

Gayle M Volk

List of Publications by Year in descending order

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98
papers

2,391
citations

186265

28
h-index

254184

43
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100
all docs

100
docs citations

100
times ranked

1749
citing authors

#	ARTICLE	IF	CITATIONS
1	Plant vitrification solution 2 lowers water content and alters freezing behavior in shoot tips during cryoprotection. <i>Cryobiology</i> , 2006, 52, 48-61.	0.7	130
2	Genetic diversity and population structure in <i>Malus sieversii</i> , a wild progenitor species of domesticated apple. <i>Tree Genetics and Genomes</i> , 2009, 5, 339-347.	1.6	117
3	Sustaining the Future of Plant Breeding: The Critical Role of the USDA-ARS National Plant Germplasm System. <i>Crop Science</i> , 2018, 58, 451-468.	1.8	91
4	Genetic diversity in <i>Malus domestica</i> (Rosaceae) through time in response to domestication. <i>American Journal of Botany</i> , 2014, 101, 1770-1779.	1.7	87
5	Ex Situ Conservation of Vegetatively Propagated Species: Development of a Seed-based Core Collection for <i>Malus sieversii</i> . <i>Journal of the American Society for Horticultural Science</i> , 2005, 130, 203-210.	1.0	79
6	Genetic Diversity among U.S. Garlic Clones as Detected Using AFLP Methods. <i>Journal of the American Society for Horticultural Science</i> , 2004, 129, 559-569.	1.0	76
7	Potential applications of cryogenic technologies to plant genetic improvement and pathogen eradication. <i>Biotechnology Advances</i> , 2014, 32, 583-595.	11.7	75
8	The vulnerability of US apple (<i>Malus</i>) genetic resources. <i>Genetic Resources and Crop Evolution</i> , 2015, 62, 765-794.	1.6	74
9	Cryobiotechnology of apple (<i>Malus</i> spp.): development, progress and future prospects. <i>Plant Cell Reports</i> , 2018, 37, 689-709.	5.6	69
10	Secondary plasmodesmata formation in the minor-vein phloem of <i>Cucumis melo</i> L. and <i>Cucurbita pepo</i> L.. <i>Planta</i> , 1996, 199, 425.	3.2	64
11	Advances in cryopreservation of in vitro-derived propagules: technologies and explant sources. <i>Plant Cell, Tissue and Organ Culture</i> , 2021, 144, 7-20.	2.3	62
12	Survival of mint shoot tips after exposure to cryoprotectant solution components. <i>Cryobiology</i> , 2006, 52, 305-308.	0.7	55
13	Challenges in implementing plant shoot tip cryopreservation technologies. <i>Plant Cell, Tissue and Organ Culture</i> , 2021, 144, 21-34.	2.3	52
14	Diversity of Wild <i>Pyrus communis</i> Based on Microsatellite Analyses. <i>Journal of the American Society for Horticultural Science</i> , 2006, 131, 408-417.	1.0	48
15	Recovery patterns, histological observations and genetic integrity in <i>Malus</i> shoot tips cryopreserved using droplet-vitrification and encapsulation-dehydration procedures. <i>Journal of Biotechnology</i> , 2015, 214, 182-191.	3.8	42
16	Plasmolysis and recovery of different cell types in cryoprotected shoot tips of <i>Mentha piperita</i> . <i>Protoplasma</i> , 2007, 231, 215-226.	2.1	40
17	Phenotypic Characteristics of Ten Garlic Cultivars Grown at Different North American Locations. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2009, 44, 1238-1247.	1.0	40
18	Massive cellular disruption occurs during early imbibition of <i>Cuphea</i> seeds containing crystallized triacylglycerols. <i>Planta</i> , 2006, 224, 1415-1426.	3.2	38

