Xinyou Yin

List of Publications by Year
in descending order

139 papers	8,240 citations	41258 49 h-index	58464 82 g-index
145 all docs	145 docs citations	145 times ranked	6787 citing authors

#	Article	IF	Citations
1	Do shoot anatomical characteristics allow rice to grow well under water deficit?. Journal of Agronomy and Crop Science, 2022, 208, 763-776.	1.7	2
2	Tâ€FACE studies reveal that increased temperature exerts an effect opposite to that of elevated CO₂ on nutrient concentration and bioavailability in rice and wheat grains. Food and Energy Security, 2022, 11, e336.	2.0	7
3	Genetic diversity reveals synergistic interaction between yield components could improve the sink size and yield in rice. Food and Energy Security, 2022, 11, .	2.0	6
4	A model-guided holistic review of exploiting natural variation of photosynthesis traits in crop improvement. Journal of Experimental Botany, 2022, 73, 3173-3188.	2.4	13
5	Drought exerts a greater influence than growth temperature on the temperature response of leaf day respiration in wheat (<i>Triticum aestivum</i>). Plant, Cell and Environment, 2022, 45, 2062-2077.	2.8	9
6	Production and scavenging of reactive oxygen species confer to differential sensitivity of rice and wheat to drought stress. , 2022, 1, 15-23.		27
7	Simultaneously improving yield and nitrogen use efficiency in a double rice cropping system in China. European Journal of Agronomy, 2022, 137, 126513.	1.9	9
8	Estimating photosynthetic parameter values of rice, wheat, maize and sorghum to enable smart crop cultivation. , 2022, 1, 119-132.		3
9	MetaPhenomics: quantifying the many ways plants respond to their abiotic environment, using light intensity as an example. Plant and Soil, 2022, 476, 421-454.	1.8	1
10	Exploiting differences in the energy budget among C₄ subtypes to improve crop productivity. New Phytologist, 2021, 229, 2400-2409.	3.5	20
11	The impact of global dimming on crop yields is determined by the sourceâ€“sink imbalance of carbon during grain filling. Global Change Biology, 2021, 27, 689-708.	4.2	41
12	No need to switch the modified Arrhenius function back to the old form. New Phytologist, 2021, 231, 2113-2116.	3.5	5
13	Metabolome profiling reveals impact of water limitation on grain filling in contrasting rice genotypes. Plant Physiology and Biochemistry, 2021, 162, 690-698.	2.8	14
14	Evolution of a biochemical model of steadyâ€state photosynthesis. Plant, Cell and Environment, 2021, 44, 2811-2837.	2.8	22
15	Role of bundle sheath conductance in sustaining photosynthesis competence in sugarcane plants under nitrogen deficiency. Photosynthesis Research, 2021, 149, 275-287.	1.6	13
16	On the needs for combining physiological principles and mathematics to improve crop models. Field Crops Research, 2021, 271, 108254.	2.3	19
17	Roles of canopy architecture and nitrogen distribution in the better performance of an aerobic than a lowland rice cultivar under water deficit. Field Crops Research, 2021, 271, 108257.	2.3	11
18	The fertilization effect of global dimming on crop yields is not attributed to an improved light interception. Global Change Biology, 2020, 26, 1697-1713.	4.2	37

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19	The acclimation of leaf photosynthesis of wheat and rice to seasonal temperature changes in Tâ€FACE environments. Global Change Biology, 2020, 26, 539-556.	4.2	35
20	The case for improving crop carbon sink strength or plasticity for a CO2-rich future. Current Opinion in Plant Biology, 2020, 56, 259-272.	3.5	45
21	The Kok effect revisited. New Phytologist, 2020, 227, 1764-1775.	3.5	22
22	Comparisons with wheat reveal root anatomical and histochemical constraints of rice under water-deficit stress. Plant and Soil, 2020, 452, 547-568.	1.8	37
23	Using photorespiratory oxygen response to analyse leaf mesophyll resistance. Photosynthesis Research, 2020, 144, 85-99.	1.6	14
