# Brian F Pfleger

## List of Publications by Year in Descending Order



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|---|---|---|---|
| 92 papers | 4,390 citations | 34 h-index | 65 g-index |
| 101 ext. papers | 5,274 ext. citations | 9.1 avg, IF | 5.91 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 92 | EnZymClass: Substrate specificity prediction tool of plant acyl-ACP thioesterases based on ensemble learning. *Current Research in Biotechnology*, **2022**, 4, 1-9 | 4.8 | 2 |
| 91 | Metabolic engineering strategies to produce medium-chain oleochemicals via acyl-ACP:CoA transacylase activity.. *Nature Communications*, **2022**, 13, 1619 | 17.4 | 1 |
| 90 | Comparative functional genomics identifies an iron-limited bottleneck in a strain with a cytosolic-localized isobutanol pathway.. *Synthetic and Systems Biotechnology*, **2022**, 7, 738-749 | 4.2 | |
| 89 | Enabling commercial success of industrial biotechnology.. *Science*, **2021**, 374, 1563-1565 | 33.3 | 2 |
| 88 | Introduction of NADH-dependent nitrate assimilation in Synechococcus sp. PCC 7002 improves photosynthetic production of 2-methyl-1-butanol and isobutanol. *Metabolic Engineering*, **2021**, 69, 87-97 | 9.7 | 2 |
| 87 | 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, | 11.5 | 2 |
| 86 | Machine learning-guided acyl-ACP reductase engineering for improved in vivo fatty alcohol production. *Nature Communications*, **2021**, 12, 5825 | 17.4 | 7 |
| 85 | Structural and Biosynthetic Analysis of the Fabrubactins, Unusual Siderophores from Strain C58. *ACS Chemical Biology*, **2021**, 16, 125-135 | 4.9 | 1 |
| 84 | Renewable linear alpha-olefins by base-catalyzed dehydration of biologically-derived fatty alcohols. *Green Chemistry*, **2021**, 23, 4338-4354 | 10 | 2 |
| 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 | 8.3 | 0 |
| 82 | Stepwise genetic engineering of Pseudomonas putida enables robust heterologous production of prodigiosin and glidobactin A. *Metabolic Engineering*, **2021**, 67, 112-124 | 9.7 | 4 |
| 81 | 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 | 5.7 | 3 |
| 80 | Metabolic engineering of β-oxidation to leverage thioesterases for production of 2-heptanone, 2-nonanone and 2-undecanone. *Metabolic Engineering*, **2020**, 61, 335-343 | 9.7 | 7 |
| 79 | Enhancing photosynthetic production of glycogen-rich biomass for use as a fermentation feedstock. *Frontiers in Energy Research*, **2020**, 8, | 3.8 | 3 |
| 78 | Rewiring yeast metabolism to synthesize products beyond ethanol. *Current Opinion in Chemical Biology*, **2020**, 59, 182-192 | 9.7 | 7 |
| 77 | Production of 1-octanol in Escherichia coli by a high flux thioesterase route. *Metabolic Engineering*, **2020**, 61, 352-359 | 9.7 | 6 |
| 76 | Genome-Wide Analysis of RNA Decay in the Cyanobacterium sp. Strain PCC 7002. *MSystems*, **2020**, 5, | 7.6 | 3 |