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19	Combining Thermotherapy with Cryotherapy for Efficient Eradication of Apple stem grooving virus from Infected In-vitro-cultured Apple Shoots. <i>Plant Disease</i> , 2018, 102, 1574-1580.	1.4	38
20	Application of Functional Genomics and Proteomics to Plant Cryopreservation. <i>Current Genomics</i> , 2010, 11, 24-29.	1.6	36
21	Chloroplast heterogeneity and historical admixture within the genus <i>Malus</i> . <i>American Journal of Botany</i> , 2015, 102, 1198-1208.	1.7	36
22	Genetic Diversity and Disease Resistance of Wild <i>Malus orientalis</i> from Turkey and Southern Russia. <i>Journal of the American Society for Horticultural Science</i> , 2008, 133, 383-389.	1.0	35
23	Identification of Duplicate Accessions within the USDA-ARS National Plant Germplasm System <i>Malus</i> Collection. <i>Journal of the American Society for Horticultural Science</i> , 2012, 137, 333-342.	1.0	35
24	Selection of Stratified Core Sets Representing Wild Apple (<i>Malus sieversii</i>). <i>Journal of the American Society for Horticultural Science</i> , 2009, 134, 228-235.	1.0	34
25	An efficient, widely applicable cryopreservation of <i>Lilium</i> shoot tips by droplet vitrification. <i>Acta Physiologiae Plantarum</i> , 2014, 36, 1683-1692.	2.1	33
26	Identification of interspecific hybrids among domesticated apple and its wild relatives. <i>Tree Genetics and Genomes</i> , 2012, 8, 1223-1235.	1.6	32
27	Calcium Channels are Involved in Calcium Oxalate Crystal Formation in Specialized Cells of <i>Pistia stratiotes</i> L.. <i>Annals of Botany</i> , 2004, 93, 741-753.	2.9	31
28	Genetic diversity of <i>Malus</i> cultivars and wild relatives in the Chinese National Repository of Apple Germplasm Resources. <i>Tree Genetics and Genomes</i> , 2015, 11, 1.	1.6	30
29	Galactinol Synthase Gene Expression in Melon. <i>Journal of the American Society for Horticultural Science</i> , 2003, 128, 8-15.	1.0	30
30	Modeling Demographics and Genetic Diversity in Ex Situ Collections during Seed Storage and Regeneration. <i>Crop Science</i> , 2010, 50, 2440-2447.	1.8	28
31	Cryopreservation of 12 <i>Vitis</i> Species Using Apical Shoot Tips Derived from Plants Grown In Vitro. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2019, 54, 976-981.	1.0	27
32	Citrus cryopreservation: viability of diverse taxa and histological observations. <i>Plant Cell, Tissue and Organ Culture</i> , 2017, 128, 327-334.	2.3	26
33	Shoot tip cryotherapy for efficient eradication of grapevine leafroll-associated virus 3 from diseased grapevine in vitro plants. <i>Annals of Applied Biology</i> , 2018, 173, 261-270.	2.5	26
34	Eradication of latent viruses from apple cultivar 'Monalisa' shoot tips using droplet-vitrification cryotherapy. <i>Scientia Horticulturae</i> , 2019, 250, 12-18.	3.6	26
35	Capturing the Diversity of Wild <i>Malus orientalis</i> from Georgia, Armenia, Russia, and Turkey. <i>Journal of the American Society for Horticultural Science</i> , 2009, 134, 453-459.	1.0	26
36	Droplet-vitrification cryopreservation of in vitro-grown shoot tips of grapevine (<i>Vitis</i> spp.). <i>In Vitro Cellular and Developmental Biology - Plant</i> , 2018, 54, 590-599.	2.1	25

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37	Probabilistic Models for Collecting Genetic Diversity: Comparisons, Caveats, and Limitations. <i>Crop Science</i> , 2007, 47, 861-866.	1.8	24
38	Cryotherapy by encapsulation-dehydration is effective for in vitro eradication of latent viruses from "Marubakaido" apple rootstock. <i>Journal of Biotechnology</i> , 2018, 269, 1-7.	3.8	24
39	Availability of Genotypic Data for USDA-ARS National Plant Germplasm System Accessions Using the Genetic Resources Information Network (GRIN) Database. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2008, 43, 1365-1366.	1.0	24
40	Genebanks in the post-genomic age: Emerging roles and anticipated uses. <i>Biodiversity</i> , 2008, 9, 68-71.	1.1	22
41	Development, progress and future prospects in cryobiotechnology of <i>Lilium</i> spp.. <i>Plant Methods</i> , 2019, 15, 125.	4.3	22
42	Probabilistic viability calculations for cryopreserving vegetatively propagated collections in genebanks. <i>Genetic Resources and Crop Evolution</i> , 2017, 64, 1613-1622.	1.6	21
43	Diversity Captured in the USDA-ARS National Plant Germplasm System Apple Core Collection. <i>Journal of the American Society for Horticultural Science</i> , 2013, 138, 375-381.	1.0	21
44	Identification of Historic Apple Trees in the Southwestern United States and Implications for Conservation. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2009, 44, 589-594.	1.0	19
45	Grapevine Shoot Tip Cryopreservation and Cryotherapy: Secure Storage of Disease-Free Plants. <i>Plants</i> , 2021, 10, 2190.	3.5	18
46	Cryobiotechnology: A Double-Edged Sword for Obligate Plant Pathogens. <i>Plant Disease</i> , 2019, 103, 1058-1067.	1.4	17
47	<i>Malus sieversii</i> : A Diverse Central Asian Apple Species in the USDA-ARS National Plant Germplasm System. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2013, 48, 1440-1444.	1.0	17
48	Historic American Apple Cultivars: Identification and Availability. <i>Journal of the American Society for Horticultural Science</i> , 2016, 141, 292-301.	1.0	17
49	Cryopreservation of citrus shoot tips using micrografting for recovery. <i>Cryo-Letters</i> , 2012, 33, 418-26.	0.3	17
50	Low-temperature Storage of Garlic for Spring Planting. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2004, 39, 571-573.	1.0	16
51	Integrating Genomic and Phenomic Approaches to Support Plant Genetic Resources Conservation and Use. <i>Plants</i> , 2021, 10, 2260.	3.5	15
52	Considerations for large-scale implementation of dormant budwood cryopreservation. <i>Plant Cell, Tissue and Organ Culture</i> , 2021, 144, 35-48.	2.3	14
53	Genetic Variation and Distribution of Pacific Crabapple. <i>Journal of the American Society for Horticultural Science</i> , 2012, 137, 325-332.	1.0	14
54	Cryopreservation of garlic (<i>Allium sativum</i> L.) using plant vitrification solution 2. <i>Cryo-Letters</i> , 2004, 25, 219-26.	0.3	14

