

Wayne R Curtis

List of Publications by Year in descending order

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75
papers

2,375
citations

201385

27
h-index

233125

45
g-index

79
all docs

79
docs citations

79
times ranked

2699
citing authors

#	ARTICLE	IF	CITATIONS
1	Improving accuracy of cell and chromophore concentration measurements using optical density. BMC Biophysics, 2013, 6, 4.	4.4	226
2	Consortia-mediated bioprocessing of cellulose to ethanol with a symbiotic Clostridium phytofermentans/yeast co-culture. Biotechnology for Biofuels, 2013, 6, 59.	6.2	141
3	Developing symbiotic consortia for lignocellulosic biofuel production. Applied Microbiology and Biotechnology, 2012, 93, 1423-1435.	1.7	136
4	Enhanced somatic embryogenesis in Theobroma cacao using the homologous BABY BOOM transcription factor. BMC Plant Biology, 2015, 15, 121.	1.6	123
5	Approaches to Understanding and Manipulating the Biosynthetic Potential of Plant Roots. Annals of the New York Academy of Sciences, 1992, 665, 188-209.	1.8	102
6	Achieving pH control in microalgal cultures through fed-batch addition of stoichiometrically-balanced growth media. BMC Biotechnology, 2013, 13, 39.	1.7	95
7	Metabolic engineering in chemolithoautotrophic hosts for the production of fuels and chemicals. Metabolic Engineering, 2015, 30, 105-120.	3.6	80
8	Plant cell suspension culture rheology. Biotechnology and Bioengineering, 1993, 42, 520-526.	1.7	68
9	Trickle-bed root culture bioreactor design and scale-up: Growth, fluid-dynamics, and oxygen mass transfer. Biotechnology and Bioengineering, 2004, 88, 248-260.	1.7	56
10	Synergistic response of plant hairy-root cultures to phosphate limitation and fungal elicitation. Biotechnology Progress, 1991, 7, 434-438.	1.3	55
11	Growth of plant root cultures in liquid- and gas dispersed reactor environments. Biotechnology Progress, 1993, 9, 317-322.	1.3	55
12	Characterization of fluid-flow resistance in root cultures with a convective flow tubular bioreactor. , 1998, 60, 375-384.		50
13	Enhanced recovery of solavetivone from Agrobacterium transformed root cultures of Hyoscyamus muticus using integrated product extraction. Biotechnology and Bioengineering, 1993, 42, 503-508.	1.7	45
14	Materials Fabrication from Native and Recombinant Thermoplastic Squid Proteins. Advanced Functional Materials, 2014, 24, 7401-7409.	7.8	44
15	A Rapid and Economical Method for Efficient DNA Extraction from Diverse Soils Suitable for Metagenomic Applications. PLoS ONE, 2015, 10, e0132441.	1.1	44
16	Modeling linear and variable growth in phosphate limited suspension cultures of Opium poppy. Biotechnology and Bioengineering, 1991, 38, 371-379.	1.7	42
17	Triterpene hydrocarbon production engineered into a metabolically versatile host <i>Rhodobacter capsulatus</i> . Biotechnology and Bioengineering, 2015, 112, 1523-1532.	1.7	42
18	Hydrocarbon production in high density <i>Botryococcus braunii</i> race B continuous culture. Biotechnology and Bioengineering, 2014, 111, 493-503.	1.7	40

