Jay D Keasling

List of Publications by Year in Descending Order

522 papers	43,013 citations	104 h-index	189 g-index
555 ext. papers	49,179 ext. citations	9.1 avg, IF	7.82 L-index

#	Paper	IF	Citations
522	Supplying plant natural products by yeast cell factories. *Current Opinion in Green and Sustainable Chemistry*, **2022**, 33, 100567	7.9	3
521	Assembly and Evolution of Artificial Metalloenzymes within Nissle 1917 for Enantioselective and Site-Selective Functionalization of C-H and C?C Bonds.. *Journal of the American Chemical Society*, **2022**,	16.4	1
520	Lower-Cost, Lower-Carbon Production of Circular Polydiketoenamine Plastics. *ACS Sustainable Chemistry and Engineering*, **2022**, 10, 2740-2749	8.3	0
519	Sustainable manufacturing with synthetic biology.. *Nature Biotechnology*, **2022**,	44.5	5
518	Nitrogen Metabolism in Pseudomonas putida: Functional Analysis Using Random Barcode Transposon Sequencing.. *Applied and Environmental Microbiology*, **2022**, e0243021	4.8	0
517	A FAIR-compliant parts catalogue for genome engineering and expression control in .. *Synthetic and Systems Biotechnology*, **2022**, 7, 657-663	4.2	0
516	CasPER: A CRISPR/Cas9-Based Method for Directed Evolution in Genomic Loci in Saccharomyces cerevisiae. *Methods in Molecular Biology*, **2022**, 23-37	1.4	
515	A synthetic promoter system for well-controlled protein expression with different carbon sources in Saccharomyces cerevisiae. *Microbial Cell Factories*, **2021**, 20, 202	6.4	1
514	Unnatural biosynthesis by an engineered microorganism with heterologously expressed natural enzymes and an artificial metalloenzyme. *Nature Chemistry*, **2021**, 13, 1186-1191	17.6	14
513	Lepidopteran mevalonate pathway optimization in Escherichia coli efficiently produces isoprenol analogs for next-generation biofuels. *Metabolic Engineering*, **2021**, 68, 210-219	9.7	1
512	Biofuels for a sustainable future. *Cell*, **2021**, 184, 1636-1647	56.2	32
511	Correction for Thompson et al., Fatty Acid and Alcohol Metabolism in Pseudomonas putida: Functional Analysis Using Random Barcode Transposon Sequencing *Applied and Environmental Microbiology*, **2021**, 87,	4.8	78
510	Leveling the cost and carbon footprint of circular polymers that are chemically recycled to monomer. *Science Advances*, **2021**, 7,	14.3	17
509	Engineering yeast metabolism for the discovery and production of polyamines and polyamine analogues. *Nature Catalysis*, **2021**, 4, 498-509	36.5	6
508	Microbial production of advanced biofuels. *Nature Reviews Microbiology*, **2021**, 19, 701-715	22.2	24
507	A synthetic RNA-mediated evolution system in yeast. *Nucleic Acids Research*, **2021**, 49, e88	20.1	3
506	Optimizing the biosynthesis of oxygenated and acetylated Taxol precursors in Saccharomyces cerevisiae using advanced bioprocessing strategies. *Biotechnology and Bioengineering*, **2021**, 118, 279-293	4.9	12

505	A Reporter System for Cytosolic Protein Aggregates in Yeast. *ACS Synthetic Biology*, **2021**, 10, 466-477	5.7	1
504	Integrating continuous hypermutation with high-throughput screening for optimization of cis,cis-muconic acid production in yeast. *Microbial Biotechnology*, **2021**, 14, 2617-2626	6.3	4
503	The Design-Build-Test-Learn cycle for metabolic engineering of Streptomycetes. *Essays in Biochemistry*, **2021**, 65, 261-275	7.6	6
502	Enhanced production of taxadiene in Saccharomyces cerevisiae. *Microbial Cell Factories*, **2020**, 19, 200	6.4	19
501	Chemoinformatic-Guided Engineering of Polyketide Synthases. *Journal of the American Chemical Society*, **2020**, 142, 9896-9901	16.4	5
500	An iron (II) dependent oxygenase performs the last missing step of plant lysine catabolism. *Nature Communications*, **2020**, 11, 2931	17.4	2
499	Investigation of Indigoidine Synthetase Reveals a Conserved Active-Site Base Residue of Nonribosomal Peptide Synthetase Oxidases. *Journal of the American Chemical Society*, **2020**, 142, 10931-10935	16.4	9
498	Response of Pseudomonas putida to Complex, Aromatic-Rich Fractions from Biomass. *ChemSusChem*, **2020**, 13, 4455-4467	8.3	9
497	Adenosine Triphosphate and Carbon Efficient Route to Second Generation Biofuel Isopentanol. *ACS Synthetic Biology*, **2020**, 9, 468-474	5.7	6
496	New frontiers: harnessing pivotal advances in microbial engineering for the biosynthesis of plant-derived terpenoids. *Current Opinion in Biotechnology*, **2020**, 65, 88-93	11.4	24
495	Directed evolution of VanR biosensor specificity in yeast. *Biotechnology Notes*, **2020**, 1, 9-15	1.3	4
494	Programmable polyketide biosynthesis platform for production of aromatic compounds in yeast. *Synthetic and Systems Biotechnology*, **2020**, 5, 11-18	4.2	7
493	High-Resolution Scanning of Optimal Biosensor Reporter Promoters in Yeast. *ACS Synthetic Biology*, **2020**, 9, 218-226	5.7	16
492	Enhancing Terminal Deoxynucleotidyl Transferase Activity on Substrates with 3′ Terminal Structures for Enzymatic De Novo DNA Synthesis. *Genes*, **2020**, 11,	4.2	13
491	Structure and Function of BorB, the Type II Thioesterase from the Borrelidin Biosynthetic Gene Cluster. *Biochemistry*, **2020**, 59, 1630-1639	3.2	4
490	Engineering Natural Product Biosynthetic Pathways to Produce Commodity and Specialty Chemicals **2020**, 352-376		
489	Insight into the Mechanism of Phenylacetate Decarboxylase (PhdB), a Toluene-Producing Glycyl Radical Enzyme. *ChemBioChem*, **2020**, 21, 663-671	3.8	6
488	Leveraging host metabolism for bisdemethoxycurcumin production in. *Metabolic Engineering Communications*, **2020**, 10, e00119	6.5	19

487	Identification, Characterization, and Application of a Highly Sensitive Lactam Biosensor from. *ACS Synthetic Biology*, **2020**, 9, 53-62	5.7	14
486	Structural Mechanism of Regioselectivity in an Unusual Bacterial Acyl-CoA Dehydrogenase. *Journal of the American Chemical Society*, **2020**, 142, 835-846	16.4	3
485	Evolution-guided engineering of small-molecule biosensors. *Nucleic Acids Research*, **2020**, 48, e3	20.1	45
484	Combining mechanistic and machine learning models for predictive engineering and optimization of tryptophan metabolism. *Nature Communications*, **2020**, 11, 4880	17.4	54
483	High titer methyl ketone production with tailored Pseudomonas taiwanensis VLB120. *Metabolic Engineering*, **2020**, 62, 84-94	9.7	3
482	Engineering Plant Synthetic Pathways for the Biosynthesis of Novel Antifungals. *ACS Central Science*, **2020**, 6, 1394-1400	16.8	11
481	Dietary Change Enables Robust Growth-Coupling of Heterologous Methyltransferase Activity in Yeast. *ACS Synthetic Biology*, **2020**, 9, 3408-3415	5.7	1
480	A bimodular PKS platform that expands the biological design space. *Metabolic Engineering*, **2020**, 61, 389-396	9.7	1
479	Promoter Architecture and Promoter Engineering in. *Metabolites*, **2020**, 10,	5.6	20
478	Regulatory control circuits for stabilizing long-term anabolic product formation in yeast. *Metabolic Engineering*, **2020**, 61, 369-380	9.7	10
477	Genome-scale metabolic rewiring improves titers rates and yields of the non-native product indigoidine at scale. *Nature Communications*, **2020**, 11, 5385	17.4	25
476	Investigation of Bar-seq as a method to study population dynamics of Saccharomyces cerevisiae deletion library during bioreactor cultivation. *Microbial Cell Factories*, **2020**, 19, 167	6.4	3
475	Fatty Acid and Alcohol Metabolism in Pseudomonas putida: Functional Analysis Using Random Barcode Transposon Sequencing. *Applied and Environmental Microbiology*, **2020**, 86,	4.8	16
474	Automated "Cells-To-Peptides" Sample Preparation Workflow for High-Throughput, Quantitative Proteomic Assays of Microbes. *Journal of Proteome Research*, **2019**, 18, 3752-3761	5.6	17
473	Optimization of the IPP-bypass mevalonate pathway and fed-batch fermentation for the production of isoprenol in Escherichia coli. *Metabolic Engineering*, **2019**, 56, 85-96	9.7	25
472	Omics-driven identification and elimination of valerolactam catabolism in KT2440 for increased product titer. *Metabolic Engineering Communications*, **2019**, 9, e00098	6.5	11
471	Robust Characterization of Two Distinct Glutarate Sensing Transcription Factors of l-Lysine Metabolism. *ACS Synthetic Biology*, **2019**, 8, 2385-2396	5.7	7
470	Mevalonate Pathway Promiscuity Enables Noncanonical Terpene Production. *ACS Synthetic Biology*, **2019**, 8, 2238-2247	5.7	13

469	Molecular basis for interactions between an acyl carrier protein and a ketosynthase. *Nature Chemical Biology*, **2019**, 15, 669-671	11.7	25
468	A High-Throughput Mass Spectrometric Enzyme Activity Assay Enabling the Discovery of Cytochrome P450 Biocatalysts. *Angewandte Chemie - International Edition*, **2019**, 58, 10114-10119	16.4	18
467	A High-Throughput Mass Spectrometric Enzyme Activity Assay Enabling the Discovery of Cytochrome P450 Biocatalysts. *Angewandte Chemie*, **2019**, 131, 10220-10225	3.6	3
466	Sustainable bioproduction of the blue pigment indigoidine: Expanding the range of heterologous products in R. toruloides to include non-ribosomal peptides. *Green Chemistry*, **2019**, 21, 3394-3406	10	31
465	Structural insights into dehydratase substrate selection for the borrelidin and fluvirucin polyketide synthases. *Journal of Industrial Microbiology and Biotechnology*, **2019**, 46, 1225-1235	4.2	3
464	Building a global alliance of biofoundries. *Nature Communications*, **2019**, 10, 2040	17.4	91
463	Massively Parallel Fitness Profiling Reveals Multiple Novel Enzymes in Lysine Metabolism. *MBio*, **2019**, 10,	7.8	28
462	Engineered Reversal of Function in Glycolytic Yeast Promoters. *ACS Synthetic Biology*, **2019**, 8, 1462-1468	5.7	6
461	Coupling S-adenosylmethionine-dependent methylation to growth: Design and uses. *PLoS Biology*, **2019**, 17, e2007050	9.7	20
460	Technical Advances to Accelerate Modular Type I Polyketide Synthase Engineering towards a Retro-biosynthetic Platform. *Biotechnology and Bioprocess Engineering*, **2019**, 24, 413-423	3.1	15
459	Distinct functional roles for hopanoid composition in the chemical tolerance of Zymomonas mobilis. *Molecular Microbiology*, **2019**, 112, 1564-1575	4.1	14
458	Isolation and Characterization of Bacterial Cellulase Producers for Biomass Deconstruction: A Microbiology Laboratory Course. *Journal of Microbiology and Biology Education*, **2019**, 20,	1.3	3
457	Complete biosynthesis of cannabinoids and their unnatural analogues in yeast. *Nature*, **2019**, 567, 123-126	50.4	273
456	A rapid methods development workflow for high-throughput quantitative proteomic applications. *PLoS ONE*, **2019**, 14, e0211582	3.7	13
455	Liquid Chromatography and Mass Spectrometry Analysis of Isoprenoid Intermediates in Escherichia coli. *Methods in Molecular Biology*, **2019**, 1859, 209-224	1.4	5
454	Synthetic Biology for Fundamental Biochemical Discovery. *Biochemistry*, **2019**, 58, 1464-1469	3.2	6
453	Integrated analysis of isopentenyl pyrophosphate (IPP) toxicity in isoprenoid-producing Escherichia coli. *Metabolic Engineering*, **2018**, 47, 60-72	9.7	62
452	Engineered Production of Short-Chain Acyl-Coenzyme A Esters in Saccharomyces cerevisiae. *ACS Synthetic Biology*, **2018**, 7, 1105-1115	5.7	7