24	Genotypic variation in source and sink traits affects the response of photosynthesis and growth to elevated atmospheric CO₂. Plant, Cell and Environment, 2020, 43, 579-593.	2.8	32
25	Towards a multiscale crop modelling framework for climate change adaptation assessment. Nature Plants, 2020, 6, 338-348.	4.7	181
26	Acquired Traits Contribute More to Drought Tolerance in Wheat Than in Rice. Plant Phenomics, 2020, 2020, 5905371.	2.5	22
27	Exploring the optimum nitrogen partitioning to predict the acclimation of C3 leaf photosynthesis to varying growth conditions. Journal of Experimental Botany, 2019, 70, 2435-2447.	2.4	35
28	Is triose phosphate utilization involved in the feedback inhibition of photosynthesis in rice under conditions of sink limitation?. Journal of Experimental Botany, 2019, 70, 5773-5785.	2.4	44
29	A model-based approach to analyse genetic variation in potato using standard cultivars and a segregating population. II. Tuber bulking and resource use efficiency. Field Crops Research, 2019, 242, 107582.	2.3	6
30	A model-based approach to analyse genetic variation in potato using standard cultivars and a segregating population. I. Canopy cover dynamics. Field Crops Research, 2019, 242, 107581.	2.3	7
31	Using a reactionâ€diffusion model to estimate day respiration and reassimilation of (photo)respired <scp>CO</scp>₂ in leaves. New Phytologist, 2019, 223, 619-631.	3.5	11
32	Incorporating genome-wide association into eco-physiological simulation to identify markers for improving rice yields. Journal of Experimental Botany, 2019, 70, 2575-2586.	2.4	21
33	Embracing 3D Complexity in Leaf Carbonâ€"Water Exchange. Trends in Plant Science, 2019, 24, 15-24.	4.3	55
34	The energy budget in C₄ photosynthesis: insights from a cellâ€typeâ€specific electron transport model. New Phytologist, 2018, 218, 986-998.	3.5	31
35	Bringing genetics and biochemistry to crop modelling, and vice versa. European Journal of Agronomy, 2018, 100, 132-140.	1.9	25
36	Agrivoltaic systems to optimise land use for electric energy production. Applied Energy, 2018, 220, 545-561.	5.1	245

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37	Pollen germination and <i>in vivo</i> fertilization in response to highâ€temperature during flowering in hybrid and inbred rice. Plant, Cell and Environment, 2018, 41, 1287-1297.	2.8	62
38	Do all leaf photosynthesis parameters of rice acclimate to elevated <scp>CO</scp>₂, elevated temperature, and their combination, in <scp>FACE</scp> environments?. Global Change Biology, 2018, 24, 1685-1707.	4.2	68
39	Sink-source relationship during rice grain filling is associated with grain nitrogen concentration. Field Crops Research, 2018, 215, 23-38.	2.3	67
40	In Silico Analysis of the Regulation of the Photosynthetic Electron Transport Chain in C3 Plants. Plant Physiology, 2018, 176, 1247-1261.	2.3	53
41	Dynamic modelling of limitations on improving leaf CO₂ assimilation under fluctuating irradiance. Plant, Cell and Environment, 2018, 41, 589-604.	2.8	53
42	Genome-wide association reveals novel genomic loci controlling rice grain yield and its component traits under water-deficit stress during the reproductive stage. Journal of Experimental Botany, 2018, 69, 4017-4032.	2.4	39
43	Water- and Nitrogen-Use Efficiencies of Hemp (Cannabis sativa L.) Based on Whole-Canopy Measurements and Modeling. Frontiers in Plant Science, 2018, 9, 951.	1.7	25
44	Calibration matters: On the procedure of using the chlorophyll fluorescence method to estimate mesophyll conductance. Journal of Plant Physiology, 2018, 220, 167-172.	1.6	15
45	Quantifying source-sink relationships of rice under high night-time temperature combined with two nitrogen levels. Field Crops Research, 2017, 202, 36-46.	2.3	54
46	Simple generalisation of a mesophyll resistance model for various intracellular arrangements of chloroplasts and mitochondria in C3 leaves. Photosynthesis Research, 2017, 132, 211-220.	1.6	24