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19	Inoculation and tissue distribution in pilot-scale plant root culture bioreactors. <i>Biotechnology Letters</i> , 1994, 8, 639.	0.5	39
20	Inhibitory role of root hairs on transport within root culture bioreactors. <i>Biotechnology and Bioengineering</i> , 2000, 70, 176-186.	1.7	38
21	Proton stoichiometric imbalance during algae photosynthetic growth on various nitrogen sources: toward metabolic pH control. <i>Journal of Applied Phycology</i> , 2016, 28, 43-52.	1.5	37
22	The role of liquid mixing and gas-phase dispersion in a submerged, sparged root reactor. <i>Enzyme and Microbial Technology</i> , 1997, 20, 207-213.	1.6	35
23	Comparison of Transient Protein Expression in Tobacco Leaves and Plant Suspension Culture. <i>Biotechnology Progress</i> , 2008, 21, 946-952.	1.3	35
24	RNA viral vectors for improved <i>Agrobacterium</i> -mediated transient expression of heterologous proteins in <i>Nicotiana benthamiana</i> cell suspensions and hairy roots. <i>BMC Biotechnology</i> , 2012, 12, 21.	1.7	34
25	Intrinsic Oxygen Use Kinetics of Transformed Plant Root Culture. <i>Biotechnology Progress</i> , 2001, 17, 481-489.	1.3	32
26	Cultivation of roots in bioreactors. <i>Current Opinion in Biotechnology</i> , 1993, 4, 205-210.	3.3	31
27	Expression and characterization of alkaline protease from the metagenomic library of tannery activated sludge. <i>Journal of Bioscience and Bioengineering</i> , 2016, 122, 694-700.	1.1	31
28	Molecular Cloning, Overexpression and Characterization of a Novel Water Channel Protein from <i>Rhodobacter sphaeroides</i> . <i>PLoS ONE</i> , 2014, 9, e86830.	1.1	30
29	Genome-wide analysis reveals divergent patterns of gene expression during zygotic and somatic embryo maturation of <i>Theobroma cacao</i> L., the chocolate tree. <i>BMC Plant Biology</i> , 2014, 14, 185.	1.6	27
30	Monitoring biomass in root culture systems. , 1999, 62, 711-721.		26
31	Estimation of Growth Yield and Maintenance Coefficient of Plant Cell Suspensions. <i>Biotechnology and Bioengineering</i> , 1991, 38, 1131-1136.	1.7	25
32	Elevated meristematic respiration in plant root cultures: implications to reactor design.. <i>Journal of Chemical Engineering of Japan</i> , 1995, 28, 491-493.	0.3	25
33	Scale-Up of <i>Agrobacterium</i> -Mediated Transient Protein Expression in Bioreactor-Grown <i>Nicotiana glutinosa</i> Plant Cell Suspension Culture. <i>Biotechnology Progress</i> , 2008, 24, 372-376.	1.3	25
34	A process economic assessment of hydrocarbon biofuels production using chemoautotrophic organisms. <i>Bioresource Technology</i> , 2014, 172, 201-211.	4.8	25
35	Metabolic Engineering Strategies of Industrial Hemp (<i>Cannabis sativa</i> L.): A Brief Review of the Advances and Challenges. <i>Frontiers in Plant Science</i> , 2020, 11, 580621.	1.7	24
36	Fluid Dynamic Studies on Plant Root Cultures for Application to Bioreactor Design. , 1994, , 281-305.		22

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37	Effects of abiotic inducers on sesquiterpene synthesis in hairy root and cell-suspension cultures of <i>Hyoscyamus muticus</i> . <i>Applied Biochemistry and Biotechnology</i> , 1997, 67, 71-77.	1.4	22
38	Physiology, Genomics, and Pathway Engineering of an Ethanol-Tolerant Strain of <i>Clostridium phytofermentans</i> . <i>Applied and Environmental Microbiology</i> , 2015, 81, 5440-5448.	1.4	20
39	Inducible somatic embryogenesis in <i>Theobroma cacao</i> achieved using the DEX-activatable transcription factor-glucocorticoid receptor fusion. <i>Biotechnology Letters</i> , 2017, 39, 1747-1755.	1.1	19
40	Approximation of continuous growth of <i>Cephalotaxus harringtonia</i> plant cell cultures using fed-batch operation. <i>Biotechnology and Bioengineering</i> , 1991, 38, 241-246.	1.7	18
41	Development of Auxotrophic <i>Agrobacterium tumefaciens</i> for Gene Transfer in Plant Tissue Culture. <i>Biotechnology Progress</i> , 2004, 20, 890-896.	1.3	18
42	Role of calcium and differentiation in enhanced sesquiterpene elicitation from calcium alginate-immobilized plant tissue. <i>Enzyme and Microbial Technology</i> , 1995, 17, 554-557.	1.6	17
43	Achieving Economic Feasibility for Moderate-Value Food and Flavor Additives. , 1999, , 225-236.		17
44	<i>Agrobacterium</i> -Mediated Viral Vector-Amplified Transient Gene Expression in <i>Nicotiana glutinosa</i> Plant Tissue Culture. <i>Biotechnology Progress</i> , 2008, 23, 570-576.	1.3	17
45	11-Hydroperoxyeicosatetraenoic acid is the major dioxygenation product of lipoxygenase isolated from hairy root cultures of <i>Solanum tuberosum</i> . <i>Biochemical and Biophysical Research Communications</i> , 1992, 189, 1349-1352.	1.0	16
46	Laterally aligned, multiwalled carbon nanotube growth using <i>Magnetospirillum magnetotacticum</i> . <i>Applied Physics Letters</i> , 2005, 86, 173101.	1.5	16
47	Use of Binding Measurements To Predict Elicitor Dosage Requirements for Secondary Metabolite Production from Root Cultures. <i>Biotechnology Progress</i> , 1994, 10, 365-371.	1.3	15
48	The effect of inoculum size on the growth of cell and root cultures of <i>Hyoscyamus muticus</i> : Implications for reactor inoculation. <i>Biotechnology and Bioprocess Engineering</i> , 1999, 4, 287-293.	1.4	15
49	Growth Yields and Maintenance Coefficients of Unadapted and NaCl-Adapted Tobacco Cells Grown in Semicontinuous Culture. <i>Plant Physiology</i> , 1991, 96, 1289-1293.	2.3	13
50	Phloem Exudate Protein Profiles during Drought and Recovery Reveal Abiotic Stress Responses in Tomato Vasculature. <i>International Journal of Molecular Sciences</i> , 2020, 21, 4461.	1.8	13
51	Interpreting the role of phosphorus and growth rate in enhanced fungal induction of sesquiterpenes from <i>Hyoscyamus muticus</i> root cultures. <i>Applied Microbiology and Biotechnology</i> , 1993, 38, 550.	1.7	12
52	The Cumulative and Sublethal Effects of Turbulence on Erythrocytes in a Stirred-Tank Model. <i>Annals of Biomedical Engineering</i> , 2007, 35, 2108-2120.	1.3	12
53	Long-Distance Translocation of Protein during Morphogenesis of the Fruiting Body in the Filamentous Fungus, <i>Agaricus bisporus</i> . <i>PLoS ONE</i> , 2011, 6, e28412.	1.1	12
54	Production of solavetivone by immobilized cells of <i>Hyoscyamus muticus</i> . <i>Biotechnology Letters</i> , 1993, 15, 301-306.	1.1	11