451	An Orthogonal and pH-Tunable Sensor-Selector for Muconic Acid Biosynthesis in Yeast. *ACS Synthetic Biology*, **2018**, 7, 995-1003	5.7	39
450	Biochemical Characterization of Amino Acid Incorporation in Fluvirucin B Biosynthesis. *ChemBioChem*, **2018**, 19, 1391-1395	3.8	6
449	Alleviation of reactive oxygen species enhances PUFA accumulation in sp. through regulating genes involved in lipid metabolism. *Metabolic Engineering Communications*, **2018**, 6, 39-48	6.5	41
448	Isolation and characterization of novel mutations in the pSC101 origin that increase copy number. *Scientific Reports*, **2018**, 8, 1590	4.9	20
447	Improving methyl ketone production in Escherichia coli by heterologous expression of NADH-dependent FabG. *Biotechnology and Bioengineering*, **2018**, 115, 1161-1172	4.9	10
446	Synthetic biology of polyketide synthases. *Journal of Industrial Microbiology and Biotechnology*, **2018**, 45, 621-633	4.2	22
445	Toward industrial production of isoprenoids in Escherichia coli: Lessons learned from CRISPR-Cas9 based optimization of a chromosomally integrated mevalonate pathway. *Biotechnology and Bioengineering*, **2018**, 115, 1000-1013	4.9	25
444	High-titer production of lathyrane diterpenoids from sugar by engineered Saccharomyces cerevisiae. *Metabolic Engineering*, **2018**, 45, 142-148	9.7	32
443	Industrial brewing yeast engineered for the production of primary flavor determinants in hopped beer. *Nature Communications*, **2018**, 9, 965	17.4	99
442	Discovery of enzymes for toluene synthesis from anoxic microbial communities. *Nature Chemical Biology*, **2018**, 14, 451-457	11.7	28
441	De novo synthesis of the sedative valerenic acid in Saccharomyces cerevisiae. *Metabolic Engineering* , **2018**, 47, 94-101	9.7	13
440	ClusterCAD: a computational platform for type I modular polyketide synthase design. *Nucleic Acids Research*, **2018**, 46, D509-D515	20.1	45
439	A combinatorial approach to synthetic transcription factor-promoter combinations for yeast strain engineering. *Yeast*, **2018**, 35, 273-280	3.4	17
438	Polyketide synthases as a platform for chemical product design. *AICHE Journal*, **2018**, 64, 4201-4207	3.6	10
437	CasPER, a method for directed evolution in genomic contexts using mutagenesis and CRISPR/Cas9. *Metabolic Engineering*, **2018**, 48, 288-296	9.7	42
436	Commodity Chemicals From Engineered Modular Type I Polyketide Synthases. *Methods in Enzymology*, **2018**, 608, 393-415	1.7	6
435	A efflux pump acts on short-chain alcohols. *Biotechnology for Biofuels*, **2018**, 11, 136	7.8	33
434	Probing the Flexibility of an Iterative Modular Polyketide Synthase with Non-Native Substrates in Vitro. *ACS Chemical Biology*, **2018**, 13, 2261-2268	4.9	13

433	De novo DNA synthesis using polymerase-nucleotide conjugates. *Nature Biotechnology*, **2018**, 36, 645-650	44.5	94
432	Feast: Choking on Acetyl-CoA, the Glyoxylate Shunt, and Acetyl-CoA-Driven Metabolism **2018**, 463-474		
431	Assembly and Multiplex Genome Integration of Metabolic Pathways in Yeast Using CasEMBLR. *Methods in Molecular Biology*, **2018**, 1671, 185-201	1.4	6
430	Design, Engineering, and Characterization of Prokaryotic Ligand-Binding Transcriptional Activators as Biosensors in Yeast. *Methods in Molecular Biology*, **2018**, 1671, 269-290	1.4	9
429	Production efficiency of the bacterial non-ribosomal peptide indigoidine relies on the respiratory metabolic state in S. cerevisiae. *Microbial Cell Factories*, **2018**, 17, 193	6.4	22
428	Renewable production of high density jet fuel precursor sesquiterpenes from. *Biotechnology for Biofuels*, **2018**, 11, 285	7.8	24
427	Viscous control of cellular respiration by membrane lipid composition. *Science*, **2018**, 362, 1186-1189	33.3	82
426	Short-chain ketone production by engineered polyketide synthases in Streptomyces albus. *Nature Communications*, **2018**, 9, 4569	17.4	29
425	Modular 5'-UTR hexamers for context-independent tuning of protein expression in eukaryotes. *Nucleic Acids Research*, **2018**, 46, e127	20.1	14
424	Synthetic Enzymology and the Fountain of Youth: Repurposing Biology for Longevity. *ACS Omega*, **2018**, 3, 11050-11061	3.9	1
423	Overexpression of a rice BAHD acyltransferase gene in switchgrass (Panicum virgatum L.) enhances saccharification. *BMC Biotechnology*, **2018**, 18, 54	3.5	24
422	Constraining Genome-Scale Models to Represent the Bow Tie Structure of Metabolism for C Metabolic Flux Analysis. *Metabolites*, **2018**, 8,	5.6	3
421	Engineering β-oxidation in Yarrowia lipolytica for methyl ketone production. *Metabolic Engineering*, **2018**, 48, 52-62	9.7	23
420	Whole-cell biocatalytic and de novo production of alkanes from free fatty acids in Saccharomyces cerevisiae. *Biotechnology and Bioengineering*, **2017**, 114, 232-237	4.9	42
419	Endoribonuclease-Based Two-Component Repressor Systems for Tight Gene Expression Control in Plants. *ACS Synthetic Biology*, **2017**, 6, 806-816	5.7	9
418	Development of an integrated approach for β-pinene recovery and sugar production from loblolly pine using ionic liquids. *Green Chemistry*, **2017**, 19, 1117-1127	10	7
417	Engineering glucose metabolism of under nitrogen starvation. *Npj Systems Biology and Applications*, **2017**, 3, 16035	5	25
416	Leveraging microbial biosynthetic pathways for the generation of 'drop-in' biofuels. *Current Opinion in Biotechnology*, **2017**, 45, 156-163	11.4	43

415	Application of an Acyl-CoA Ligase from Streptomyces aizunensis for Lactam Biosynthesis. *ACS Synthetic Biology*, **2017**, 6, 884-890	5.7	41
414	Polyketide mimetics yield structural and mechanistic insights into product template domain function in nonreducing polyketide synthases. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E4142-E4148	11.5	16
413	OpenMSI Arrayed Analysis Toolkit: Analyzing Spatially Defined Samples Using Mass Spectrometry Imaging. *Analytical Chemistry*, **2017**, 89, 5818-5823	7.8	15
412	Intracellular cellobiose metabolism and its applications in lignocellulose-based biorefineries. *Bioresource Technology*, **2017**, 239, 496-506	11	40
411	A Cas9-based toolkit to program gene expression in Saccharomyces cerevisiae. *Nucleic Acids Research*, **2017**, 45, 496-508	20.1	106
410	Engineering high-level production of fatty alcohols by Saccharomyces cerevisiae from lignocellulosic feedstocks. *Metabolic Engineering*, **2017**, 42, 115-125	9.7	67
409	System-level perturbations of cell metabolism using CRISPR/Cas9. *Current Opinion in Biotechnology*, **2017**, 46, 134-140	11.4	21
408	High-throughput enzyme screening platform for the IPP-bypass mevalonate pathway for isopentenol production. *Metabolic Engineering*, **2017**, 41, 125-134	9.7	24
407	Production of jet fuel precursor monoterpenoids from engineered Escherichia coli. *Biotechnology and Bioengineering*, **2017**, 114, 1703-1712	4.9	56
406	Production of Odd-Carbon Dicarboxylic Acids in Escherichia coli Using an Engineered Biotin-Fatty Acid Biosynthetic Pathway. *Journal of the American Chemical Society*, **2017**, 139, 4615-4618	16.4	24
405	Cyanobacterial carbon metabolism: Fluxome plasticity and oxygen dependence. *Biotechnology and Bioengineering*, **2017**, 114, 1593-1602	4.9	48
404	Transcriptional reprogramming in yeast using dCas9 and combinatorial gRNA strategies. *Microbial Cell Factories*, **2017**, 16, 46	6.4	75
403	Lipid engineering reveals regulatory roles for membrane fluidity in yeast flocculation and oxygen-limited growth. *Metabolic Engineering*, **2017**, 41, 46-56	9.7	34
402	Deciphering flux adjustments of engineered E. coli cells during fermentation with changing growth conditions. *Metabolic Engineering*, **2017**, 39, 247-256	9.7	27
401	Development of a Transcription Factor-Based Lactam Biosensor. *ACS Synthetic Biology*, **2017**, 6, 439-445	5.7	44
400	Heterologous Gene Expression of N-Terminally Truncated Variants of LipPks1 Suggests a Functionally Critical Structural Motif in the N-terminus of Modular Polyketide Synthase. *ACS Chemical Biology*, **2017**, 12, 2725-2729	4.9	7
399	a new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts. *Biotechnology for Biofuels*, **2017**, 10, 241	7.8	93
398	The Experiment Data Depot: A Web-Based Software Tool for Biological Experimental Data Storage, Sharing, and Visualization. *ACS Synthetic Biology*, **2017**, 6, 2248-2259	5.7	34

