James C Liao

List of Publications by Year in Descending Order

262 papers	20,469 citations	78 h-index	139 g-index
278 ext. papers	22,416 ext. citations	9 avg, IF	7.16 L-index

#	Paper	IF	Citations
262	A cell-free self-replenishing CO2-fixing system. *Nature Catalysis*, **2022**, 5, 154-162	36.5	2
261	Metabolomics-Driven Identification of the Rate-Limiting Steps in 1-Propanol Production.. *Frontiers in Microbiology*, **2022**, 13, 871624	5.7	0
260	Identification of COVID-19 B-cell epitopes with phage-displayed peptide library. *Journal of Biomedical Science*, **2021**, 28, 43	13.3	3
259	Role of cyanobacterial phosphoketolase in energy regulation and glucose secretion under dark anaerobic and osmotic stress conditions. *Metabolic Engineering*, **2021**, 65, 255-262	9.7	4
258	Analysis of genomic distributions of SARS-CoV-2 reveals a dominant strain type with strong allelic associations. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 30679-30686	11.5	39
257	Converting Escherichia coli to a Synthetic Methylotroph Growing Solely on Methanol. *Cell*, **2020**, 182, 933-946.e14	56.2	60
256	Metabolome analysis revealed the knockout of glyoxylate shunt as an effective strategy for improvement of 1-butanol production in transgenic Escherichia coli. *Journal of Bioscience and Bioengineering*, **2019**, 127, 301-308	3.3	10
255	Escherichia coli as a host for metabolic engineering. *Metabolic Engineering*, **2018**, 50, 16-46	9.7	153
254	Rearrangement of Coenzyme A-Acylated Carbon Chain Enables Synthesis of Isobutanol via a Novel Pathway in Ralstonia eutropha. *ACS Synthetic Biology*, **2018**, 7, 794-800	5.7	18
253	Construction and evolution of an strain relying on nonoxidative glycolysis for sugar catabolism. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 3538-3546	11.5	53
252	Directed strain evolution restructures metabolism for 1-butanol production in minimal media. *Metabolic Engineering*, **2018**, 49, 153-163	9.7	16
251	A modified serine cycle in Escherichia coli coverts methanol and CO to two-carbon compounds. *Nature Communications*, **2018**, 9, 3992	17.4	53
250	Metabolic repair through emergence of new pathways in Escherichia coli. *Nature Chemical Biology*, **2018**, 14, 1005-1009	11.7	14
249	Synthetic methanol auxotrophy of Escherichia coli for methanol-dependent growth and production. *Metabolic Engineering*, **2018**, 49, 257-266	9.7	50
248	Augmenting the Calvin-Benson-Bassham cycle by a synthetic malyl-CoA-glycerate carbon fixation pathway. *Nature Communications*, **2018**, 9, 2008	17.4	44
247	Rational engineering of diol dehydratase enables 1,4-butanediol biosynthesis from xylose. *Metabolic Engineering*, **2017**, 40, 148-156	9.7	56
246	Metabolic systems modeling for cell factories improvement. *Current Opinion in Biotechnology*, **2017**, 46, 114-119	11.4	14

245	Kinetically accessible yield (KAY) for redirection of metabolism to produce exo-metabolites. *Metabolic Engineering*, **2017**, 41, 144-151	9.7	4
244	Metabolomics-driven approach to solving a CoA imbalance for improved 1-butanol production in Escherichia coli. *Metabolic Engineering*, **2017**, 41, 135-143	9.7	65
243	Engineering a Thermostable Keto Acid Decarboxylase Using Directed Evolution and Computationally Directed Protein Design. *ACS Synthetic Biology*, **2017**, 6, 610-618	5.7	18
242	Orthogonal partial least squares/projections to latent structures regression-based metabolomics approach for identification of gene targets for improvement of 1-butanol production in Escherichia coli. *Journal of Bioscience and Bioengineering*, **2017**, 124, 498-505	3.3	15
