

Kristala L J Prather

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Synthetic protein scaffolds provide modular control over metabolic flux. <i>Nature Biotechnology</i> , 2009 , 27, 753-9	44.5	920
80	Dynamic regulation of metabolic flux in engineered bacteria using a pathway-independent quorum-sensing circuit. <i>Nature Biotechnology</i> , 2017 , 35, 273-279	44.5	276
79	Synthesis and accumulation of aromatic aldehydes in an engineered strain of Escherichia coli. <i>Journal of the American Chemical Society</i> , 2014 , 136, 11644-54	16.4	169
78	The no-SCAR (Scarless Cas9 Assisted Recombineering) system for genome editing in Escherichia coli. <i>Scientific Reports</i> , 2015 , 5, 15096	4.9	130
77	Engineering synergy in biotechnology. <i>Nature Chemical Biology</i> , 2014 , 10, 319-22	11.7	126
76	Dynamic metabolic engineering: New strategies for developing responsive cell factories. <i>Biotechnology Journal</i> , 2015 , 10, 1360-9	5.6	125
75	Layered dynamic regulation for improving metabolic pathway productivity in. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 2964-2969	11.5	111
74	Dynamic knockdown of E. coli central metabolism for redirecting fluxes of primary metabolites. <i>Metabolic Engineering</i> , 2015 , 28, 104-113	9.7	104
73	Microbial engineering for aldehyde synthesis. <i>Applied and Environmental Microbiology</i> , 2015 , 81, 1892-901	4.8	91
72	Metabolic engineering of acetoin and meso-2, 3-butanediol biosynthesis in E. coli. <i>Biotechnology Journal</i> , 2010 , 5, 274-84	5.6	89
71	Controlled biosynthesis of odd-chain fuels and chemicals via engineered modular metabolic pathways. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 17925-30	11.5	88
70	A dynamic metabolite valve for the control of central carbon metabolism. <i>Metabolic Engineering</i> , 2012 , 14, 661-71	9.7	87
69	A platform pathway for production of 3-hydroxyacids provides a biosynthetic route to 3-hydroxy-Ebutyrolactone. <i>Nature Communications</i> , 2013 , 4, 1414	17.4	67
68	Modular and selective biosynthesis of gasoline-range alkanes. <i>Metabolic Engineering</i> , 2016 , 33, 28-40	9.7	64
67	Dynamic pathway regulation: recent advances and methods of construction. <i>Current Opinion in Chemical Biology</i> , 2017 , 41, 28-35	9.7	62
66	A Robust CRISPR Interference Gene Repression System in Pseudomonas. <i>Journal of Bacteriology</i> , 2018 , 200,	3.5	59
65	Improving D-glucaric acid production from myo-inositol in E. coli by increasing MIOX stability and myo-inositol transport. <i>Metabolic Engineering</i> , 2014 , 22, 22-31	9.7	58

64	Development of an autonomous and bifunctional quorum-sensing circuit for metabolic flux control in engineered. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 25562-25568	11.5	58
63	Heterologous production of caffeic acid from tyrosine in <i>Escherichia coli</i> . <i>Enzyme and Microbial Technology</i> , 2015 , 71, 36-44	3.8	47
62	Biosynthesis of chiral 3-hydroxyvalerate from single propionate-unrelated carbon sources in metabolically engineered <i>E. coli</i> . <i>Microbial Cell Factories</i> , 2010 , 9, 96	6.4	47
61	Engineering of bacterial strains and vectors for the production of plasmid DNA. <i>Applied Microbiology and Biotechnology</i> , 2009 , 82, 805-13	5.7	44
60	Engineering enzyme specificity using computational design of a defined-sequence library. <i>Chemistry and Biology</i> , 2010 , 17, 1306-15		44
59	Retro-biosynthetic screening of a modular pathway design achieves selective route for microbial synthesis of 4-methyl-pentanol. <i>Nature Communications</i> , 2014 , 5, 5031	17.4	43
58	Predicting the adsorption of second generation biofuels by polymeric resins with applications for in situ product recovery (ISPR). <i>Bioresource Technology</i> , 2010 , 101, 2762-9	11	42
57	Synthetic biology strategies for improving microbial synthesis of "green" biopolymers. <i>Journal of Biological Chemistry</i> , 2018 , 293, 5053-5061	5.4	39
56	Deregulation of S-adenosylmethionine biosynthesis and regeneration improves methylation in the <i>E. coli</i> de novo vanillin biosynthesis pathway. <i>Microbial Cell Factories</i> , 2016 , 15, 61	6.4	39
55	Functional screening and in vitro analysis reveal thioesterases with enhanced substrate specificity profiles that improve short-chain fatty acid production in <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2014 , 80, 1042-50	4.8	35
54	Production of curcuminoids from tyrosine by a metabolically engineered <i>Escherichia coli</i> using caffeic acid as an intermediate. <i>Biotechnology Journal</i> , 2015 , 10, 599-609	5.6	35
53	Improvement of glucaric acid production in via dynamic control of metabolic fluxes. <i>Metabolic Engineering Communications</i> , 2015 , 2, 109-116	6.5	34
52	Development of a Quorum-Sensing Based Circuit for Control of Coculture Population Composition in a Naringenin Production System. <i>ACS Synthetic Biology</i> , 2020 , 9, 590-597	5.7	33
51	Controlling Central Carbon Metabolism for Improved Pathway Yields in <i>Saccharomyces cerevisiae</i> . <i>ACS Synthetic Biology</i> , 2016 , 5, 116-24	5.7	31
50	Engineering <i>E. coli</i> for the biosynthesis of 3-hydroxy- β -butyrolactone (3HBL) and 3,4-dihydroxybutyric acid (3,4-DHBA) as value-added chemicals from glucose as a sole carbon source. <i>Metabolic Engineering</i> , 2014 , 25, 72-81	9.7	31
49	Rational engineering of <i>Escherichia coli</i> strains for plasmid biopharmaceutical manufacturing. <i>Biotechnology Journal</i> , 2012 , 7, 251-61	5.6	31
48	De novo creation of MG1655-derived <i>E. coli</i> strains specifically designed for plasmid DNA production. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 611-20	5.7	30
47	Flipase-mediated cassette exchange in Sf9 insect cells for stable gene expression. <i>Biotechnology and Bioengineering</i> , 2012 , 109, 2836-44	4.9	28

