Edward E K Baidoo

List of Publications by Year
in descending order

82 papers	4,323 citations	94433 37 h-index	118850 62 g-index
93 all docs	93 docs citations	93 times ranked	5276 citing authors

#	Article	IF	Citations
1	Complete biosynthesis of cannabinoids and their unnatural analogues in yeast. Nature, 2019, 567, 123-126.	27.8	473
2	Engineering dynamic pathway regulation using stress-response promoters. Nature Biotechnology, 2013, 31, 1039-1046.	17.5	411
3	Rhodosporidium toruloides: a new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts. Biotechnology for Biofuels, 2017, 10, 241.	6.2	150
4	Metabolic engineering for the high-yield production of isoprenoid-based C5 alcohols in E. coli. Scientific Reports, 2015, 5, 11128.	3.3	125
5	Remodeling the isoprenoid pathway in tobacco by expressing the cytoplasmic mevalonate pathway in chloroplasts. Metabolic Engineering, 2012, 14, 19-28.	7.0	120
6	Lessons from Two Designâ€"Buildâ€"Testâ€"Learn Cycles of Dodecanol Production in <i>Escherichia coli</i> Aided by Machine Learning. ACS Synthetic Biology, 2019, 8, 1337-1351.	3.8	107
7	Integrated analysis of isopentenyl pyrophosphate (IPP) toxicity in isoprenoid-producing Escherichia coli. Metabolic Engineering, 2018, 47, 60-72.	7.0	106
8	Comprehensive <i>in Vitro</i> Analysis of Acyltransferase Domain Exchanges in Modular Polyketide Synthases and Its Application for Short-Chain Ketone Production. ACS Synthetic Biology, 2017, 6, 139-147.	3.8	100
9	Isopentenyl diphosphate (IPP)-bypass mevalonate pathways for isopentenol production. Metabolic Engineering, 2016, 34, 25-35.	7.0	97
10	Metabolic pathway optimization using ribosome binding site variants and combinatorial gene assembly. Applied Microbiology and Biotechnology, 2014, 98, 1567-1581.	3.6	94
11	Expression of a bacterial 3â€dehydroshikimate dehydratase reduces lignin content and improves biomass saccharification efficiency. Plant Biotechnology Journal, 2015, 13, 1241-1250.	8.3	90
12	Correlation analysis of targeted proteins and metabolites to assess and engineer microbial isopentenol production. Biotechnology and Bioengineering, 2014, 111, 1648-1658.	3.3	89
13	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.	2.2	84
14	Cyanobacterial carbon metabolism: Fluxome plasticity and oxygen dependence. Biotechnology and Bioengineering, 2017, 114, 1593-1602.	3.3	83
15	Production of jet fuel precursor monoterpenoids from engineered <i>Escherichia coli</i>. Biotechnology and Bioengineering, 2017, 114, 1703-1712.	3.3	81
16	Exploiting the Substrate Promiscuity of Hydroxycinnamoyl-CoA:Shikimate Hydroxycinnamoyl Transferase to Reduce Lignin. Plant and Cell Physiology, 2016, 57, 568-579.	3.1	78
17	Examining Escherichia coli glycolytic pathways, catabolite repression, and metabolite channeling using Î"pfk mutants. Biotechnology for Biofuels, 2016, 9, 212.	6.2	74
18	Characterizing Strain Variation in Engineered E.Âcoli Using a Multi-Omics-Based Workflow. Cell Systems, 2016, 2, 335-346.	6.2	73

