Edward E K Baidoo

List of Publications by Year
in descending order

82 papers	4,323 citations	94269 37 h-index	118652 62 g-index
93 all docs	93 docs citations	93 times ranked	5276 citing authors

#	Article	IF	Citations
1	Adaptive evolution of Methylotuvimicrobium alcaliphilum to grow in the presence of rhamnolipids improves fatty acid and rhamnolipid production from CH4. Journal of Industrial Microbiology and Biotechnology, 2022, 49, .	1.4	4
2	Downregulation of Squalene Synthase Broadly Impacts Isoprenoid Biosynthesis in Guayule. Metabolites, 2022, 12, 303.	1.3	3
3	Engineering Saccharomyces cerevisiae for isoprenol production. Metabolic Engineering, 2021, 64, 154-166.	3.6	34
4	In-planta production of the biodegradable polyester precursor 2-pyrone-4,6-dicarboxylic acid (PDC): Stacking reduced biomass recalcitrance with value-added co-product. Metabolic Engineering, 2021, 66, 148-156.	3.6	12
5	Identification, Characterization, and Application of a Highly Sensitive Lactam Biosensor from Pseudomonas putida. ACS Synthetic Biology, 2020, 9, 53-62.	1.9	31
6	Structural Mechanism of Regioselectivity in an Unusual Bacterial Acyl-CoA Dehydrogenase. Journal of the American Chemical Society, 2020, 142, 835-846.	6.6	9
7	A bimodular PKS platform that expands the biological design space. Metabolic Engineering, 2020, 61, 389-396.	3.6	2
8	Influence of hydrocracking and ionic liquid pretreatments on composition and properties of Arabidopsis thaliana wild type and CAD mutant lignins. Renewable Energy, 2020, 152, 1241-1249.	4.3	3
9	Chemoinformatic-Guided Engineering of Polyketide Synthases. Journal of the American Chemical Society, 2020, 142, 9896-9901.	6.6	13
10	An iron (II) dependent oxygenase performs the last missing step of plant lysine catabolism. Nature Communications, 2020, 11, 2931.	5.8	11
11	Response of Pseudomonas putida to Complex, Aromaticâ€Rich Fractions from Biomass. ChemSusChem, 2020, 13, 4455-4467.	3.6	23
12	Comparative studies of glycolytic pathways and channeling under in vitro and in vivo modes. AICHE Journal, 2019, 65, 483-490.	1.8	14
13	Distinct functional roles for hopanoid composition in the chemical tolerance of Zymomonas mobilis. Molecular Microbiology, 2019, 112, 1564-1575.	1.2	28
14	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.	3.6	46
15	Omics-driven identification and elimination of valerolactam catabolism in Pseudomonas putida KT2440 for increased product titer. Metabolic Engineering Communications, 2019, 9, e00098.	1.9	25
16	Mevalonate Pathway Promiscuity Enables Noncanonical Terpene Production. ACS Synthetic Biology, 2019, 8, 2238-2247.	1.9	22
17	Structural insights into dehydratase substrate selection for the borrelidin and fluvirucin polyketide synthases. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 1225-1235.	1.4	7
18	Massively Parallel Fitness Profiling Reveals Multiple Novel Enzymes in Pseudomonas putida Lysine Metabolism. MBio, 2019, 10, .	1.8	60