46	Porting the synthetic D-glucaric acid pathway from Escherichia coli to Saccharomyces cerevisiae. <i>Biotechnology Journal</i> , 2016 , 11, 1201-8	5.6	27
45	Hydroxycinnamic acids and curcumin production in engineered Escherichia coli using heat shock promoters. <i>Biochemical Engineering Journal</i> , 2017 , 125, 41-49	4.2	25
44	Engineered microbial biofuel production and recovery under supercritical carbon dioxide. <i>Nature Communications</i> , 2019 , 10, 587	17.4	25
43	Development of a Vanillate Biosensor for the Vanillin Biosynthesis Pathway in. <i>ACS Synthetic Biology</i> , 2019 , 8, 1958-1967	5.7	24
42	Improving product yields on D-glucose in Escherichia coli via knockout of pgi and zwf and feeding of supplemental carbon sources. <i>Biotechnology and Bioengineering</i> , 2015 , 112, 579-87	4.9	24
41	Tuning primary metabolism for heterologous pathway productivity. <i>ACS Synthetic Biology</i> , 2013 , 2, 126-357	5.7	24
40	Scarless Cas9 Assisted Recombineering (no-SCAR) in Escherichia coli, an Easy-to-Use System for Genome Editing. <i>Current Protocols in Molecular Biology</i> , 2017 , 117, 31.8.1-31.8.20	2.9	23
39	Screening and modular design for metabolic pathway optimization. <i>Current Opinion in Biotechnology</i> , 2015 , 36, 189-98	11.4	21
38	Coupling carboxylic acid reductase to inorganic pyrophosphatase enhances cell-free in vitro aldehyde biosynthesis. <i>Biochemical Engineering Journal</i> , 2016 , 109, 19-27	4.2	21
37	Single-step production of arabino-xylooligosaccharides by recombinant Bacillus subtilis 3610 cultivated in brewers spent grain. <i>Carbohydrate Polymers</i> , 2018 , 199, 546-554	10.3	21
36	Towards effective non-viral gene delivery vector. <i>Biotechnology and Genetic Engineering Reviews</i> , 2015 , 31, 82-107	4.1	21
35	The zero-sum game of pathway optimization: emerging paradigms for tuning gene expression. <i>Biotechnology Journal</i> , 2011 , 6, 1064-70	5.6	21
34	Rate-limiting step analysis of the microbial desulfurization of dibenzothiophene in a model oil system. <i>Biotechnology and Bioengineering</i> , 2014 , 111, 876-84	4.9	20
33	Fed-batch microbioreactor platform for scale down and analysis of a plasmid DNA production process. <i>Biotechnology and Bioengineering</i> , 2012 , 109, 1976-86	4.9	20
32	Plasmid DNA production with Escherichia coli GALG20, a pgi-gene knockout strain: fermentation strategies and impact on downstream processing. <i>Journal of Biotechnology</i> , 2014 , 186, 119-27	3.7	19
31	Synthetic biology devices as tools for metabolic engineering. <i>Biochemical Engineering Journal</i> , 2012 , 65, 82-89	4.2	19
30	Downscale fermentation for xylooligosaccharides production by recombinant Bacillus subtilis 3610. <i>Carbohydrate Polymers</i> , 2019 , 205, 176-183	10.3	17
29	In situ NIR spectroscopy monitoring of plasmid production processes: effect of producing strain, medium composition and the cultivation strategy. <i>Journal of Chemical Technology and Biotechnology</i> , 2015 , 90, 255-261	3.5	16