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19	Engineering the oleaginous yeast Yarrowia lipolytica to produce the aroma compound Î²-ionone. Microbial Cell Factories, 2018, 17, 136.	4.0	72
20	Loss of Inositol Phosphorylceramide Sphingolipid Mannosylation Induces Plant Immune Responses and Reduces Cellulose Content in Arabidopsis. Plant Cell, 2016, 28, 2991-3004.	6.6	71
21	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.	3.1	65
22	Massively Parallel Fitness Profiling Reveals Multiple Novel Enzymes in <i>Pseudomonas putida</i> Lysine Metabolism. MBio, 2019, 10, .	4.1	60
23	SbCOMT (Bmr12) is involved in the biosynthesis of tricin-lignin in sorghum. PLoS ONE, 2017, 12, e0178160.	2.5	59
24	ATP citrate lyase mediated cytosolic acetyl-CoA biosynthesis increases mevalonate production in Saccharomyces cerevisiae. Microbial Cell Factories, 2016, 15, 48.	4.0	58
25	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.	3.1	55
26	Substantial improvements in methyl ketone production in E. coli and insights on the pathway from in vitro studies. Metabolic Engineering, 2014, 26, 67-76.	7.0	53
27	Short-chain ketone production by engineered polyketide synthases in Streptomyces albus. Nature Communications, 2018, 9, 4569.	12.8	52
28	Analysis of plant nucleotide sugars by hydrophilic interaction liquid chromatography and tandem mass spectrometry. Analytical Biochemistry, 2014, 448, 14-22.	2.4	49
29	Production of hydroxycinnamoyl anthranilates from glucose in Escherichia coli. Microbial Cell Factories, 2013, 12, 62.	4.0	48
30	Characterization of NaCl tolerance in <i>Desulfovibrio vulgaris</i> Hildenborough through experimental evolution. ISME Journal, 2013, 7, 1790-1802.	9.8	46
31	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.	8.3	46
32	Engineering a functional 1-deoxy-D-xylulose 5-phosphate (DXP) pathway in Saccharomyces cerevisiae. Metabolic Engineering, 2016, 38, 494-503.	7.0	46
33	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.	7.0	46
34	The Experiment Data Depot: A Web-Based Software Tool for Biological Experimental Data Storage, Sharing, and Visualization. ACS Synthetic Biology, 2017, 6, 2248-2259.	3.8	45
35	Glycosylation of inositol phosphorylceramide sphingolipids is required for normal growth and reproduction in Arabidopsis. Plant Journal, 2017, 89, 278-290.	5.7	43
36	Renewable production of high density jet fuel precursor sesquiterpenes from Escherichia coli. Biotechnology for Biofuels, 2018, 11, 285.	6.2	43

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37	A kineticâ€based approach to understanding heterologous mevalonate pathway function in <i>E. coli</i>. Biotechnology and Bioengineering, 2015, 112, 111-119.	3.3	42
38	13C Metabolic Flux Analysis for Systematic Metabolic Engineering of S. cerevisiae for Overproduction of Fatty Acids. Frontiers in Bioengineering and Biotechnology, 2016, 4, 76.	4.1	42
39	Overexpression of a rice BAHD acyltransferase gene in switchgrass (Panicum virgatum L.) enhances saccharification. BMC Biotechnology, 2018, 18, 54.	3.3	38
40	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.	8.3	37
41	Interlaboratory study to evaluate the robustness of capillary electrophoresisâ€mass spectrometry for peptide mapping. Journal of Separation Science, 2015, 38, 3262-3270.	2.5	36
42	Metabolic engineering of Escherichia coli for the biosynthesis of 2-pyrrolidone. Metabolic Engineering Communications, 2016, 3, 1-7.	3.6	34
43	Engineering Saccharomyces cerevisiae for isoprenol production. Metabolic Engineering, 2021, 64, 154-166.	7.0	34
44	Deciphering flux adjustments of engineered E. coli cells during fermentation with changing growth conditions. Metabolic Engineering, 2017, 39, 247-256.	7.0	33
45	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.	4.0	33
46	Increased drought tolerance in plants engineered for low lignin and low xylan content. Biotechnology for Biofuels, 2018, 11, 195.	6.2	33
47	Exploiting members of the BAHD acyltransferase family to synthesize multiple hydroxycinnamate and benzoate conjugates in yeast. Microbial Cell Factories, 2016, 15, 198.	4.0	32
48	Identification, Characterization, and Application of a Highly Sensitive Lactam Biosensor from <i>Pseudomonas putida</i>. ACS Synthetic Biology, 2020, 9, 53-62.	3.8	31
49	Methyl ketone production by <i>Pseudomonas putida</i> is enhanced by plantâ€derived amino acids. Biotechnology and Bioengineering, 2019, 116, 1909-1922.	3.3	29
50	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.	3.4	28
51	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.	3.5	28
52	Distinct functional roles for hopanoid composition in the chemical tolerance of <i>Zymomonas mobilis</i>. Molecular Microbiology, 2019, 112, 1564-1575.	2.5	28
53	Model metabolic strategy for heterotrophic bacteria in the cold ocean based on <i>Colwellia psychrerythraea</i> 34H. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12507-12512.	7.1	26
54	Oxidative cyclization of prodigiosin by an alkylglycerol monooxygenase-like enzyme. Nature Chemical Biology, 2017, 13, 1155-1157.	8.0	25

