Yair Y Shachar-Hill

List of Publications by Year
in descending order

106 papers	11,813 citations	26567 56 h-index	27345 106 g-index
110 all docs	110 docs citations	110 times ranked	9436 citing authors

#	Article	IF	Citations
1	Kinetic complexities of triacylglycerol accumulation in developing embryos from Camelina sativa provide evidence for multiple biosynthetic systems. Journal of Biological Chemistry, 2022, 298, 101396.	1.6	8
2	Reimport of carbon from cytosolic and vacuolar sugar pools into the Calvinâ€“Benson cycle explains photosynthesis labeling anomalies. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2121531119.	3.3	31
3	13C-labeling reveals how membrane lipid components contribute to triacylglycerol accumulation in <i>Chlamydomonas</i>. Plant Physiology, 2022, 189, 1326-1344.	2.3	11
4	Re-Programing Glucose Catabolism in the Microalga Chlorella sorokiniana under Light Condition. Biomolecules, 2022, 12, 939.	1.8	4
5	The metabolic origins of non-photorespiratory CO2 release during photosynthesis: a metabolic flux analysis. Plant Physiology, 2021, 186, 297-314.	2.3	65
6	Large fluxes of fatty acids from membranes to triacylglycerol and back during N-deprivation and recovery in <i>Chlamydomonas</i>. Plant Physiology, 2021, 185, 796-814.	2.3	15
7	High Flux Through the Oxidative Pentose Phosphate Pathway Lowers Efficiency in Developing Camelina Seeds. Plant Physiology, 2020, 182, 493-506.	2.3	14
8	Unfair trade underground revealed by integrating data with Nash bargaining models. New Phytologist, 2019, 222, 1325-1337.	3.5	8
9	Modelling nutritional mutualisms: challenges and opportunities for data integration. Ecology Letters, 2017, 20, 1203-1215.	3.0	11
10	Metabolic flux analyses of Pseudomonas aeruginosa cystic fibrosis isolates. Metabolic Engineering, 2016, 38, 251-263.	3.6	9
11	The Relationship of Triacylglycerol and Starch Accumulation to Carbon and Energy Flows During Nutrient Deprivation in Chlamydomonas.. Plant Physiology, 2016, 171, pp.00761.2016.	2.3	46
12	Identification of regulatory network hubs that control lipid metabolism in<i>Chlamydomonas reinhardtii</i>. Journal of Experimental Botany, 2015, 66, 4551-4566.	2.4	100
13	The Regulation of Photosynthetic Structure and Function during Nitrogen Deprivation in <i>Chlamydomonas reinhardtii</i> Â Â. Plant Physiology, 2015, 167, 558-573.	2.3	94
14	Lipid analysis of developing Camelina sativa seeds and cultured embryos. Phytochemistry, 2015, 118, 23-32.	1.4	20
15	Are Aquaporins the Missing Transmembrane Osmosensors?. Journal of Membrane Biology, 2015, 248, 753-765.	1.0	25
16	Lipid labeling from acetate or glycerol in cultured embryos of Camelina sativa seeds: A tale of two substrates. Phytochemistry, 2015, 118, 192-203.	1.4	19
17	The response of <i>Chlamydomonas reinhardtii</i> to nitrogen deprivation: a systems biology analysis. Plant Journal, 2015, 81, 611-624.	2.8	207
18	High-Throughput Data Pipelines for Metabolic Flux Analysis in Plants. Methods in Molecular Biology, 2014, 1090, 223-246.	0.4	4

