

Nancy L Engle

List of Publications by Year in descending order

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84
papers

4,027
citations

147801

31
h-index

128289

60
g-index

98
all docs

98
docs citations

98
times ranked

5164
citing authors

#	ARTICLE	IF	CITATIONS
1	A physical catalyst for the electrolysis of nitrogen to ammonia. <i>Science Advances</i> , 2018, 4, e1700336.	10.3	264
2	Carbon-negative production of acetone and isopropanol by gas fermentation at industrial pilot scale. <i>Nature Biotechnology</i> , 2022, 40, 335-344.	17.5	195
3	The fate of lignin during hydrothermal pretreatment. <i>Biotechnology for Biofuels</i> , 2013, 6, 110.	6.2	191
4	Efficient Degradation of Lignocellulosic Plant Biomass, without Pretreatment, by the Thermophilic Anaerobe <i>Anaerococcus thermophilus</i> DSM 6725. <i>Applied and Environmental Microbiology</i> , 2009, 75, 4762-4769.	3.1	187
5	4-Coumarate 3-hydroxylase in the lignin biosynthesis pathway is a cytosolic ascorbate peroxidase. <i>Nature Communications</i> , 2019, 10, 1994.	12.8	171
6	Transcript, protein and metabolite temporal dynamics in the CAM plant Agave. <i>Nature Plants</i> , 2016, 2, 16178.	9.3	158
7	Transcriptomic and metabolomic profiling of <i>Zymomonas mobilis</i> during aerobic and anaerobic fermentations. <i>BMC Genomics</i> , 2009, 10, 34.	2.8	138
8	Combined inactivation of the <i>Clostridium cellulolyticum</i> lactate and malate dehydrogenase genes substantially increases ethanol yield from cellulose and switchgrass fermentations. <i>Biotechnology for Biofuels</i> , 2012, 5, 2.	6.2	125
9	Enhanced characteristics of genetically modified switchgrass (<i>Panicum virgatum</i> L.) for high biofuel production. <i>Biotechnology for Biofuels</i> , 2013, 6, 71.	6.2	118
10	Two Poplar-Associated Bacterial Isolates Induce Additive Favorable Responses in a Constructed Plant-Microbiome System. <i>Frontiers in Plant Science</i> , 2016, 7, 497.	3.6	113
11	Genome-wide association studies and expression-based quantitative trait loci analyses reveal roles of HCT2 in caffeoylquinic acid biosynthesis and its regulation by defense-responsive transcription factors in <i>Populus</i> . <i>New Phytologist</i> , 2018, 220, 502-516.	7.3	112
12	Rhizosphere microbiomes diverge among <i>Populus trichocarpa</i> plant-host genotypes and chemotypes, but it depends on soil origin. <i>Microbiome</i> , 2019, 7, 76.	11.1	109
13	Down-regulation of the caffeic acid O-methyltransferase gene in switchgrass reveals a novel monolignol analog. <i>Biotechnology for Biofuels</i> , 2012, 5, 71.	6.2	96
14	The exometabolome of <i>Clostridium thermocellum</i> reveals overflow metabolism at high cellulose loading. <i>Biotechnology for Biofuels</i> , 2014, 7, 155.	6.2	96
15	Abiotic Stresses Shift Belowground <i>Populus</i> -Associated Bacteria Toward a Core Stress Microbiome. <i>MSystems</i> , 2018, 3, .	3.8	89
16	Insights of biomass recalcitrance in natural <i>Populus trichocarpa</i> variants for biomass conversion. <i>Green Chemistry</i> , 2017, 19, 5467-5478.	9.0	82
17	<i>Clostridium thermocellum</i> ATCC27405 transcriptomic, metabolomic and proteomic profiles after ethanol stress. <i>BMC Genomics</i> , 2012, 13, 336.	2.8	73
18	<i>Populus trichocarpa</i> and <i>Populus deltoides</i> Exhibit Different Metabolomic Responses to Colonization by the Symbiotic Fungus <i>Laccaria bicolor</i> . <i>Molecular Plant-Microbe Interactions</i> , 2014, 27, 546-556.	2.6	69

