Keelnatham T Shanmugam

List of Publications by Year
in descending order

77 papers	5,626 citations	71004 43 h-index	87275 74 g-index
78 all docs	78 docs citations	78 times ranked	4508 citing authors

#	Article	IF	Citations
1	Principles and practice of designing microbial biocatalysts for fuel and chemical production. Journal of Industrial Microbiology and Biotechnology, 2022, 49, .	1.4	3
2	Lonnie O'Neal Ingram (1947-2020)â€”Dedication and determination. Journal of Industrial Microbiology and Biotechnology, 2022, , .	1.4	0
3	Chromosomal mutations in <i>Escherichia coli</i> that improve tolerance to nonvolatile sideâ€products from dilute acid treatment of sugarcane bagasse. Biotechnology and Bioengineering, 2020, 117, 85-95.	1.7	4
4	Kinetic characterization and structure analysis of an altered polyol dehydrogenase with d â€lactate dehydrogenase activity. Protein Science, 2020, 29, 2387-2397.	3.1	4
5	A Combined Thermochemical and Microbial Process for Recycling Polylactic Acid Polymer to Optically Pure l-Lactic Acid for Reuse. Journal of Polymers and the Environment, 2020, 28, 1503-1512.	2.4	16
6	Metabolic engineering of Escherichia coli for the production of butyric acid at high titer and productivity. Biotechnology for Biofuels, 2019, 12, 62.	6.2	24
7	Simultaneous fermentation of biomass-derived sugars to ethanol by a co-culture of an engineered Escherichia coli and Saccharomyces cerevisiae. Bioresource Technology, 2019, 273, 269-276.	4.8	63
8	Techno-Economic Evaluation of Cellulosic Ethanol Production Based on Pilot Biorefinery Data: a Case Study of Sweet Sorghum Bagasse Processed via L+SScF. Bioenergy Research, 2018, 11, 414-425.	2.2	48
9	Fermentation of dihydroxyacetone by engineeredEscherichia coliandKlebsiella variicolato products. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4381-4386.	3.3	8
10	Metabolic engineering of <i>Bacillus subtilis</i> for production of Dâ€lactic acid. Biotechnology and Bioengineering, 2018, 115, 453-463.	1.7	36
11	Phosphoric acid based pretreatment of switchgrass and fermentation of entire slurry to ethanol using a simplified process. Bioresource Technology, 2018, 251, 171-180.	4.8	23
12	Plasmidic Expression of<i>nemA</i>and<i>yafC</i>* Increased Resistance of Ethanologenic Escherichia coli LY180 to Nonvolatile Side Products from Dilute Acid Treatment of Sugarcane Bagasse and Artificial Hydrolysate. Applied and Environmental Microbiology, 2016, 82, 2137-2145.	1.4	7
13	Techno-economic analysis of ethanol production from sugarcane bagasse using a Liquefaction plus Simultaneous Saccharification and co-Fermentation process. Bioresource Technology, 2016, 208, 42-48.	4.8	128
14	Sweet Sorghum Juice and Bagasse as Feedstocks for the Production of Optically Pure Lactic Acid by Native and Engineered Bacillus coagulans Strains. Bioenergy Research, 2016, 9, 123-131.	2.2	33
15	Mutation in galP improved fermentation of mixed sugars to succinate using engineered Escherichia coli AS1600a and AM1 mineral salts medium. Bioresource Technology, 2015, 193, 433-441.	4.8	32
16	Combining treatments to improve the fermentation of sugarcane bagasse hydrolysates by ethanologenic Escherichia coli LY180. Bioresource Technology, 2015, 189, 15-22.	4.8	17
17	Fermentation of sweet sorghum derived sugars to butyric acid at high titer and productivity by a moderate thermophile Clostridium thermobutyricum at 50 Â°C. Bioresource Technology, 2015, 198, 533-539.	4.8	39
18	Removing chiral contamination of lactate solutions by selective metabolism of the d-enantiomer. Biotechnology Letters, 2015, 37, 2411-2418.	1.1	3