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19	Genome of an arbuscular mycorrhizal fungus provides insight into the oldest plant symbiosis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20117-20122.	3.3	717
20	Metabolic network flux analysis for engineering plant systems. Current Opinion in Biotechnology, 2013, 24, 247-255.	3.3	40
21	Dynamic metabolic flux analysis of plant cell wall synthesis. Metabolic Engineering, 2013, 18, 78-85.	3.6	39
22	Response to â€œWhat Do Aquaporin Knockout Studies Tell Us about Fluid Transport in Epithelia?â€• Maclaren OJ, Sneyd J, Crampin EJ (2013) J Membr Biol 246:297â€"305. Journal of Membrane Biology, 2013, 246, 665-667.	1.0	3
23	Mercury-sensitive water channels as possible sensors of water potentials in pollen. Journal of Experimental Botany, 2013, 64, 5195-5205.	2.4	17
24	Genome, Functional Gene Annotation, and Nuclear Transformation of the Heterokont Oleaginous Alga Nannochloropsis oceanica CCMP1779. PLoS Genetics, 2012, 8, e1003064.	1.5	376
25	Insights into metabolic efficiency from flux analysis. Journal of Experimental Botany, 2012, 63, 2343-2351.	2.4	46
26	Metabolic cartography: experimental quantification of metabolic fluxes from isotopic labelling studies. Journal of Experimental Botany, 2012, 63, 2293-2308.	2.4	66
27	iMS2Fluxâ€" a highâ€"throughput processing tool for stable isotope labeled mass spectrometric data used for metabolic flux analysis. BMC Bioinformatics, 2012, 13, 295.	1.2	43
28	The transcriptome of the arbuscular mycorrhizal fungus <i>Glomus intraradices</i> (DAOM 197198) reveals functional tradeoffs in an obligate symbiont. New Phytologist, 2012, 193, 755-769.	3.5	305
29	Isotope labelling of Rubisco subunits provides in vivo information on subcellular biosynthesis and exchange of amino acids between compartments. Plant, Cell and Environment, 2012, 35, 1232-1244.	2.8	41
30	An Osmotic Model of the Growing Pollen Tube. PLoS ONE, 2012, 7, e36585.	1.1	57
31	Central metabolic fluxes in the endosperm of developing maize seeds and their implications for metabolic engineering. Metabolic Engineering, 2011, 13, 96-107.	3.6	91
32	Synergy between 13C-metabolic flux analysis and flux balance analysis for understanding metabolic adaption to anaerobiosis in E. coli. Metabolic Engineering, 2011, 13, 38-48.	3.6	143
33	Understanding fatty acid synthesis in developing maize embryos using metabolic flux analysis. Metabolic Engineering, 2010, 12, 488-497.	3.6	104
34	Quantifying the Labeling and the Levels of Plant Cell Wall Precursors Using Ion Chromatography Tandem Mass Spectrometry Â Â. Plant Physiology, 2010, 153, 915-924.	2.3	74
35	Changes in Transcript Abundance in <i>Chlamydomonas reinhardtii</i> following Nitrogen Deprivation Predict Diversion of Metabolism. Plant Physiology, 2010, 154, 1737-1752.	2.3	455
36	Regulation of the Nitrogen Transfer Pathway in the Arbuscular Mycorrhizal Symbiosis: Gene Characterization and the Coordination of Expression with Nitrogen Flux Â Â. Plant Physiology, 2010, 153, 1175-1187.	2.3	152

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37	Driving on Biomass. Science, 2009, 324, 1019-1020.	6.0	145
38	Sulfur Transfer through an Arbuscular Mycorrhiza. Plant Physiology, 2009, 149, 549-560.	2.3	150
39	Metabolic flux analysis in plants: coping with complexity. Plant, Cell and Environment, 2009, 32, 1241-1257.	2.8	131
40	The role of light in soybean seed filling metabolism. Plant Journal, 2009, 58, 220-234.	2.8	198
41	Germinating spores of <i>Glomus intraradices</i> can use internal and exogenous nitrogen sources for <i>de novo</i> biosynthesis of amino acids. New Phytologist, 2009, 184, 399-411.	3.5	41
42	Triacylglyceride Metabolism by <i>Fusarium graminearum</i> During Colonization and Sexual Development on Wheat. Molecular Plant-Microbe Interactions, 2009, 22, 1492-1503.	1.4	55
43	Root exudates stimulate the uptake and metabolism of organic carbon in germinating spores of <i>Glomus intraradices</i>. New Phytologist, 2008, 180, 684-695.	3.5	48
44	Metabolic Flux Analysis in Plants: From Intelligent Design to Rational Engineering. Annual Review of Plant Biology, 2008, 59, 625-650.	8.6	92
45	<i>Arabidopsis</i> 10-Formyl Tetrahydrofolate Deformylases Are Essential for Photorespiration Â. Plant Cell, 2008, 20, 1818-1832.	3.1	90
46	A metabolic flux analysis to study the role of sucrose synthase in the regulation of the carbon partitioning in central metabolism in maize root tips. Metabolic Engineering, 2007, 9, 419-432.	3.6	52
47	Determining Actinobacillus succinogenes metabolic pathways and fluxes by NMR and GC-MS analyses of 13C-labeled metabolic product isotopomers. Metabolic Engineering, 2007, 9, 177-192.	3.6	131
48	Compartment-specific labeling information in 13C metabolic flux analysis of plants. Phytochemistry, 2007, 68, 2197-2210.	1.4	98
49	Design of substrate label for steady state flux measurements in plant systems using the metabolic network of Brassica napus embryos. Phytochemistry, 2007, 68, 2211-2221.	1.4	41
50	Towards the plant metabolome and beyond. Nature Reviews Molecular Cell Biology, 2007, 8, 167-174.	16.1	110
51	Carbon conversion efficiency and central metabolic fluxes in developing sunflower (<i>Helianthus) Tj ETQq1 1 0.784314 rgBT /Overlo	2.8	147
52	Quantifying flows through metabolic networks and the prospects for fluxomic studies of mycorrhizas. New Phytologist, 2007, 174, 235-240.	3.5	9
53	Measuring multiple fluxes through plant metabolic networks. Plant Journal, 2006, 45, 490-511.	2.8	237
54	Mitochondrial Metabolism in Developing Embryos of Brassica napus. Journal of Biological Chemistry, 2006, 281, 34040-34047.	1.6	217

