Karen E Koch

List of Publications by Year
in descending order

56 papers	5,049 citations	126907 33 h-index	155660 55 g-index
56 all docs	56 docs citations	56 times ranked	6076 citing authors

#	Article	IF	Citations
1	Sucrose metabolism: regulatory mechanisms and pivotal roles in sugar sensing and plant development. Current Opinion in Plant Biology, 2004, 7, 235-246.	7.1	1,132
2	Seed filling in domesticated maize and rice depends on SWEET-mediated hexose transport. Nature Genetics, 2015, 47, 1489-1493.	21.4	360
3	Steady-state transposon mutagenesis in inbred maize. Plant Journal, 2005, 44, 52-61.	5.7	234
4	Regulation of assimilate import into sink organs: update on molecular drivers of sink strength. Frontiers in Plant Science, 2013, 4, 177.	3.6	223
5	Sucrose-Metabolizing Enzymes in Transport Tissues and Adjacent Sink Structures in Developing Citrus Fruit. Plant Physiology, 1989, 90, 1394-1402.	4.8	183
6	The maize W22 genome provides a foundation for functional genomics and transposon biology. Nature Genetics, 2018, 50, 1282-1288.	21.4	183
7	An Arabidopsis cell wall-associated kinase required for invertase activity and cell growth. Plant Journal, 2006, 46, 307-316.	5.7	177
8	Rapid Repression of Maize Invertases by Low Oxygen. Invertase/Sucrose Synthase Balance, Sugar Signaling Potential, and Seedling Survival. Plant Physiology, 1999, 121, 599-608.	4.8	152
9	Genetic Resources for Maize Cell Wall Biology Â Â Â. Plant Physiology, 2009, 151, 1703-1728.	4.8	152
10	Carbon Cost of the Fungal Symbiont Relative to Net Leaf P Accumulation in a Split-Root VA Mycorrhizal Symbiosis. Plant Physiology, 1988, 86, 491-496.	4.8	151
11	Photosynthate Partitioning in Split-Root Citrus Seedlings with Mycorrhizal and Nonmycorrhizal Root Systems. Plant Physiology, 1984, 75, 26-30.	4.8	146
12	Carbon partitioning in sugarcane (Saccharum species). Frontiers in Plant Science, 2013, 4, 201.	3.6	123
13	Diverse Roles of Strigolactone Signaling in Maize Architecture and the Uncoupling of a Branching-Specific Subnetwork Â Â Â. Plant Physiology, 2012, 160, 1303-1317.	4.8	120
14	Differential Regulation of Sugar-Sensitive Sucrose Synthases by Hypoxia and Anoxia Indicate Complementary Transcriptional and Posttranscriptional Responses1. Plant Physiology, 1998, 116, 1573-1583.	4.8	115
15	Multiple paths of sugarâ€sensing and a sugar/oxygen overlap for genes of sucrose and ethanol metabolism. Journal of Experimental Botany, 2000, 51, 417-427.	4.8	102
16	Characteristics of Crassulacean Acid Metabolism in the Succulent C₄ Dicot, <i>Portulaca oleracea</i> L.. Plant Physiology, 1980, 65, 193-197.	4.8	97
17	Positional cues for the starch/lipid balance in maize kernels and resource partitioning to the embryo. Plant Journal, 2005, 42, 69-83.	5.7	97
18	Transcript Profiling by 3â€²-Untranslated Region Sequencing Resolves Expression of Gene Families. Plant Physiology, 2008, 146, 32-44.	4.8	97

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19	Genomics of plant cell wall biogenesis. Planta, 2005, 221, 747-751.	3.2	90
20	Postphloem, Nonvascular Transfer in Citrus. Plant Physiology, 1990, 93, 1405-1416.	4.8	74
21	Vascularization, High-Volume Solution Flow, and Localized Roles for Enzymes of Sucrose Metabolism during Tumorigenesis by Agrobacterium tumefaciens Â. Plant Physiology, 2003, 133, 1024-1037.	4.8	64
22	The Maize<i>Viviparous8</i>Locus, Encoding a Putative ALTERED MERISTEM PROGRAM1-Like Peptidase, Regulates Abscisic Acid Accumulation and Coordinates Embryo and Endosperm Development Â. Plant Physiology, 2008, 146, 1193-1206.	4.8	61
23	Growth, dry matter partitioning, and diurnal activities of RuBP carboxylase in citrus seedlings maintained at two levels of CO2. Physiologia Plantarum, 1986, 67, 477-484.	5.2	60
24	Cellulose Synthase-Like D1 Is Integral to Normal Cell Division, Expansion, and Leaf Development in Maize Â Â. Plant Physiology, 2012, 158, 708-724.	4.8	60
25	Crassulacean Acid Metabolism in the Succulent C₄ Dicot, <i>Portulaca oleracea</i> L Under Natural Environmental Conditions. Plant Physiology, 1982, 69, 757-761.	4.8	57
26	Mu-seq: Sequence-Based Mapping and Identification of Transposon Induced Mutations. PLoS ONE, 2013, 8, e77172.	2.5	53
27	Yield, Water-, and Nitrogen-use Efficiency in Field-grown, Grafted Tomatoes. Hortscience: A Publication of the American Society for Hortcultural Science, 2013, 48, 485-492.	1.0	52
28	G-Quadruplex (G4) Motifs in the Maize (Zea mays L.) Genome Are Enriched at Specific Locations in Thousands of Genes Coupled to Energy Status, Hypoxia, Low Sugar, and Nutrient Deprivation. Journal of Genetics and Genomics, 2014, 41, 627-647.	3.9	49
29	Sucrose Synthase and Invertase in Isolated Vascular Bundles. Plant Physiology, 1991, 97, 1249-1252.	4.8	46
30	Carbon and Nitrogen Economy of Developing Rabbiteye Blueberry Fruit. Journal of the American Society for Horticultural Science, 1992, 117, 139-145.	1.0	45
31	Regulation of invertase: a 'suite' of transcriptional and post-transcriptional mechanisms. Functional Plant Biology, 2007, 34, 499.	2.1	40
32	Nutritional Quality of Field-grown Tomato Fruit as Affected by Grafting with Interspecific Hybrid Rootstocks. Hortscience: A Publication of the American Society for Hortcultural Science, 2016, 51, 1618-1624.	1.0	37
33	Effects of longâ€term exposure to elevated temperature on <i>Zea mays</i> endosperm development during grain fill. Plant Journal, 2019, 99, 23-40.	5.7	37
34	Structure and Origin of the <i>White Cap</i> Locus and Its Role in Evolution of Grain Color in Maize. Genetics, 2017, 206, 135-150.	2.9	36
35	Sugar Levels Modulate Differential Expression of Maize Sucrose Synthase Genes. Plant Cell, 1992, 4, 59.	6.6	34
36	The path of photosynthate translocation into citrus fruit. Plant, Cell and Environment, 1984, 7, 647-653.	5.7	32

