Kristala L J Prather

List of Publications by Year in Descending Order

81 papers	3,957 citations	31 h-index	62 g-index
90 ext. papers	4,774 ext. citations	8.8 avg, IF	6.18 L-index

#	Paper	IF	Citations
81	Optimization of the Isopentenol Utilization Pathway for Isoprenoid Synthesis in .. *Journal of Agricultural and Food Chemistry*, **2022**, 70, 3512-3520	5.7	1
80	Natural combinatorial genetics and prolific polyamine production enable siderophore diversification in Serratia plymuthica. *BMC Biology*, **2021**, 19, 46	7.3	0
79	Prospecting Biochemical Pathways to Implement Microbe-Based Production of the New-to-Nature Platform Chemical Levulinic Acid. *ACS Synthetic Biology*, **2021**, 10, 724-736	5.7	3
78	Transcription factor allosteric regulation through substrate coordination to zinc. *NAR Genomics and Bioinformatics*, **2021**, 3, lqab033	3.7	
77	Substrate-activated expression of a biosynthetic pathway in Escherichia coli. *Biotechnology Journal*, **2021**, e2000433	5.6	1
76	Rapid in vitro prototyping of O-methyltransferases for pathway applications in Escherichia coli. *Cell Chemical Biology*, **2021**, 28, 876-886.e4	8.2	1
75	Dynamic Control of Metabolism. *Annual Review of Chemical and Biomolecular Engineering*, **2021**, 12, 519-541	8.1	6
74	Effective use of biosensors for high-throughput library screening for metabolite production. *Journal of Industrial Microbiology and Biotechnology*, **2021**,	4.2	1
73	Sequence-based bioprospecting of myo-inositol oxygenase (Miox) reveals new homologues that increase glucaric acid production in Saccharomyces cerevisiae. *Enzyme and Microbial Technology*, **2020**, 140, 109623	3.8	1
72	Development of a Quorum-Sensing Based Circuit for Control of Coculture Population Composition in a Naringenin Production System. *ACS Synthetic Biology*, **2020**, 9, 590-597	5.7	33
71	Heterologous caffeic acid biosynthesis in Escherichia coli is affected by choice of tyrosine ammonia lyase and redox partners for bacterial Cytochrome P450. *Microbial Cell Factories*, **2020**, 19, 26	6.4	10
70	The importance and future of biochemical engineering. *Biotechnology and Bioengineering*, **2020**, 117, 2305-2318	4.9	7
69	Layered and multi-input autonomous dynamic control strategies for metabolic engineering. *Current Opinion in Biotechnology*, **2020**, 65, 156-162	11.4	4
68	Metabolic engineering strategies to overcome precursor limitations in isoprenoid biosynthesis. *Current Opinion in Biotechnology*, **2020**, 66, 171-178	11.4	11
67	Carbon catabolite repression relaxation in Escherichia coli: global and sugar-specific methods for glucose and secondary sugar co-utilization. *Current Opinion in Chemical Engineering*, **2020**, 30, 9-16	5.4	6
66	Production of D-Glyceric acid from D-Galacturonate in Escherichia coli. *Journal of Industrial Microbiology and Biotechnology*, **2020**, 47, 1075-1081	4.2	3
65	Development of a Vanillate Biosensor for the Vanillin Biosynthesis Pathway in. *ACS Synthetic Biology*, **2019**, 8, 1958-1967	5.7	24