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55	Implementation of garlic cryopreservation techniques in the national plant germplasm system. <i>Cryo-Letters</i> , 2006, 27, 99-106.	0.3	14
56	Cryopreservation of Jerusalem artichoke cultivars using an improved droplet-vitrification method. <i>Plant Cell, Tissue and Organ Culture</i> , 2017, 128, 577-587.	2.3	13
57	Genetic relationships between wild progenitor pear (<i>Pyrus L.</i>) species and local cultivars native to Georgia, South Caucasus. <i>Flora: Morphology, Distribution, Functional Ecology of Plants</i> , 2014, 209, 504-512.	1.2	12
58	Changes in transcript expression patterns as a result of cryoprotectant treatment and liquid nitrogen exposure in <i>Arabidopsis</i> shoot tips. <i>Plant Cell Reports</i> , 2017, 36, 459-470.	5.6	12
59	Thermotherapy Followed by Shoot Tip Cryotherapy Eradicates Latent Viruses and Apple Hammerhead Viroid from In Vitro Apple Rootstocks. <i>Plants</i> , 2022, 11, 582.	3.5	12
60	Shoot tip cryotherapy for plant pathogen eradication. <i>Plant Pathology</i> , 2022, 71, 1241-1254.	2.4	12
61	Identification of unknown apple (<i>Malus Æ— domestica</i>) cultivars demonstrates the impact of local breeding program on cultivar diversity. <i>Genetic Resources and Crop Evolution</i> , 2018, 65, 1317-1327.	1.6	11
62	Optimization of in vitro germination and cryopreservation conditions for preserving date palm pollen in the USDA National Plant Germplasm System. <i>Plant Cell, Tissue and Organ Culture</i> , 2021, 144, 223-232.	2.3	11
63	Novel Diversity Identified in a Wild Apple Population from the Kyrgyz Republic. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2009, 44, 516-518.	1.0	11
64	Citrus genebank collections: international collaboration opportunities between the US and Russia. <i>Genetic Resources and Crop Evolution</i> , 2018, 65, 433-447.	1.6	10
65	Cryoprotectants and components induce plasmolytic responses in sweet potato (<i>Ipomoea batatas (L.)</i>) Tj ETQq1 1,0,784314,rgBT /Ore	2.1	9
66	Localization of a calcium channel-like protein in the sieve element plasma membrane. <i>Functional Plant Biology</i> , 2000, 27, 779.	2.1	9
67	Seeds capture the diversity of genetic resource collections of <i>Malus sieversii</i> maintained in an orchard. <i>Genetic Resources and Crop Evolution</i> , 2017, 64, 1513-1528.	1.6	8
68	Variation in Low-temperature Exotherms of Pecan Cultivar Dormant Twigs. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2009, 44, 317-321.	1.0	8
69	CRYOPRESERVATION OF CITRUS FOR LONG-TERM CONSERVATION. <i>Acta Horticulturae</i> , 2015, , 187-191.	0.2	7
70	Temperate Tree Fruits of North America: <i>Malus Mill.</i> , <i>Prunus L.</i> , <i>Diospyros L.</i> , and <i>Asimina Adans.</i> , 2019, , 353-386.		7
71	Identification of Historic Homestead and Orchard Apple Cultivars in Wyoming. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2019, 54, 8-16.	1.0	7
72	Identification of a highly successful cryopreservation method (droplet-vitrification) for petunia. <i>In Vitro Cellular and Developmental Biology - Plant</i> , 2015, 51, 445-451.	2.1	6

