expression alters nucleotide synthesis to impact cell proliferation. *Molecular Cell*, **2015**, 57, 95-107	17.6	164
263	Review of methods to probe single cell metabolism and bioenergetics. *Metabolic Engineering*, **2015**, 27, 115-135	9.7	69
262	Improved Gene Targeting through Cell Cycle Synchronization. *PLoS ONE*, **2015**, 10, e0133434	3.7	45

261	Distributing a metabolic pathway among a microbial consortium enhances production of natural products. *Nature Biotechnology*, **2015**, 33, 377-83	44.5	397
260	Microfluidic high-throughput culturing of single cells for selection based on extracellular metabolite production or consumption. *Nature Biotechnology*, **2014**, 32, 473-8	44.5	247
259	Improving fatty acids production by engineering dynamic pathway regulation and metabolic control. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 11299-304	11.5	357
258	Fragment formula calculator (FFC): determination of chemical formulas for fragment ions in mass spectrometric data. *Analytical Chemistry*, **2014**, 86, 2221-8	7.8	20
257	Biofuels. Engineering alcohol tolerance in yeast. *Science*, **2014**, 346, 71-5	33.3	142
256	Metabolic engineering: the ultimate paradigm for continuous pharmaceutical manufacturing. *ChemSusChem*, **2014**, 7, 1847-53	8.3	12
255	13C isotope-assisted methods for quantifying glutamine metabolism in cancer cells. *Methods in Enzymology*, **2014**, 542, 369-89	1.7	28
254	Reductive glutamine metabolism is a function of the □-ketoglutarate to citrate ratio in cells. *Nature Communications*, **2013**, 4, 2236	17.4	240
253	Heterologous expression and characterization of bacterial 2-C-methyl-D-erythritol-4-phosphate pathway in Saccharomyces cerevisiae. *Applied Microbiology and Biotechnology*, **2013**, 97, 5753-69	5.7	37
252	Anaerobic CO2 fixation by the acetogenic bacterium Moorella thermoacetica. *AICHE Journal*, **2013**, 59, 3176-3183	3.6	44
251	Metformin decreases glucose oxidation and increases the dependency of prostate cancer cells on reductive glutamine metabolism. *Cancer Research*, **2013**, 73, 4429-38	10.1	151
250	Engineering the push and pull of lipid biosynthesis in oleaginous yeast Yarrowia lipolytica for biofuel production. *Metabolic Engineering*, **2013**, 15, 1-9	9.7	473
249	Compartmentalization of metabolic pathways in yeast mitochondria improves the production of branched-chain alcohols. *Nature Biotechnology*, **2013**, 31, 335-41	44.5	332
248	Insight out: Advances in understanding metabolism achieved by high-throughput mass spectrometry. *Biomedical Spectroscopy and Imaging*, **2013**, 2, 1-8	1.3	
247	Metabolic engineering: past and future. *Annual Review of Chemical and Biomolecular Engineering*, **2013**, 4, 259-88	8.9	218
246	Optimization of amorphadiene synthesis in bacillus subtilis via transcriptional, translational, and media modulation. *Biotechnology and Bioengineering*, **2013**, 110, 2556-61	4.9	65
245	In vivo HIF-mediated reductive carboxylation is regulated by citrate levels and sensitizes VHL-deficient cells to glutamine deprivation. *Cell Metabolism*, **2013**, 17, 372-85	24.6	219
244	A review of cellulosic microbial fuel cells: Performance and challenges. *Biomass and Bioenergy*, **2013** , 56, 179-188	5.3	49

243	Engineering E. coli for caffeic acid biosynthesis from renewable sugars. *Applied Microbiology and Biotechnology*, **2013**, 97, 3333-41	5.7	65
242	The mTORC1 pathway stimulates glutamine metabolism and cell proliferation by repressing SIRT4. *Cell*, **2013**, 153, 840-54	56.2	402
241	Cofactor balance by nicotinamide nucleotide transhydrogenase (NNT) coordinates reductive carboxylation and glucose catabolism in the tricarboxylic acid (TCA) cycle. *Journal of Biological Chemistry*, **2013**, 288, 12967-77	5.4	80