241	Host Organism: Streptomyces **2016**, 487-504		2
240	Solid-State Fermentation **2016**, 187-204		1
239	CO2-fixing one-carbon metabolism in a cellulose-degrading bacterium Clostridium thermocellum. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 13180-13185	11.5	35
238	Quantitative target analysis and kinetic profiling of acyl-CoAs reveal the rate-limiting step in cyanobacterial 1-butanol production. *Metabolomics*, **2016**, 12, 26	4.7	23
237	Characterization and evolution of an activator-independent methanol dehydrogenase from Cupriavidus necator N-1. *Applied Microbiology and Biotechnology*, **2016**, 100, 4969-83	5.7	41
236	Frontiers in microbial 1-butanol and isobutanol production. *FEMS Microbiology Letters*, **2016**, 363, fnw020	2.9	63
235	Stability of Ensemble Models Predicts Productivity of Enzymatic Systems. *PLoS Computational Biology*, **2016**, 12, e1004800	5	20
234	Industrial-Scale Fermentation **2016**, 1-53		4
233	Glutamic Acid Fermentation: Discovery of Glutamic Acid-Producing Microorganisms, Analysis of the Production Mechanism, Metabolic Engineering, and Industrial Production Process **2016**, 339-360		6
232	L-Lysine **2016**, 361-390		2
231	Diamines for Bio-Based Materials **2016**, 391-409		1
230	Microbial Production of 3-Hydroxypropionic Acid **2016**, 411-451		1
229	Itaconic Acid An Emerging Building Block **2016**, 453-472		5
228	Microbial Production of Isoprene: Opportunities and Challenges **2016**, 473-504		2

227	Succinic Acid **2016**, 505-544	3
226	Ethanol: A Model Biorenewable Fuel **2016**, 547-572	1
225	Microbial Production of Butanols **2016**, 573-595	
224	Scale-Down: Simulating Large-Scale Cultures in the Laboratory **2016**, 55-79	4
223	Bioreactor Modeling **2016**, 81-128	1
222	Cell Culture Technology **2016**, 129-158	2
221	Anticancer Drugs **2016**, 237-269	
220	Biotechnological Production of Flavors **2016**, 271-308	2
219	Industrial Microorganisms: Pichia pastoris **2016**, 687-714	4
218	Industrial Microorganisms: Corynebacterium glutamicum **2016**, 183-220	12
217	Production of Fuels and Chemicals from Biomass by Integrated Bioprocesses **2016**, 159-186	
216	Nutraceuticals (Vitamin C, Carotenoids, Resveratrol) **2016**, 309-336	3
215	Cell Immobilization: Fundamentals, Technologies, and Applications **2016**, 205-235	7
214	Host Organisms: Algae **2016**, 605-641	1
213	Industrial Microorganisms: Saccharomyces cerevisiae and other Yeasts **2016**, 673-686	0
212	History of Industrial Biotechnology **2016**, 1-84	6
211	Advances in Consolidated Bioprocessing Using Clostridium thermocellum and Thermoanaerobacter saccharolyticum **2016**, 365-394	24
210	Lactic Acid Bacteria **2016**, 395-451	4

209	Host Organisms: Myxobacterium **2016**, 453-485		2
208	Extreme Thermophiles as Metabolic Engineering Platforms: Strategies and Current Perspective **2016**, 505-580		3
207	Cyanobacteria as a Host Organism **2016**, 581-604		4
206	Host Organisms: Mammalian Cells **2016**, 643-671		1
205	Synthetic Biology: An Emerging Approach for Strain Engineering **2016**, 85-110		2
204	Toward Genome-Scale Metabolic Pathway Analysis **2016**, 111-123		2
203	Cell-Free Synthetic Systems for Metabolic Engineering and Biosynthetic Pathway Prototyping **2016**, 125-148		9
202	Industrial Biotechnology: Escherichia coli as a Host **2016**, 149-181		5
201	Host Organisms: Bacillus subtilis **2016**, 221-297		6
200	Host Organism: Pseudomonas putida **2016**, 299-326		3
199	Host Organisms: Clostridium acetobutylicum/Clostridium beijerinckii and Related Organisms **2016**, 327-364		