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55	Omics-driven identification and elimination of valerolactam catabolism in Pseudomonas putida KT2440 for increased product titer. Metabolic Engineering Communications, 2019, 9, e00098.	3.6	25
56	Alteration of Polyketide Stereochemistry from <i>anti</i> to <i>syn</i> by a Ketoreductase Domain Exchange in a Type I Modular Polyketide Synthase Subunit. Biochemistry, 2016, 55, 1677-1680.	2.5	23
57	Response of <i>Pseudomonas putida</i> to Complex, Aromaticâ€Rich Fractions from Biomass. ChemSusChem, 2020, 13, 4455-4467.	6.8	23
58	Mevalonate Pathway Promiscuity Enables Noncanonical Terpene Production. ACS Synthetic Biology, 2019, 8, 2238-2247.	3.8	22
59	Production of muconic acid in plants. Metabolic Engineering, 2018, 46, 13-19.	7.0	19
60	Microbial Metabolomics: A General Overview. Methods in Molecular Biology, 2019, 1859, 1-8.	0.9	18
61	Discovery of novel geranylgeranyl reductases and characterization of their substrate promiscuity. Biotechnology for Biofuels, 2018, 11, 340.	6.2	17
62	Mass Spectrometry-Based Microbial Metabolomics: Techniques, Analysis, and Applications. Methods in Molecular Biology, 2019, 1859, 11-69.	0.9	16
63	Comparative studies of glycolytic pathways and channeling under <i>in vitro</i> and <i>in vivo</i> modes. AICHE Journal, 2019, 65, 483-490.	3.6	14
64	Precursor-Directed Combinatorial Biosynthesis of Cinnamoyl, Dihydrocinnamoyl, and Benzoyl Anthranilates in Saccharomyces cerevisiae. PLoS ONE, 2015, 10, e0138972.	2.5	14
65	Liquid Chromatography and Mass Spectrometry Analysis of Isoprenoid Intermediates in Escherichia coli. Methods in Molecular Biology, 2019, 1859, 209-224.	0.9	13
66	Chemoinformatic-Guided Engineering of Polyketide Synthases. Journal of the American Chemical Society, 2020, 142, 9896-9901.	13.7	13
67	Heterologous Gene Expression of <i>N</i>-Terminally Truncated Variants of LipPks1 Suggests a Functionally Critical Structural Motif in the <i>N</i>-terminus of Modular Polyketide Synthase. ACS Chemical Biology, 2017, 12, 2725-2729.	3.4	12
68	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.	7.0	12
69	Biochemical Characterization of Î²â€Amino Acid Incorporation in Fluvirucinâ€…B₂ Biosynthesis. ChemBioChem, 2018, 19, 1391-1395.	2.6	11
70	An iron (II) dependent oxygenase performs the last missing step of plant lysine catabolism. Nature Communications, 2020, 11, 2931.	12.8	11
71	Assay for lignin breakdown based on lignin films: insights into the Fenton reaction with insoluble lignin. Green Chemistry, 2015, 17, 4830-4845.	9.0	10
72	Structural Mechanism of Regioselectivity in an Unusual Bacterial Acyl-CoA Dehydrogenase. Journal of the American Chemical Society, 2020, 142, 835-846.	13.7	9

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73	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.	4.1	8
74	Metabolite Profiling of Plastidial Deoxyxylulose-5-Phosphate Pathway Intermediates by Liquid Chromatography and Mass Spectrometry. Methods in Molecular Biology, 2014, 1153, 57-76.	0.9	8
75	Structural insights into dehydratase substrate selection for the borrelidin and fluvirucin polyketide synthases. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 1225-1235.	3.0	7
76	Microbial metabolomics: welcome to the real world!. Metabolomics, 2013, 9, 755-756.	3.0	5
77	Flux-Enabled Exploration of the Role of Sip1 in Galactose Yeast Metabolism. Frontiers in Bioengineering and Biotechnology, 2017, 5, 31.	4.1	4
78	Adaptive evolution of <i>Methylotuvimicrobium alcaliphilum</i> to grow in the presence of rhamnolipids improves fatty acid and rhamnolipid production from CH4. Journal of Industrial Microbiology and Biotechnology, 2022, 49, .	3.0	4
79	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.	8.9	3
80	Downregulation of Squalene Synthase Broadly Impacts Isoprenoid Biosynthesis in Guayule. Metabolites, 2022, 12, 303.	2.9	3
81	A bimodular PKS platform that expands the biological design space. Metabolic Engineering, 2020, 61, 389-396.	7.0	2
82	Workflow Automation in Liquid Chromatography Mass Spectrometry. , 2019, , .		0