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73	Virus infection reduces shoot proliferation of in vitro stock cultures and ability of cryopreserved shoot tips to regenerate into normal shoots in "Gala" apple (<i>Malus domestica</i>). <i>Cryobiology</i> , 2018, 84, 52-58.	0.7	6
74	Standardized Plant Disease Evaluations Will Enhance Resistance Gene Discovery. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2010, 45, 1317-1320.	1.0	6
75	Cryopreservation of <i>Arabidopsis thaliana</i> shoot tips. <i>Cryo-Letters</i> , 2006, 27, 353-60.	0.3	6
76	Genebank Conservation of Germplasm Collected from Wild Species. , 2018, , 245-280.		5
77	Genetic Diversity and Domestication History in <i>Pyrus</i> . <i>Compendium of Plant Genomes</i> , 2019, , 51-62.	0.5	5
78	Training in Plant Genetic Resources Management: A Way Forward. <i>Crop Science</i> , 2019, 59, 853-857.	1.8	5
79	Survey Identifies Essential Plant Genetic Resources Training Program Components. <i>Crop Science</i> , 2019, 59, 2308-2316.	1.8	5
80	Integration of Georeferencing, Habitat, Sampling, and Genetic Data for Documentation of Wild Plant Genetic Resources. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2011, 46, 1446-1449.	1.0	5
81	The ASHS Outstanding Fruit Cultivar Award: A 25-year Retrospective. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2013, 48, 4-12.	1.0	5
82	Photoperiod Shift Effects on Yield Characteristics of Rice. <i>Crop Science</i> , 1995, 35, 1631-1635.	1.8	4
83	Chloroplast sequence data differentiate <i>Maleae</i> , and specifically <i>Pyrus</i> , species in the USDA-ARS National Plant Germplasm System. <i>Genetic Resources and Crop Evolution</i> , 2019, 66, 5-15.	1.6	4
84	Non-Uniform Distribution of Cryoprotecting Agents in Rice Culture Cells Measured by CARS Microscopy. <i>Plants</i> , 2021, 10, 589.	3.5	4
85	Horticultural Value of Wild Genetic Resources"Introduction to the Workshop. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2011, 46, 1436-1437.	1.0	4
86	Genetic fingerprinting identifies apple (<i>Malus domestica</i> Borkh.) fruit cultivars in historic orchards on public lands. <i>Genetic Resources and Crop Evolution</i> , 2021, 68, 3133-3144.	1.6	3
87	Advantages for the Use of Standardized Phenotyping in Databases. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2010, 45, 1310-1313.	1.0	3
88	Hydration of <i>Cuphea</i> seeds containing crystallised triacylglycerols. <i>Functional Plant Biology</i> , 2007, 34, 360.	2.1	2
89	Genetic data inform Yosemite National Park's apple orchard management guidelines. <i>Plants People Planet</i> , 2021, 3, 142-154.	3.3	2
90	Cryopreservation of Grapevine Shoot Tips from In Vitro Plants Using Droplet Vitrification and V Cryo-plate Techniques. , 2019, , 469-482.		2

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91	Cryopreservation of <i>Populus trichocarpa</i> and <i>Salix</i> dormant buds with recovery by grafting or direct rooting. <i>Cryo-Letters</i> , 2014, 35, 507-15.	0.3	2
92	Micrografting: An Old Dog Plays New Tricks in Obligate Plant Pathogens. <i>Plant Disease</i> , 2022, 106, 2545-2557.	1.4	2
93	Standardized Phenotyping: Advantages to Horticulture—Introduction to the Workshop. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2010, 45, 1306.	1.0	1
94	Apple Genetic Resources: Diversity and Conservation. <i>Compendium of Plant Genomes</i> , 2021, , 33-45.	0.5	0
95	(19) Cryopreservation of <i>Arabidopsisthaliana</i> Shoot Tips. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2005, 40, 1067E-1067.	1.0	0
96	(274) Genetic Diversity of Wild <i>Pyrus communis</i> L.. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 2006, 41, 1035D-1036.	1.0	0
97	EVALUATION OF STRAWBERRY (<i>FRAGARIA SP.</i>) SEEDLINGS FOR DROUGHT AND SALT TOLERANCE BY IN VITRO INDUCED STRESSES.. <i>Hortscience: A Publication of the American Society for Horticultural Science</i> , 1990, 25, 1113f-1113.	1.0	0
98	Localization and Visualization of Dimethyl Sulfoxide In <i>Mentha X Piperita</i> Shoot Tips. <i>Cryobiology</i> , 2021, 103, 170.	0.7	0