397	Engineered polyketides: Synergy between protein and host level engineering. *Synthetic and Systems Biotechnology*, **2017**, 2, 147-166	4.2	55
396	Oxidative cyclization of prodigiosin by an alkylglycerol monooxygenase-like enzyme. *Nature Chemical Biology*, **2017**, 13, 1155-1157	11.7	17
395	Base-Catalyzed Depolymerization of Solid Lignin-Rich Streams Enables Microbial Conversion. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 8171-8180	8.3	87
394	Autonomous control of metabolic state by a quorum sensing (QS)-mediated regulator for bisabolene production in engineered E. coli. *Metabolic Engineering*, **2017**, 44, 325-336	9.7	51
393	The JBEI quantitative metabolic modeling library (jQMM): a python library for modeling microbial metabolism. *BMC Bioinformatics*, **2017**, 18, 205	3.6	12
392	Bio-based production of fuels and industrial chemicals by repurposing antibiotic-producing type I modular polyketide synthases: opportunities and challenges. *Journal of Antibiotics*, **2017**, 70, 378-385	3.7	15
391	Comprehensive in Vitro Analysis of Acyltransferase Domain Exchanges in Modular Polyketide Synthases and Its Application for Short-Chain Ketone Production. *ACS Synthetic Biology*, **2017**, 6, 139-147	5.7	71
390	Development of Next Generation Synthetic Biology Tools for Use in Streptomyces venezuelae. *ACS Synthetic Biology*, **2017**, 6, 159-166	5.7	51
389	Flux-Enabled Exploration of the Role of Sip1 in Galactose Yeast Metabolism. *Frontiers in Bioengineering and Biotechnology*, **2017**, 5, 31	5.8	0
388	The Need for Integrated Approaches in Metabolic Engineering. *Cold Spring Harbor Perspectives in Biology*, **2016**, 8,	10.2	34
387	Exploiting members of the BAHD acyltransferase family to synthesize multiple hydroxycinnamate and benzoate conjugates in yeast. *Microbial Cell Factories*, **2016**, 15, 198	6.4	21
386	Evolved hexose transporter enhances xylose uptake and glucose/xylose co-utilization in Saccharomyces cerevisiae. *Scientific Reports*, **2016**, 6, 19512	4.9	78
385	Enhanced fatty acid production in engineered chemolithoautotrophic bacteria using reduced sulfur compounds as energy sources. *Metabolic Engineering Communications*, **2016**, 3, 211-215	6.5	
384	Structural and Biochemical Analysis of Protein-Protein Interactions Between the Acyl-Carrier Protein and Product Template Domain. *Angewandte Chemie - International Edition*, **2016**, 55, 13005-13009	16.4	14
383	Engineering prokaryotic transcriptional activators as metabolite biosensors in yeast. *Nature Chemical Biology*, **2016**, 12, 951-958	11.7	141
382	EasyClone-MarkerFree: A vector toolkit for marker-less integration of genes into Saccharomyces cerevisiae via CRISPR-Cas9. *Biotechnology Journal*, **2016**, 11, 1110-7	5.6	111
381	Engineering Bacteria to Catabolize the Carbonaceous Component of Sarin: Teaching E. coli to Eat Isopropanol. *ACS Synthetic Biology*, **2016**, 5, 1485-1496	5.7	4
380	Engineering an NADPH/NADP Redox Biosensor in Yeast. *ACS Synthetic Biology*, **2016**, 5, 1546-1556	5.7	46

379	Examining glycolytic pathways, catabolite repression, and metabolite channeling using Δmutants. *Biotechnology for Biofuels*, **2016**, 9, 212	7.8	58
378	Synthetic and systems biology for microbial production of commodity chemicals. *Npj Systems Biology and Applications*, **2016**, 2, 16009	5	157
377	Engineering a functional 1-deoxy-D-xylulose 5-phosphate (DXP) pathway in Saccharomyces cerevisiae. *Metabolic Engineering*, **2016**, 38, 494-503	9.7	31
376	Engineering of synthetic, stress-responsive yeast promoters. *Nucleic Acids Research*, **2016**, 44, e136	20.1	76
375	Insights into polyketide biosynthesis gained from repurposing antibiotic-producing polyketide synthases to produce fuels and chemicals. *Journal of Antibiotics*, **2016**, 69, 494-9	3.7	16
374	End-to-end automated microfluidic platform for synthetic biology: from design to functional analysis. *Journal of Biological Engineering*, **2016**, 10, 3	6.3	38
373	Alteration of Polyketide Stereochemistry from anti to syn by a Ketoreductase Domain Exchange in a Type I Modular Polyketide Synthase Subunit. *Biochemistry*, **2016**, 55, 1677-80	3.2	21
372	Insights into Complex Oxidation during BE-7585A Biosynthesis: Structural Determination and Analysis of the Polyketide Monooxygenase BexE. *ACS Chemical Biology*, **2016**, 11, 1137-47	4.9	8
371	A Droplet Microfluidic Platform for Automating Genetic Engineering. *ACS Synthetic Biology*, **2016**, 5, 426-33	5.7	46
370	Exploiting the Substrate Promiscuity of Hydroxycinnamoyl-CoA:Shikimate Hydroxycinnamoyl Transferase to Reduce Lignin. *Plant and Cell Physiology*, **2016**, 57, 568-79	4.9	54
369	Engineering Cellular Metabolism. *Cell*, **2016**, 164, 1185-1197	56.2	655
368	CRISPR/Cas9 advances engineering of microbial cell factories. *Metabolic Engineering*, **2016**, 34, 44-59	9.7	152
367	Metabolic engineering of for the biosynthesis of 2-pyrrolidone. *Metabolic Engineering Communications*, **2016**, 3, 1-7	6.5	19
366	Isopentenyl diphosphate (IPP)-bypass mevalonate pathways for isopentenol production. *Metabolic Engineering*, **2016**, 34, 25-35	9.7	71
365	Engineering a Polyketide Synthase for In Vitro Production of Adipic Acid. *ACS Synthetic Biology*, **2016**, 5, 21-7	5.7	52
364	Modular Synthetic Inverters from Zinc Finger Proteins and Small RNAs. *PLoS ONE*, **2016**, 11, e0149483	3.7	6
363	Investigation of Proposed Ladderane Biosynthetic Genes from Anammox Bacteria by Heterologous Expression in E. coli. *PLoS ONE*, **2016**, 11, e0151087	3.7	19
362	Feast: Choking on Acetyl-CoA, the Glyoxylate Shunt, and Acetyl-CoA-Driven Metabolism **2016**, 1-12		

361	Expression of S-adenosylmethionine Hydrolase in Tissues Synthesizing Secondary Cell Walls Alters Specific Methylated Cell Wall Fractions and Improves Biomass Digestibility. *Frontiers in Bioengineering and Biotechnology*, **2016**, 4, 58	5.8	5
360	C Metabolic Flux Analysis for Systematic Metabolic Engineering of for Overproduction of Fatty Acids. *Frontiers in Bioengineering and Biotechnology*, **2016**, 4, 76	5.8	28
359	Loss of Inositol Phosphorylceramide Sphingolipid Mannosylation Induces Plant Immune Responses and Reduces Cellulose Content in Arabidopsis. *Plant Cell*, **2016**, 28, 2991-3004	11.6	43
358	Photosynthetic conversion of CO2 to farnesyl diphosphate-derived phytochemicals (amorpha-4,11-diene and squalene) by engineered cyanobacteria. *Biotechnology for Biofuels*, **2016**, 9, 202	7.8	57
357	Development of an E. coli strain for one-pot biofuel production from ionic liquid pretreated cellulose and switchgrass. *Green Chemistry*, **2016**, 18, 4189-4197	10	47
356	ATP citrate lyase mediated cytosolic acetyl-CoA biosynthesis increases mevalonate production in Saccharomyces cerevisiae. *Microbial Cell Factories*, **2016**, 15, 48	6.4	41
355	Switchable ionic liquids based on di-carboxylic acids for one-pot conversion of biomass to an advanced biofuel. *Green Chemistry*, **2016**, 18, 4012-4021	10	28
354	Characterizing Strain Variation in Engineered E.□coli Using a Multi-Omics-Based Workflow. *Cell Systems*, **2016**, 2, 335-46	10.6	59
353	Structural and Biochemical Analysis of Protein□Protein Interactions Between the Acyl-Carrier Protein and Product Template Domain. *Angewandte Chemie*, **2016**, 128, 13199-13203	3.6	3
352	Divergent mechanistic routes for the formation of gem-dimethyl groups in the biosynthesis of complex polyketides. *Angewandte Chemie - International Edition*, **2015**, 54, 2370-3	16.4	26
351	Isoprenoid drugs, biofuels, and chemicals--artemisinin, farnesene, and beyond. *Advances in Biochemical Engineering/Biotechnology*, **2015**, 148, 355-89	1.7	84
350	Metabolic engineering for the high-yield production of isoprenoid-based C□alcohols in E. coli. *Scientific Reports*, **2015**, 5, 11128	4.9	109
349	Comprehensive Structural and Biochemical Analysis of the Terminal Myxalamid Reductase Domain for the Engineered Production of Primary Alcohols. *Chemistry and Biology*, **2015**, 22, 1018-29		43
348	Synthesis of Cycloprodigiosin Identifies the Natural Isolate as a Scalemic Mixture. *Organic Letters*, **2015**, 17, 3474-7	6.2	14
347	A Versatile Microfluidic Device for Automating Synthetic Biology. *ACS Synthetic Biology*, **2015**, 4, 1151-64	5.7	57
346	Development of biosensors and their application in metabolic engineering. *Current Opinion in Chemical Biology*, **2015**, 28, 1-8	9.7	122
345	Plastid-produced interorgannellar stress signal MEcPP potentiates induction of the unfolded protein response in endoplasmic reticulum. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 6212-7	11.5	62
344	Impact of Pretreatment Technologies on Saccharification and Isopentenol Fermentation of Mixed Lignocellulosic Feedstocks. *Bioenergy Research*, **2015**, 8, 1004-1013	3.1	34

343	CasEMBLR: Cas9-Facilitated Multiloci Genomic Integration of in Vivo Assembled DNA Parts in Saccharomyces cerevisiae. *ACS Synthetic Biology*, **2015**, 4, 1226-34	5.7	108
342	Computational protein design enables a novel one-carbon assimilation pathway. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 3704-9	11.5	199
341	Development of an orthogonal fatty acid biosynthesis system in E. coli for oleochemical production. *Metabolic Engineering*, **2015**, 30, 1-6	9.7	39
340	Acute Limonene Toxicity in Escherichia coli Is Caused by Limonene Hydroperoxide and Alleviated by a Point Mutation in Alkyl Hydroperoxidase AhpC. *Applied and Environmental Microbiology*, **2015**, 81, 4690-6	4.8	55
339	Synthetic biology for microbial production of lipid-based biofuels. *Current Opinion in Chemical Biology*, **2015**, 29, 58-65	9.7	62
338	Assay for lignin breakdown based on lignin films: insights into the Fenton reaction with insoluble lignin. *Green Chemistry*, **2015**, 17, 4830-4845	10	9
337	Enhancing Terpene yield from sugars via novel routes to 1-deoxy-d-xylulose 5-phosphate. *Applied and Environmental Microbiology*, **2015**, 81, 130-8	4.8	42
336	Engineering terpene biosynthesis in Streptomyces for production of the advanced biofuel precursor bisabolene. *ACS Synthetic Biology*, **2015**, 4, 393-9	5.7	64
335	A kinetic-based approach to understanding heterologous mevalonate pathway function in E. coli. *Biotechnology and Bioengineering*, **2015**, 112, 111-9	4.9	37
334	Optimization of renewable pinene production from the conversion of macroalgae Saccharina latissima. *Bioresource Technology*, **2015**, 184, 415-420	11	21
333	Recent applications of synthetic biology tools for yeast metabolic engineering. *FEMS Yeast Research*, **2015**, 15, 1-10	3.1	47
332	Mechanistic Analysis of an Engineered Enzyme that Catalyzes the Formose Reaction. *ChemBioChem* , **2015**, 16, 1950-1954	3.8	29
331	Interlaboratory study to evaluate the robustness of capillary electrophoresis-mass spectrometry for peptide mapping. *Journal of Separation Science*, **2015**, 38, 3262-3270	3.4	29
330	Structural and functional analysis of two di-domain aromatase/cyclases from type II polyketide synthases. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E6844-51	11.5	19
329	CrEdit: CRISPR mediated multi-loci gene integration in Saccharomyces cerevisiae. *Microbial Cell Factories*, **2015**, 14, 97	6.4	105
328	Principal component analysis of proteomics (PCAP) as a tool to direct metabolic engineering. *Metabolic Engineering*, **2015**, 28, 123-133	9.7	118
327	Multiplex metabolic pathway engineering using CRISPR/Cas9 in Saccharomyces cerevisiae. *Metabolic Engineering*, **2015**, 28, 213-222	9.7	292
326	Expression of a bacterial 3-dehydroshikimate dehydratase reduces lignin content and improves biomass saccharification efficiency. *Plant Biotechnology Journal*, **2015**, 13, 1241-50	11.6	62