198	Sustainable biorefining in wastewater by engineered extreme alkaliphile Bacillus marmarensis. *Scientific Reports*, **2016**, 6, 20224	4.9	22
197	Fuelling the future: microbial engineering for the production of sustainable biofuels. *Nature Reviews Microbiology*, **2016**, 14, 288-304	22.2	383
196	Outlook for the Production of Butanol from Cellulolytic Strains of Clostridia **2015**, 291-306		1
195	Consolidated bioprocessing of cellulose to isobutanol using Clostridium thermocellum. *Metabolic Engineering*, **2015**, 31, 44-52	9.7	119
194	An entropy-like index of bifurcational robustness for metabolic systems. *Integrative Biology (United Kingdom)*, **2015**, 7, 895-903	3.7	5
193	Metabolic engineering of cyanobacteria for photosynthetic 3-hydroxypropionic acid production from CO2 using Synechococcus elongatus PCC 7942. *Metabolic Engineering*, **2015**, 31, 163-70	9.7	71
192	Integrative genomic mining for enzyme function to enable engineering of a non-natural biosynthetic pathway. *Nature Communications*, **2015**, 6, 10005	17.4	56

191	Mathematical modeling of the insulin signal transduction pathway for prediction of insulin sensitivity from expression data. *Molecular Genetics and Metabolism*, **2015**, 114, 66-72	3.7	9
190	Behavior training reverses asymmetry in hippocampal transcriptome of the cav3.2 knockout mice. *PLoS ONE*, **2015**, 10, e0118832	3.7	6
189	A synthetic anhydrotetracycline-controllable gene expression system in Ralstonia eutropha H16. *ACS Synthetic Biology*, **2015**, 4, 101-6	5.7	22
188	Isobutanol production at elevated temperatures in thermophilic Geobacillus thermoglucosidasius. *Metabolic Engineering*, **2014**, 24, 1-8	9.7	82
187	Engineering synergy in biotechnology. *Nature Chemical Biology*, **2014**, 10, 319-22	11.7	126
186	Consolidated conversion of protein waste into biofuels and ammonia using Bacillus subtilis. *Metabolic Engineering*, **2014**, 23, 53-61	9.7	70
185	Development of an NADPH-dependent homophenylalanine dehydrogenase by protein engineering. *ACS Synthetic Biology*, **2014**, 3, 13-20	5.7	22
184	Building carbon-carbon bonds using a biocatalytic methanol condensation cycle. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 15928-33	11.5	87
183	Ensemble Modeling for Robustness Analysis in engineering non-native metabolic pathways. *Metabolic Engineering*, **2014**, 25, 63-71	9.7	68
182	Isobutanol production as an alternative metabolic sink to rescue the growth deficiency of the glycogen mutant of Synechococcus elongatus PCC 7942. *Photosynthesis Research*, **2014**, 120, 301-10	3.7	88
181	A kinetic model of Escherichia coli core metabolism satisfying multiple sets of mutant flux data. *Metabolic Engineering*, **2014**, 25, 50-62	9.7	131
180	Comprehensive detection of genes causing a phenotype using phenotype sequencing and pathway analysis. *PLoS ONE*, **2014**, 9, e88072	3.7	3
179	Biological conversion of carbon dioxide to photosynthetic fuels and electrofuels. *Energy and Environmental Science*, **2013**, 6, 2892	35.4	65
178	A reverse glyoxylate shunt to build a non-native route from C4 to C2 in Escherichia coli. *Metabolic Engineering*, **2013**, 19, 116-27	9.7	46
177	Protein-based biorefining: metabolic engineering for production of chemicals and fuel with regeneration of nitrogen fertilizers. *Applied Microbiology and Biotechnology*, **2013**, 97, 1397-406	5.7	26
176	Engineering a synthetic pathway in cyanobacteria for isopropanol production directly from carbon dioxide and light. *Metabolic Engineering*, **2013**, 20, 101-8	9.7	115