47	Hemp (<i>Cannabis sativa</i> L.) leaf photosynthesis in relation to nitrogen content and temperature: implications for hemp as a bioâ€economically sustainable crop. GCB Bioenergy, 2017, 9, 1573-1587.	2.5	40
48	Exploring anatomical controls of C₄leaf photosynthesis using a 3D reaction-diffusion model. Acta Horticulturae, 2017, , 171-178.	0.1	3
49	Genetic Control of Plasticity in Root Morphology and Anatomy of Rice in Response to Water Deficit. Plant Physiology, 2017, 174, 2302-2315.	2.3	112
50	A model for the irradiance responses of photosynthesis. Physiologia Plantarum, 2017, 161, 109-123.	2.6	8
51	Can increased leaf photosynthesis be converted into higher crop mass production? A simulation study for rice using the crop model GECROS. Journal of Experimental Botany, 2017, 68, 2345-2360.	2.4	76
52	Stomatal conductance, mesophyll conductance, and transpiration efficiency in relation to leaf anatomy in rice and wheat genotypes under drought. Journal of Experimental Botany, 2017, 68, 5191-5205.	2.4	165
53	A comprehensive study of planting density and nitrogen fertilization effect on dual-purpose hemp (Cannabis sativa L.) cultivation. Industrial Crops and Products, 2017, 107, 427-438.	2.5	81
54	Increased sink strength offsets the inhibitory effect of sucrose on sugarcane photosynthesis. Journal of Plant Physiology, 2017, 208, 61-69.	1.6	29

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55	Causes of variation among rice models in yield response to CO2 examined with Free-Air CO2 Enrichment and growth chamber experiments. Scientific Reports, 2017, 7, 14858.	1.6	41
56	High day- and night-time temperatures affect grain growth dynamics in contrasting rice genotypes. Journal of Experimental Botany, 2017, 68, 5233-5245.	2.4	100
57	Can the Responses of Photosynthesis and Stomatal Conductance to Water and Nitrogen Stress Combinations Be Modeled Using a Single Set of Parameters?. Frontiers in Plant Science, 2017, 8, 328.	1.7	3
58	Crops In Silico: Generating Virtual Crops Using an Integrative and Multi-scale Modeling Platform. Frontiers in Plant Science, 2017, 8, 786.	1.7	102
59	Localization of (photo)respiration and CO2 re-assimilation in tomato leaves investigated with a reaction-diffusion model. PLoS ONE, 2017, 12, e0183746.	1.1	40
60	Comparing hemp (Cannabis sativa L.) cultivars for dual-purpose production under contrasting environments. Industrial Crops and Products, 2016, 87, 33-44.	2.5	125
61	Mesophyll conductance and reaction-diffusion models for CO2 transport in C3 leaves; needs, opportunities and challenges. Plant Science, 2016, 252, 62-75.	1.7	46
62	Impact of anatomical traits of maize (Zea mays L.) leaf as affected by nitrogen supply and leaf age on bundle sheath conductance. Plant Science, 2016, 252, 205-214.	1.7	16
63	A taxonomy-based approach to shed light on the babel of mathematical models for rice simulation. Environmental Modelling and Software, 2016, 85, 332-341.	1.9	18
64	Threeâ€dimensional microscale modelling of <scp>CO</scp>₂ transport and light propagation in tomato leaves enlightens photosynthesis. Plant, Cell and Environment, 2016, 39, 50-61.	2.8	84
65	Temperature response of bundle-sheath conductance in maize leaves. Journal of Experimental Botany, 2016, 67, 2699-2714.	2.4	33
66	Responses of wheat and rice to factorial combinations of ambient and elevated CO₂ and temperature in FACE experiments. Global Change Biology, 2016, 22, 856-874.	4.2	200
67	A two-dimensional microscale model of gas exchange during photosynthesis in maize (Zea mays L.) leaves. Plant Science, 2016, 246, 37-51.	1.7	20
68	Grain yield and quality responses of tropical hybrid rice to high night-time temperature. Field Crops Research, 2016, 190, 18-25.	2.3	88
69	Crop Systems Biology: Where Are We and Where to Go?. , 2016, , 219-227.		2
70	Modelling QTL-Trait-Crop Relationships: Past Experiences and Future Prospects. , 2016, , 193-218.		12