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19	Biosynthesis and emission of insect-induced methyl salicylate and methyl benzoate from rice. <i>Plant Physiology and Biochemistry</i> , 2010, 48, 279-287.	5.8	65
20	Systems Biology Analysis of <i>Zymomonas mobilis</i> ZM4 Ethanol Stress Responses. <i>PLoS ONE</i> , 2013, 8, e68886.	2.5	64
21	Knockdown of a laccase in <i>Populus deltoides</i> confers altered cell wall chemistry and increased sugar release. <i>Plant Biotechnology Journal</i> , 2016, 14, 2010-2020.	8.3	64
22	ALD1 Regulates Basal Immune Components and Early Inducible Defense Responses in <i>Arabidopsis</i> . <i>Molecular Plant-Microbe Interactions</i> , 2015, 28, 455-466.	2.6	56
23	A 5-Enolpyruvylshikimate 3-Phosphate Synthase Functions as a Transcriptional Repressor in <i>Populus</i> . <i>Plant Cell</i> , 2018, 30, 1645-1660.	6.6	56
24	Consolidated bioprocessing of <i>Populus</i> using <i>Clostridium</i> (<i>Ruminiclostridium</i>) <i>thermocellum</i> : a case study on the impact of lignin composition and structure. <i>Biotechnology for Biofuels</i> , 2016, 9, 31.	6.2	54
25	Characterization of <i>Clostridium thermocellum</i> strains with disrupted fermentation end-product pathways. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2013, 40, 725-734.	3.0	50
26	A Carotenoid-Deficient Mutant in <i>Pantoea</i> sp. YR343, a Bacteria Isolated from the Rhizosphere of <i>Populus deltoides</i> , Is Defective in Root Colonization. <i>Frontiers in Microbiology</i> , 2016, 7, 491.	3.5	48
27	Evaluation of the bioconversion of genetically modified switchgrass using simultaneous saccharification and fermentation and a consolidated bioprocessing approach. <i>Biotechnology for Biofuels</i> , 2012, 5, 81.	6.2	46
28	The nature of the progression of drought stress drives differential metabolomic responses in <i>Populus deltoides</i> . <i>Annals of Botany</i> , 2019, 124, 617-626.	2.9	45
29	Microfluidics and Metabolomics Reveal Symbiotic Bacterial-Fungal Interactions Between <i>Mortierella elongata</i> and <i>Burkholderia</i> Include Metabolite Exchange. <i>Frontiers in Microbiology</i> , 2019, 10, 2163.	3.5	37
30	Plant Hosts Modify Belowground Microbial Community Response to Extreme Drought. <i>MSystems</i> , 2020, 5, .	3.8	36
31	Underground Azelaic Acid-Conferred Resistance to <i>Pseudomonas syringae</i> in <i>Arabidopsis</i> . <i>Molecular Plant-Microbe Interactions</i> , 2019, 32, 86-94.	2.6	35
32	Synthesis and Properties of Calix[4]arene-bis[4-(2-ethylhexyl)benzo-crown-6], A Cesium Extractant with Improved Solubility. <i>Solvent Extraction and Ion Exchange</i> , 2004, 22, 611-636.	2.0	34
33	Nitrogen and sulfur requirements for <i>Clostridium thermocellum</i> and <i>Caldicellulosiruptor bescii</i> on cellulosic substrates in minimal nutrient media. <i>Bioresource Technology</i> , 2013, 130, 125-135.	9.6	33
34	Development of Process Chemistry for the Removal of Cesium from Acidic Nuclear Waste by Calix[4]arene-crown-6 Ethers. <i>ACS Symposium Series</i> , 2000, , 26-44.	0.5	32
35	Down-Regulation of KORRIGAN-Like Endo- β -1,4-Glucanase Genes Impacts Carbon Partitioning, Mycorrhizal Colonization and Biomass Production in <i>Populus</i> . <i>Frontiers in Plant Science</i> , 2016, 7, 1455.	3.6	32
36	Mathematical models of lignin biosynthesis. <i>Biotechnology for Biofuels</i> , 2018, 11, 34.	6.2	32