175	Synthetic non-oxidative glycolysis enables complete carbon conservation. *Nature*, **2013**, 502, 693-7	50.4	233
174	Oxygen-tolerant coenzyme A-acylating aldehyde dehydrogenase facilitates efficient photosynthetic n-butanol biosynthesis in cyanobacteria. *Energy and Environmental Science*, **2013**, 6, 2672	35.4	128

173	Engineering a cyanobacterium as the catalyst for the photosynthetic conversion of CO2 to 1,2-propanediol. *Microbial Cell Factories*, **2013**, 12, 4	6.4	91
172	Metabolic engineering of 2-pentanone synthesis in Escherichia coli. *AICHE Journal*, **2013**, 59, 3167-3175	3.6	19
171	Toward a Biological Replacement of Petroleum. *ACS Symposium Series*, **2013**, 1-17	0.4	
170	Protein engineering for metabolic engineering: current and next-generation tools. *Biotechnology Journal*, **2013**, 8, 545-55	5.6	33
169	Next generation biofuel engineering in prokaryotes. *Current Opinion in Chemical Biology*, **2013**, 17, 462-71	9.7	129
168	Microbial synthesis of n-butanol, isobutanol, and other higher alcohols from diverse resources. *Bioresource Technology*, **2013**, 135, 339-49	11	157
167	Optimization-driven identification of genetic perturbations accelerates the convergence of model parameters in ensemble modeling of metabolic networks. *Biotechnology Journal*, **2013**, 8, 1090-104	5.6	22
166	Synergy as design principle for metabolic engineering of 1-propanol production in Escherichia coli. *Metabolic Engineering*, **2013**, 17, 12-22	9.7	52
165	Genome Sequence of the Extreme Obligate Alkaliphile Bacillus marmarensis Strain DSM 21297. *Genome Announcements*, **2013**, 1,		7
164	Design and characterization of synthetic fungal-bacterial consortia for direct production of isobutanol from cellulosic biomass. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 14592-7	11.5	290
163	A selection platform for carbon chain elongation using the CoA-dependent pathway to produce linear higher alcohols. *Metabolic Engineering*, **2012**, 14, 504-11	9.7	112
162	ATP drives direct photosynthetic production of 1-butanol in cyanobacteria. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 6018-23	11.5	293
161	A synthetic recursive "+1" pathway for carbon chain elongation. *ACS Chemical Biology*, **2012**, 7, 689-97	4.9	99
160	Toward nitrogen neutral biofuel production. *Current Opinion in Biotechnology*, **2012**, 23, 406-13	11.4	44
159	Photosynthetic production of 2-methyl-1-butanol from CO2 in cyanobacterium Synechococcus elongatus PCC7942 and characterization of the native acetohydroxyacid synthase. *Energy and Environmental Science*, **2012**, 5, 9574	35.4	92
158	Determining PTEN functional status by network component deduced transcription factor activities. *PLoS ONE*, **2012**, 7, e31053	3.7	9
157	Combined inactivation of the Clostridium cellulolyticum lactate and malate dehydrogenase genes substantially increases ethanol yield from cellulose and switchgrass fermentations. *Biotechnology for Biofuels*, **2012**, 5, 2	7.8	96
156	Integrated electromicrobial conversion of CO2 to higher alcohols. *Science*, **2012**, 335, 1596	33.3	457

155	Engineering synthetic recursive pathways to generate non-natural small molecules. *Nature Chemical Biology*, **2012**, 8, 518-26	11.7	46
154	Metabolic ensemble modeling for strain engineers. *Biotechnology Journal*, **2012**, 7, 343-53	5.6	45
153	Metabolic Engineering of Clostridium cellulolyticum for Production of Isobutanol from Cellulose. *Applied and Environmental Microbiology*, **2012**, 78, 7171-7171	4.8	6