71	Does Morphological and Anatomical Plasticity during the Vegetative Stage Make Wheat More Tolerant of Water Deficit Stress Than Rice? Â. Plant Physiology, 2015, 167, 1389-1401.	2.3	111
72	Uncertainties in predicting rice yield by current crop models under a wide range of climatic conditions. Global Change Biology, 2015, 21, 1328-1341.	4.2	339

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73	Modelling the relationship between CO2 assimilation and leaf anatomical properties in tomato leaves. Plant Science, 2015, 238, 297-311.	1.7	25
74	Constraints to the potential efficiency of converting solar radiation into phytoenergy in annual crops: from leaf biochemistry to canopy physiology and crop ecology. Journal of Experimental Botany, 2015, 66, 6535-6549.	2.4	61
75	Accounting for the decrease of photosystem photochemical efficiency with increasing irradiance to estimate quantum yield of leaf photosynthesis. Photosynthesis Research, 2014, 122, 323-335.	1.6	28
76	Can exploiting natural genetic variation in leaf photosynthesis contribute to increasing rice productivity? A simulation analysis. Plant, Cell and Environment, 2014, 37, 22-34.	2.8	112
77	Quantitative trait locus analysis of nitrogen use efficiency in barley (Hordeum vulgare L.). Euphytica, 2014, 199, 207-221.	0.6	35
78	Linking ecophysiological modelling with quantitative genetics to support marker-assisted crop design for improved yields of rice (Oryza sativa) under drought stress. Annals of Botany, 2014, 114, 499-511.	1.4	45
79	A two-step approach to quantify photothermal effects on pre-flowering rice phenology. Field Crops Research, 2014, 155, 14-22.	2.3	9
80	An ecophysiological model analysis of yield differences within a set of contrasting cultivars and an F1 segregating population of potato (Solanum tuberosum L.) grown under diverse environments. Ecological Modelling, 2014, 290, 146-154.	1.2	17
81	Improving ecophysiological simulation models to predict the impact of elevated atmospheric CO2 concentration on crop productivity. Annals of Botany, 2013, 112, 465-475.	1.4	67
82	A dynamic model of tomato fruit growth integrating cell division, cell growth and endoreduplication. Functional Plant Biology, 2013, 40, 1098.	1.1	31
83	Leaf photosynthesis and respiration of three bioenergy crops in relation to temperature and leaf nitrogen: how conserved are biochemical model parameters among crop species?. Journal of Experimental Botany, 2012, 63, 895-911.	2.4	47
84	Physiological basis of genetic variation in leaf photosynthesis among rice (Oryza sativa L.) introgression lines under drought and well-watered conditions. Journal of Experimental Botany, 2012, 63, 5137-5153.	2.4	110
85	Using chromosome introgression lines to map quantitative trait loci for photosynthesis parameters in rice (Oryza sativa L.) leaves under drought and well-watered field conditions. Journal of Experimental Botany, 2012, 63, 455-469.	2.4	105
86	Histological and molecular investigation of the basis for variation in tomato fruit size in response to fruit load and genotype. Functional Plant Biology, 2012, 39, 754.	1.1	9
87	MODELLING GENE-TRAIT-CROP RELATIONSHIPS: PAST EXPERIENCES AND FUTURE PROSPECTS. Acta Horticulturae, 2012, , 181-189.	0.1	3
88	Crop systems biology as an avenue to bridge applied crop science and fundamental plant biology. , 2012, , .		2
89	Testing two models for the estimation of leaf stomatal conductance in four greenhouse crops cucumber, chrysanthemum, tulip and lilium. Agricultural and Forest Meteorology, 2012, 165, 92-103.	1.9	30
90	Mathematical review of the energy transduction stoichiometries of C₄ leaf photosynthesis under limiting light. Plant, Cell and Environment, 2012, 35, 1299-1312.	2.8	46

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91	Photosynthetic adaptation of soybean due to varying effectiveness of N2 fixation by two distinct Bradyrhizobium japonicum strains. Environmental and Experimental Botany, 2012, 76, 1-6.	2.0	48