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37	Pinoresinol reductase 1 impacts lignin distribution during secondary cell wall biosynthesis in <i>Arabidopsis</i> . <i>Phytochemistry</i> , 2015, 112, 170-178.	2.9	31
38	Integrated omics analyses reveal the details of metabolic adaptation of <i>Clostridium thermocellum</i> to lignocellulose-derived growth inhibitors released during the deconstruction of switchgrass. <i>Biotechnology for Biofuels</i> , 2017, 10, 14.	6.2	30
39	Study of traits and recalcitrance reduction of field-grown COMT down-regulated switchgrass. <i>Biotechnology for Biofuels</i> , 2017, 10, 12.	6.2	30
40	SOLVATOCHROMIC SOLVENT POLARITY MEASUREMENTS OF ALCOHOL SOLVENT MODIFIERS AND CORRELATION WITH CESIUM EXTRACTION STRENGTH. <i>Solvent Extraction and Ion Exchange</i> , 2001, 19, 1037-1058.	2.0	29
41	New amino-functionalized 1,3-alternate calix[4]arene bis- and mono-(benzo-crown-6 ethers) for pH-switched cesium nitrate extraction. <i>Tetrahedron Letters</i> , 2003, 44, 5397-5401.	1.4	29
42	Selective Separation of Hydroxide from Alkaline Nuclear Tank Waste by Liquid-Liquid Extraction with Weak Hydroxy Acids. <i>Environmental Science & Technology</i> , 2002, 36, 1861-1867.	10.0	28
43	Characterization of a novel, ubiquitous fungal endophyte from the rhizosphere and root endosphere of <i>Populus</i> trees. <i>Fungal Ecology</i> , 2017, 27, 78-86.	1.6	27
44	Overexpression of a serine hydroxymethyltransferase increases biomass production and reduces recalcitrance in the bioenergy crop <i>Populus</i> . <i>Sustainable Energy and Fuels</i> , 2019, 3, 195-207.	4.9	27
45	Ectopic Defense Gene Expression Is Associated with Growth Defects in <i>Medicago truncatula</i> Lignin Pathway Mutants. <i>Plant Physiology</i> , 2019, 181, 63-84.	4.8	27
46	Development of a clostridia-based cell-free system for prototyping genetic parts and metabolic pathways. <i>Metabolic Engineering</i> , 2020, 62, 95-105.	7.0	27
47	Overexpression of a Domain of Unknown Function 231-containing protein increases O-xylan acetylation and cellulose biosynthesis in <i>Populus</i> . <i>Biotechnology for Biofuels</i> , 2017, 10, 311.	6.2	26
48	Developmental changes in lignin composition are driven by both monolignol supply and laccase specificity. <i>Science Advances</i> , 2022, 8, eabm8145.	10.3	26
49	Crystalline hydrogen-bonded nanocolumns of cyclic thiourea octamers. <i>CrystEngComm</i> , 2007, 9, 452.	2.6	25
50	Improvement of cellulose catabolism in <i>Clostridium cellulolyticum</i> by sporulation abolishment and carbon alleviation. <i>Biotechnology for Biofuels</i> , 2014, 7, 25.	6.2	25
51	Genome-scale resources for <i>Thermoanaerobacterium saccharolyticum</i> . <i>BMC Systems Biology</i> , 2015, 9, 30.	3.0	24
52	Pentose sugars inhibit metabolism and increase expression of an AgrD-type cyclic pentapeptide in <i>Clostridium thermocellum</i> . <i>Scientific Reports</i> , 2017, 7, 43355.	3.3	24
53	Impacts of Soil Microbiome Variations on Root Colonization by Fungi and Bacteria and on the Metabolome of <i>Populus tremula</i> <i>Populus alba</i> . <i>Phytobiomes Journal</i> , 2020, 4, 142-155.	2.7	24
54	Rational Design of Cesium-Selective Ionophores: Dihydrocalix[4]arene Crown-6 Ethers. <i>European Journal of Organic Chemistry</i> , 2003, 2003, 4862-4869.	2.4	22