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19	Lessons from Two Designâ€“Buildâ€“Testâ€“Learn Cycles of Dodecanol Production in Escherichia coli Aided by Machine Learning. ACS Synthetic Biology, 2019, 8, 1337-1351.	1.9	107
20	Methyl ketone production by Pseudomonas putida is enhanced by plantâ€derived amino acids. Biotechnology and Bioengineering, 2019, 116, 1909-1922.	1.7	29
21	Complete biosynthesis of cannabinoids and their unnatural analogues in yeast. Nature, 2019, 567, 123-126.	13.7	473
22	Workflow Automation in Liquid Chromatography Mass Spectrometry. , 2019, , .		0
23	Liquid Chromatography and Mass Spectrometry Analysis of Isoprenoid Intermediates in Escherichia coli. Methods in Molecular Biology, 2019, 1859, 209-224.	0.4	13
24	Mass Spectrometry-Based Microbial Metabolomics: Techniques, Analysis, and Applications. Methods in Molecular Biology, 2019, 1859, 11-69.	0.4	16
25	Microbial Metabolomics: A General Overview. Methods in Molecular Biology, 2019, 1859, 1-8.	0.4	18
26	Production of muconic acid in plants. Metabolic Engineering, 2018, 46, 13-19.	3.6	19
27	Integrated analysis of isopentenyl pyrophosphate (IPP) toxicity in isoprenoid-producing Escherichia coli. Metabolic Engineering, 2018, 47, 60-72.	3.6	106
28	Biochemical Characterization of Î²â€Amino Acid Incorporation in Fluvirucinâ€…B₂ Biosynthesis. ChemBioChem, 2018, 19, 1391-1395.	1.3	11
29	Model metabolic strategy for heterotrophic bacteria in the cold ocean based on Colwellia psychrerythraea 34H. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12507-12512.	3.3	26
30	Discovery of novel geranylgeranyl reductases and characterization of their substrate promiscuity. Biotechnology for Biofuels, 2018, 11, 340.	6.2	17
31	Renewable production of high density jet fuel precursor sesquiterpenes from Escherichia coli. Biotechnology for Biofuels, 2018, 11, 285.	6.2	43
32	Restoration of biofuel production levels and increased tolerance under ionic liquid stress is enabled by a mutation in the essential Escherichia coli gene cydC. Microbial Cell Factories, 2018, 17, 159.	1.9	33
33	Short-chain ketone production by engineered polyketide synthases in Streptomyces albus. Nature Communications, 2018, 9, 4569.	5.8	52
34	Overexpression of a rice BAHD acyltransferase gene in switchgrass (Panicum virgatum L.) enhances saccharification. BMC Biotechnology, 2018, 18, 54.	1.7	38
35	Engineering the oleaginous yeast Yarrowia lipolytica to produce the aroma compound Î²-ionone. Microbial Cell Factories, 2018, 17, 136.	1.9	72
36	Increased drought tolerance in plants engineered for low lignin and low xylan content. Biotechnology for Biofuels, 2018, 11, 195.	6.2	33

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37	Production of jet fuel precursor monoterpenoids from engineered Escherichia coli. Biotechnology and Bioengineering, 2017, 114, 1703-1712.	1.7	81
38	Cyanobacterial carbon metabolism: Fluxome plasticity and oxygen dependence. Biotechnology and Bioengineering, 2017, 114, 1593-1602.	1.7	83
39	Deciphering flux adjustments of engineered E. coli cells during fermentation with changing growth conditions. Metabolic Engineering, 2017, 39, 247-256.	3.6	33
40	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.	1.6	12
41	The Experiment Data Depot: A Web-Based Software Tool for Biological Experimental Data Storage, Sharing, and Visualization. ACS Synthetic Biology, 2017, 6, 2248-2259.	1.9	45
42	Oxidative cyclization of prodigiosin by an alkylglycerol monooxygenase-like enzyme. Nature Chemical Biology, 2017, 13, 1155-1157.	3.9	25
43	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.	1.9	100
44	Glycosylation of inositol phosphorylceramide sphingolipids is required for normal growth and reproduction in Arabidopsis. Plant Journal, 2017, 89, 278-290.	2.8	43
45	Flux-Enabled Exploration of the Role of Sip1 in Galactose Yeast Metabolism. Frontiers in Bioengineering and Biotechnology, 2017, 5, 31.	2.0	4
46	Rhodosporidium toruloides: a new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts. Biotechnology for Biofuels, 2017, 10, 241.	6.2	150
47	SbCOMT (Bmr12) is involved in the biosynthesis of tricin-lignin in sorghum. PLoS ONE, 2017, 12, e0178160.	1.1	59
48	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.	2.0	8
49	13C Metabolic Flux Analysis for Systematic Metabolic Engineering of S. cerevisiae for Overproduction of Fatty Acids. Frontiers in Bioengineering and Biotechnology, 2016, 4, 76.	2.0	42
50	Loss of Inositol Phosphorylceramide Sphingolipid Mannosylation Induces Plant Immune Responses and Reduces Cellulose Content in Arabidopsis. Plant Cell, 2016, 28, 2991-3004.	3.1	71
51	ATP citrate lyase mediated cytosolic acetyl-CoA biosynthesis increases mevalonate production in Saccharomyces cerevisiae. Microbial Cell Factories, 2016, 15, 48.	1.9	58
52	Characterizing Strain Variation in Engineered E.Âcoli Using a Multi-Omics-Based Workflow. Cell Systems, 2016, 2, 335-346.	2.9	73
53	Exploiting members of the BAHD acyltransferase family to synthesize multiple hydroxycinnamate and benzoate conjugates in yeast. Microbial Cell Factories, 2016, 15, 198.	1.9	32
54	Examining Escherichia coli glycolytic pathways, catabolite repression, and metabolite channeling using Î”pfk mutants. Biotechnology for Biofuels, 2016, 9, 212.	6.2	74