240	Kinetic isotope effects significantly influence intracellular metabolite (13) C labeling patterns and flux determination. *Biotechnology Journal*, **2013**, 8, 1080-9	5.6	18
239	Loss of RBF1 changes glutamine catabolism. *Genes and Development*, **2013**, 27, 182-96	12.6	73
238	Statistical experimental design guided optimization of a one-pot biphasic multienzyme total synthesis of amorpha-4,11-diene. *PLoS ONE*, **2013**, 8, e79650	3.7	29
237	Combining genotype improvement and statistical media optimization for isoprenoid production in E. coli. *PLoS ONE*, **2013**, 8, e75164	3.7	42
236	Combinatorial engineering of 1-deoxy-D-xylulose 5-phosphate pathway using cross-lapping in vitro assembly (CLIVA) method. *PLoS ONE*, **2013**, 8, e79557	3.7	52
235	Rational enzyme redesign for enhancing activity and selectivity of heterologous taxane oxidation in engineered E. coli. *FASEB Journal*, **2013**, 27, 998.3	0.9	
234	Optimization of 13C isotopic tracers for metabolic flux analysis in mammalian cells. *Metabolic Engineering*, **2012**, 14, 162-71	9.7	65
233	The future of metabolic engineering and synthetic biology: towards a systematic practice. *Metabolic Engineering*, **2012**, 14, 233-41	9.7	240
232	Analysis of heterologous taxadiene production in K- and B-derived Escherichia coli. *Applied Microbiology and Biotechnology*, **2012**, 93, 1651-61	5.7	43
231	Synthetic biology and metabolic engineering. *ACS Synthetic Biology*, **2012**, 1, 514-25	5.7	177
230	Xylose isomerase overexpression along with engineering of the pentose phosphate pathway and evolutionary engineering enable rapid xylose utilization and ethanol production by Saccharomyces cerevisiae. *Metabolic Engineering*, **2012**, 14, 611-22	9.7	206
229	Expanding the concepts and tools of metabolic engineering to elucidate cancer metabolism. *Biotechnology Progress*, **2012**, 28, 1409-18	2.8	15
228	Rational, combinatorial, and genomic approaches for engineering L-tyrosine production in Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 13538-43	11.5	113
227	Pyruvate kinase M2 activators promote tetramer formation and suppress tumorigenesis. *Nature Chemical Biology*, **2012**, 8, 839-47	11.7	476
226	Metabolic engineering: enabling technology of a bio-based economy. *Current Opinion in Chemical Engineering*, **2012**, 1, 355-362	5.4	16

225	Metabolic engineering: enabling technology for biofuels production. *Wiley Interdisciplinary Reviews: Energy and Environment*, **2012**, 1, 165-172	4.7	3
224	Ensemble kinetic modeling of metabolic networks from dynamic metabolic profiles. *Metabolites*, **2012**, 2, 891-912	5.6	28
223	Systems-Level Analysis of Cancer Metabolism **2012**, 349-381		1
222	Stimulation of MC38 tumor growth by insulin analog X10 involves the serine synthesis pathway. *Endocrine-Related Cancer*, **2012**, 19, 557-74	5.7	9
221	Downstream reactions and engineering in the microbially reconstituted pathway for Taxol. *Applied Microbiology and Biotechnology*, **2012**, 94, 841-9	5.7	33
220	Toward biosynthetic design and implementation of Escherichia coli-derived paclitaxel and other heterologous polyisoprene compounds. *Applied and Environmental Microbiology*, **2012**, 78, 2497-504	4.8	25
219	Metabolite profiling identified methylerythritol cyclodiphosphate efflux as a limiting step in microbial isoprenoid production. *PLoS ONE*, **2012**, 7, e47513	3.7	69
218	Reductive glutamine metabolism by IDH1 mediates lipogenesis under hypoxia. *Nature*, **2011**, 481, 380-4	50.4	1165
217	Relative potential of biosynthetic pathways for biofuels and bio-based products. *Nature Biotechnology*, **2011**, 29, 1074-8	44.5	125
216	Erk regulation of pyruvate dehydrogenase flux through PDK4 modulates cell proliferation. *Genes and Development*, **2011**, 25, 1716-33	12.6	132