152	Metabolic engineering of Clostridium cellulolyticum for production of isobutanol from cellulose. *Applied and Environmental Microbiology*, **2011**, 77, 2727-33	4.8	241
151	Revealing the functions of the transketolase enzyme isoforms in Rhodopseudomonas palustris using a systems biology approach. *PLoS ONE*, **2011**, 6, e28329	3.7	9
150	Oxidized low-density lipoprotein inhibits nitric oxide-mediated coronary arteriolar dilation by up-regulating endothelial arginase I. *Microcirculation*, **2011**, 18, 36-45	2.9	34
149	Conversion of proteins into biofuels by engineering nitrogen flux. *Nature Biotechnology*, **2011**, 29, 346-51	44.5	232
148	An evolutionary strategy for isobutanol production strain development in Escherichia coli. *Metabolic Engineering*, **2011**, 13, 674-81	9.7	92
147	Driving forces enable high-titer anaerobic 1-butanol synthesis in Escherichia coli. *Applied and Environmental Microbiology*, **2011**, 77, 2905-15	4.8	520
146	High-flux isobutanol production using engineered Escherichia coli: a bioreactor study with in situ product removal. *Applied Microbiology and Biotechnology*, **2011**, 90, 1681-90	5.7	183
145	Redox homeostasis phenotypes in RubisCO-deficient Rhodobacter sphaeroides via ensemble modeling. *Biotechnology Progress*, **2011**, 27, 15-22	2.8	10
144	Identification of transcription factors perturbed by the synthesis of high levels of a foreign protein in yeast Saccharomyces cerevisiae. *Biotechnology Progress*, **2011**, 27, 925-36	2.8	3
143	Extending carbon chain length of 1-butanol pathway for 1-hexanol synthesis from glucose by engineered Escherichia coli. *Journal of the American Chemical Society*, **2011**, 133, 11399-401	16.4	110
142	Reducing the allowable kinetic space by constructing ensemble of dynamic models with the same steady-state flux. *Metabolic Engineering*, **2011**, 13, 60-75	9.7	44
141	Metabolic engineering of cyanobacteria for 1-butanol production from carbon dioxide. *Metabolic Engineering*, **2011**, 13, 353-63	9.7	314
140	Phenotype sequencing: identifying the genes that cause a phenotype directly from pooled sequencing of independent mutants. *PLoS ONE*, **2011**, 6, e16517	3.7	18
139	Systems Approaches to Unraveling Nitric Oxide Response Networks in Prokaryotes **2010**, 103-136		2
138	Evolution, genomic analysis, and reconstruction of isobutanol tolerance in Escherichia coli. *Molecular Systems Biology*, **2010**, 6, 449	12.2	216

137	Expanding metabolism for total biosynthesis of the nonnatural amino acid L-homoalanine. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 6234-9	11.5	118
136	Ensemble modeling of hepatic fatty acid metabolism with a synthetic glyoxylate shunt. *Biophysical Journal*, **2010**, 98, 1385-95	2.9	17
135	Biofuels: biomolecular engineering fundamentals and advances. *Annual Review of Chemical and Biomolecular Engineering*, **2010**, 1, 19-36	8.9	51
134	An agar gel membrane-PDMS hybrid microfluidic device for long term single cell dynamic study. *Lab on A Chip*, **2010**, 10, 2710-9	7.2	21
133	Bioengineering of microorganisms for C□ to C□ alcohols production. *Biotechnology Journal*, **2010**, 5, 1297-308	3.8	31
132	Engineering the isobutanol biosynthetic pathway in Escherichia coli by comparison of three aldehyde reductase/alcohol dehydrogenase genes. *Applied Microbiology and Biotechnology*, **2010**, 85, 651-7	5.7	241
131	Pentanol isomer synthesis in engineered microorganisms. *Applied Microbiology and Biotechnology*, **2010**, 85, 893-9	5.7	97
130	3-Methyl-1-butanol production in Escherichia coli: random mutagenesis and two-phase fermentation. *Applied Microbiology and Biotechnology*, **2010**, 86, 1155-64	5.7	130