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19	Polyamine Transporters and Polyamines Increase Furfural Tolerance during Xylose Fermentation with Ethanologenic Escherichia coli Strain LY180. Applied and Environmental Microbiology, 2014, 80, 5955-5964.	1.4	28
20	Seed train development for the fermentation of bagasse from sweet sorghum and sugarcane using a simplified fermentation process. Bioresource Technology, 2013, 128, 716-724.	4.8	36
21	Engineering furfural tolerance in <i>Escherichia coli</i> improves the fermentation of lignocellulosic sugars into renewable chemicals. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4021-4026.	3.3	167
22	Amino acid substitutions at glutamate-354 in dihydrolipoamide dehydrogenase of Escherichia coli lower the sensitivity of pyruvate dehydrogenase to NADH. Microbiology (United Kingdom), 2012, 158, 1350-1358.	0.7	12
23	Increase in Furfural Tolerance in Ethanologenic Escherichia coli LY180 by Plasmid-Based Expression of <i>thyA</i>. Applied and Environmental Microbiology, 2012, 78, 4346-4352.	1.4	35
24	Complete Genome Sequence of a thermotolerant sporogenic lactic acid bacterium, Bacillus coagulans strain 36D1. Standards in Genomic Sciences, 2011, 5, 331-340.	1.5	28
25	Physiological and fermentation properties of Bacillus coagulans and a mutant lacking fermentative lactate dehydrogenase activity. Journal of Industrial Microbiology and Biotechnology, 2011, 38, 441-450.	1.4	18
26	l(+)-Lactic acid production from non-food carbohydrates by thermotolerant Bacillus coagulans. Journal of Industrial Microbiology and Biotechnology, 2011, 38, 599-605.	1.4	103
27	Simplified process for ethanol production from sugarcane bagasse using hydrolysate-resistant Escherichia coli strain MM160. Bioresource Technology, 2011, 102, 2702-2711.	4.8	105
28	Injection of air into the headspace improves fermentation of phosphoric acid pretreated sugarcane bagasse by Escherichia coli MM170. Bioresource Technology, 2011, 102, 6959-6965.	4.8	49
29	Evolution of D-lactate dehydrogenase activity from glycerol dehydrogenase and its utility for D-lactate production from lignocellulose. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18920-18925.	3.3	69
30	Increased Furfural Tolerance Due to Overexpression of NADH-Dependent Oxidoreductase FucO in Escherichia coli Strains Engineered for the Production of Ethanol and Lactate. Applied and Environmental Microbiology, 2011, 77, 5132-5140.	1.4	89
31	Optimizing cellulase usage for improved mixing and rheological properties of acid-pretreated sugarcane bagasse. Bioresource Technology, 2010, 101, 9128-9136.	4.8	28
32	Optimizing the saccharification of sugar cane bagasse using dilute phosphoric acid followed by fungal cellulases. Bioresource Technology, 2010, 101, 1851-1857.	4.8	114
33	Metabolic Engineering for Production of Biorenewable Fuels and Chemicals: Contributions of Synthetic Biology. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-18.	3.0	125
34	Silencing of NADPH-Dependent Oxidoreductase Genes (<i>yqhD</i>and<i>dkgA</i>) in Furfural-Resistant Ethanologenic<i>Escherichia coli</i>. Applied and Environmental Microbiology, 2009, 75, 4315-4323.	1.4	168
35	Deletion of methylglyoxal synthase gene (mgsA) increased sugar co-metabolism in ethanol-producing Escherichia coli. Biotechnology Letters, 2009, 31, 1389-1398.	1.1	101
36	Engineering Escherichia coli for Fermentative Dihydrogen Production: Potential Role of NADH-Ferredoxin Oxidoreductase from the Hydrogenosome of Anaerobic Protozoa. Applied Biochemistry and Biotechnology, 2009, 153, 21-33.	1.4	7