325	Engineering temporal accumulation of a low recalcitrance polysaccharide leads to increased C6 sugar content in plant cell walls. *Plant Biotechnology Journal*, **2015**, 13, 903-14	11.6	30
324	A Method to Constrain Genome-Scale Models with 13C Labeling Data. *PLoS Computational Biology*, **2015**, 11, e1004363	5	44
323	Precursor-Directed Combinatorial Biosynthesis of Cinnamoyl, Dihydrocinnamoyl, and Benzoyl Anthranilates in Saccharomyces cerevisiae. *PLoS ONE*, **2015**, 10, e0138972	3.7	12
322	Correlation analysis of targeted proteins and metabolites to assess and engineer microbial isopentenol production. *Biotechnology and Bioengineering*, **2014**, 111, 1648-58	4.9	75
321	Integrating biological redesign: where synthetic biology came from and where it needs to go. *Cell*, **2014**, 157, 151-61	56.2	178
320	Engineering synergy in biotechnology. *Nature Chemical Biology*, **2014**, 10, 319-22	11.7	126
319	Metabolic pathway optimization using ribosome binding site variants and combinatorial gene assembly. *Applied Microbiology and Biotechnology*, **2014**, 98, 1567-81	5.7	83
318	Narrowing the gap between the promise and reality of polyketide synthases as a synthetic biology platform. *Current Opinion in Biotechnology*, **2014**, 30, 32-9	11.4	48
317	Enzyme analysis of the polyketide synthase leads to the discovery of a novel analog of the antibiotic □ipomycin. *Journal of Antibiotics*, **2014**, 67, 199-201	3.7	7
316	Analysis of plant nucleotide sugars by hydrophilic interaction liquid chromatography and tandem mass spectrometry. *Analytical Biochemistry*, **2014**, 448, 14-22	3.1	40
315	Production of anteiso-branched fatty acids in Escherichia coli; next generation biofuels with improved cold-flow properties. *Metabolic Engineering*, **2014**, 26, 111-118	9.7	45
314	In vitro analysis of carboxyacyl substrate tolerance in the loading and first extension modules of borrelidin polyketide synthase. *Biochemistry*, **2014**, 53, 5975-7	3.2	18
313	Constructing tailored isoprenoid products by structure-guided modification of geranylgeranyl reductase. *Structure*, **2014**, 22, 1028-36	5.2	23
312	Use of nonionic surfactants for improvement of terpene production in Saccharomyces cerevisiae. *Applied and Environmental Microbiology*, **2014**, 80, 6685-93	4.8	22
311	PR-PR: cross-platform laboratory automation system. *ACS Synthetic Biology*, **2014**, 3, 515-24	5.7	35
310	A targeted proteomics toolkit for high-throughput absolute quantification of Escherichia coli proteins. *Metabolic Engineering*, **2014**, 26, 48-56	9.7	41
309	Substantial improvements in methyl ketone production in E. coli and insights on the pathway from in vitro studies. *Metabolic Engineering*, **2014**, 26, 67-76	9.7	45
308	Production and quantification of sesquiterpenes in Saccharomyces cerevisiae, including extraction, detection and quantification of terpene products and key related metabolites. *Nature Protocols*, **2014**, 9, 1980-96	18.8	48

307	Biochemical and structural studies of NADH-dependent FabG used to increase the bacterial production of fatty acids under anaerobic conditions. *Applied and Environmental Microbiology*, **2014**, 80, 497-505	4.8	34
306	Synthetic biology: A global approach. *Nature*, **2014**, 510, 218	50.4	3
305	Metabolic Engineering of Escherichia coli for the Production of a Precursor to Artemisinin, an Antimalarial Drug **2014**, 364-379		
304	Correction: Production of hydroxycinnamoyl anthranilates from glucose in Escherichia coli. *Microbial Cell Factories*, **2014**, 13, 8	6.4	5
303	Kinetics of phosphomevalonate kinase from Saccharomyces cerevisiae. *PLoS ONE*, **2014**, 9, e87112	3.7	9
302	Development of a native Escherichia coli induction system for ionic liquid tolerance. *PLoS ONE*, **2014**, 9, e101115	3.7	30
301	Understanding the role of histidine in the GHSxG acyltransferase active site motif: evidence for histidine stabilization of the malonyl-enzyme intermediate. *PLoS ONE*, **2014**, 9, e109421	3.7	7
300	Rapid metabolic pathway assembly and modification using serine integrase site-specific recombination. *Nucleic Acids Research*, **2014**, 42, e23	20.1	90
299	Identification of a cyclic-di-GMP-modulating response regulator that impacts biofilm formation in a model sulfate reducing bacterium. *Frontiers in Microbiology*, **2014**, 5, 382	5.7	9
298	Genomic encyclopedia of bacteria and archaea: sequencing a myriad of type strains. *PLoS Biology*, **2014**, 12, e1001920	9.7	146
297	A peptide-based method for 13C Metabolic Flux Analysis in microbial communities. *PLoS Computational Biology*, **2014**, 10, e1003827	5	43
296	Independence among synthetic genetic devices in the bacterium Escherichia coli extends to the time-domain **2014**,		1
295	An auto-inducible mechanism for ionic liquid resistance in microbial biofuel production. *Nature Communications*, **2014**, 5, 3490	17.4	76
294	Improving microbial biogasoline production in Escherichia coli using tolerance engineering. *MBio*, **2014**, 5, e01932	7.8	91
293	Metabolic engineering of Saccharomyces cerevisiae for production of fatty acid-derived biofuels and chemicals. *Metabolic Engineering*, **2014**, 21, 103-13	9.7	286
292	Semi-synthetic artemisinin: a model for the use of synthetic biology in pharmaceutical development. *Nature Reviews Microbiology*, **2014**, 12, 355-67	22.2	441
291	Microbial synthesis of pinene. *ACS Synthetic Biology*, **2014**, 3, 466-75	5.7	175
290	Metabolite profiling of plastidial deoxyxylulose-5-phosphate pathway intermediates by liquid chromatography and mass spectrometry. *Methods in Molecular Biology*, **2014**, 1153, 57-76	1.4	6

289	Dual-selection for evolution of in vivo functional aptazymes as riboswitch parts. *Methods in Molecular Biology*, **2014**, 1111, 221-35	1.4	9
288	Versatile synthesis of probes for high-throughput enzyme activity screening. *Analytical and Bioanalytical Chemistry*, **2013**, 405, 4969-73	4.4	14
287	Application of targeted proteomics and biological parts assembly in E. coli to optimize the biosynthesis of an anti-malarial drug precursor, amorpha-4,11-diene. *Chemical Engineering Science*, **2013**, 103, 21-28	4.4	12
286	Synthetic Biology of Microbial Biofuel Production: From Enzymes to Pathways to Organisms **2013**, 207-223		1
285	Production of hydroxycinnamoyl anthranilates from glucose in Escherichia coli. *Microbial Cell Factories*, **2013**, 12, 62	6.4	39
284	Correction: Global analysis of host response to induction of a latent bacteriophage. *BMC Microbiology*, **2013**, 13, 183	4.5	78
283	Metabolic engineering of Escherichia coli for limonene and perillyl alcohol production. *Metabolic Engineering*, **2013**, 19, 33-41	9.7	281
282	Programming adaptive control to evolve increased metabolite production. *Nature Communications*, **2013**, 4, 2595	17.4	130
281	Engineering dynamic pathway regulation using stress-response promoters. *Nature Biotechnology*, **2013**, 31, 1039-46	44.5	338
280	Utilizing a highly responsive gene, yhjX, in E. coli based production of 1,4-butanediol. *Chemical Engineering Science*, **2013**, 103, 68-73	4.4	7
279	Biochemical production of ethanol and fatty acid ethyl esters from switchgrass: A comparative analysis of environmental and economic performance. *Biomass and Bioenergy*, **2013**, 49, 49-62	5.3	12
278	Precise and reliable gene expression via standard transcription and translation initiation elements. *Nature Methods*, **2013**, 10, 354-60	21.6	485
277	Quantitative estimation of activity and quality for collections of functional genetic elements. *Nature Methods*, **2013**, 10, 347-53	21.6	150
276	Acid enhanced ionic liquid pretreatment of biomass. *Green Chemistry*, **2013**, 15, 1264	10	38
275	Carotenoid-based phenotypic screen of the yeast deletion collection reveals new genes with roles in isoprenoid production. *Metabolic Engineering*, **2013**, 15, 174-83	9.7	131
274	High-level semi-synthetic production of the potent antimalarial artemisinin. *Nature*, **2013**, 496, 528-32	50.4	1292
273	Broad substrate specificity of the loading didomain of the lipomycin polyketide synthase. *Biochemistry*, **2013**, 52, 3791-3	3.2	29
272	Characterization of NaCl tolerance in Desulfovibrio vulgaris Hildenborough through experimental evolution. *ISME Journal*, **2013**, 7, 1790-802	11.9	39