129	Engineering Corynebacterium glutamicum for isobutanol production. *Applied Microbiology and Biotechnology*, **2010**, 87, 1045-55	5.7	272
128	Trimming of mammalian transcriptional networks using network component analysis. *BMC Bioinformatics*, **2010**, 11, 511	3.6	10
127	Improvement of isopropanol production by metabolically engineered Escherichia coli using gas stripping. *Journal of Bioscience and Bioengineering*, **2010**, 110, 696-701	3.3	142
126	Moonlighting function of glycerol kinase causes systems-level changes in rat hepatoma cells. *Metabolic Engineering*, **2010**, 12, 332-40	9.7	11
125	Acetolactate synthase from Bacillus subtilis serves as a 2-ketoisovalerate decarboxylase for isobutanol biosynthesis in Escherichia coli. *Applied and Environmental Microbiology*, **2009**, 75, 6306-11	4.8	75
124	An integrated network approach identifies the isobutanol response network of Escherichia coli. *Molecular Systems Biology*, **2009**, 5, 277	12.2	155
123	Using network component analysis to dissect regulatory networks mediated by transcription factors in yeast. *PLoS Computational Biology*, **2009**, 5, e1000311	5	26
122	A hidden square-root boundary between growth rate and biomass yield. *Biotechnology and Bioengineering*, **2009**, 102, 73-80	4.9	18
121	Engineering metabolic systems for production of advanced fuels. *Journal of Industrial Microbiology and Biotechnology*, **2009**, 36, 471-9	4.2	82
120	Direct photosynthetic recycling of carbon dioxide to isobutyraldehyde. *Nature Biotechnology*, **2009**, 27, 1177-80	44.5	675

119	Reconstruction of the archaeal isoprenoid ether lipid biosynthesis pathway in Escherichia coli through digeranylgeranylglyceryl phosphate. *Metabolic Engineering*, **2009**, 11, 184-91	9.7	17
118	Ensemble modeling for strain development of L-lysine-producing Escherichia coli. *Metabolic Engineering*, **2009**, 11, 221-33	9.7	58
117	Microbial maximal specific growth rate as a square-root function of biomass yield and two kinetic parameters. *Metabolic Engineering*, **2009**, 11, 409-14	9.7	2
116	Ensemble modeling and related mathematical modeling of metabolic networks. *Journal of the Taiwan Institute of Chemical Engineers*, **2009**, 40, 595-601	5.3	16
115	Microbial production of advanced transportation fuels in non-natural hosts. *Current Opinion in Biotechnology*, **2009**, 20, 307-15	11.4	165
114	Resistance to diet-induced obesity in mice with synthetic glyoxylate shunt. *Cell Metabolism*, **2009**, 9, 525-36	24.6	28
113	Transcriptomic and network component analysis of glycerol kinase in skeletal muscle using a mouse model of glycerol kinase deficiency. *Molecular Genetics and Metabolism*, **2009**, 96, 106-12	3.7	14
112	Enantioselective synthesis of pure (R,R)-2,3-butanediol in Escherichia coli with stereospecific secondary alcohol dehydrogenases. *Organic and Biomolecular Chemistry*, **2009**, 7, 3914-7	3.9	103
111	Ensemble modeling for aromatic production in Escherichia coli. *PLoS ONE*, **2009**, 4, e6903	3.7	44
110	Non-fermentative pathways for synthesis of branched-chain higher alcohols as biofuels. *Nature*, **2008**, 451, 86-9	50.4	1488
109	Ensemble modeling of metabolic networks. *Biophysical Journal*, **2008**, 95, 5606-17	2.9	190
108	Interactions of nitrosylhemoglobin and carboxyhemoglobin with erythrocyte. *Nitric Oxide - Biology and Chemistry*, **2008**, 18, 122-35	5	
107	Global metabolic effects of glycerol kinase overexpression in rat hepatoma cells. *Molecular Genetics and Metabolism*, **2008**, 93, 145-59	3.7	25