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37	Thermophilic Bacillus coagulans Requires Less Cellulases for Simultaneous Saccharification and Fermentation of Cellulose to Products than Mesophilic Microbial Biocatalysts. Applied Biochemistry and Biotechnology, 2009, 155, 76-82.	1.4	60
38	Eliminating side products and increasing succinate yields in engineered strains of <i>Escherichia coli</i> C. Biotechnology and Bioengineering, 2008, 101, 881-893.	1.7	202
39	Dihydrolipoamide Dehydrogenase Mutation Alters the NADH Sensitivity of Pyruvate Dehydrogenase Complex of <i>Escherichia coli</i> K-12. Journal of Bacteriology, 2008, 190, 3851-3858.	1.0	107
40	Engineering Biocatalysts for Production of Commodity Chemicals. Journal of Molecular Microbiology and Biotechnology, 2008, 15, 8-15.	1.0	35
41	Construction of an Escherichia coli K-12 Mutant for Homoethanologenic Fermentation of Glucose or Xylose without Foreign Genes. Applied and Environmental Microbiology, 2007, 73, 1766-1771.	1.4	130
42	Development of plasmid vector and electroporation condition for gene transfer in sporogenic lactic acid bacterium, Bacillus coagulans. Plasmid, 2007, 58, 13-22.	0.4	36
43	Production of l-alanine by metabolically engineered Escherichia coli. Applied Microbiology and Biotechnology, 2007, 77, 355-366.	1.7	146
44	Low salt medium for lactate and ethanol production by recombinant Escherichia coli B. Biotechnology Letters, 2007, 29, 397-404.	1.1	142
45	Fermentation of 12% (w/v) Glucose to 1.2Âm Lactate by Escherichia coli Strain SZ194 using Mineral Salts Medium. Biotechnology Letters, 2006, 28, 663-670.	1.1	71
46	Betaine Tripled the Volumetric Productivity of d(-)-lactate by Escherichia coli Strain SZ132 in Mineral Salts Medium. Biotechnology Letters, 2006, 28, 671-676.	1.1	52
47	Methylglyoxal Bypass Identified as Source of Chiral Contamination in l(+) and d(âˆ’)-lactate Fermentations by Recombinant Escherichia coli. Biotechnology Letters, 2006, 28, 1527-1535.	1.1	103
48	Isolation and Characterization of Acid-Tolerant, Thermophilic Bacteria for Effective Fermentation of Biomass-Derived Sugars to Lactic Acid. Applied and Environmental Microbiology, 2006, 72, 3228-3235.	1.4	159
49	Simultaneous Saccharification and Co-Fermentation of Crystalline Cellulose and Sugar Cane Bagasse Hemicellulose Hydrolysate to Lactate by a Thermotolerant Acidophilic Bacillus sp.. Biotechnology Progress, 2005, 21, 1453-1460.	1.3	91
50	Global gene expression analysis revealed an unsuspected deo operon under the control of molybdate sensor, ModE protein, in Escherichia coli. Archives of Microbiology, 2005, 184, 225-233.	1.0	19
51	Pyruvate Formate Lyase and Acetate Kinase Are Essential for Anaerobic Growth of Escherichia coli on Xylose. Journal of Bacteriology, 2004, 186, 7593-7600.	1.0	134
52	Production of Optically Pure d-Lactic Acid in Mineral Salts Medium by Metabolically Engineered Escherichia coli W3110. Applied and Environmental Microbiology, 2003, 69, 399-407.	1.4	212
53	Engineering the metabolism of Escherichia coli W3110 for the conversion of sugar to redox-neutral and oxidized products: Homoacetate production. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 825-832.	3.3	182
54	Functional Replacement of the Escherichia coli d- (âˆ’)-Lactate Dehydrogenase Gene (ldhA) with the l-(+)-Lactate Dehydrogenase Gene (ldhL) from Pediococcus acidilactici. Applied and Environmental Microbiology, 2003, 69, 2237-2244.	1.4	96