28	On the dual effect of glucose during production of pBAD/AraC-based minicircles. <i>Vaccine</i> , 2014 , 32, 2843-6	4.6	12
27	Development of new plasmid DNA vaccine vectors with R1-based replicons. <i>Microbial Cell Factories</i> , 2012 , 11, 107	6.4	11
26	Metabolic engineering strategies to overcome precursor limitations in isoprenoid biosynthesis. <i>Current Opinion in Biotechnology</i> , 2020 , 66, 171-178	11.4	11
25	Heterologous caffeic acid biosynthesis in Escherichia coli is affected by choice of tyrosine ammonia lyase and redox partners for bacterial Cytochrome P450. <i>Microbial Cell Factories</i> , 2020 , 19, 26	6.4	10
24	Improvement of DNA minicircle production by optimization of the secondary structure of the 5'UTR of ParA resolvase. <i>Applied Microbiology and Biotechnology</i> , 2016 , 100, 6725-6737	5.7	10
23	Extraction Rate and Energy Efficiency of Supercritical Carbon Dioxide Recovery of Higher Alcohols from Dilute Aqueous Solution. <i>Energy Technology</i> , 2018 , 6, 683-693	3.5	9
22	Rational design of thiolase substrate specificity for metabolic engineering applications. <i>Biotechnology and Bioengineering</i> , 2018 , 115, 2167-2182	4.9	9
21	Engineering of Escherichia coli strains for plasmid biopharmaceutical production: scale-up challenges. <i>Vaccine</i> , 2014 , 32, 2847-50	4.1	9
20	Biological synthesis unbounded?. <i>Nature Biotechnology</i> , 2015 , 33, 1148-9	44.5	8
19	Bioprospecting in the genomic age. <i>Advances in Applied Microbiology</i> , 2014 , 87, 111-46	4.9	8
18	The importance and future of biochemical engineering. <i>Biotechnology and Bioengineering</i> , 2020 , 117, 2305-2318	4.9	7
17	Carbon catabolite repression relaxation in Escherichia coli: global and sugar-specific methods for glucose and secondary sugar co-utilization. <i>Current Opinion in Chemical Engineering</i> , 2020 , 30, 9-16	5.4	6
16	Dynamic Control of Metabolism. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2021 , 12, 519-541	8.1	6
15	Isolation, Development, and Genomic Analysis of SR7 for Growth and Metabolite Production Under Supercritical Carbon Dioxide. <i>Frontiers in Microbiology</i> , 2018 , 9, 2152	5.7	6
14	Chemistry as biology by design. <i>Microbial Biotechnology</i> , 2019 , 12, 30-31	6.3	5
13	Layered and multi-input autonomous dynamic control strategies for metabolic engineering. <i>Current Opinion in Biotechnology</i> , 2020 , 65, 156-162	11.4	4
12	Tackling codon usage bias for heterologous expression in Rhodobacter sphaeroides by supplementation of rare tRNAs. <i>Enzyme and Microbial Technology</i> , 2015 , 72, 25-34	3.8	3
11	Production of D-Glyceric acid from D-Galacturonate in Escherichia coli. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2020 , 47, 1075-1081	4.2	3

10	Prospecting Biochemical Pathways to Implement Microbe-Based Production of the New-to-Nature Platform Chemical Levulinic Acid. <i>ACS Synthetic Biology</i> , 2021 , 10, 724-736	5.7	3
9	Development of a vanillate biosensor for the vanillin biosynthesis pathway in E. coli		2
8	Sequence-based bioprospecting of myo-inositol oxygenase (Miox) reveals new homologues that increase glucaric acid production in <i>Saccharomyces cerevisiae</i> . <i>Enzyme and Microbial Technology</i> , 2020 , 140, 109623	3.8	1
7	Pathway towards renewable chemicals. <i>Nature Microbiology</i> , 2017 , 2, 1580-1581	26.6	1
6	Substrate-activated expression of a biosynthetic pathway in <i>Escherichia coli</i> . <i>Biotechnology Journal</i> , 2021 , e2000433	5.6	1
5	Rapid in vitro prototyping of O-methyltransferases for pathway applications in <i>Escherichia coli</i> . <i>Cell Chemical Biology</i> , 2021 , 28, 876-886.e4	8.2	1
4	Effective use of biosensors for high-throughput library screening for metabolite production. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2021 ,	4.2	1
3	Optimization of the Isopentenol Utilization Pathway for Isoprenoid Synthesis in .. <i>Journal of Agricultural and Food Chemistry</i> , 2022 , 70, 3512-3520	5.7	1
2	Natural combinatorial genetics and prolific polyamine production enable siderophore diversification in <i>Serratia plymuthica</i> . <i>BMC Biology</i> , 2021 , 19, 46	7.3	0
1	Transcription factor allosteric regulation through substrate coordination to zinc. <i>NAR Genomics and Bioinformatics</i> , 2021 , 3, lqab033	3.7	