271	PaR-PaR laboratory automation platform. *ACS Synthetic Biology*, **2013**, 2, 216-22	5.7	41
270	HipA-triggered growth arrest and β-lactam tolerance in Escherichia coli are mediated by RelA-dependent ppGpp synthesis. *Journal of Bacteriology*, **2013**, 195, 3173-82	3.5	66
269	Transcription factor-based screens and synthetic selections for microbial small-molecule biosynthesis. *ACS Synthetic Biology*, **2013**, 2, 47-58	5.7	145
268	Overexpression of a BAHD acyltransferase, OsAt10, alters rice cell wall hydroxycinnamic acid content and saccharification. *Plant Physiology*, **2013**, 161, 1615-33	6.6	109
267	Physical and functional interactions of a monothiol glutaredoxin and an iron sulfur cluster carrier protein with the sulfur-donating radical S-adenosyl-L-methionine enzyme MiaB. *Journal of Biological Chemistry*, **2013**, 288, 14200-14211	5.4	26
266	Arabinosylation of a Yariv-precipitable cell wall polymer impacts plant growth as exemplified by the Arabidopsis glycosyltransferase mutant ray1. *Molecular Plant*, **2013**, 6, 1369-72	14.4	37
265	Functional characterization of the origin of replication of pRN1 from Sulfolobus islandicus REN1H1. *PLoS ONE*, **2013**, 8, e84664	3.7	4
264	Functional characterization of four sesquiterpene synthases from Ricinus communis (castor bean). *Phytochemistry*, **2012**, 78, 20-8	4	30
263	Remodeling the isoprenoid pathway in tobacco by expressing the cytoplasmic mevalonate pathway in chloroplasts. *Metabolic Engineering*, **2012**, 14, 19-28	9.7	106
262	Synthetic biology and the development of tools for metabolic engineering. *Metabolic Engineering*, **2012**, 14, 189-95	9.7	316
261	Biosynthesis and incorporation of side-chain-truncated lignin monomers to reduce lignin polymerization and enhance saccharification. *Plant Biotechnology Journal*, **2012**, 10, 609-20	11.6	119
260	DeviceEditor visual biological CAD canvas. *Journal of Biological Engineering*, **2012**, 6, 1	6.3	65
259	From fields to fuels: recent advances in the microbial production of biofuels. *ACS Synthetic Biology*, **2012**, 1, 498-513	5.7	71
258	Overlapping photoprotective function of vitamin E and carotenoids in Chlamydomonas. *Plant Physiology*, **2012**, 158, 313-23	6.6	43
257	Mass spectrometry-based microbial metabolomics. *Methods in Molecular Biology*, **2012**, 881, 215-78	1.4	17
256	Engineering of L-tyrosine oxidation in Escherichia coli and microbial production of hydroxytyrosol. *Metabolic Engineering*, **2012**, 14, 603-10	9.7	54
255	Enhancing fatty acid production by the expression of the regulatory transcription factor FadR. *Metabolic Engineering*, **2012**, 14, 653-60	9.7	132
254	Modular engineering of L-tyrosine production in Escherichia coli. *Applied and Environmental Microbiology*, **2012**, 78, 89-98	4.8	211

253	XAX1 from glycosyltransferase family 61 mediates xylosyltransfer to rice xylan. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 17117-22	11.5	140
252	Production of amorphadiene in yeast, and its conversion to dihydroartemisinic acid, precursor to the antimalarial agent artemisinin. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, E111-8	11.5	503
251	Engineering of bacterial methyl ketone synthesis for biofuels. *Applied and Environmental Microbiology*, **2012**, 78, 70-80	4.8	113
250	Design, implementation and practice of JBEI-ICE: an open source biological part registry platform and tools. *Nucleic Acids Research*, **2012**, 40, e141	20.1	141
249	Synthetic pathway for production of five-carbon alcohols from isopentenyl diphosphate. *Applied and Environmental Microbiology*, **2012**, 78, 7849-55	4.8	57
248	Retrograde signaling by the plastidial metabolite MEcPP regulates expression of nuclear stress-response genes. *Cell*, **2012**, 149, 1525-35	56.2	284
247	Transcriptomic and proteomic analyses of Desulfovibrio vulgaris biofilms: carbon and energy flow contribute to the distinct biofilm growth state. *BMC Genomics*, **2012**, 13, 138	4.5	45
246	Manipulation of the carbon storage regulator system for metabolite remodeling and biofuel production in Escherichia coli. *Microbial Cell Factories*, **2012**, 11, 79	6.4	41
245	Microbial engineering for the production of advanced biofuels. *Nature*, **2012**, 488, 320-8	50.4	824
244	j5 DNA assembly design automation software. *ACS Synthetic Biology*, **2012**, 1, 14-21	5.7	228
243	Design of a dynamic sensor-regulator system for production of chemicals and fuels derived from fatty acids. *Nature Biotechnology*, **2012**, 30, 354-9	44.5	619
242	Structure of FabH and factors affecting the distribution of branched fatty acids in Micrococcus luteus. *Acta Crystallographica Section D: Biological Crystallography*, **2012**, 68, 1320-8		6
241	Heterologous production of polyketides by modular type I polyketide synthases in Escherichia coli. *Current Opinion in Biotechnology*, **2012**, 23, 727-35	11.4	36
240	Control of Stress Tolerance in Bacterial Host Organisms for Bioproduction of Fuels. *Microbiology Monographs*, **2012**, 209-238	0.8	1
239	Targeted proteomics for metabolic pathway optimization. *Methods in Molecular Biology*, **2012**, 944, 237-49	1.4	16
238	Construction of a part of a 3-hydroxypropionate cycle for heterologous polyketide biosynthesis in Escherichia coli. *Biochemistry*, **2012**, 51, 9779-81	3.2	12
237	Engineering of a tyrosol-producing pathway, utilizing simple sugar and the central metabolic tyrosine, in Escherichia coli. *Journal of Agricultural and Food Chemistry*, **2012**, 60, 979-84	5.7	34
236	Mutations in Escherichia coli aceE and ribB genes allow survival of strains defective in the first step of the isoprenoid biosynthesis pathway. *PLoS ONE*, **2012**, 7, e43775	3.7	21

235	Encoding substrates with mass tags to resolve stereospecific reactions using Nimzyme. *Rapid Communications in Mass Spectrometry*, **2012**, 26, 611-5	2.2	18
234	Application of targeted proteomics to metabolically engineered Escherichia coli. *Proteomics*, **2012**, 12, 1289-99	4.8	20
233	Supplementation of intracellular XylR leads to coutilization of hemicellulose sugars. *Applied and Environmental Microbiology*, **2012**, 78, 2221-9	4.8	24
232	Functional responses of methanogenic archaea to syntrophic growth. *ISME Journal*, **2012**, 6, 2045-55	11.9	46
231	Tracing determinants of dual substrate specificity in glycoside hydrolase family 5. *Journal of Biological Chemistry*, **2012**, 287, 25335-43	5.4	31
230	Arabidopsis Deficient in Cutin Ferulate encodes a transferase required for feruloylation of ω-hydroxy fatty acids in cutin polyester. *Plant Physiology*, **2012**, 158, 654-65	6.6	66
229	Three members of the Arabidopsis glycosyltransferase family 8 are xylan glucuronosyltransferases. *Plant Physiology*, **2012**, 159, 1408-17	6.6	95
228	DeviceEditor visual biological CAD canvas. *Journal of Biological Engineering*, **2012**, 6, 1	6.3	15
227	A thermophilic ionic liquid-tolerant cellulase cocktail for the production of cellulosic biofuels. *PLoS ONE*, **2012**, 7, e37010	3.7	87
226	Joint BioEnergy Institute. *Industrial Biotechnology*, **2011**, 7, 259-260	1.3	
225	Impact of ionic liquid pretreated plant biomass on Saccharomyces cerevisiae growth and biofuel production. *Green Chemistry*, **2011**, 13, 2743	10	120
224	Organelle membrane proteomics reveals differential influence of mycobacterial lipoglycans on macrophage phagosome maturation and autophagosome accumulation. *Journal of Proteome Research*, **2011**, 10, 339-48	5.6	54
223	Identification and microbial production of a terpene-based advanced biofuel. *Nature Communications*, **2011**, 2, 483	17.4	433
222	The effect of ionic liquid cation and anion combinations on the macromolecular structure of lignins. *Green Chemistry*, **2011**, 13, 3375	10	118
221	Biosensors and their applications in microbial metabolic engineering. *Trends in Microbiology*, **2011**, 19, 323-9	12.4	147
220	Synergies between synthetic biology and metabolic engineering. *Nature Biotechnology*, **2011**, 29, 693-5	44.5	114
219	Model-driven engineering of RNA devices to quantitatively program gene expression. *Science*, **2011**, 334, 1716-9	33.3	152
218	Structure of a three-domain sesquiterpene synthase: a prospective target for advanced biofuels production. *Structure*, **2011**, 19, 1876-84	5.2	68

217	Optimization of a heterologous mevalonate pathway through the use of variant HMG-CoA reductases. *Metabolic Engineering*, **2011**, 13, 588-97	9.7	124
216	Metabolic engineering of microbial pathways for advanced biofuels production. *Current Opinion in Biotechnology*, **2011**, 22, 775-83	11.4	281
215	Synthesis of three advanced biofuels from ionic liquid-pretreated switchgrass using engineered Escherichia coli. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 19949-54	11.5	304
214	Production of tranilast [N-(3',4'-dimethoxycinnamoyl)-anthranilic acid] and its analogs in yeast Saccharomyces cerevisiae. *Applied Microbiology and Biotechnology*, **2011**, 89, 989-1000	5.7	38
213	BglBrick vectors and datasheets: A synthetic biology platform for gene expression. *Journal of Biological Engineering*, **2011**, 5, 12	6.3	302
212	A framework and model system to investigate linear system behavior in Escherichia coli. *Journal of Biological Engineering*, **2011**, 5, 3	6.3	15
211	Engineering microbial biofuel tolerance and export using efflux pumps. *Molecular Systems Biology*, **2011**, 7, 487	12.2	391
210	Microbial Production of Plant-Derived Pharmaceutical Natural Products through Metabolic Engineering: Artemisinin and beyond **2011**, 173-196		1
209	Targeted proteomics for metabolic pathway optimization: application to terpene production. *Metabolic Engineering*, **2011**, 13, 194-203	9.7	151
208	Absence of diauxie during simultaneous utilization of glucose and Xylose by Sulfolobus acidocaldarius. *Journal of Bacteriology*, **2011**, 193, 1293-301	3.5	41
207	Definitive alkene identification needed for in vitro studies with ole (olefin biosynthesis) proteins. *Journal of Biological Chemistry*, **2011**, 286, le11; author reply le12-3	5.4	3
206	Generalized schemes for high-throughput manipulation of the Desulfovibrio vulgaris genome. *Applied and Environmental Microbiology*, **2011**, 77, 7595-604	4.8	13
205	Q&A roundtable on US bioenergy research. *Industrial Biotechnology*, **2011**, 7, 264-266	1.3	1
204	Towards a rigorous network of protein-protein interactions of the model sulfate reducer Desulfovibrio vulgaris Hildenborough. *PLoS ONE*, **2011**, 6, e21470	3.7	10
203	Design and Construction of a Double Inversion Recombination Switch for Heritable Sequential Genetic Memory **2011**, 175-196		
202	Diterpene production in Mycobacterium tuberculosis. *FEBS Journal*, **2010**, 277, 3588-95	5.7	21
201	Impact of elevated nitrate on sulfate-reducing bacteria: a comparative study of Desulfovibrio vulgaris. *ISME Journal*, **2010**, 4, 1386-97	11.9	50
200	Microbial production of fatty-acid-derived fuels and chemicals from plant biomass. *Nature*, **2010**, 463, 559-62	50.4	1060