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| 75 | IPRO+/-: Computational Protein Design Tool Allowing for Insertions and Deletions. *Structure*, **2020**, 28, 1344-1357.e4 | 5.2 | 3 |
| 74 | Model-driven analysis of mutant fitness experiments improves genome-scale metabolic models of Zymomonas mobilis ZM4. *PLoS Computational Biology*, **2020**, 16, e1008137 | 5 | 4 |
| 73 | Revisiting metabolic engineering strategies for microbial synthesis of oleochemicals. *Metabolic Engineering*, **2020**, 58, 35-46 | 9.7 | 40 |
| 72 | Common principles and best practices for engineering microbiomes. *Nature Reviews Microbiology*, **2019**, 17, 725-741 | 22.2 | 144 |
| 71 | Growth-coupled bioconversion of levulinic acid to butanone. *Metabolic Engineering*, **2019**, 55, 92-101 | 9.7 | 9 |
| 70 | Leveraging synthetic biology for producing bioactive polyketides and non-ribosomal peptides in bacterial heterologous hosts. *MedChemComm*, **2019**, 10, 668-681 | 5 | 8 |
| 69 | Directed Evolution Reveals the Functional Sequence Space of an Adenylation Domain Specificity Code. *ACS Chemical Biology*, **2019**, 14, 2044-2054 | 4.9 | 9 |
| 68 | 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 | 20.1 | 6 |
| 67 | High-CO Requirement as a Mechanism for the Containment of Genetically Modified Cyanobacteria. *ACS Synthetic Biology*, **2018**, 7, 384-391 | 5.7 | 14 |
| 66 | Genetic tools for reliable gene expression and recombineering in Pseudomonas putida. *Journal of Industrial Microbiology and Biotechnology*, **2018**, 45, 517-527 | 4.2 | 54 |
| 65 | 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 | 9.7 | 31 |
| 64 | Highly Active C-Acyl-ACP Thioesterase Variant Isolated by a Synthetic Selection Strategy. *ACS Synthetic Biology*, **2018**, 7, 2205-2215 | 5.7 | 32 |
| 63 | Directed Evolution of an Adenylation Domain Specificity Code. *FASEB Journal*, **2018**, 32, 530.6 | 0.9 | |
| 62 | Regulatory Tools for Controlling Gene Expression in Cyanobacteria. *Advances in Experimental Medicine and Biology*, **2018**, 1080, 281-315 | 3.6 | 20 |
| 61 | Inhibition of Cyanobacterial Growth on a Municipal Wastewater Sidestream Is Impacted by Temperature. *MSphere*, **2018**, 3, | 5 | 9 |
| 60 | Anaerobic production of medium-chain fatty alcohols via a □eduction pathway. *Metabolic Engineering*, **2018**, 48, 63-71 | 9.7 | 30 |
| 59 | Computational Redesign of Acyl-ACP Thioesterase with Improved Selectivity toward Medium-Chain-Length Fatty Acids. *ACS Catalysis*, **2017**, 7, 3837-3849 | 13.1 | 49 |
| 58 | RNA Sequencing Identifies New RNase III Cleavage Sites in and Reveals Increased Regulation of mRNA. *MBio*, **2017**, 8, | 7.8 | 32 |

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| 57 | Reassessing Escherichia coli as a cell factory for biofuel production. *Current Opinion in Biotechnology*, **2017**, 45, 92-103 | 11.4 | 39 |
| 56 | Engineering photosynthetic production of L-lysine. *Metabolic Engineering*, **2017**, 44, 273-283 | 9.7 | 25 |
| 55 | Transcription control engineering and applications in synthetic biology. *Synthetic and Systems Biotechnology*, **2017**, 2, 176-191 | 4.2 | 53 |
| 54 | A metabolic pathway for catabolizing levulinic acid in bacteria. *Nature Microbiology*, **2017**, 2, 1624-1634 | 26.6 | 44 |
| 53 | Genome sequence and analysis of production strain LS5218. *Metabolic Engineering Communications*, **2017**, 5, 78-83 | 6.5 | 7 |
| 52 | Flux Balance Analysis Indicates that Methane Is the Lowest Cost Feedstock for Microbial Cell Factories. *Metabolic Engineering Communications*, **2017**, 5, 26-33 | 6.5 | 21 |
| 51 | Functional genomics analysis of free fatty acid production under continuous phosphate limiting conditions. *Journal of Industrial Microbiology and Biotechnology*, **2017**, 44, 759-772 | 4.2 | 2 |
| 50 | Production of Fatty Acids and Derivatives by Metabolic Engineering of Bacteria **2017**, 1-24 | | |
| 49 | Production of Fatty Acids and Derivatives by Metabolic Engineering of Bacteria **2017**, 435-458 | | |
| 48 | 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 | 17.8 | 26 |
| 47 | Construction of new synthetic biology tools for the control of gene expression in the cyanobacterium Synechococcus sp. strain PCC 7002. *Biotechnology and Bioengineering*, **2016**, 113, 424-32 | 4.9 | 66 |
| 46 | 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, 3717-9 | 11.5 | 6 |
| 45 | A transcription activator-like effector (TALE) induction system mediated by proteolysis. *Nature Chemical Biology*, **2016**, 12, 254-60 | 11.7 | 24 |
| 44 | Production of Fatty Acids and Derivatives by Metabolic Engineering of Bacteria **2016**, 1-24 | | 2 |
| 43 | 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 | 9.7 | 127 |
| 42 | Impact of synthetic biology and metabolic engineering on industrial production of fine chemicals. *Biotechnology Advances*, **2015**, 33, 1395-402 | 17.8 | 153 |
| 41 | Efflux systems in bacteria and their metabolic engineering applications. *Applied Microbiology and Biotechnology*, **2015**, 99, 9381-93 | 5.7 | 62 |
| 40 | Biological synthesis unbounded?. *Nature Biotechnology*, **2015**, 33, 1148-9 | 44.5 | 8 |