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55	Functional Characterization of a Methionine Â-Lyase in Arabidopsis and its Implication in an Alternative to the Reverse Trans-sulfuration Pathway. Plant and Cell Physiology, 2006, 48, 232-242.	1.5	73
56	Phosphate uptake, transport and transfer by the arbuscular mycorrhizal fungus Glomus intraradices is stimulated by increased carbohydrate availability. New Phytologist, 2005, 165, 899-912.	3.5	173
57	The uptake, metabolism, transport and transfer of nitrogen in an arbuscular mycorrhizal symbiosis. New Phytologist, 2005, 168, 687-696.	3.5	260
58	Nitrogen transfer in the arbuscular mycorrhizal symbiosis. Nature, 2005, 435, 819-823.	13.7	876
59	Revealing metabolic phenotypes in plants: inputs from NMR analysis. Biological Reviews, 2005, 80, 27-43.	4.7	114
60	Light Enables a Very High Efficiency of Carbon Storage in Developing Embryos of Rapeseed. Plant Physiology, 2005, 138, 2269-2279.	2.3	164
61	5-Formyltetrahydrofolate Is an Inhibitory but Well Tolerated Metabolite in Arabidopsis Leaves. Journal of Biological Chemistry, 2005, 280, 26137-26142.	1.6	72
62	Characterization and Metabolic Function of a Peroxisomal Sarcosine and Pipecolate Oxidase from Arabidopsis. Journal of Biological Chemistry, 2004, 279, 16947-16953.	1.6	69
63	Measurement of intracellular pH in maize root tissue with alpha-methyl fluorinated alanines and in-vivo 19F NMR spectroscopy. Physiologia Plantarum, 2004, 122, 373-379.	2.6	2
64	The fungus does not transfer carbon to or between roots in an arbuscular mycorrhizal symbiosis. New Phytologist, 2004, 163, 617-627.	3.5	92
65	Rubisco without the Calvin cycle improves the carbon efficiency of developing green seeds. Nature, 2004, 432, 779-782.	13.7	455
66	Understanding flux in plant metabolic networks. Current Opinion in Plant Biology, 2004, 7, 309-317.	3.5	162
67	What Are Aquaporins For?. Journal of Membrane Biology, 2004, 197, 1-32.	1.0	196
68	Carbon dioxide concentrations are very high in developing oilseeds. Plant Physiology and Biochemistry, 2004, 42, 703-708.	2.8	41
69	A Flux Model of Glycolysis and the Oxidative Pentosephosphate Pathway in Developing Brassica napus Embryos. Journal of Biological Chemistry, 2003, 278, 29442-29453.	1.6	241
70	Carbon Export from Arbuscular Mycorrhizal Roots Involves the Translocation of Carbohydrate as well as Lipid. Plant Physiology, 2003, 131, 1496-1507.	2.3	227
71	The Folate Precursor p-Aminobenzoate Is Reversibly Converted to Its Glucose Ester in the Plant Cytosol. Journal of Biological Chemistry, 2003, 278, 20731-20737.	1.6	61
72	Translocation and Utilization of Fungal Storage Lipid in the Arbuscular Mycorrhizal Symbiosis. Plant Physiology, 2002, 128, 108-124.	2.3	228