199	Hydrogen peroxide-induced oxidative stress responses in Desulfovibrio vulgaris Hildenborough. *Environmental Microbiology*, **2010**, 12, 2645-57	5.2	39
198	Selecting RNA aptamers for synthetic biology: investigating magnesium dependence and predicting binding affinity. *Nucleic Acids Research*, **2010**, 38, 2736-47	20.1	70
197	Genes involved in long-chain alkene biosynthesis in Micrococcus luteus. *Applied and Environmental Microbiology*, **2010**, 76, 1212-23	4.8	126
196	Global transcriptional, physiological, and metabolite analyses of the responses of Desulfovibrio vulgaris hildenborough to salt adaptation. *Applied and Environmental Microbiology*, **2010**, 76, 1574-86	4.8	48
195	Functional genomic study of exogenous n-butanol stress in Escherichia coli. *Applied and Environmental Microbiology*, **2010**, 76, 1935-45	4.8	188
194	Manufacturing molecules through metabolic engineering. *Science*, **2010**, 330, 1355-8	33.3	620
193	Engineering static and dynamic control of synthetic pathways. *Cell*, **2010**, 140, 19-23	56.2	178
192	High-throughput metabolic engineering: advances in small-molecule screening and selection. *Annual Review of Biochemistry*, **2010**, 79, 563-90	29.1	258
191	Advanced biofuel production in microbes. *Biotechnology Journal*, **2010**, 5, 147-62	5.6	282
190	A Simple Method for Enzymatic Synthesis of Unlabeled and Radiolabeled Hydroxycinnamate-CoA. *Bioenergy Research*, **2010**, 3, 115-122	3.1	6
189	The Joint BioEnergy Institute (JBEI): Developing New Biofuels by Overcoming Biomass Recalcitrance. *Bioenergy Research*, **2010**, 3, 105-107	3.1	6
188	A model for improving microbial biofuel production using a synthetic feedback loop. *Systems and Synthetic Biology*, **2010**, 4, 95-104		104
187	Study of stationary phase metabolism via isotopomer analysis of amino acids from an isolated protein. *Biotechnology Progress*, **2010**, 26, 52-6	2.8	21
186	Rationally engineered biotransformation of p-nitrophenol. *Biotechnology Progress*, **2010**, 26, 616-21	2.8	4
185	Farnesol production from Escherichia coli by harnessing the exogenous mevalonate pathway. *Biotechnology and Bioengineering*, **2010**, 107, 421-9	4.9	90
184	Cloning of casbene and neocembrene synthases from Euphorbiaceae plants and expression in Saccharomyces cerevisiae. *Phytochemistry*, **2010**, 71, 1466-73	4	85
183	BglBricks: A flexible standard for biological part assembly. *Journal of Biological Engineering*, **2010**, 4, 1	6.3	281
182	Expression profiling of hypothetical genes in Desulfovibrio vulgaris leads to improved functional annotation. *Nucleic Acids Research*, **2009**, 37, 2926-39	20.1	20

181	Synthetic Biology in Pursuit of Inexpensive, Effective, Anti-Malarial Drugs. *BioSocieties*, **2009**, 4, 275-282	1.5	13
180	Investigation of carbon metabolism in "Dehalococcoides ethenogenes" strain 195 by use of isotopomer and transcriptomic analyses. *Journal of Bacteriology*, **2009**, 191, 5224-31	3.5	65
179	High-level production of amorpha-4,11-diene, a precursor of the antimalarial agent artemisinin, in Escherichia coli. *PLoS ONE*, **2009**, 4, e4489	3.7	286
178	Developing Aspergillus as a host for heterologous expression. *Biotechnology Advances*, **2009**, 27, 53-75	17.8	208
177	Advances in analysis of microbial metabolic fluxes via (13)C isotopic labeling. *Mass Spectrometry Reviews*, **2009**, 28, 362-75	11	115
176	Metabolic flux analysis of Shewanella spp. reveals evolutionary robustness in central carbon metabolism. *Biotechnology and Bioengineering*, **2009**, 102, 1161-9	4.9	45
175	Analysis of metabolic pathways and fluxes in a newly discovered thermophilic and ethanol-tolerant Geobacillus strain. *Biotechnology and Bioengineering*, **2009**, 102, 1377-86	4.9	55
174	Enzyme immobilization via silaffin-mediated autoencapsulation in a biosilica support. *Biotechnology Progress*, **2009**, 25, 417-23	2.8	56
173	Invariability of central metabolic flux distribution in Shewanella oneidensis MR-1 under environmental or genetic perturbations. *Biotechnology Progress*, **2009**, 25, 1254-9	2.8	29
172	Chemical synthesis using synthetic biology. *Current Opinion in Biotechnology*, **2009**, 20, 498-503	11.4	82
171	Central metabolism in Mycobacterium smegmatis during the transition from O2-rich to O2-poor conditions as studied by isotopomer-assisted metabolite analysis. *Biotechnology Letters*, **2009**, 31, 1233-40	2	31
170	A rapid and inexpensive labeling method for microarray gene expression analysis. *BMC Biotechnology*, **2009**, 9, 97	3.5	21
169	Synthetic protein scaffolds provide modular control over metabolic flux. *Nature Biotechnology*, **2009**, 27, 753-9	44.5	920
168	Optimization of the mevalonate-based isoprenoid biosynthetic pathway in Escherichia coli for production of the anti-malarial drug precursor amorpha-4,11-diene. *Metabolic Engineering*, **2009**, 11, 13-9	9.7	227
167	Combinatorial expression of bacterial whole mevalonate pathway for the production of beta-carotene in E. coli. *Journal of Biotechnology*, **2009**, 140, 218-26	3.7	159
166	A novel semi-biosynthetic route for artemisinin production using engineered substrate-promiscuous P450(BM3). *ACS Chemical Biology*, **2009**, 4, 261-7	4.9	167
165	Quantitative proteomic profiling of host-pathogen interactions: the macrophage response to Mycobacterium tuberculosis lipids. *Journal of Proteome Research*, **2009**, 8, 282-9	5.6	47
164	Lutein accumulation in the absence of zeaxanthin restores nonphotochemical quenching in the Arabidopsis thaliana npq1 mutant. *Plant Cell*, **2009**, 21, 1798-812	11.6	156

163	Biosynthesis of plant isoprenoids: perspectives for microbial engineering. *Annual Review of Plant Biology*, **2009**, 60, 335-55	30.7	343
162	Biofuel alternatives to ethanol: pumping the microbial well. *Trends in Biotechnology*, **2008**, 26, 375-81	15.1	301
161	Synthetic biology for synthetic chemistry. *ACS Chemical Biology*, **2008**, 3, 64-76	4.9	334
160	Metabolic engineering of Saccharomyces cerevisiae for the production of n-butanol. *Microbial Cell Factories*, **2008**, 7, 36	6.4	377
159	Capillary electrophoresis-fourier transform ion cyclotron resonance mass spectrometry for the identification of cationic metabolites via a pH-mediated stacking-transient isotachophoretic method. *Analytical Chemistry*, **2008**, 80, 3112-22	7.8	62
158	Separation and mass spectrometry in microbial metabolomics. *Current Opinion in Microbiology*, **2008**, 11, 233-9	7.9	82
157	Heterologous protein production in Escherichia coli using the propionate-inducible pPro system by conventional and auto-induction methods. *Protein Expression and Purification*, **2008**, 61, 197-203	2	20
156	Morphology of artificial silica matrices formed via autosilification of a silaffin/protein polymer chimera. *Biomacromolecules*, **2008**, 9, 1-5	6.9	37
155	Metabolic engineering of microorganisms for isoprenoid production. *Natural Product Reports*, **2008**, 25, 656-61	15.1	79
154	Post-translational modifications of Desulfovibrio vulgaris Hildenborough sulfate reduction pathway proteins. *Journal of Proteome Research*, **2008**, 7, 2320-31	5.6	11
153	Isotopomer distributions in amino acids from a highly expressed protein as a proxy for those from total protein. *Analytical Chemistry*, **2008**, 80, 886-90	7.8	22
152	Addressing the need for alternative transportation fuels: the Joint BioEnergy Institute. *ACS Chemical Biology*, **2008**, 3, 17-20	4.9	40
151	Membrane proteomics of phagosomes suggests a connection to autophagy. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 16952-7	11.5	85
150	Application of functional genomics to pathway optimization for increased isoprenoid production. *Applied and Environmental Microbiology*, **2008**, 74, 3229-41	4.8	143
149	Memory in microbes: quantifying history-dependent behavior in a bacterium. *PLoS ONE*, **2008**, 3, e1700	3.7	77
148	Design and construction of a double inversion recombination switch for heritable sequential genetic memory. *PLoS ONE*, **2008**, 3, e2815	3.7	109
147	Expression of a synthetic Artemesia annua amorphadiene synthase in Aspergillus nidulans yields altered product distribution. *Journal of Industrial Microbiology and Biotechnology*, **2008**, 35, 1191-8	4.2	16
146	Induction of multiple pleiotropic drug resistance genes in yeast engineered to produce an increased level of anti-malarial drug precursor, artemisinic acid. *BMC Biotechnology*, **2008**, 8, 83	3.5	143

145	Redirection of flux through the FPP branch-point in Saccharomyces cerevisiae by down-regulating squalene synthase. *Biotechnology and Bioengineering*, **2008**, 100, 371-8	4.9	119
144	Importance of systems biology in engineering microbes for biofuel production. *Current Opinion in Biotechnology*, **2008**, 19, 228-34	11.4	109
143	Metabolic engineering of microorganisms for biofuels production: from bugs to synthetic biology to fuels. *Current Opinion in Biotechnology*, **2008**, 19, 556-63	11.4	478
142	Redesigning enzymes based on adaptive evolution for optimal function in synthetic metabolic pathways. *Chemistry and Biology*, **2008**, 15, 607-18		49
141	Engineering triterpene production in Saccharomyces cerevisiae-beta-amyrin synthase from Artemisia annua. *FEBS Journal*, **2008**, 275, 1852-9	5.7	94
140	Increased beta-carotene production in recombinant Escherichia coli harboring an engineered isoprenoid precursor pathway with mevalonate addition. *Biotechnology Progress*, **2007**, 23, 599-605	2.8	69
139	Identification of the intermediates of in vivo oxidation of 1 ,4-dioxane by monooxygenase-containing bacteria. *Environmental Science & Technology*, **2007**, 41, 7330-6	10.3	86
138	Flux analysis of central metabolic pathways in Geobacter metallireducens during reduction of soluble Fe(III)-nitrilotriacetic acid. *Applied and Environmental Microbiology*, **2007**, 73, 3859-64	4.8	52
137	A kinetic model describing Shewanella oneidensis MR-1 growth, substrate consumption, and product secretion. *Biotechnology and Bioengineering*, **2007**, 96, 125-33	4.9	73
136	Microbial sensors for small molecules: development of a mevalonate biosensor. *Metabolic Engineering*, **2007**, 9, 30-8	9.7	73
135	Engineering of the pyruvate dehydrogenase bypass in Saccharomyces cerevisiae for high-level production of isoprenoids. *Metabolic Engineering*, **2007**, 9, 160-8	9.7	255
134	Balancing a heterologous mevalonate pathway for improved isoprenoid production in Escherichia coli. *Metabolic Engineering*, **2007**, 9, 193-207	9.7	349
133	Metabolic flux elucidation for large-scale models using 13C labeled isotopes. *Metabolic Engineering*, **2007**, 9, 387-405	9.7	94
132	Pathway engineering by designed divergent evolution. *Current Opinion in Chemical Biology*, **2007**, 11, 233-9	9.7	25
131	Engineering Escherichia coli for production of functionalized terpenoids using plant P450s. *Nature Chemical Biology*, **2007**, 3, 274-7	11.7	310
130	Global analysis of host response to induction of a latent bacteriophage. *BMC Microbiology*, **2007**, 7, 82	4.5	36
129	Biosynthesis and engineering of isoprenoid small molecules. *Applied Microbiology and Biotechnology*, **2007**, 73, 980-90	5.7	206
128	Engineering the lycopene synthetic pathway in E. coli by comparison of the carotenoid genes of Pantoea agglomerans and Pantoea ananatis. *Applied Microbiology and Biotechnology*, **2007**, 74, 131-9	5.7	84

