David R Nielsen

List of Publications by Year
in descending order

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Version: 2024-02-01

52 papers	2,258 citations	236925 25 h-index	214800 47 g-index
52 all docs	52 docs citations	52 times ranked	2533 citing authors

#	Article	IF	Citations
1	Engineering alternative butanol production platforms in heterologous bacteria. Metabolic Engineering, 2009, 11, 262-273.	7.0	350
2	Styrene biosynthesis from glucose by engineered E. coli. Metabolic Engineering, 2011, 13, 544-554.	7.0	222
3	In situ product recovery of nâ€butanol using polymeric resins. Biotechnology and Bioengineering, 2009, 102, 811-821.	3.3	162
4	Engineering cyanobacteria for photosynthetic production of 3-hydroxybutyrate directly from CO2. Metabolic Engineering, 2013, 16, 68-77.	7.0	149
5	Membrane engineering via trans unsaturated fatty acids production improves Escherichia coli robustness and production of biorenewables. Metabolic Engineering, 2016, 35, 105-113.	7.0	112
6	Metabolic engineering of acetoin and mesoâ€2, 3â€butanediol biosynthesis in E. coli. Biotechnology Journal, 2010, 5, 274-284.	3.5	100
7	Engineering Escherichia coli for renewable production of the 5â€carbon polyamide buildingâ€blocks 5â€aminovalerate and glutarate. Biotechnology and Bioengineering, 2013, 110, 1726-1734.	3.3	86
8	Engineering microbial chemical factories to produce renewable â€œbiomonomersâ€. Frontiers in Microbiology, 2012, 3, 313.	3.5	72
9	Rational and combinatorial approaches to engineering styrene production by Saccharomyces cerevisiae. Microbial Cell Factories, 2014, 13, 123.	4.0	59
10	In situ butanol recovery from Clostridium acetobutylicum fermentations by expanded bed adsorption. Biotechnology Progress, 2014, 30, 68-78.	2.6	57
11	Rapid adsorption of alcohol biofuels by high surface area mesoporous carbons. Microporous and Mesoporous Materials, 2012, 148, 107-114.	4.4	56
12	Engineering Escherichia coli for renewable benzyl alcohol production. Metabolic Engineering Communications, 2015, 2, 39-45.	3.6	56
13	Creating pathways towards aromatic building blocks and fine chemicals. Current Opinion in Biotechnology, 2015, 36, 1-7.	6.6	52
14	Production of biorenewable styrene: utilization of biomass-derived sugars and insights into toxicity. Journal of Industrial Microbiology and Biotechnology, 2016, 43, 595-604.	3.0	50
15	Predicting the adsorption of second generation biofuels by polymeric resins with applications for in situ product recovery (ISPR). Bioresource Technology, 2010, 101, 2762-2769.	9.6	49
16	Improving n-butanol production in batch and semi-continuous processes through integrated product recovery. Process Biochemistry, 2015, 50, 1487-1498.	3.7	49
17	High-throughput screening for efficient microbial biotechnology. Current Opinion in Biotechnology, 2020, 64, 141-150.	6.6	43
18	Comparing in situ removal strategies for improving styrene bioproduction. Bioprocess and Biosystems Engineering, 2015, 38, 165-174.	3.4	41