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73	Translocation and Utilization of Fungal Storage Lipid in the Arbuscular Mycorrhizal Symbiosis. Plant Physiology, 2002, 128, 108-124.	2.3	38
74	Nuclear Magnetic Resonance and Plant Metabolic Engineering. Metabolic Engineering, 2002, 4, 90-97.	3.6	24
75	Title is missing!. Plant and Soil, 2002, 244, 189-197.	1.8	68
76	Title is missing!. Plant and Soil, 2002, 244, 141-148.	1.8	25
77	Tracking metabolism and imaging transport in arbuscular mycorrhizal fungi. , 2002, , 189-197.		10
78	Expression in an arbuscular mycorrhizal fungus of genes putatively involved in metabolism, transport, the cytoskeleton and the cell cycle. , 2002, , 141-148.		0
79	Translocation and utilization of fungal storage lipid in the arbuscular mycorrhizal symbiosis. Plant Physiology, 2002, 128, 108-24.	2.3	58
80	From genome to function: the Arabidopsis aquaporins. Genome Biology, 2001, 3, research0001.1.	13.9	182
81	PROBINGPLANTMETABOLISM WITHNMR. Annual Review of Plant Biology, 2001, 52, 499-526.	14.2	150
82	The Glyoxylate Cycle in an Arbuscular Mycorrhizal Fungus. Carbon Flux and Gene Expression. Plant Physiology, 2001, 127, 1287-1298.	2.3	9
83	Could the urea cycle be translocating nitrogen in the arbuscular mycorrhizal symbiosis?. New Phytologist, 2001, 149, 4-8.	3.5	96
84	Exploring mycorrhizal function with NMR spectroscopy. New Phytologist, 2001, 150, 543-553.	3.5	56
85	Plant NMR spectroscopy. Progress in Nuclear Magnetic Resonance Spectroscopy, 2001, 39, 267-300.	3.9	72
86	The Glyoxylate Cycle in an Arbuscular Mycorrhizal Fungus. Carbon Flux and Gene Expression. Plant Physiology, 2001, 127, 1287-1298.	2.3	88
87	Magnetic susceptibility shift selected imaging (MESSI) and localized1H2O spectroscopy in living plant tissues. NMR in Biomedicine, 2000, 13, 392-397.	1.6	18
88	Application of in vitro methods to study carbon uptake and transport by AM fungi. Plant and Soil, 2000, 226, 255-261.	1.8	33
89	Metabolic Modeling Identifies Key Constraints on an Engineered Glycine Betaine Synthesis Pathway in Tobacco. Plant Physiology, 2000, 124, 153-162.	2.3	101
90	Radiotracer and Computer Modeling Evidence that Phospho-Base Methylation Is the Main Route of Choline Synthesis in Tobacco. Plant Physiology, 2000, 123, 371-380.	2.3	70

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91	Plant one-carbon metabolism and its engineering. Trends in Plant Science, 2000, 5, 206-213.	4.3	124
92	Carbon Metabolism and Transport in Arbuscular Mycorrhizas. Plant Physiology, 2000, 124, 949-958.	2.3	477
93	Carbon Partitioning, Cost, and Metabolism of Arbuscular Mycorrhizas. , 2000, , 107-129.		75
94	Carbon Uptake and the Metabolism and Transport of Lipids in an Arbuscular Mycorrhiza1. Plant Physiology, 1999, 120, 587-598.	2.3	345
95	Carbon Metabolism in Spores of the Arbuscular Mycorrhizal FungusGlomus intraradices as Revealed by Nuclear Magnetic Resonance Spectroscopy. Plant Physiology, 1999, 121, 263-272.	2.3	141
96	Isolation, Characterization, and Functional Expression of cDNAs Encoding NADH-dependent Methylenetetrahydrofolate Reductase from Higher Plants. Journal of Biological Chemistry, 1999, 274, 36089-36096.	1.6	66
97	Effects of Bafilomycin A1 and Metabolic Inhibitors on the Maintenance of Vacuolar Acidity in Maize Root Hair Cells. Plant Physiology, 1997, 113, 809-816.	2.3	24
98	Using Bulk Magnetic Susceptibility to Resolve Internal and External Signals in the NMR Spectra of Plant Tissues. Journal of Magnetic Resonance, 1997, 127, 17-25.	1.2	12
99	Following Plant Metabolismin Vivoand in Extracts with Heteronuclear Two-Dimensional Nuclear Magnetic Resonance Spectroscopy. Analytical Biochemistry, 1996, 243, 110-118.	1.1	29
100	Measuring Nitrate in Plant Cells byin VivoNMR Using Gd3+as a Shift Reagent. Journal of Magnetic Resonance Series B, 1996, 111, 9-14.	1.6	8
101	Partitioning of Intermediary Carbon Metabolism in Vesicular-Arbuscular Mycorrhizal Leek. Plant Physiology, 1995, 108, 7-15.	2.3	290
102	The effects of calcium deficiency on Cucurbita pepo L. hypocotyl cells: A 31P nuclear-magnetic-resonance study. Planta, 1993, 189, 306-311.	1.6	2
103	Inhibition of PDGF BB stimulated DNA synthesis in rat aortic vascular smooth muscle cells by the expression of a truncated PDGFÎ² receptor. FEBS Letters, 1993, 336, 119-123.	1.3	3
104	Calcium measurements with a new high-affinity n.m.r. indicator in the isolated perfused heart. Biochemical Journal, 1993, 293, 407-411.	1.7	17
105	Cobalt(2+) as a shift reagent for chlorine-35 NMR of chloride with vesicles and cells. Biochemistry, 1992, 31, 6272-6278.	1.2	31
106	Chloride binding to photosystem II in the dark is in slow exchange. FEBS Letters, 1989, 254, 184-188.	1.3	5