127	Polyphosphate kinase genes from full-scale activated sludge plants. *Applied Microbiology and Biotechnology*, **2007**, 77, 167-73	5.7	64
126	Manipulation of intracellular magnesium levels in Saccharomyces cerevisiae with deletion of magnesium transporters. *Applied Microbiology and Biotechnology*, **2007**, 77, 411-25	5.7	11
125	Directed evolution of AraC for improved compatibility of arabinose- and lactose-inducible promoters. *Applied and Environmental Microbiology*, **2007**, 73, 5711-5	4.8	86
124	Pathway confirmation and flux analysis of central metabolic pathways in Desulfovibrio vulgaris hildenborough using gas chromatography-mass spectrometry and Fourier transform-ion cyclotron resonance mass spectrometry. *Journal of Bacteriology*, **2007**, 189, 940-9	3.5	81
123	Identification of isopentenol biosynthetic genes from Bacillus subtilis by a screening method based on isoprenoid precursor toxicity. *Applied and Environmental Microbiology*, **2007**, 73, 6277-83	4.8	146
122	Cell-wide responses to low-oxygen exposure in Desulfovibrio vulgaris Hildenborough. *Journal of Bacteriology*, **2007**, 189, 5996-6010	3.5	88
121	Shewanella oneidensis MR-1 fluxome under various oxygen conditions. *Applied and Environmental Microbiology*, **2007**, 73, 718-29	4.8	78
120	Anaerobic central metabolic pathways in Shewanella oneidensis MR-1 reinterpreted in the light of isotopic metabolite labeling. *Journal of Bacteriology*, **2007**, 189, 894-901	3.5	74
119	Charge-associated effects of fullerene derivatives on microbial structural integrity and central metabolism. *Nano Letters*, **2007**, 7, 754-60	11.5	141
118	Analysis of amino acid isotopomers using FT-ICR MS. *Analytical Chemistry*, **2007**, 79, 2483-90	7.8	45
117	Microbially Derived Artemisinin: A Biotechnology Solution to the Global Problem of Access to Affordable Antimalarial Drugs. *American Journal of Tropical Medicine and Hygiene*, **2007**, 77, 198-202	3.2	86
116	Microbially derived artemisinin: a biotechnology solution to the global problem of access to affordable antimalarial drugs. *American Journal of Tropical Medicine and Hygiene*, **2007**, 77, 198-202	3.2	28
115	Marker and promoter effects on heterologous expression in Aspergillus nidulans. *Applied Microbiology and Biotechnology*, **2006**, 72, 1014-23	5.7	16
114	Propionate-regulated high-yield protein production in Escherichia coli. *Biotechnology and Bioengineering*, **2006**, 93, 912-8	4.9	23
113	Enhanced lycopene production in Escherichia coli engineered to synthesize isopentenyl diphosphate and dimethylallyl diphosphate from mevalonate. *Biotechnology and Bioengineering*, **2006**, 94, 1025-32	4.9	129
112	A tightly regulated inducible expression system utilizing the fim inversion recombination switch. *Biotechnology and Bioengineering*, **2006**, 94, 1-4	4.9	59
111	Evaluation of the effects of various culture conditions on Cr(VI) reduction by Shewanella oneidensis MR-1 in a novel high-throughput mini-bioreactor. *Biotechnology and Bioengineering*, **2006**, 95, 176-84	4.9	49
110	High-level production of amorpha-4,11-diene in a two-phase partitioning bioreactor of metabolically engineered Escherichia coli. *Biotechnology and Bioengineering*, **2006**, 95, 684-91	4.9	209

109	Mineralization of paraoxon and its use as a sole C and P source by a rationally designed catabolic pathway in Pseudomonas putida. *Applied and Environmental Microbiology*, **2006**, 72, 6699-706	4.8	48
108	Study of nitrate stress in Desulfovibrio vulgaris Hildenborough using iTRAQ proteomics. *Briefings in Functional Genomics & Proteomics*, **2006**, 5, 133-43		48
107	Salt stress in Desulfovibrio vulgaris Hildenborough: an integrated genomics approach. *Journal of Bacteriology*, **2006**, 188, 4068-78	3.5	134
106	Initiator-independent and initiator-dependent rubber biosynthesis in Ficus elastica. *Archives of Biochemistry and Biophysics*, **2006**, 448, 13-22	4.1	15
105	A Salmonella-based, propionate-inducible, expression system for Salmonella enterica. *Gene*, **2006**, 377, 6-11	3.8	13
104	Effect of glucose or glycerol as the sole carbon source on gene expression from the Salmonella prpBCDE promoter in Escherichia coli. *Biotechnology Progress*, **2006**, 22, 1547-51	2.8	4
103	Combinatorial engineering of intergenic regions in operons tunes expression of multiple genes. *Nature Biotechnology*, **2006**, 24, 1027-32	44.5	434
102	Production of isoprenoid pharmaceuticals by engineered microbes. *Nature Chemical Biology*, **2006**, 2, 674-81	11.7	312
101	Designed divergent evolution of enzyme function. *Nature*, **2006**, 440, 1078-82	50.4	345
100	Production of the antimalarial drug precursor artemisinic acid in engineered yeast. *Nature*, **2006**, 440, 940-3	50.4	2071
99	Engineering cotton (+)-delta-cadinene synthase to an altered function: germacrene D-4-ol synthase. *Chemistry and Biology*, **2006**, 13, 91-8		72
98	Magnesium ion regulation of in vitro rubber biosynthesis by Parthenium argentatum Gray. *Phytochemistry*, **2006**, 67, 1621-8	4	15
97	Coenzyme Q10 production in recombinant Escherichia coli strains engineered with a heterologous decaprenyl diphosphate synthase gene and foreign mevalonate pathway. *Metabolic Engineering*, **2006**, 8, 406-16	9.7	69
96	Effect of Glucose or Glycerol as the Sole Carbon Source on Gene Expression from theSalmonella prpBCDEPromoter inEscherichia coli. *Biotechnology Progress*, **2006**, 22, 1547-1551	2.8	10
95	Regulation of rubber biosynthetic rate and molecular weight in Hevea brasiliensis by metal cofactor. *Biomacromolecules*, **2005**, 6, 279-89	6.9	28
94	Effects of the sequence and size of non-polar residues on self-assembly of amphiphilic peptides. *International Journal of Biological Macromolecules*, **2005**, 36, 232-40	7.9	43
93	Identification of genes affecting lycopene accumulation in Escherichia coli using a shot-gun method. *Biotechnology and Bioengineering*, **2005**, 91, 636-42	4.9	79
92	Optimization of DsRed production in Escherichia coli: effect of ribosome binding site sequestration on translation efficiency. *Biotechnology and Bioengineering*, **2005**, 92, 553-8	4.9	27

91	A propionate-inducible expression system for enteric bacteria. *Applied and Environmental Microbiology*, **2005**, 71, 6856-62	4.8	68
90	Catabolite repression of the propionate catabolic genes in Escherichia coli and Salmonella enterica: evidence for involvement of the cyclic AMP receptor protein. *Journal of Bacteriology*, **2005**, 187, 2793-800	3.5	45
89	Experimental and Theoretical Considerations of P1-plasmid Replication and Segregation During the E. coli Cell Cycle. *Journal of Biological Sciences*, **2005**, 5, 222-229	0.4	
88	Errata to A Microfabricated Electrochemical Oxygen Generator for High-Density Cell Culture Arrays *Journal of Microelectromechanical Systems*, **2004**, 13, 386-386	2.5	
87	Uranyl precipitation by Pseudomonas aeruginosa via controlled polyphosphate metabolism. *Applied and Environmental Microbiology*, **2004**, 70, 7404-12	4.8	97
86	Microbioreactor arrays with parametric control for high-throughput experimentation. *Biotechnology and Bioengineering*, **2004**, 85, 376-81	4.9	90
85	Mono and diterpene production in Escherichia coli. *Biotechnology and Bioengineering*, **2004**, 87, 200-12	4.9	129
84	Dibenzothiophene biodesulfurization pathway improvement using diagnostic GFP fusions. *Biotechnology and Bioengineering*, **2004**, 88, 94-9	4.9	26
83	Microbioreactor arrays with parametric control for high-throughput experimentation. *Biotechnology and Bioengineering*, **2004**, 86, 485-90	4.9	20
82	Gene Cloning, purification, and characterization of a phosphodiesterase from Delftia acidovorans. *Applied and Environmental Microbiology*, **2003**, 69, 504-8	4.8	26
81	GENETIC AND BIOCHEMICAL MARKERS FOR ENHANCED BIOLOGICAL PHOSPHORUS REMOVAL. *Proceedings of the Water Environment Federation*, **2003**, 2003, 529-549		
80	Process design for microbial plastic factories: metabolic engineering of polyhydroxyalkanoates. *Current Opinion in Biotechnology*, **2003**, 14, 475-83	11.4	174
79	Laser spectroscopic studies of interactions of UVI with bacterial phosphate species. *Chemistry - A European Journal*, **2003**, 9, 2812-8	4.8	24
78	Activation and inhibition of rubber transferases by metal cofactors and pyrophosphate substrates. *Phytochemistry*, **2003**, 64, 123-34	4	33
77	Engineering a mevalonate pathway in Escherichia coli for production of terpenoids. *Nature Biotechnology*, **2003**, 21, 796-802	44.5	1293
76	Metabolic engineering for drug discovery and development. *Nature Reviews Drug Discovery*, **2003**, 2, 1019-25	64.1	147
75	Self-Assembly of a Designed Protein Polymer into Sheet Fibrils and Responsive Gels. *Macromolecules*, **2003**, 36, 2932-2938	5.5	50
74	A microfabricated electrochemical oxygen generator for high-density cell culture arrays. *Journal of Microelectromechanical Systems*, **2003**, 12, 590-599	2.5	31