106	An information theoretic exploratory method for learning patterns of conditional gene coexpression from microarray data. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **2008**, 5, 15-24	3	11
105	Expanding metabolism for biosynthesis of nonnatural alcohols. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 20653-8	11.5	326
104	Engineering of an Escherichia coli strain for the production of 3-methyl-1-butanol. *Applied and Environmental Microbiology*, **2008**, 74, 5769-75	4.8	132
103	Directed evolution of Methanococcus jannaschii citramalate synthase for biosynthesis of 1-propanol and 1-butanol by Escherichia coli. *Applied and Environmental Microbiology*, **2008**, 74, 7802-8	4.8	202
102	Determination of the Escherichia coli S-nitrosoglutathione response network using integrated biochemical and systems analysis. *Journal of Biological Chemistry*, **2008**, 283, 5148-57	5.4	31

101	Production of 2-methyl-1-butanol in engineered Escherichia coli. *Applied Microbiology and Biotechnology*, **2008**, 81, 89-98	5.7	136
100	Metabolic engineering for advanced biofuels production from Escherichia coli. *Current Opinion in Biotechnology*, **2008**, 19, 414-9	11.4	252
99	Metabolic engineering of Escherichia coli for 1-butanol production. *Metabolic Engineering*, **2008**, 10, 305-11	9.7	686
98	Transfer of the high-GC cyclohexane carboxylate degradation pathway from Rhodopseudomonas palustris to Escherichia coli for production of biotin. *Metabolic Engineering*, **2008**, 10, 131-40	9.7	1
97	Metabolic engineering of Escherichia coli for 1-butanol and 1-propanol production via the keto-acid pathways. *Metabolic Engineering*, **2008**, 10, 312-20	9.7	312
96	Engineering Cellular Metabolism. *FASEB Journal*, **2008**, 22, 529.1	0.9	
95	Network-based identification of critical transcription regulators in the metabolic syndrome in mice. *FASEB Journal*, **2008**, 22, 797.1	0.9	
94	Glycerol kinase deficiency alters expression of genes involved in lipid metabolism, carbohydrate metabolism, and insulin signaling. *European Journal of Human Genetics*, **2007**, 15, 646-57	5.3	46
93	Nitric oxide metabolism in adults with cyanotic congenital heart disease. *American Journal of Cardiology*, **2007**, 99, 691-5	3	11
92	Engineered synthetic pathway for isopropanol production in Escherichia coli. *Applied and Environmental Microbiology*, **2007**, 73, 7814-8	4.8	225
91	Directed evolution of ribosomal protein S1 for enhanced translational efficiency of high GC Rhodopseudomonas palustris DNA in Escherichia coli. *Journal of Biological Chemistry*, **2007**, 282, 18929-36	5.4	17
90	Differential association of hemoglobin with proinflammatory high density lipoproteins in atherogenic/hyperlipidemic mice. A novel biomarker of atherosclerosis. *Journal of Biological Chemistry*, **2007**, 282, 23698-707	5.4	61
89	Biological network mapping and source signal deduction. *Bioinformatics*, **2007**, 23, 1783-91	7.2	8
88	Integrated network analysis identifies nitric oxide response networks and dihydroxyacid dehydratase as a crucial target in Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 8484-9	11.5	117
87	Single-cell zeroth-order protein degradation enhances the robustness of synthetic oscillator. *Molecular Systems Biology*, **2007**, 3, 130	12.2	59
86	Dynamic Cell and Microparticle Control via Optoelectronic Tweezers. *Journal of Microelectromechanical Systems*, **2007**, 16, 491-499	2.5	109
85	Targeted disruption of glycerol kinase gene in mice: expression analysis in liver shows alterations in network partners related to glycerol kinase activity. *Human Molecular Genetics*, **2006**, 15, 405-15	5.6	29
