Gavin L Sacks

List of Publications by Year
in descending order

72 papers	2,374 citations	257450 24 h-index	254184 43 g-index
128 all docs	128 docs citations	128 times ranked	2616 citing authors

#	Article	IF	Citations
1	The tomato pan-genome uncovers new genes and a rare allele regulating fruit flavor. Nature Genetics, 2019, 51, 1044-1051.	21.4	441
2	Effects of Cluster Light Exposure on 3-Isobutyl-2-methoxypyrazine Accumulation and Degradation Patterns in Red Wine Grapes (Vitis vinifera L. Cv. Cabernet Franc). Journal of Agricultural and Food Chemistry, 2008, 56, 10838-10846.	5.2	128
3	A next-generation marker genotyping platform (AmpSeq) in heterozygous crops: a case study for marker-assisted selection in grapevine. Horticulture Research, 2016, 3, 16002.	6.3	90
4	Timing of Cluster Light Environment Manipulation during Grape Development Affects C₁₃ Norisoprenoid and Carotenoid Concentrations in Riesling. Journal of Agricultural and Food Chemistry, 2010, 58, 6841-6849.	5.2	89
5	Sensory Threshold of 1,1,6-Trimethyl-1,2-dihydronaphthalene (TDN) and Concentrations in Young Riesling and Non-Riesling Wines. Journal of Agricultural and Food Chemistry, 2012, 60, 2998-3004.	5.2	88
6	Comparison of Odor-Active Compounds in Grapes and Wines from Vitis vinifera and Non-Foxy American Grape Species. Journal of Agricultural and Food Chemistry, 2011, 59, 10657-10664.	5.2	73
7	Rapid Measurement of 3-Alkyl-2-methoxypyrazine Content of Winegrapes To Predict Levels in Resultant Wines. Journal of Agricultural and Food Chemistry, 2009, 57, 8250-8257.	5.2	57
8	Comprehensive Two-Dimensional Gas Chromatography Combustion Isotope Ratio Mass Spectrometry. Analytical Chemistry, 2008, 80, 8613-8621.	6.5	56
9	Correlation of 3-Isobutyl-2-methoxypyrazine to 3-Isobutyl-2-hydroxypyrazine during Maturation of Bell Pepper (Capsicum annuum) and Wine Grapes (Vitis vinifera). Journal of Agricultural and Food Chemistry, 2010, 58, 9723-9730.	5.2	47
10	Protein-Precipitable Tannin in Wines from Vitis vinifera and Interspecific Hybrid Grapes (Vitis ssp.): Differences in Concentration, Extractability, and Cell Wall Binding. Journal of Agricultural and Food Chemistry, 2014, 62, 7515-7523.	5.2	47
11	Impact of Shoot and Cluster Thinning on Yield, Fruit Composition, and Wine Quality of Corot noir. American Journal of Enology and Viticulture, 2012, 63, 49-56.	1.7	45
12	Solid Phase Mesh Enhanced Sorption from Headspace (SPMESH) Coupled to DART-MS for Rapid Quantification of Trace-Level Volatiles. Analytical Chemistry, 2016, 88, 8617-8623.	6.5	42
13	Next Generation Mapping of Enological Traits in an F2 Interspecific Grapevine Hybrid Family. PLoS ONE, 2016, 11, e0149560.	2.5	40
14	Quantitative analysis of volatiles in edible oils following accelerated oxidation using broad spectrum isotope standards. Food Chemistry, 2015, 174, 310-318.	8.2	38
15	Impact of Harvesting and Processing Conditions on Green Leaf Volatile Development and Phenolics in Concord Grape Juice. Journal of Food Science, 2010, 75, C297-304.	3.1	37
16	Pathogenesis-Related Proteins Limit the Retention of Condensed Tannin Additions to Red Wines. Journal of Agricultural and Food Chemistry, 2016, 64, 1309-1317.	5.2	36
17	15N/14N Position-Specific Isotopic Analyses of Polynitrogenous Amino Acids. Analytical Chemistry, 2005, 77, 1013-1019.	6.5	33
18	Impact of Shoot Thinning and Harvest Date on Yield Components, Fruit Composition, and Wine Quality of Marechal Foch. American Journal of Enology and Viticulture, 2011, 62, 32-41.	1.7	33