73	A three-dimensional, stochastic simulation of biofilm growth and transport-related factors that affect structure. *Microbiology (United Kingdom)*, **2003**, 149, 2859-2871	2.9	51
72	Effect of copy number and mRNA processing and stabilization on transcript and protein levels from an engineered dual-gene operon. *Biotechnology and Bioengineering*, **2002**, 78, 412-24	4.9	23
71	Metabolic engineering of Pseudomonas putida for the utilization of parathion as a carbon and energy source. *Biotechnology and Bioengineering*, **2002**, 78, 715-21	4.9	41
70	Effect of gene location, mRNA secondary structures, and RNase sites on expression of two genes in an engineered operon. *Biotechnology and Bioengineering*, **2002**, 80, 762-76	4.9	51
69	Amplification of HMG-CoA reductase production enhances carotenoid accumulation in Neurospora crassa. *Metabolic Engineering*, **2002**, 4, 193-201	9.7	56
68	Nickel accumulation and nickel oxalate precipitation by Aspergillus niger. *Applied Microbiology and Biotechnology*, **2002**, 59, 382-8	5.7	75
67	Modulation of gene expression from the arabinose-inducible araBAD promoter. *Journal of Industrial Microbiology and Biotechnology*, **2002**, 29, 34-7	4.2	37
66	Effect of lacY expression on homogeneity of induction from the P(tac) and P(trc) promoters by natural and synthetic inducers. *Biotechnology Progress*, **2002**, 18, 672-4	2.8	55
65	A deep-sea hydrothermal vent isolate, Pseudomonas aeruginosa CW961, requires thiosulfate for Cd tolerance and precipitation. *Biotechnology Letters*, **2002**, 24, 637-641	3	19
64	Metabolic engineering of a novel propionate-independent pathway for the production of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) in recombinant Salmonella enterica serovar typhimurium. *Applied and Environmental Microbiology*, **2002**, 68, 3848-54	4.8	84
63	Chlorxanthomycin, a fluorescent, chlorinated, pentacyclic pyrene from a Bacillus sp. *Applied and Environmental Microbiology*, **2002**, 68, 4095-101	4.8	9
62	Polyphosphate kinase from activated sludge performing enhanced biological phosphorus removal. *Applied and Environmental Microbiology*, **2002**, 68, 4971-8	4.8	100
61	Improved assembly of multimeric genes for the biosynthetic production of protein polymers. *Biomacromolecules*, **2002**, 3, 874-9	6.9	30
60	Aerobic sulfide production and cadmium precipitation by Escherichia coli expressing the Treponema denticola cysteine desulfhydrase gene. *Applied Microbiology and Biotechnology*, **2001**, 56, 425-30	5.7	51
59	Effects of transcription induction homogeneity and transcript stability on expression of two genes in a constructed operon. *Applied Microbiology and Biotechnology*, **2001**, 57, 689-96	5.7	4
58	Metabolic engineering of the nonmevalonate isopentenyl diphosphate synthesis pathway in Escherichia coli enhances lycopene production. *Biotechnology and Bioengineering*, **2001**, 72, 408-15	4.9	255
57	Controlling the metabolic flux through the carotenoid pathway using directed mRNA processing and stabilization. *Metabolic Engineering*, **2001**, 3, 313-21	9.7	49
56	Analysis of an engineered sulfate reduction pathway and cadmium precipitation on the cell surface. *Biotechnology and Bioengineering*, **2001**, 75, 285-91	4.9	13

55	The in vivo synthesis of plant sesquiterpenes by Escherichia coli. *Biotechnology and Bioengineering*, **2001**, 75, 497-503	4.9	87
54	Uranyl precipitation by biomass from an enhanced biological phosphorus removal reactor. *Biodegradation*, **2001**, 12, 401-10	4.1	26
53	Development of engineered biofilms on poly- L-lysine patterned surfaces. *Biotechnology Letters*, **2001**, 23, 1235-1241	3	22
52	Analysis of biofilm structure and gene expression using fluorescence dual labeling. *Biotechnology Progress*, **2001**, 17, 1180-2	2.8	7
51	Homogeneous expression of the P(BAD) promoter in Escherichia coli by constitutive expression of the low-affinity high-capacity AraE transporter. *Microbiology (United Kingdom)*, **2001**, 147, 3241-7	2.9	234
50	Biodesulfurization of dibenzothiophene in Escherichia coli is enhanced by expression of a Vibrio harveyi oxidoreductase gene. *Biotechnology and Bioengineering*, **2000**, 67, 72-79	4.9	62
49	Low-copy plasmids can perform as well as or better than high-copy plasmids for metabolic engineering of bacteria. *Metabolic Engineering*, **2000**, 2, 328-38	9.7	213
48	Cadmium, lead, and zinc removal by expression of the thiosulfate reductase gene from Salmonella typhimurium in Escherichia coli. *Biotechnology Letters*, **2000**, 22, 1331-1335	3	16
47	Commensal interactions in a dual-species biofilm exposed to mixed organic compounds. *Applied and Environmental Microbiology*, **2000**, 66, 4481-5	4.8	75
46	Regulatable arabinose-inducible gene expression system with consistent control in all cells of a culture. *Journal of Bacteriology*, **2000**, 182, 7029-34	3.5	140
45	Polyphosphate binding and chain length recognition of Escherichia coli exopolyphosphatase. *Journal of Biological Chemistry*, **2000**, 275, 33814-9	5.4	29
44	Coordinated, differential expression of two genes through directed mRNA cleavage and stabilization by secondary structures. *Applied and Environmental Microbiology*, **2000**, 66, 5399-405	4.8	66
43	Metabolic engineering of an aerobic sulfate reduction pathway and its application to precipitation of cadmium on the cell surface. *Applied and Environmental Microbiology*, **2000**, 66, 4497-502	4.8	67
42	Engineering hydrogen sulfide production and cadmium removal by expression of the thiosulfate reductase gene (phsABC) from Salmonella enterica serovar typhimurium in Escherichia coli. *Applied and Environmental Microbiology*, **2000**, 66, 3939-44	4.8	42
41	The effect of monovalent ions on polyphosphate binding to Escherichia coli exopolyphosphatase. *Biochemical and Biophysical Research Communications*, **2000**, 274, 236-41	3.4	6
40	Biodesulfurization of dibenzothiophene in Escherichia coli is enhanced by expression of a Vibrio harveyi oxidoreductase gene **2000**, 67, 72		1
39	Control of polyphosphate metabolism in genetically engineered Escherichia coli. *Enzyme and Microbial Technology*, **1999**, 24, 21-25	3.8	5
38	Library of synthetic 5' secondary structures to manipulate mRNA stability in Escherichia coli. *Biotechnology Progress*, **1999**, 15, 58-64	2.8	76

37	Effect of polyphosphate metabolism on the Escherichia coli phosphate-starvation response. *Biotechnology Progress*, **1999**, 15, 587-93	2.8	10
36	Gene-expression tools for the metabolic engineering of bacteria. *Trends in Biotechnology*, **1999**, 17, 452-60	9.1	90
35	Investigating autocatalytic gene expression systems through mechanistic modeling. *Journal of Theoretical Biology*, **1999**, 201, 25-36	2.3	41
34	Reductive dechlorination of chlorinated ethene DNAPLs by a culture enriched from contaminated groundwater. *Biotechnology and Bioengineering*, **1999**, 62, 160-5	4.9	41
33	Development and validation of a flux-based stoichiometric model for enhanced biological phosphorus removal metabolism. *Water Research*, **1999**, 33, 462-476	12.5	35
32	Ultrasonic flexural-plate-wave sensor for detecting the concentration of settling E. coli W3110 cells. *Analytical Chemistry*, **1999**, 71, 3622-5	7.8	6
31	Cycle-specific replication of chromosomal and F-plasmid origins. *FEMS Microbiology Letters*, **1998**, 163, 217-22	2.9	8
30	A dynamic model of the Escherichia coli phosphate-starvation response. *Journal of Theoretical Biology*, **1998**, 190, 37-49	2.3	38
29	Construction and characterization of F plasmid-based expression vectors. *Biotechnology and Bioengineering*, **1998**, 59, 659-665	4.9	36
28	mRNA stability and plasmid copy number effects on gene expression from an inducible promoter system. *Biotechnology and Bioengineering*, **1998**, 59, 666-72	4.9	41
27	Optimization of polyphosphate degradation and phosphate secretion using hybrid metabolic pathways and engineered host strains. *Biotechnology and Bioengineering*, **1998**, 59, 754-61	4.9	6
26	Effect of Escherichia coli biomass composition on central metabolic fluxes predicted by a stoichiometric model. *Biotechnology and Bioengineering*, **1998**, 60, 230-8	4.9	83
25	Recombinant DNA techniques for bioremediation and environmentally-friendly synthesis. *Current Opinion in Biotechnology*, **1998**, 9, 135-40	11.4	27
24	Complete reductive dechlorination of trichloroethene by a groundwater microbial consortium. *Annals of the New York Academy of Sciences*, **1997**, 829, 97-102	6.5	2
23	Kinetics of BTEX degradation by a nitrate-reducing mixed culture. *Annals of the New York Academy of Sciences*, **1997**, 829, 135-41	6.5	5
22	Regulation of intracellular toxic metals and other cations by hydrolysis of polyphosphate. *Annals of the New York Academy of Sciences*, **1997**, 829, 242-9	6.5	77
21	Mathematical model of the lac operon: inducer exclusion, catabolite repression, and diauxic growth on glucose and lactose. *Biotechnology Progress*, **1997**, 13, 132-43	2.8	136
20	Controlling messenger RNA stability in bacteria: strategies for engineering gene expression. *Biotechnology Progress*, **1997**, 13, 699-708	2.8	67

19	Kinetics of toluene degradation by a nitrate-reducing bacterium isolated from a groundwater aquifer. *Biotechnology and Bioengineering*, **1997**, 55, 82-90	4.9	15
18	Engineering mRNA stability in E. coli by the addition of synthetic hairpins using a 5' cassette system. *Biotechnology and Bioengineering*, **1997**, 55, 577-80	4.9	30
17	Stoichiometric model of Escherichia coli metabolism: incorporation of growth-rate dependent biomass composition and mechanistic energy requirements. *Biotechnology and Bioengineering*, **1997**, 56, 398-421	4.9	247
16	Mechanistic modeling of prokaryotic mRNA decay. *Journal of Theoretical Biology*, **1997**, 189, 195-209	2.3	25
15	Modulation of the phosphate-starvation response in Escherichia coli by genetic manipulation of the polyphosphate pathways. *Biotechnology and Bioengineering*, **1996**, 51, 434-8	4.9	8
14	A Monte Carlo simulation of plasmid replication during the bacterial division cycle. *Biotechnology and Bioengineering*, **1996**, 52, 633-47	4.9	17
13	A Monte Carlo simulation of the Escherichia coli cell cycle. *Journal of Theoretical Biology*, **1995**, 176, 411-30	2.3	23
12	ColE1 plasmid replication: a simple kinetic description from a structured model. *Journal of Theoretical Biology*, **1989**, 141, 447-61	2.3	18
11	Massively parallel fitness profiling reveals multiple novel enzymes inPseudomonas putidalysine metabolism		1
10	Versatile polyketide biosynthesis platform for production of aromatic compounds in yeast		1
9	Rhodosporidium toruloides: A new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts		1
8	Genome-scale metabolic rewiring to achieve predictable titers rates and yield of a non-native product at scale		3
7	Enhanced production of taxadiene in Saccharomyces cerevisiae		1
6	An orthogonal and pH-tunable sensor-selector for muconic acid biosynthesis in yeast		1
5	Glutarate metabolism in Pseudomonas putida is regulated by two distinct glutarate sensing transcription factors		3
4	Evolution-guided engineering of small-molecule biosensors		3
3	Host engineering for improved valerolactam production in Pseudomonas putida		1
2	Structural mechanism of regioselectivity in an unusual bacterial acyl-CoA dehydrogenase		1

1 Predictive engineering and optimization of tryptophan metabolism in yeast through a combination of mechanistic and machine learning models 1