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55	Flux through Citrate Synthase Limits the Growth of Ethanologenic Escherichia coli KO11 during Xylose Fermentation. Applied and Environmental Microbiology, 2002, 68, 1071-1081.	1.4	78
56	Genetic Changes To Optimize Carbon Partitioning between Ethanol and Biosynthesis in Ethanologenic Escherichia coli. Applied and Environmental Microbiology, 2002, 68, 6263-6272.	1.4	56
57	Global Gene Expression Differences Associated with Changes in Glycolytic Flux and Growth Rate in Escherichia coli during the Fermentation of Glucose and Xylose. Biotechnology Progress, 2002, 18, 6-20.	1.3	76
58	Molybdate transport. Research in Microbiology, 2001, 152, 311-321.	1.0	129
59	Transcriptional regulation of the moe (molybdate metabolism) operon of Escherichia coli. Archives of Microbiology, 2001, 175, 178-188.	1.0	21
60	Engineering a Homo-Ethanol Pathway in Escherichia coli : Increased Glycolytic Flux and Levels of Expression of Glycolytic Genes during Xylose Fermentation. Journal of Bacteriology, 2001, 183, 2979-2988.	1.0	106
61	N-terminal truncations in the FhlA protein result in formate- and MoeA-independent expression of the hyc (formate hydrogenlyase) operon of Escherichia coli. Microbiology (United Kingdom), 2001, 147, 3093-3104.	0.7	31
62	Isolation and characterization of mutated FhlA proteins which activate transcription of thehycoperon (formate hydrogenlyase) ofEscherichia coliin the absence of molybdate. FEMS Microbiology Letters, 2000, 184, 47-52.	0.7	26
63	An Analysis of the Binding of Repressor Protein ModE to modABCD (Molybdate Transport) Operator/Promoter DNA of Escherichia coli. Journal of Biological Chemistry, 1999, 274, 24308-24315.	1.6	38
64	Transcriptional regulation of molybdoenzyme synthesis in Escherichia coli in response to molybdenum: ModE-molybdate, a repressor of the modABCD (molybdate transport) operon is a secondary transcriptional activator for the hyc and nar operons. Microbiology (United Kingdom), 1999, 145, 41-55.	0.7	61
65	Molybdate-dependent transcription ofhycandnaroperons ofEscherichia colirequires MoeA protein and ModE-molybdate. FEMS Microbiology Letters, 1998, 169, 111-116.	0.7	26
66	Dry Matter and Nitrogen Accumulation in Rice Inoculated with a Nitrogenaseâ€Derepressed Mutant of Anabaena variabilis. Agronomy Journal, 1998, 90, 529-535.	0.9	8
67	Physiological and Genetic Analyses Leading to Identification of a Biochemical Role for the <i>moeA</i> (Molybdate Metabolism) Gene Product in <i>Escherichia coli</i>. Journal of Bacteriology, 1998, 180, 1466-1472.	1.0	66
68	Molybdate transport and regulation in bacteria. Archives of Microbiology, 1997, 168, 345-354.	1.0	161
69	Photodissimilation of Fructose to H(inf2) and CO(inf2) by a Dinitrogen-Fixing Cyanobacterium, Anabaena variabilis. Applied and Environmental Microbiology, 1996, 62, 1220-1226.	1.4	23
70	Repression of the Escherichia coli modABCD (molybdate transport) operon by ModE. Journal of Bacteriology, 1996, 178, 735-744.	1.0	101
71	Genetic analysis of the modABCD (molybdate transport) operon of Escherichia coli. Journal of Bacteriology, 1995, 177, 4851-4856.	1.0	104
72	Molybdate and regulation of mod (molybdate transport), fdhF, and hyc (formate hydrogenlyase) operons in Escherichia coli. Journal of Bacteriology, 1995, 177, 4857-4864.	1.0	85

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73	Direct isolation of functional genes encoding cellulases from the microbial consortia in a thermophilic, anaerobic digester maintained on lignocellulose. Applied Microbiology and Biotechnology, 1995, 43, 667-674.	1.7	22
74	Genetic improvement of Escherichia coli for ethanol production: chromosomal integration of Zymomonas mobilis genes encoding pyruvate decarboxylase and alcohol dehydrogenase II. Applied and Environmental Microbiology, 1991, 57, 893-900.	1.4	444
75	Identification of a new gene, molR, essential for utilization of molybdate by Escherichia coli. Journal of Bacteriology, 1990, 172, 2079-2087.	1.0	60
76	Isolation and characterization of mutant strains of Escherichia coli altered in H2 metabolism. Journal of Bacteriology, 1985, 162, 344-352.	1.0	70
77	Ferredoxins in light- and dark-grown photosynthetic cells with special reference to Rhodospirillum rubrum. Biochimica Et Biophysica Acta - Bioenergetics, 1972, 256, 477-486.	0.5	84