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55	Engineering a functional 1-deoxy-D-xylulose 5-phosphate (DXP) pathway in Saccharomyces cerevisiae. Metabolic Engineering, 2016, 38, 494-503.	3.6	46
56	Alteration of Polyketide Stereochemistry from anti to syn by a Ketoreductase Domain Exchange in a Type I Modular Polyketide Synthase Subunit. Biochemistry, 2016, 55, 1677-1680.	1.2	23
57	Exploiting the Substrate Promiscuity of Hydroxycinnamoyl-CoA:Shikimate Hydroxycinnamoyl Transferase to Reduce Lignin. Plant and Cell Physiology, 2016, 57, 568-579.	1.5	78
58	Metabolic engineering of Escherichia coli for the biosynthesis of 2-pyrrolidone. Metabolic Engineering Communications, 2016, 3, 1-7.	1.9	34
59	Isopentenyl diphosphate (IPP)-bypass mevalonate pathways for isopentenol production. Metabolic Engineering, 2016, 34, 25-35.	3.6	97
60	Interlaboratory study to evaluate the robustness of capillary electrophoresisâ€mass spectrometry for peptide mapping. Journal of Separation Science, 2015, 38, 3262-3270.	1.3	36
61	Expression of a bacterial 3â€dehydroshikimate dehydratase reduces lignin content and improves biomass saccharification efficiency. Plant Biotechnology Journal, 2015, 13, 1241-1250.	4.1	90
62	Engineering temporal accumulation of a low recalcitrance polysaccharide leads to increased C6 sugar content in plant cell walls. Plant Biotechnology Journal, 2015, 13, 903-914.	4.1	37
63	Metabolic engineering for the high-yield production of isoprenoid-based C5 alcohols in E. coli. Scientific Reports, 2015, 5, 11128.	1.6	125
64	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, 4690-4696.	1.4	65
65	Assay for lignin breakdown based on lignin films: insights into the Fenton reaction with insoluble lignin. Green Chemistry, 2015, 17, 4830-4845.	4.6	10
66	Enhancing Terpene Yield from Sugars via Novel Routes to 1-Deoxy- <scp>d</scp> -Xylulose 5-Phosphate. Applied and Environmental Microbiology, 2015, 81, 130-138.	1.4	55
67	A kineticâ€based approach to understanding heterologous mevalonate pathway function in E. coli. Biotechnology and Bioengineering, 2015, 112, 111-119.	1.7	42
68	Precursor-Directed Combinatorial Biosynthesis of Cinnamoyl, Dihydrocinnamoyl, and Benzoyl Anthranilates in Saccharomyces cerevisiae. PLoS ONE, 2015, 10, e0138972.	1.1	14
69	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.	1.5	28
70	Correlation analysis of targeted proteins and metabolites to assess and engineer microbial isopentenol production. Biotechnology and Bioengineering, 2014, 111, 1648-1658.	1.7	89
71	Metabolic pathway optimization using ribosome binding site variants and combinatorial gene assembly. Applied Microbiology and Biotechnology, 2014, 98, 1567-1581.	1.7	94
72	Analysis of plant nucleotide sugars by hydrophilic interaction liquid chromatography and tandem mass spectrometry. Analytical Biochemistry, 2014, 448, 14-22.	1.1	49

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73	Substantial improvements in methyl ketone production in E. coli and insights on the pathway from in vitro studies. Metabolic Engineering, 2014, 26, 67-76.	3.6	53
74	Metabolite Profiling of Plastidial Deoxyxylulose-5-Phosphate Pathway Intermediates by Liquid Chromatography and Mass Spectrometry. Methods in Molecular Biology, 2014, 1153, 57-76.	0.4	8
75	Production of hydroxycinnamoyl anthranilates from glucose in Escherichia coli. Microbial Cell Factories, 2013, 12, 62.	1.9	48
76	Microbial metabolomics: welcome to the real world!. Metabolomics, 2013, 9, 755-756.	1.4	5
77	Engineering dynamic pathway regulation using stress-response promoters. Nature Biotechnology, 2013, 31, 1039-1046.	9.4	411
78	Characterization of NaCl tolerance in Desulfovibrio vulgaris Hildenborough through experimental evolution. ISME Journal, 2013, 7, 1790-1802.	4.4	46
79	HipA-Triggered Growth Arrest and Â-Lactam Tolerance in Escherichia coli Are Mediated by RelA-Dependent ppGpp Synthesis. Journal of Bacteriology, 2013, 195, 3173-3182.	1.0	84
80	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.	1.6	28
81	Arabinosylation of a Yariv-Precipitable Cell Wall Polymer Impacts Plant Growth as Exemplified by the Arabidopsis Glycosyltransferase Mutant ray1. Molecular Plant, 2013, 6, 1369-1372.	3.9	46
82	Remodeling the isoprenoid pathway in tobacco by expressing the cytoplasmic mevalonate pathway in chloroplasts. Metabolic Engineering, 2012, 14, 19-28.	3.6	120