64	Engineered microbial biofuel production and recovery under supercritical carbon dioxide. *Nature Communications*, **2019**, 10, 587	17.4	25
63	Development of an autonomous and bifunctional quorum-sensing circuit for metabolic flux control in engineered. *Proceedings of the National Academy of Sciences of the United States of America*, **2019** , 116, 25562-25568	11.5	58
62	Chemistry as biology by design. *Microbial Biotechnology*, **2019**, 12, 30-31	6.3	5
61	Downscale fermentation for xylooligosaccharides production by recombinant Bacillus subtilis 3610. *Carbohydrate Polymers*, **2019**, 205, 176-183	10.3	17
60	Layered dynamic regulation for improving metabolic pathway productivity in. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 2964-2969	11.5	111
59	Synthetic biology strategies for improving microbial synthesis of "green" biopolymers. *Journal of Biological Chemistry*, **2018**, 293, 5053-5061	5.4	39
58	A Robust CRISPR Interference Gene Repression System in Pseudomonas. *Journal of Bacteriology*, **2018**, 200,	3.5	59
57	Extraction Rate and Energy Efficiency of Supercritical Carbon Dioxide Recovery of Higher Alcohols from Dilute Aqueous Solution. *Energy Technology*, **2018**, 6, 683-693	3.5	9
56	Single-step production of arabino-xylooligosaccharides by recombinant Bacillus subtilis 3610 cultivated in brewersTspent grain. *Carbohydrate Polymers*, **2018**, 199, 546-554	10.3	21
55	Rational design of thiolase substrate specificity for metabolic engineering applications. *Biotechnology and Bioengineering*, **2018**, 115, 2167-2182	4.9	9
54	Isolation, Development, and Genomic Analysis of SR7 for Growth and Metabolite Production Under Supercritical Carbon Dioxide. *Frontiers in Microbiology*, **2018**, 9, 2152	5.7	6
53	Scarless Cas9 Assisted Recombineering (no-SCAR) in Escherichia coli, an Easy-to-Use System for Genome Editing. *Current Protocols in Molecular Biology*, **2017**, 117, 31.8.1-31.8.20	2.9	23
52	Dynamic regulation of metabolic flux in engineered bacteria using a pathway-independent quorum-sensing circuit. *Nature Biotechnology*, **2017**, 35, 273-279	44.5	276
51	Hydroxycinnamic acids and curcumin production in engineered Escherichia coli using heat shock promoters. *Biochemical Engineering Journal*, **2017**, 125, 41-49	4.2	25
50	Dynamic pathway regulation: recent advances and methods of construction. *Current Opinion in Chemical Biology*, **2017**, 41, 28-35	9.7	62
49	Pathway towards renewable chemicals. *Nature Microbiology*, **2017**, 2, 1580-1581	26.6	1
48	Deregulation of S-adenosylmethionine biosynthesis and regeneration improves methylation in the E. coli de novo vanillin biosynthesis pathway. *Microbial Cell Factories*, **2016**, 15, 61	6.4	39
47	Improvement of DNA minicircle production by optimization of the secondary structure of the 5TUTR of ParA resolvase. *Applied Microbiology and Biotechnology*, **2016**, 100, 6725-6737	5.7	10

46	Controlling Central Carbon Metabolism for Improved Pathway Yields in Saccharomyces cerevisiae. *ACS Synthetic Biology*, **2016**, 5, 116-24	5.7	31
45	Coupling carboxylic acid reductase to inorganic pyrophosphatase enhances cell-free in vitro aldehyde biosynthesis. *Biochemical Engineering Journal*, **2016**, 109, 19-27	4.2	21
44	Modular and selective biosynthesis of gasoline-range alkanes. *Metabolic Engineering*, **2016**, 33, 28-40	9.7	64
43	Porting the synthetic D-glucaric acid pathway from Escherichia coli to Saccharomyces cerevisiae. *Biotechnology Journal*, **2016**, 11, 1201-8	5.6	27
42	Microbial engineering for aldehyde synthesis. *Applied and Environmental Microbiology*, **2015**, 81, 1892-901	4.8	91
41	Tackling codon usage bias for heterologous expression in Rhodobacter sphaeroides by supplementation of rare tRNAs. *Enzyme and Microbial Technology*, **2015**, 72, 25-34	3.8	3
40	Dynamic metabolic engineering: New strategies for developing responsive cell factories. *Biotechnology Journal*, **2015**, 10, 1360-9	5.6	125
39	Improvement of glucaric acid production in via dynamic control of metabolic fluxes. *Metabolic Engineering Communications*, **2015**, 2, 109-116	6.5	34
38	Screening and modular design for metabolic pathway optimization. *Current Opinion in Biotechnology*, **2015**, 36, 189-98	11.4	21
37	Biological synthesis unbounded?. *Nature Biotechnology*, **2015**, 33, 1148-9	44.5	8
36	Improving product yields on D-glucose in Escherichia coli via knockout of pgi and zwf and feeding of supplemental carbon sources. *Biotechnology and Bioengineering*, **2015**, 112, 579-87	4.9	24
35	In situ NIR spectroscopy monitoring of plasmid production processes: effect of producing strain, medium composition and the cultivation strategy. *Journal of Chemical Technology and Biotechnology*, **2015**, 90, 255-261	3.5	16
34	Towards effective non-viral gene delivery vector. *Biotechnology and Genetic Engineering Reviews*, **2015**, 31, 82-107	4.1	21
33	The no-SCAR (Scarless Cas9 Assisted Recombineering) system for genome editing in Escherichia coli. *Scientific Reports*, **2015**, 5, 15096	4.9	130
32	Heterologous production of caffeic acid from tyrosine in Escherichia coli. *Enzyme and Microbial Technology*, **2015**, 71, 36-44	3.8	47
31	Dynamic knockdown of E. coli central metabolism for redirecting fluxes of primary metabolites. *Metabolic Engineering*, **2015**, 28, 104-113	9.7	104
30	Production of curcuminoids from tyrosine by a metabolically engineered Escherichia coli using caffeic acid as an intermediate. *Biotechnology Journal*, **2015**, 10, 599-609	5.6	35
29	Engineering synergy in biotechnology. *Nature Chemical Biology*, **2014**, 10, 319-22	11.7	126