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55	Application of bioreactor design principles to plant micropropagation. <i>Plant Cell, Tissue and Organ Culture</i> , 2005, 81, 255-264.	1.2	11
56	Advancing <i>Rhodobacter sphaeroides</i> as a platform for expression of functional membrane proteins. <i>Protein Expression and Purification</i> , 2015, 115, 109-117.	0.6	10
57	A preliminary implementation of metabolic-based pH control to reduce CO ₂ usage in outdoor flat-panel photobioreactor cultivation of <i>Nannochloropsis oceanica</i> microalgae. <i>Algal Research</i> , 2016, 18, 288-295.	2.4	10
58	A temporary immersion plant propagation bioreactor with decoupled gas and liquid flows for enhanced control of gas phase. <i>Biotechnology Progress</i> , 2016, 32, 337-345.	1.3	9
59	Insights into <i>Clostridium phytofermentans</i> biofilm formation: aggregation, microcolony development and the role of extracellular DNA. <i>Microbiology (United Kingdom)</i> , 2014, 160, 1134-1143.	0.7	8
60	Direct <i>Agrobacterium tumefaciens</i> -Mediated Transformation of <i>Hyoscyamus muticus</i> Hairy Roots Using Green Fluorescent Protein. <i>Biotechnology Progress</i> , 1999, 15, 278-282.	1.3	7
61	Oxygen Transport In Plant Tissue Culture Systems. , 2008, , 173-186.		6
62	Characterization of Local and Systemic Impact of Whitefly (<i>Bemisia tabaci</i>) Feeding and Whitefly-Transmitted Tomato Mottle Virus Infection on Tomato Leaves by Comprehensive Proteomics. <i>International Journal of Molecular Sciences</i> , 2020, 21, 7241.	1.8	6
63	Reactor Design for Root Culture. , 1999, , 139-156.		5
64	Effect of Elicitation on Growth, Respiration, and Nutrient Uptake of Root and Cell Suspension Cultures of <i>Hyoscyamus muticus</i> . <i>Biotechnology Progress</i> , 2002, 18, 282-289.	1.3	4
65	Preserved and variable spatial chemical changes of lipids across tomato leaves in response to central vein wounding reveals potential origin of linolenic acid in signal transduction cascade. <i>Plant-Environment Interactions</i> , 2021, 2, 28-35.	0.7	4
66	Application of bioreactor design principles to plant micropropagation. , 2005, , 21-40.		4
67	Integrated Recovery of Pigments Released from Red Beet Hairy Roots Exposed to Acidic Medium. <i>Journal of Plant Biochemistry and Biotechnology</i> , 2001, 10, 67-69.	0.9	3
68	Scale-up of transgenic tobacco cells that express intimin of enterohemorrhagic <i>Escherichia coli</i> O157:H7 for use as a transitional platform for an oral cattle vaccine. <i>In Vitro Cellular and Developmental Biology - Plant</i> , 2015, 51, 315-323.	0.9	3
69	Genome analysis of alginate synthesizing <i>Pseudomonas aeruginosa</i> strain SW1 isolated from degraded seaweeds. <i>Antonie Van Leeuwenhoek</i> , 2021, 114, 2205-2217.	0.7	3
70	Effect of Root Morphology on Reactor Design and Operation for Production of Chemicals. , 2020, , 151-168.		3
71	CO ₂ supplementation eliminates sugar-rich media requirement for plant propagation using a simple inexpensive temporary immersion photobioreactor. <i>Plant Cell, Tissue and Organ Culture</i> , 2022, 150, 57-71.	1.2	3
72	Interference of intracellular inorganic phosphate analysis by phosphatase in <i>Papaver somniferum</i> cell suspensions. <i>Phytochemical Analysis</i> , 1990, 1, 70-73.	1.2	1

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73	Production of Biofuel-Related Isoprenoids Derived from <i>Botryococcus braunii</i> Algae. Springer Protocols, 2015, , 141-152.	0.1	1
74	Establishing an inexpensive, space efficient colony of <i>Bemisia tabaci</i> MEAM1 utilizing modelling and feedback control principles. Journal of Applied Entomology, 0, , .	0.8	1
75	Resid Conversion. , 2005, , 2655-2662.		0