84	A Gibbs sampler for the identification of gene expression and network connectivity consistency. *Bioinformatics*, **2006**, 22, 3040-6	7.2	15

83	Transcriptome network component analysis with limited microarray data. *Bioinformatics*, **2006**, 22, 1886-94	7.2	49
82	Versatility and connectivity efficiency of bipartite transcription networks. *Biophysical Journal*, **2006**, 91, 2749-59	2.9	5
81	Rhodopseudomonas palustris CGA009 has two functional ppsR genes, each of which encodes a repressor of photosynthesis gene expression. *Biochemistry*, **2006**, 45, 14441-51	3.2	27
80	Single-gene disorders: what role could moonlighting enzymes play?. *American Journal of Human Genetics*, **2005**, 76, 911-24	11	168
79	A generalized framework for network component analysis. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, **2005**, 2, 289-301	3	30
78	Erythrocyte nitric oxide transport reduced by a submembrane cytoskeletal barrier. *Biochimica Et Biophysica Acta - General Subjects*, **2005**, 1723, 135-42	4	43
77	Markov Chain modeling of pyelonephritis-associated pili expression in uropathogenic Escherichia coli. *Biophysical Journal*, **2005**, 88, 2541-53	2.9	7
76	Transcriptional regulation and metabolism. *Biochemical Society Transactions*, **2005**, 33, 1423-6	5.1	7
75	gNCA: a framework for determining transcription factor activity based on transcriptome: identifiability and numerical implementation. *Metabolic Engineering*, **2005**, 7, 128-41	9.7	79
74	Determination of functional interactions among signalling pathways in Escherichia coli K-12. *Metabolic Engineering*, **2005**, 7, 280-90	9.7	13
73	A synthetic gene-metabolic oscillator. *Nature*, **2005**, 435, 118-22	50.4	314
72	Inferring yeast cell cycle regulators and interactions using transcription factor activities. *BMC Genomics*, **2005**, 6, 90	4.5	52
71	Analysis of nitric oxide donor effectiveness in resistance vessels. *American Journal of Physiology - Heart and Circulatory Physiology*, **2005**, 288, H2390-9	5.2	7
70	Heat shock response of Archaeoglobus fulgidus. *Journal of Bacteriology*, **2005**, 187, 6046-57	3.5	47
69	A global regulatory role of gluconeogenic genes in Escherichia coli revealed by transcriptome network analysis. *Journal of Biological Chemistry*, **2005**, 280, 36079-87	5.4	63
68	Vocabulon: a dictionary model approach for reconstruction and localization of transcription factor binding sites. *Bioinformatics*, **2005**, 21, 922-31	7.2	19
67	Transcriptome-based determination of multiple transcription regulator activities in Escherichia coli by using network component analysis. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 641-6	11.5	108
66	Stochastic modeling of the phase-variable pap operon regulation in uropathogenic Escherichia coli. *Biotechnology and Bioengineering*, **2004**, 88, 189-203	4.9	11

65	Network component analysis of Saccharamyces cerevisiae stress response. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2004**, 2004, 2937-40		1
64	Design of artificial cell-cell communication using gene and metabolic networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 2299-304	11.5	137
63	Reductive nitrosylation and S-nitrosation of hemoglobin in inhomogeneous nitric oxide solutions. *Nitric Oxide - Biology and Chemistry*, **2004**, 10, 74-82	5	8
62	Network component analysis: reconstruction of regulatory signals in biological systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 15522-7	11.5	462
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