92	A Microscale Model for Combined CO2 Diffusion and Photosynthesis in Leaves. PLoS ONE, 2012, 7, e48376.	1.1	24
93	Response of Cell Division and Cell Expansion to Local Fruit Heating in Tomato Fruit. Journal of the American Society for Horticultural Science, 2012, 137, 294-301.	0.5	19
94	Modelling the effects of soil water potential on growth and quality of cut chrysanthemum (Chrysanthemum morifolium). Scientia Horticulturae, 2011, 130, 275-288.	1.7	7
95	Quantifying the effects of nitrogen on fruit growth and yield of cucumber crop in greenhouses. Scientia Horticulturae, 2011, 130, 551-561.	1.7	12
96	Using a biochemical C₄ photosynthesis model and combined gas exchange and chlorophyll fluorescence measurements to estimate bundleâ€sheath conductance of maize leaves differing in age and nitrogen content. Plant, Cell and Environment, 2011, 34, 2183-2199.	2.8	65
97	Temporal dynamics of light and nitrogen vertical distributions in canopies of sunflower, kenaf and cynara. Field Crops Research, 2011, 122, 186-198.	2.3	59
98	Evaluating a new method to estimate the rate of leaf respiration in the light by analysis of combined gas exchange and chlorophyll fluorescence measurements. Journal of Experimental Botany, 2011, 62, 3489-3499.	2.4	123
99	Simulation of wheat growth and development based on organ-level photosynthesis and assimilate allocation. Journal of Experimental Botany, 2010, 61, 2203-2216.	2.4	111
100	A photothermal model of leaf area index for greenhouse crops. Agricultural and Forest Meteorology, 2010, 150, 541-552.	1.9	36
101	Modelling the crop: from system dynamics to systems biology. Journal of Experimental Botany, 2010, 61, 2171-2183.	2.4	136
102	Using combined measurements of gas exchange and chlorophyll fluorescence to estimate parameters of a biochemical C₃ photosynthesis model: a critical appraisal and a new integrated approach applied to leaves in a wheat (<i>Triticum aestivum</i>) canopy. Plant, Cell and Environment, 2009, 32, 448-464.	2.8	201
103	Theoretical reconsiderations when estimating the mesophyll conductance to CO₂ diffusion in leaves of C₃ plants by analysis of combined gas exchange and chlorophyll fluorescence measurements. Plant, Cell and Environment, 2009, 32, 1513-1524.	2.8	67
104	A quantitative approach to characterize sinkâ€“source relationships during grain filling in contrasting wheat genotypes. Field Crops Research, 2009, 114, 119-126.	2.3	84
105	C₃ and C₄ photosynthesis models: An overview from the perspective of crop modelling. Njas - Wageningen Journal of Life Sciences, 2009, 57, 27-38.	7.9	157
106	A Model of the Generalized Stoichiometry of Electron Transport Limited C3 Photosynthesis: Development and Applications. Advances in Photosynthesis and Respiration, 2009, , 247-273.	1.0	14
107	Plant neurobiology and green plant intelligence: science, metaphors and nonsense. Journal of the Science of Food and Agriculture, 2008, 88, 363-370.	1.7	45
108	Applying modelling experiences from the past to shape crop systems biology: the need to converge crop physiology and functional genomics. New Phytologist, 2008, 179, 629-642.	3.5	81

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109	Analysis of Reciprocal-transfer Experiments to Estimate the Length of Phases having Different Responses to Temperature. Annals of Botany, 2008, 101, 603-611.	1.4	7
110	Technological Feasibility. , 2006, , 51-98.		0
111	Mathematical review of literature to assess alternative electron transports and interphotosystem excitation partitioning of steady-state C3 photosynthesis under limiting light. Plant, Cell and Environment, 2006, 29, 1771-1782.	2.8	50
112	Model analysis of flowering phenology in recombinant inbred lines of barley. Journal of Experimental Botany, 2005, 56, 959-965.	2.4	59