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| 39 | Synthetic biology toolbox for controlling gene expression in the cyanobacterium Synechococcus sp. strain PCC 7002. *ACS Synthetic Biology*, **2015**, 4, 595-603 | 5.7 | 131 |
| 38 | Solvent-enabled nonenyzmatic sugar production from biomass for chemical and biological upgrading. *ChemSusChem*, **2015**, 8, 1317-22 | 8.3 | 28 |
| 37 | Metabolic engineering strategies for microbial synthesis of oleochemicals. *Metabolic Engineering*, **2015**, 29, 1-11 | 9.7 | 133 |
| 36 | Genetic and genomic analysis of RNases in model cyanobacteria. *Photosynthesis Research*, **2015**, 126, 171-83 | 3.7 | 18 |
| 35 | Application of TALEs, CRISPR/Cas and sRNAs as trans-acting regulators in prokaryotes. *Current Opinion in Biotechnology*, **2014**, 29, 46-54 | 11.4 | 29 |
| 34 | Insights into the industrial growth of cyanobacteria from a model of the carbon-concentrating mechanism. *AICHE Journal*, **2014**, 60, 1269-1277 | 3.6 | 15 |
| 33 | Nonenzymatic sugar production from biomass using biomass-derived γ-valerolactone. *Science*, **2014**, 343, 277-80 | 33.3 | 519 |
| 32 | A desaturase gene involved in the formation of 1,14-nonadecadiene in Synechococcus sp. strain PCC 7002. *Applied and Environmental Microbiology*, **2014**, 80, 6073-9 | 4.8 | 15 |
| 31 | Free fatty acid production in Escherichia coli under phosphate-limited conditions. *Applied Microbiology and Biotechnology*, **2013**, 97, 5149-59 | 5.7 | 23 |
| 30 | Production of medium chain length fatty alcohols from glucose in Escherichia coli. *Metabolic Engineering*, **2013**, 20, 177-86 | 9.7 | 76 |
| 29 | Identification of transport proteins involved in free fatty acid efflux in Escherichia coli. *Journal of Bacteriology*, **2013**, 195, 135-44 | 3.5 | 90 |
| 28 | Synthetic biology strategies for synthesizing polyhydroxyalkanoates from unrelated carbon sources. *Chemical Engineering Science*, **2013**, 103, 58-67 | 4.4 | 39 |
| 27 | Artificial repressors for controlling gene expression in bacteria. *Chemical Communications*, **2013**, 49, 4325-7 | 5.8 | 35 |
| 26 | Microbial production of fatty acid-derived fuels and chemicals. *Current Opinion in Biotechnology*, **2013**, 24, 1044-53 | 11.4 | 144 |
| 25 | By-passing the refinery for production of high-value BTX derivatives. *Biotechnology Journal*, **2013**, 8, 1375-6 | 5.6 | |
| 24 | Modulating membrane composition alters free fatty acid tolerance in Escherichia coli. *PLoS ONE*, **2013**, 8, e54031 | 3.7 | 57 |
| 23 | An organic acid based counter selection system for cyanobacteria. *PLoS ONE*, **2013**, 8, e76594 | 3.7 | 48 |
| 22 | Isolation of improved free fatty acid overproducing strains of via Nile red based high-throughput screening. *Environmental Progress and Sustainable Energy*, **2012**, 31, 17-23 | 2.5 | 15 |

