Brian F Pfleger

List of Publications by Year
in descending order

92 papers	5,865 citations	87888 38 h-index	79698 73 g-index
101 all docs	101 docs citations	101 times ranked	6108 citing authors

#	Article	IF	Citations
1	Nonenzymatic Sugar Production from Biomass Using Biomass-Derived Î3-Valerolactone. Science, 2014, 343, 277-280.	12.6	607
2	Combinatorial engineering of intergenic regions in operons tunes expression of multiple genes. Nature Biotechnology, 2006, 24, 1027-1032.	17.5	492
3	Common principles and best practices for engineering microbiomes. Nature Reviews Microbiology, 2019, 17, 725-741.	28.6	324
4	A process for microbial hydrocarbon synthesis: Overproduction of fatty acids in <i>Escherichia coli</i> and catalytic conversion to alkanes. Biotechnology and Bioengineering, 2010, 106, 193-202.	3.3	223
5	Impact of synthetic biology and metabolic engineering on industrial production of fine chemicals. Biotechnology Advances, 2015, 33, 1395-1402.	11.7	195
6	Synthetic Biology Toolbox for Controlling Gene Expression in the Cyanobacterium <i>Synechococcus</i> sp. strain PCC 7002. ACS Synthetic Biology, 2015, 4, 595-603.	3.8	176
7	Engineering Escherichia coli to synthesize free fatty acids. Trends in Biotechnology, 2012, 30, 659-667.	9.3	174
8	Microbial production of fatty acid-derived fuels and chemicals. Current Opinion in Biotechnology, 2013, 24, 1044-1053.	6.6	174
9	Application of Functional Genomics to Pathway Optimization for Increased Isoprenoid Production. Applied and Environmental Microbiology, 2008, 74, 3229-3241.	3.1	171
10	Modular Synthase-Encoding Gene Involved in Î±-Olefin Biosynthesis in Synechococcus sp. Strain PCC 7002. Applied and Environmental Microbiology, 2011, 77, 4264-4267.	3.1	170
11	CRISPR interference as a titratable, trans-acting regulatory tool for metabolic engineering in the cyanobacterium Synechococcus sp. strain PCC 7002. Metabolic Engineering, 2016, 38, 170-179.	7.0	160
12	Metabolic engineering strategies for microbial synthesis of oleochemicals. Metabolic Engineering, 2015, 29, 1-11.	7.0	152
13	Membrane Stresses Induced by Overproduction of Free Fatty Acids in Escherichia coli. Applied and Environmental Microbiology, 2011, 77, 8114-8128.	3.1	135
14	Biosynthetic Analysis of the Petrobactin Siderophore Pathway from Bacillusanthracis. Journal of Bacteriology, 2007, 189, 1698-1710.	2.2	133
15	Identification of Transport Proteins Involved in Free Fatty Acid Efflux in Escherichia coli. Journal of Bacteriology, 2013, 195, 135-144.	2.2	116
16	Genetic tools for reliable gene expression and recombineering in <i>Pseudomonas putida</i>. Journal of Industrial Microbiology and Biotechnology, 2018, 45, 517-527.	3.0	108
17	Production of medium chain length fatty alcohols from glucose in Escherichia coli. Metabolic Engineering, 2013, 20, 177-186.	7.0	98
18	Directed Evolution of AraC for Improved Compatibility of Arabinose- and Lactose-Inducible Promoters. Applied and Environmental Microbiology, 2007, 73, 5711-5715.	3.1	97