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37	A Similar Dichotomy of Sugar Modulation and Developmental Expression Affects Both Paths of Sucrose Metabolism: Evidence from a Maize Invertase Gene Family. Plant Cell, 1996, 8, 1209.	6.6	30
38	<i>BonnMu</i>: A Sequence-Indexed Resource of Transposon-Induced Maize Mutations for Functional Genomics Studies. Plant Physiology, 2020, 184, 620-631.	4.8	25
39	Transposon Mutagenesis and Analysis of Mutants in UniformMu Maize (<i>Zea mays</i>). Current Protocols in Plant Biology, 2016, 1, 451-465.	2.8	24
40	MaizeÂ<i>w3</i>Âdisrupts <i>homogentisate solanesyl transferase</i>Â(<i>ZmHst</i>) and reveals a plastoquinoneâ€9 independent path for phytoene desaturation and tocopherol accumulation in kernels. Plant Journal, 2018, 93, 799-813.	5.7	24
41	Organ-Specific Invertase Deficiency in the Primary Root of an Inbred Maize Line. Plant Physiology, 1991, 97, 523-527.	4.8	23
42	Molecular Approaches to Altered C Partitioning: Genes for Sucrose Metabolism. Journal of the American Society for Horticultural Science, 2002, 127, 474-483.	1.0	21
43	Phenotype to genotype using forward-genetic Mu-seq for identification and functional classification of maize mutants. Frontiers in Plant Science, 2014, 4, 545.	3.6	20
44	Structural and kinetic characterization of a maize aldose reductase. Plant Physiology and Biochemistry, 2009, 47, 98-104.	5.8	17
45	Developmental Changes in Translocation and Localization of 14C-labeled Assimilates in Grapefruit: Light and Dark CO2 Fixation by Leaves and Fruit. Journal of the American Society for Horticultural Science, 1990, 115, 815-819.	1.0	15
46	Source-Sink Relations in Maize Mutants with Starch-Deficient Endosperms. Plant Physiology, 1982, 70, 322-325.	4.8	10
47	14C-Photosynthate Partitioning and Translocation in Soybeans during Reproductive Development. Plant Physiology, 1984, 75, 1040-1043.	4.8	10
48	Nitrogen Accumulation and Root Distribution of Grafted Tomato Plants as Affected by Nitrogen Fertilization. Hortscience: A Publication of the American Society for Hortcultural Science, 2019, 54, 1907-1914.	1.0	10
49	Gibberellic Acid Alters Sucrose, Hexoses, and Their Gradients in Peel Tissues During Color Break Delay in â€˜Hamlinâ€™ Orange. Journal of the American Society for Horticultural Science, 2008, 133, 760-767.	1.0	10
50	Genetic Perturbation of the Starch Biosynthesis in Maize Endosperm Reveals Sugar-Responsive Gene Networks. Frontiers in Plant Science, 2021, 12, 800326.	3.6	8
51	A time and a place for sugar in your ears. Nature Biotechnology, 2015, 33, 827-828.	17.5	7
52	Estimating nitrogen nutritional crop requirements of grafted tomatoes under field conditions. Scientia Horticulturae, 2015, 182, 18-26.	3.6	7
53	Sugar modulation of anaerobic-response networks in maize root tips. Plant Physiology, 2021, 185, 295-317.	4.8	7
54	A comparative structural analysis reveals distinctive features of co-factor binding and substrate specificity in plant aldo-keto reductases. Biochemical and Biophysical Research Communications, 2016, 474, 696-701.	2.1	6

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55	A Question-Based Approach to Teaching Photosynthesis, Carbohydrate Partitioning, and Energy Flow. American Biology Teacher, 2017, 79, 655-660.	0.2	4
56	Differences in sucrose metabolism relative to accumulation of bird-deterrent sucrose levels in fruits of wild and domestic Vaccinium species. Physiologia Plantarum, 1994, 92, 336-342.	5.2	0