28	Functional screening and in vitro analysis reveal thioesterases with enhanced substrate specificity profiles that improve short-chain fatty acid production in Escherichia coli. *Applied and Environmental Microbiology*, **2014**, 80, 1042-50	4.8	35
27	Rate-limiting step analysis of the microbial desulfurization of dibenzothiophene in a model oil system. *Biotechnology and Bioengineering*, **2014**, 111, 876-84	4.9	20
26	Plasmid DNA production with Escherichia coli GALG20, a pgi-gene knockout strain: fermentation strategies and impact on downstream processing. *Journal of Biotechnology*, **2014**, 186, 119-27	3.7	19
25	Engineering E. coli for the biosynthesis of 3-hydroxy-γ-butyrolactone (3HBL) and 3,4-dihydroxybutyric acid (3,4-DHBA) as value-added chemicals from glucose as a sole carbon source. *Metabolic Engineering*, **2014**, 25, 72-81	9.7	31
24	Retro-biosynthetic screening of a modular pathway design achieves selective route for microbial synthesis of 4-methyl-pentanol. *Nature Communications*, **2014**, 5, 5031	17.4	43
23	Engineering of Escherichia coli strains for plasmid biopharmaceutical production: scale-up challenges. *Vaccine*, **2014**, 32, 2847-50	4.1	9
22	Synthesis and accumulation of aromatic aldehydes in an engineered strain of Escherichia coli. *Journal of the American Chemical Society*, **2014**, 136, 11644-54	16.4	169
21	On the dual effect of glucose during production of pBAD/AraC-based minicircles. *Vaccine*, **2014**, 32, 2843-46	4.1	12
20	Bioprospecting in the genomic age. *Advances in Applied Microbiology*, **2014**, 87, 111-46	4.9	8
19	Improving D-glucaric acid production from myo-inositol in E. coli by increasing MIOX stability and myo-inositol transport. *Metabolic Engineering*, **2014**, 22, 22-31	9.7	58
18	Tuning primary metabolism for heterologous pathway productivity. *ACS Synthetic Biology*, **2013**, 2, 126-35	5.7	24
17	A platform pathway for production of 3-hydroxyacids provides a biosynthetic route to 3-hydroxy-γ-butyrolactone. *Nature Communications*, **2013**, 4, 1414	17.4	67
16	De novo creation of MG1655-derived E. coli strains specifically designed for plasmid DNA production. *Applied Microbiology and Biotechnology*, **2013**, 97, 611-20	5.7	30
15	Synthetic biology devices as tools for metabolic engineering. *Biochemical Engineering Journal*, **2012**, 65, 82-89	4.2	19
14	A dynamic metabolite valve for the control of central carbon metabolism. *Metabolic Engineering*, **2012**, 14, 661-71	9.7	87
13	Development of new plasmid DNA vaccine vectors with R1-based replicons. *Microbial Cell Factories*, **2012**, 11, 107	6.4	11
12	Rational engineering of Escherichia coli strains for plasmid biopharmaceutical manufacturing. *Biotechnology Journal*, **2012**, 7, 251-61	5.6	31
11	Fed-batch microbioreactor platform for scale down and analysis of a plasmid DNA production process. *Biotechnology and Bioengineering*, **2012**, 109, 1976-86	4.9	20

10	Flipase-mediated cassette exchange in Sf9 insect cells for stable gene expression. *Biotechnology and Bioengineering*, **2012**, 109, 2836-44	4.9	28
9	Controlled biosynthesis of odd-chain fuels and chemicals via engineered modular metabolic pathways. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 17925-30	11.5	88
8	The zero-sum game of pathway optimization: emerging paradigms for tuning gene expression. *Biotechnology Journal*, **2011**, 6, 1064-70	5.6	21
7	Biosynthesis of chiral 3-hydroxyvalerate from single propionate-unrelated carbon sources in metabolically engineered E. coli. *Microbial Cell Factories*, **2010**, 9, 96	6.4	47
6	Metabolic engineering of acetoin and meso-2, 3-butanediol biosynthesis in E. coli. *Biotechnology Journal*, **2010**, 5, 274-84	5.6	89
5	Engineering enzyme specificity using computational design of a defined-sequence library. *Chemistry and Biology*, **2010**, 17, 1306-15		44
4	Predicting the adsorption of second generation biofuels by polymeric resins with applications for in situ product recovery (ISPR). *Bioresource Technology*, **2010**, 101, 2762-9	11	42
3	Engineering of bacterial strains and vectors for the production of plasmid DNA. *Applied Microbiology and Biotechnology*, **2009**, 82, 805-13	5.7	44
2	Synthetic protein scaffolds provide modular control over metabolic flux. *Nature Biotechnology*, **2009**, 27, 753-9	44.5	920
1	Development of a vanillate biosensor for the vanillin biosynthesis pathway in E. coli		2