113	QTL analysis and QTL-based prediction of flowering phenology in recombinant inbred lines of barley. Journal of Experimental Botany, 2005, 56, 967-976.	2.4	112
114	Complex quality traits: now time to model. Trends in Plant Science, 2005, 10, 513-516.	4.3	40
115	Statistical models for genotype by environment data: from conventional ANOVA models to eco-physiological QTL models. Australian Journal of Agricultural Research, 2005, 56, 883.	1.5	91
116	Extension of a biochemical model for the generalized stoichiometry of electron transport limited C3 photosynthesis. Plant, Cell and Environment, 2004, 27, 1211-1222.	2.8	85
117	Simulating the partitioning of biomass and nitrogen between roots and shoot in crop and grass plants. Njas - Wageningen Journal of Life Sciences, 2004, 51, 407-426.	7.9	24
118	Role of crop physiology in predicting gene-to-phenotype relationships. Trends in Plant Science, 2004, 9, 426-432.	4.3	215
119	A Flexible Sigmoid Function of Determinate Growth. Annals of Botany, 2003, 91, 361-371.	1.4	594
120	Some Quantitative Relationships between Leaf Area Index and Canopy Nitrogen Content and Distribution. Annals of Botany, 2003, 91, 893-903.	1.4	81
121	Crop Modeling, QTL Mapping, and Their Complementary Role in Plant Breeding. Agronomy Journal, 2003, 95, 90.	0.9	90
122	Crop Modeling, QTL Mapping, and Their Complementary Role in Plant Breeding. Agronomy Journal, 2003, 95, 90-98.	0.9	25
123	Use of component analysis in QTL mapping of complex crop traits: a case study on yield in barley. Plant Breeding, 2002, 121, 314-319.	1.0	29
124	Coupling estimated effects of QTLs for physiological traits to a crop growth model: predicting yield variation among recombinant inbred lines in barley. Heredity, 2000, 85, 539-549.	1.2	82
125	A Model Analysis of Yield Differences among Recombinant Inbred Lines in Barley. Agronomy Journal, 2000, 92, 114-120.	0.9	32
126	A Generic Equation for Nitrogen-limited Leaf Area Index and its Application in Crop Growth Models for Predicting Leaf Senescence. Annals of Botany, 2000, 85, 579-585.	1.4	67

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127	The role of ecophysiological models in QTL analysis: the example of specific leaf area in barley. Heredity, 1999, 82, 415-421.	1.2	90
128	AFLP mapping of quantitative trait loci for yield-determining physiological characters in spring barley. Theoretical and Applied Genetics, 1999, 99, 244-253.	1.8	91
129	The effect of photoperiod on interval between panicle initiation and flowering in rice. Field Crops Research, 1998, 57, 301-307.	2.3	20
130	Optimal preflowering phenology of irrigated rice for high yield potential in three Asian environments: A simulation study. Field Crops Research, 1997, 51, 19-27.	2.3	21
131	A model for photothermal responses of flowering in rice I. Model description and parameterization. Field Crops Research, 1997, 51, 189-200.	2.3	65
132	A model for photothermal responses of flowering in rice II. Model evaluation. Field Crops Research, 1997, 51, 201-211.	2.3	22
133	Changes in Temperature Sensitivity of Development from Sowing to Flowering in Rice. Crop Science, 1997, 37, 1787-1794.	0.8	13
134	Photoperiodically Sensitive and Insensitive Phases of Preflowering Development in Rice. Crop Science, 1997, 37, 182-190.	0.8	33
135	Rice flowering in response to diurnal temperature amplitude. Field Crops Research, 1996, 48, 1-9.	2.3	25
136	Use of the Beta function to quantify effects of photoperiod on flowering and leaf number in rice. Agricultural and Forest Meteorology, 1996, 81, 217-228.	1.9	27
137	Differential Effects of Day and Night Temperature on Development to Flowering in Rice. Annals of Botany, 1996, 77, 203-213.	1.4	82
138	The Effect of Temperature on Leaf Appearance in Rice. Annals of Botany, 1996, 77, 215-221.	1.4	65
139	A nonlinear model for crop development as a function of temperature. Agricultural and Forest Meteorology, 1995, 77, 1-16.	1.9	317