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19	Microbial production of the aromatic buildingâ€blocks (S)â€styrene oxide and (R)â€1,2â€phenylethanediol from renewable resources. Biotechnology Journal, 2013, 8, 1465-1475.	3.5	40
20	Rational engineering of a novel pathway for producing the aromatic compounds p-hydroxybenzoate, protocatechuate, and catechol in Escherichia coli. Process Biochemistry, 2014, 49, 1843-1850.	3.7	38
21	Muconic Acid Production via Alternative Pathways and a Synthetic â€œMetabolic Funnelâ€. ACS Synthetic Biology, 2018, 7, 565-575.	3.8	37
22	Technoeconomic evaluation of bio-based styrene production by engineered Escherichia coli. Journal of Industrial Microbiology and Biotechnology, 2014, 41, 1211-1216.	3.0	32
23	Engineering a Synthetic, Catabolically Orthogonal Coculture System for Enhanced Conversion of Lignocellulose-Derived Sugars to Ethanol. ACS Synthetic Biology, 2019, 8, 1089-1099.	3.8	31
24	Bioprospecting of Native Efflux Pumps To Enhance Furfural Tolerance in Ethanologenic Escherichia coli. Applied and Environmental Microbiology, 2019, 85, .	3.1	31
25	Expanding Upon Styrene Biosynthesis to Engineer a Novel Route to 2â€Phenylethanol. Biotechnology Journal, 2017, 12, 1700310.	3.5	28
26	Engineering and comparison of nonâ€natural pathways for microbial phenol production. Biotechnology and Bioengineering, 2016, 113, 1745-1754.	3.3	25
27	Dynamic simulation of benzene vapor treatment by a two-phase partitioning bioscrubber. Biochemical Engineering Journal, 2007, 36, 239-249.	3.6	21
28	Dynamic simulation of benzene vapor treatment by a two-phase partitioning bioscrubber. Biochemical Engineering Journal, 2007, 36, 250-261.	3.6	20
29	High Efficiency and Facile Butanol Recovery with Magnetically Responsive Micro/Mesoporous Carbon Adsorbents. ACS Sustainable Chemistry and Engineering, 2017, 5, 885-894.	6.7	19
30	Advances and opportunities at the interface between microbial bioenergy and nanotechnology. Canadian Journal of Chemical Engineering, 2011, 89, 2-12.	1.7	16
31	Recent trends in integrated bioprocesses: aiding and expanding microbial biofuel/biochemical production. Current Opinion in Biotechnology, 2019, 57, 82-87.	6.6	15
32	Catabolic Division of Labor Enhances Production of D-Lactate and Succinate From Glucose-Xylose Mixtures in Engineered Escherichia coli Co-culture Systems. Frontiers in Bioengineering and Biotechnology, 2020, 8, 329.	4.1	15
33	Adsorption of Short-Chain Alcohols by Hydrophobic Silica Aerogels. Industrial & Engineering Chemistry Research, 2013, 52, 18379-18385.	3.7	11
34	From promise to practice. EMBO Reports, 2013, 14, 1034-1038.	4.5	11
35	Synthetic biology applications in industrial microbiology. Frontiers in Microbiology, 2014, 5, 451.	3.5	9
36	â€˜Hybridâ€™ processing strategies for expanding and improving the synthesis of renewable bioproducts. Current Opinion in Biotechnology, 2014, 30, 17-23.	6.6	9

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37	Emerging tools, enabling technologies, and future opportunities for the bioproduction of aromatic chemicals. Journal of Chemical Technology and Biotechnology, 2019, 94, 38-52.	3.2	9
38	Catalytic conversion of cyanobacteria-derived fatty acids to alkanes for biorenewable synthetic paraffinic kerosene. Sustainable Energy and Fuels, 2018, 2, 882-893.	4.9	8
39	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
40	Systematic Engineering of Synechococcus elongatus UTEX 2973 for Photosynthetic Production of <scp>l</scp>-Lysine, Cadaverine, and Glutarate. ACS Synthetic Biology, 2021, 10, 3561-3575.	3.8	8
41	Sensitivity analysis of a proposed model mechanism for newly created glucoseâ€6â€oxidases. AICHE Journal, 2012, 58, 2303-2308.	3.6	7
42	Exploiting Polyploidy for Markerless and Plasmid-Free Genome Engineering in Cyanobacteria. ACS Synthetic Biology, 2021, 10, 2371-2382.	3.8	7
43	Solid-phase extraction of long-chain fatty acids from aqueous solution. Separation and Purification Technology, 2013, 106, 1-7.	7.9	6
44	Activity of Lactobacillus brevis Alcohol Dehydrogenase on Primary and Secondary Alcohol Biofuel Precursors. Fermentation, 2015, 1, 24-37.	3.0	6
45	Characterizing Escherichia coliâ€™s transcriptional response to different styrene exposure modes reveals novel toxicity and tolerance insights. Journal of Industrial Microbiology and Biotechnology, 2021, 48, .	3.0	6
46	Multi-omic based production strain improvement (MOBpsi) for bio-manufacturing of toxic chemicals. Metabolic Engineering, 2022, 72, 133-149.	7.0	6
47	Consolidated bioprocessing of hemicellulose to fuels and chemicals through an engineered Bacillus subtilis-Escherichia coli consortium. Renewable Energy, 2022, 193, 288-298.	8.9	6
48	A coculture-coproduction system designed for enhanced carbon conservation through inter-strain CO2 recycling. Metabolic Engineering, 2021, 67, 387-395.	7.0	5
49	Synthetic biology strategies to address waste CO2 loss during biofuel production. Current Opinion in Environmental Science and Health, 2021, , 100305.	4.1	2
50	Heterologous expression and purification of the bicarbonate transporter BicA from Synechocystis sp. PCC 6803. Protein Expression and Purification, 2020, 175, 105716.	1.3	1
51	Applying a â€˜Metabolic Funnelâ€™ for Phenol Production in Escherichia coli. Fermentation, 2021, 7, 216.	3.0	0
52	Tetragonal crystal form of the cyanobacterial bicarbonate-transporter regulator SbtB from Synechocystis sp. PCC 6803. Acta Crystallographica Section F, Structural Biology Communications, 2020, 76, 438-443.	0.8	0