215	Oncogenic K-Ras decouples glucose and glutamine metabolism to support cancer cell growth. *Molecular Systems Biology*, **2011**, 7, 523	12.2	342
214	Elucidation of cellular metabolism via metabolomics and stable-isotope assisted metabolomics. *Current Pharmaceutical Biotechnology*, **2011**, 12, 1075-86	2.6	43
213	Mapping photoautotrophic metabolism with isotopically nonstationary (13)C flux analysis. *Metabolic Engineering*, **2011**, 13, 656-65	9.7	264
212	Phosphoglycerate dehydrogenase diverts glycolytic flux and contributes to oncogenesis. *Nature Genetics*, **2011**, 43, 869-74	36.3	788
211	Tracking cellular metabolomics in lipoapoptosis- and steatosis-developing liver cells. *Molecular BioSystems*, **2011**, 7, 1409-19		12
210	Measuring deuterium enrichment of glucose hydrogen atoms by gas chromatography/mass spectrometry. *Analytical Chemistry*, **2011**, 83, 3211-6	7.8	89
209	Optimization of a heterologous pathway for the production of flavonoids from glucose. *Metabolic Engineering*, **2011**, 13, 392-400	9.7	229
208	Directed evolution of promoters and tandem gene arrays for customizing RNA synthesis rates and regulation. *Methods in Enzymology*, **2011**, 497, 135-55	1.7	19

207	The phosphoinositide 3-kinase regulatory subunit p85alpha can exert tumor suppressor properties through negative regulation of growth factor signaling. *Cancer Research*, **2010**, 70, 5305-15	10.1	105
206	Restoration of growth phenotypes of Escherichia coli DH5alpha in minimal media through reversal of a point mutation in purB. *Applied and Environmental Microbiology*, **2010**, 76, 6307-9	4.8	8
205	Method for designing and optimizing random-search libraries for strain improvement. *Applied and Environmental Microbiology*, **2010**, 76, 5541-6	4.8	9
204	Nontargeted elucidation of metabolic pathways using stable-isotope tracers and mass spectrometry. *Analytical Chemistry*, **2010**, 82, 6621-8	7.8	96
203	Combining metabolic and protein engineering of a terpenoid biosynthetic pathway for overproduction and selectivity control. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 13654-9	11.5	267
202	Isoprenoid pathway optimization for Taxol precursor overproduction in Escherichia coli. *Science*, **2010**, 330, 70-4	33.3	1203
201	Reevaluating synthesis by biology. *Current Opinion in Microbiology*, **2010**, 13, 371-6	7.9	15
200	Enhancing stress resistance and production phenotypes through transcriptome engineering. *Methods in Enzymology*, **2010**, 470, 509-32	1.7	13
199	Assessment of heterologous butyrate and butanol pathway activity by measurement of intracellular pathway intermediates in recombinant Escherichia coli. *Applied Microbiology and Biotechnology*, **2010**, 88, 265-75	5.7	33
198	Analysis of polyhydroxybutyrate flux limitations by systematic genetic and metabolic perturbations. *Metabolic Engineering*, **2010**, 12, 187-95	9.7	46
197	Ketogenic essential amino acids modulate lipid synthetic pathways and prevent hepatic steatosis in mice. *PLoS ONE*, **2010**, 5, e12057	3.7	42
196	Mutagenesis of the bacterial RNA polymerase alpha subunit for improvement of complex phenotypes. *Applied and Environmental Microbiology*, **2009**, 75, 2705-11	4.8	63
195	Effect of anaplerotic fluxes and amino acid availability on hepatic lipoapoptosis. *Journal of Biological Chemistry*, **2009**, 284, 33425-36	5.4	53
194	Induction of mammalian cell death by simple shear and extensional flows. *Biotechnology and Bioengineering*, **2009**, 104, 360-70	4.9	65
193	Identification of gene disruptions for increased poly-3-hydroxybutyrate accumulation in Synechocystis PCC 6803. *Biotechnology Progress*, **2009**, 25, 1236-43	2.8	37
192	Stabilized gene duplication enables long-term selection-free heterologous pathway expression. *Nature Biotechnology*, **2009**, 27, 760-5	44.5	230
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