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55	Industrial Robustness: Understanding the Mechanism of Tolerance for the Populus Hydrolysate-Tolerant Mutant Strain of Clostridium thermocellum. PLoS ONE, 2013, 8, e78829.	2.5	21
56	Combined Extraction of Cesium and Strontium from Alkaline Nitrate Solutions. Solvent Extraction and Ion Exchange, 2006, 24, 197-217.	2.0	19
57	Combining loss of function of FOLYLPOLYGLUTAMATE SYNTHETASE1 and CAFFEOYL-COA 3-O-METHYLTRANSFERASE1 for lignin reduction and improved saccharification efficiency in Arabidopsis thaliana. Biotechnology for Biofuels, 2019, 12, 108.	6.2	18
58	Scavenging organic nitrogen and remodelling lipid metabolism are key survival strategies adopted by the endophytic fungi, <i>Serendipita vermifera</i> and <i>Serendipita bescii</i> to alleviate nitrogen and phosphorous starvation in vitro. Environmental Microbiology Reports, 2019, 11, 548-557.	2.4	18
59	ALD1 accumulation in Arabidopsis epidermal plastids confers local and non-autonomous disease resistance. Journal of Experimental Botany, 2021, 72, 2710-2726.	4.8	18
60	Multiplex knockout of trichome-regulating MYB duplicates in hybrid poplar using a single gRNA. Plant Physiology, 2022, 189, 516-526.	4.8	18
61	A comparative multidimensional LC-MS proteomic analysis reveals mechanisms for furan aldehyde detoxification in Thermoanaerobacter pseudethanolicus 39E. Biotechnology for Biofuels, 2014, 7, 165.	6.2	17
62	Quantitative proteome profile of water deficit stress responses in eastern cottonwood (Populus) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50 4	2.5	17
63	Overexpression of a <i>Prefoldin 1</i> subunit gene reduces biomass recalcitrance in the bioenergy crop <i>Populus</i> . Plant Biotechnology Journal, 2020, 18, 859-871.	8.3	17
64	Arabidopsis C-terminal binding protein ANGUSTIFOLIA modulates transcriptional coregulation of <i>MYB46</i> and <i>WRKY33</i> . New Phytologist, 2020, 228, 1627-1639.	7.3	17
65	Clostridium thermocellum LL1210 pH homeostasis mechanisms informed by transcriptomics and metabolomics. Biotechnology for Biofuels, 2018, 11, 98.	6.2	16
66	Modification of plant cell wall chemistry impacts metabolome and microbiome composition in Populus PdkOR1 RNAi plants. Plant and Soil, 2018, 429, 349-361.	3.7	16
67	Rex in Caldicellulosiruptor bescii : Novel regulon members and its effect on the production of ethanol and overflow metabolites. MicrobiologyOpen, 2019, 8, e00639.	3.0	15
68	Towards engineering ectomycorrhization into switchgrass bioenergy crops via a lectin receptor-like kinase. Plant Biotechnology Journal, 2021, 19, 2454-2468.	8.3	14
69	Proteomic and metabolic disturbances in lignin-modified <i>Brachypodium distachyon</i> . Plant Cell, 2022, 34, 3339-3363.	6.6	14
70	Correlating laser-induced breakdown spectroscopy with neutron activation analysis to determine the elemental concentration in the ionome of the Populus trichocarpa leaf. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 138, 46-53.	2.9	11
71	A dynamic model of lignin biosynthesis in Brachypodium distachyon. Biotechnology for Biofuels, 2018, 11, 253.	6.2	11
72	Isolation, Characterization, and Pathogenicity of Two Pseudomonas syringae Pathovars from Populus trichocarpa Seeds. Microorganisms, 2020, 8, 1137.	3.6	9

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73	An Equilibrium Model of Pseudo-Hydroxide Extraction in the Separation of Sodium Hydroxide from Aqueous Solutions using Lipophilic Fluorinated Alcohols and Phenols. <i>Separation Science and Technology</i> , 2005, 40, 725-738.	2.5	8
74	Horizontal transfer of a pathway for coumarate catabolism unexpectedly inhibits purine nucleotide biosynthesis. <i>Molecular Microbiology</i> , 2019, 112, 1784-1797.	2.5	5
75	Benzyl Phenol Derivatives: Extraction Properties of Calixarene Fragments. <i>ACS Symposium Series</i> , 2000, , 86-106.	0.5	4
76	Scaling nitrogen and carbon interactions: what are the consequences of biological buffering?. <i>Ecology and Evolution</i> , 2015, 5, 2839-2850.	1.9	4
77	Identification of functional single nucleotide polymorphism of <i>Populus trichocarpa</i> PtrEPSPâ€ŒF and determination of its transcriptional effect. <i>Plant Direct</i> , 2020, 4, e00178.	1.9	4
78	Expanding the Biological Role of Lipo-Chitoooligosaccharides and Chitoooligosaccharides in <i>Laccaria bicolor</i> Growth and Development. <i>Frontiers in Fungal Biology</i> , 2022, 3, .	2.0	4
79	Genetic dissection of transcript, metabolite, growth and wood property traits in an F2 pseudo-backcross pedigree of <i>Eucalyptus grandis</i> x <i>E. urophylla</i> . <i>BMC Proceedings</i> , 2011, 5, .	1.6	3
80	Tribenzo-18-crown-6 acetonitrile disolvate. <i>Acta Crystallographica Section C: Crystal Structure Communications</i> , 2001, 57, 1359-1360.	0.4	2
81	Relationships between <i>Sphaerulina musiva</i> Infection and the <i>Populus</i> Microbiome and Metabolome. <i>MSystems</i> , 2022, 7, .	3.8	2
82	Title is missing!. <i>Journal of Chemical Crystallography</i> , 2002, 32, 33-38.	1.1	0
83	The s-cis and s-trans Î€ complexes of B-bromocatecholborane and (E)-2-butenal. <i>Journal of Chemical Research</i> , 2003, 2003, 726-727.	1.3	0
84	Ozonized biochar filtrate effects on the growth of <i>Pseudomonas putida</i> and cyanobacteria <i>Synechococcus elongatus</i> PCC 7942. <i>Bioresources and Bioprocessing</i> , 2022, 9, .	4.2	0