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19	A metabolic pathway for catabolizing levulinic acid in bacteria. Nature Microbiology, 2017, 2, 1624-1634.	13.3	86
20	Efflux systems in bacteria and their metabolic engineering applications. Applied Microbiology and Biotechnology, 2015, 99, 9381-9393.	3.6	85
21	Characterization and Analysis of Early Enzymes for Petrobactin Biosynthesis in Bacillus anthracis. Biochemistry, 2007, 46, 4147-4157.	2.5	82
22	Microbial sensors for small molecules: Development of a mevalonate biosensor. Metabolic Engineering, 2007, 9, 30-38.	7.0	80
23	Revisiting metabolic engineering strategies for microbial synthesis of oleochemicals. Metabolic Engineering, 2020, 58, 35-46.	7.0	80
24	Computational Redesign of Acyl-ACP Thioesterase with Improved Selectivity toward Medium-Chain-Length Fatty Acids. ACS Catalysis, 2017, 7, 3837-3849.	11.2	77
25	Construction of new synthetic biology tools for the control of gene expression in the cyanobacterium <i>Synechococcus</i> sp. strain PCC 7002. Biotechnology and Bioengineering, 2016, 113, 424-432.	3.3	73
26	Transcription control engineering and applications in synthetic biology. Synthetic and Systems Biotechnology, 2017, 2, 176-191.	3.7	70
27	Modulating Membrane Composition Alters Free Fatty Acid Tolerance in Escherichia coli. PLoS ONE, 2013, 8, e54031.	2.5	68
28	An Organic Acid Based Counter Selection System for Cyanobacteria. PLoS ONE, 2013, 8, e76594.	2.5	62
29	Engineering Escherichia coli for production of C12â€“C14 polyhydroxyalkanoate from glucose. Metabolic Engineering, 2012, 14, 705-713.	7.0	61
30	Highly Active C₈-Acyl-ACP Thioesterase Variant Isolated by a Synthetic Selection Strategy. ACS Synthetic Biology, 2018, 7, 2205-2215.	3.8	60
31	Structural and functional analysis of AsbF: Origin of the stealth 3,4-dihydroxybenzoic acid subunit for petrobactin biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 17133-17138.	7.1	58
32	RNA Sequencing Identifies New RNase III Cleavage Sites in <i>Escherichia coli</i> and Reveals Increased Regulation of mRNA. MBio, 2017, 8, .	4.1	56
33	Reassessing Escherichia coli as a cell factory for biofuel production. Current Opinion in Biotechnology, 2017, 45, 92-103.	6.6	53
34	Anaerobic production of medium-chain fatty alcohols via a Î²-reduction pathway. Metabolic Engineering, 2018, 48, 63-71.	7.0	53
35	Freshwater diatoms as a source of lipids for biofuels. Journal of Industrial Microbiology and Biotechnology, 2012, 39, 419-428.	3.0	51
36	Machine learning-guided acyl-ACP reductase engineering for improved in vivo fatty alcohol production. Nature Communications, 2021, 12, 5825.	12.8	50

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37	Synthetic biology strategies for synthesizing polyhydroxyalkanoates from unrelated carbon sources. Chemical Engineering Science, 2013, 103, 58-67.	3.8	48
38	A roadmap for the synthesis of separation networks for the recovery of bio-based chemicals: Matching biological and process feasibility. Biotechnology Advances, 2016, 34, 1362-1383.	11.7	43
39	Light-optimized growth of cyanobacterial cultures: Growth phases and productivity of biomass and secreted molecules in light-limited batch growth. Metabolic Engineering, 2018, 47, 230-242.	7.0	43
40	Artificial repressors for controlling gene expression in bacteria. Chemical Communications, 2013, 49, 4325-4327.	4.1	42
41	Engineering photosynthetic production of L-lysine. Metabolic Engineering, 2017, 44, 273-283.	7.0	36
42	Kinetic modeling of free fatty acid production in <i>Escherichia coli</i> based on continuous cultivation of a plasmid free strain. Biotechnology and Bioengineering, 2012, 109, 1518-1527.	3.3	34
43	Bacterial production of free fatty acids from freshwater macroalgal cellulose. Applied Microbiology and Biotechnology, 2011, 91, 435-446.	3.6	31
44	Application of TALEs, CRISPR/Cas and sRNAs as trans-acting regulators in prokaryotes. Current Opinion in Biotechnology, 2014, 29, 46-54.	6.6	31
45	Flux balance analysis indicates that methane is the lowest cost feedstock for microbial cell factories. Metabolic Engineering Communications, 2017, 5, 26-33.	3.6	31
46	Functional and Structural Analysis of the Siderophore Synthetase AsbB through Reconstitution of the Petrobactin Biosynthetic Pathway from Bacillus anthracis. Journal of Biological Chemistry, 2012, 287, 16058-16072.	3.4	30
47	Solventâ€Enabled Nonenyzmatic Sugar Production from Biomass for Chemical and Biological Upgrading. ChemSusChem, 2015, 8, 1317-1322.	6.8	30
48	A transcription activatorâ€“like effector (TALE) induction system mediated by proteolysis. Nature Chemical Biology, 2016, 12, 254-260.	8.0	30
49	A translation-coupling DNA cassette for monitoring protein translation in Escherichia coli. Metabolic Engineering, 2012, 14, 298-305.	7.0	28
50	Optimization of DsRed production inEscherichia coli: Effect of ribosome binding site sequestration on translation efficiency. Biotechnology and Bioengineering, 2005, 92, 553-558.	3.3	27
51	Free fatty acid production in Escherichia coli under phosphate-limited conditions. Applied Microbiology and Biotechnology, 2013, 97, 5149-5159.	3.6	26
52	High-CO₂ Requirement as a Mechanism for the Containment of Genetically Modified Cyanobacteria. ACS Synthetic Biology, 2018, 7, 384-391.	3.8	26
53	Regulatory Tools for Controlling Gene Expression in Cyanobacteria. Advances in Experimental Medicine and Biology, 2018, 1080, 281-315.	1.6	26
54	Rewiring yeast metabolism to synthesize products beyond ethanol. Current Opinion in Chemical Biology, 2020, 59, 182-192.	6.1	25