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| 21 | Freshwater diatoms as a source of lipids for biofuels. *Journal of Industrial Microbiology and Biotechnology*, **2012**, 39, 419-28 | 4.2 | 44 |
| 20 | A translation-coupling DNA cassette for monitoring protein translation in Escherichia coli. *Metabolic Engineering*, **2012**, 14, 298-305 | 9.7 | 23 |
| 19 | Engineering Escherichia coli for production of C□C□polyhydroxyalkanoate from glucose. *Metabolic Engineering*, **2012**, 14, 705-13 | 9.7 | 50 |
| 18 | Engineering Escherichia coli to synthesize free fatty acids. *Trends in Biotechnology*, **2012**, 30, 659-67 | 15.1 | 134 |
| 17 | Kinetic modeling of free fatty acid production in Escherichia coli based on continuous cultivation of a plasmid free strain. *Biotechnology and Bioengineering*, **2012**, 109, 1518-27 | 4.9 | 29 |
| 16 | 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, 16058-72 | 5.4 | 22 |
| 15 | Optimization of synthetic operons using libraries of post-transcriptional regulatory elements. *Methods in Molecular Biology*, **2011**, 765, 99-111 | 1.4 | 5 |
| 14 | Bacterial production of free fatty acids from freshwater macroalgal cellulose. *Applied Microbiology and Biotechnology*, **2011**, 91, 435-46 | 5.7 | 24 |
| 13 | Modular synthase-encoding gene involved in □-olefin biosynthesis in Synechococcus sp. strain PCC 7002. *Applied and Environmental Microbiology*, **2011**, 77, 4264-7 | 4.8 | 132 |
| 12 | Membrane stresses induced by overproduction of free fatty acids in Escherichia coli. *Applied and Environmental Microbiology*, **2011**, 77, 8114-28 | 4.8 | 109 |
| 11 | A process for microbial hydrocarbon synthesis: Overproduction of fatty acids in Escherichia coli and catalytic conversion to alkanes. *Biotechnology and Bioengineering*, **2010**, 106, 193-202 | 4.9 | 200 |
| 10 | 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, 17133-8 | 11.5 | 47 |
| 9 | Application of functional genomics to pathway optimization for increased isoprenoid production. *Applied and Environmental Microbiology*, **2008**, 74, 3229-41 | 4.8 | 143 |
| 8 | Characterization and analysis of early enzymes for petrobactin biosynthesis in Bacillus anthracis. *Biochemistry*, **2007**, 46, 4147-57 | 3.2 | 76 |
| 7 | Microbial sensors for small molecules: development of a mevalonate biosensor. *Metabolic Engineering*, **2007**, 9, 30-8 | 9.7 | 73 |
| 6 | Directed evolution of AraC for improved compatibility of arabinose- and lactose-inducible promoters. *Applied and Environmental Microbiology*, **2007**, 73, 5711-5 | 4.8 | 86 |
| 5 | Biosynthetic analysis of the petrobactin siderophore pathway from Bacillus anthracis. *Journal of Bacteriology*, **2007**, 189, 1698-710 | 3.5 | 102 |
| 4 | Combinatorial engineering of intergenic regions in operons tunes expression of multiple genes. *Nature Biotechnology*, **2006**, 24, 1027-32 | 44.5 | 434 |

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| 3 | 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 |
| 2 | Construction and Operation of an Affordable Laboratory Photobioreactor System for Simultaneous Cultivation of up to 12 Independent 1 L Cyanobacterial Cultures | | 1 |
| 1 | Cyanobacterial Growth on Municipal Wastewater Requires Low Temperatures | | 2 |