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55	Metabolic engineering of Î²-oxidation to leverage thioesterases for production of 2-heptanone, 2-nonanone and 2-undecanone. Metabolic Engineering, 2020, 61, 335-343.	7.0	24
56	Genetic and genomic analysis of RNases in model cyanobacteria. Photosynthesis Research, 2015, 126, 171-183.	2.9	23
57	Production of 1-octanol in Escherichia coli by a high flux thioesterase route. Metabolic Engineering, 2020, 61, 352-359.	7.0	22
58	A Desaturase Gene Involved in the Formation of 1,14-Nonadecadiene in Synechococcus sp. Strain PCC 7002. Applied and Environmental Microbiology, 2014, 80, 6073-6079.	3.1	18
59	Insights into the industrial growth of cyanobacteria from a model of the carbonâ€concentrating mechanism. AICHE Journal, 2014, 60, 1269-1277.	3.6	18
60	Isolation of improved free fatty acid overproducing strains of <i>Escherichia coli</i> via nile red based highâ€throughput screening. Environmental Progress and Sustainable Energy, 2012, 31, 17-23.	2.3	16
61	Directed Evolution Reveals the Functional Sequence Space of an Adenylation Domain Specificity Code. ACS Chemical Biology, 2019, 14, 2044-2054.	3.4	16
62	Growth-coupled bioconversion of levulinic acid to butanone. Metabolic Engineering, 2019, 55, 92-101.	7.0	16
63	Stepwise genetic engineering of Pseudomonas putida enables robust heterologous production of prodigiosin and glidobactin A. Metabolic Engineering, 2021, 67, 112-124.	7.0	16
64	Introduction of NADH-dependent nitrate assimilation in Synechococcus sp. PCC 7002 improves photosynthetic production of 2-methyl-1-butanol and isobutanol. Metabolic Engineering, 2022, 69, 87-97.	7.0	14
65	Inhibition of Cyanobacterial Growth on a Municipal Wastewater Sidestream Is Impacted by Temperature. MSphere, 2018, 3, .	2.9	13
66	Leveraging synthetic biology for producing bioactive polyketides and non-ribosomal peptides in bacterial heterologous hosts. MedChemComm, 2019, 10, 668-681.	3.4	13
67	Model-driven analysis of mutant fitness experiments improves genome-scale metabolic models of Zymomonas mobilis ZM4. PLoS Computational Biology, 2020, 16, e1008137.	3.2	12
68	Microbes paired for biological gas-to-liquids (Bio-GTL) process. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3717-3719.	7.1	11
69	Biological synthesis unbounded?. Nature Biotechnology, 2015, 33, 1148-1149.	17.5	10
70	Enabling commercial success of industrial biotechnology. Science, 2021, 374, 1563-1565.	12.6	10
71	Genome sequence and analysis of Escherichia coli production strain LS5218. Metabolic Engineering Communications, 2017, 5, 78-83.	3.6	9
72	Distinct and redundant functions of three homologs of RNase III in the cyanobacterium Synechococcus sp. strain PCC 7002. Nucleic Acids Research, 2018, 46, 1984-1997.	14.5	9

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73	Enhancing Photosynthetic Production of Glycogen-Rich Biomass for Use as a Fermentation Feedstock. Frontiers in Energy Research, 2020, 8, .	2.3	9
74	Renewable linear alpha-olefins by base-catalyzed dehydration of biologically-derived fatty alcohols. Green Chemistry, 2021, 23, 4338-4354.	9.0	9
75	IPRO+/â^': Computational Protein Design Tool Allowing for Insertions and Deletions. Structure, 2020, 28, 1344-1357.e4.	3.3	8
76	Optimization of a T7-RNA polymerase system in Synechococcus sp. PCC 7002 mirrors the protein overproduction phenotype from E. coli BL21(DE3). Applied Microbiology and Biotechnology, 2021, 105, 1147-1158.	3.6	8
77	Accelerating strain phenotyping with desorption electrospray ionization-imaging mass spectrometry and untargeted analysis of intact microbial colonies. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	8
78	Metabolic engineering strategies to produce medium-chain oleochemicals via acyl-ACP:CoA transacylase activity. Nature Communications, 2022, 13, 1619.	12.8	8
79	EnZymClass: Substrate specificity prediction tool of plant acyl-ACP thioesterases based on ensemble learning. Current Research in Biotechnology, 2022, 4, 1-9.	3.7	7
80	Genome-Wide Analysis of RNA Decay in the Cyanobacterium <i>Synechococcus</i> sp. Strain PCC 7002. MSystems, 2020, 5, .	3.8	6
81	Optimization of Synthetic Operons Using Libraries of Post-Transcriptional Regulatory Elements. Methods in Molecular Biology, 2011, 765, 99-111.	0.9	5
82	Functional genomics analysis of free fatty acid production under continuous phosphate limiting conditions. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 759-772.	3.0	5
83	Infrastructures for Phosphorus Recovery from Livestock Waste Using Cyanobacteria: Transportation, Techno-Economic, and Policy Implications. ACS Sustainable Chemistry and Engineering, 2021, 9, 11416-11426.	6.7	4
84	Structural and Biosynthetic Analysis of the Fabrubactins, Unusual Siderophores from <i>Agrobacterium fabrum</i> Strain C58. ACS Chemical Biology, 2021, 16, 125-135.	3.4	4
85	Comparative functional genomics identifies an iron-limited bottleneck in a Saccharomyces cerevisiae strain with a cytosolic-localized isobutanol pathway. Synthetic and Systems Biotechnology, 2022, 7, 738-749.	3.7	4
86	Production of Fatty Acids and Derivatives by Metabolic Engineering of Bacteria. , 2016, , 1-24.		2
87	Byâ€passing the refinery for production of highâ€value BTX derivatives. Biotechnology Journal, 2013, 8, 1375-1376.	3.5	0
88	Editorial: Biochemical and molecular engineering. Biotechnology Journal, 2014, 9, 587-588.	3.5	0
89	Editorial overview: Energy biotechnology. Current Opinion in Biotechnology, 2017, 45, v-viii.	6.6	0
90	Production of Fatty Acids and Derivatives by Metabolic Engineering of Bacteria. , 2017, , 1-24.		0

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91	Production of Fatty Acids and Derivatives by Metabolic Engineering of Bacteria. , 2017, , 435-458.		0
92	Directed Evolution of an Adenylation Domain Specificity Code. FASEB Journal, 2018, 32, 530.6.	0.5	0