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19	Fast Gas Chromatography Combustion Isotope Ratio Mass Spectrometry. Analytical Chemistry, 2007, 79, 6348-6358.	6.5	32
20	Role of Elemental Sulfur in Forming Latent Precursors of H₂S in Wine. Journal of Agricultural and Food Chemistry, 2017, 65, 10542-10549.	5.2	32
21	Trace-Level Volatile Quantitation by Direct Analysis in Real Time Mass Spectrometry following Headspace Extraction: Optimization and Validation in Grapes. Journal of Agricultural and Food Chemistry, 2017, 65, 9353-9359.	5.2	29
22	Calibration and data processing in gas chromatography combustion isotope ratio mass spectrometry. Drug Testing and Analysis, 2012, 4, 912-922.	2.6	28
23	Persistence of Elemental Sulfur Spray Residue on Grapes during Ripening and Vinification. American Journal of Enology and Viticulture, 2014, 65, 453-462.	1.7	28
24	Relationship of Soluble Grape-Derived Proteins to Condensed Tannin Extractability during Red Wine Fermentation. Journal of Agricultural and Food Chemistry, 2016, 64, 8191-8199.	5.2	25
25	Loss and formation of malodorous volatile sulfhydryl compounds during wine storage. Critical Reviews in Food Science and Nutrition, 2019, 59, 1728-1752.	10.3	25
26	Behavior of 3-Isobutyl-2-hydroxypyrazine (IBHP), a Key Intermediate in 3-Isobutyl-2-methoxypyrazine (IBMP) Metabolism, in Ripening Wine Grapes. Journal of Agricultural and Food Chemistry, 2012, 60, 11901-11908.	5.2	24
27	Decontamination of Green Onions and Baby Spinach by Vaporized Ethyl Pyruvate. Journal of Food Protection, 2012, 75, 1012-1022.	1.7	22
28	Treatment of grape juice or must with silicone reduces 3-alkyl-2-methoxypyrazine concentrations in resulting wines without altering fermentation volatiles. Food Research International, 2012, 47, 70-79.	6.2	22
29	Volatile and sensory characterization of roast coffees â€“ Effects of cherry maturity. Food Chemistry, 2019, 274, 137-145.	8.2	22
30	Glycosylated Aroma Compound Responses in â€˜Rieslingâ€™ Wine Grapes to Cluster Exposure and Vine Yield. HortTechnology, 2013, 23, 581-588.	0.9	21
31	Quantification of Polyfunctional Thiols in Wine by HS-SPME-GC-MS Following Extractive Alkylation. Molecules, 2015, 20, 12280-12299.	3.8	20
32	A Headspace Gas Detection Tube Method to Measure SO₂in Wine without Disrupting SO₂Equilibria. American Journal of Enology and Viticulture, 2015, 66, 257-265.	1.7	19
33	Parallel Headspace Extraction onto Etched Sorbent Sheets Prior to Ambient-Ionization Mass Spectrometry for Automated, Trace-Level Volatile Analyses. Analytical Chemistry, 2018, 90, 13806-13813.	6.5	19
34	High-Precision Position-Specific Isotope Analysis of13C/12C in Leucine and Methionine Analogues. Analytical Chemistry, 2003, 75, 5495-5503.	6.5	18
35	Carbon Position-Specific Isotope Analysis of Alanine and Phenylalanine Analogues Exhibiting Nonideal Pyrolytic Fragmentation. Analytical Chemistry, 2005, 77, 1746-1752.	6.5	18
36	Convenient, inexpensive quantification of elemental sulfur by simultaneous in situ reduction and colorimetric detection. Analytica Chimica Acta, 2011, 703, 52-57.	5.4	17

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37	Conventional Measurements of Sulfur Dioxide (SO₂) in Red Wine Overestimate SO₂ Antimicrobial Activity. American Journal of Enology and Viticulture, 2018, 69, 210-220.	1.7	17
38	Improving vineyard sampling efficiency via dynamic spatially explicit optimisation. Australian Journal of Grape and Wine Research, 2011, 17, 306-315.	2.1	15
39	Quantifying the Contribution of Grape Hexoses to Wine Volatiles by High-Precision [U¹³C]-Glucose Tracer Studies. Journal of Agricultural and Food Chemistry, 2014, 62, 6820-6827.	5.2	15
40	Modeling Impacts of Viticultural and Environmental Factors on 3-Isobutyl-2-Methoxypyrazine in Cabernet franc Grapes. American Journal of Enology and Viticulture, 2012, 63, 94-105.	1.7	13
41	HS-SPME-GC-MS Analyses of Volatiles in Plant Populationsâ€"Quantitating Compound Ã— Individual Matrix Effects. Molecules, 2018, 23, 2436.	3.8	13
42	Determination of Intramolecular Î´13C from Incomplete Pyrolysis Fragments. Evaluation of Pyrolysis-Induced Isotopic Fractionation in Fragments from the Lactic Acid Analogue Propylene Glycol. Analytical Chemistry, 2006, 78, 2752-2757.	6.5	12
43	Copper-Complexed Hydrogen Sulfide in Wine: Measurement by Gas Detection Tubes and Comparison of Release Approaches. American Journal of Enology and Viticulture, 2017, 68, 91-99.	1.7	12
44	Analysis of quantization error in high-precision continuous-flow isotope ratio mass spectrometry. Journal of Chromatography A, 2003, 1020, 273-282.	3.7	11
45	Spatially Resolved Headspace Extractions of Trace-Level Volatiles from Planar Surfaces for High-Throughput Quantitation and Mass Spectral Imaging. Journal of Agricultural and Food Chemistry, 2019, 67, 13840-13847.	5.2	11
46	Free, Bound, and Total Sulfur Dioxide (SO₂) during Oxidation of Wines. American Journal of Enology and Viticulture, 2020, 71, 266-277.	1.7	11
47	Simplified Method for Free SO 2 Measurement Using Gas Detection Tubes. American Journal of Enology and Viticulture, 2013, 64, 405-410.	1.7	10
48	Determination of Molecular and â€œTrulyâ€•Free Sulfur Dioxide in Wine: A Comparison of Headspace and Conventional Methods. American Journal of Enology and Viticulture, 2020, 71, 222-230.	1.7	10
49	Computational modeling of complexes of penta-ammine osmium (II) with aromatic ligands. International Journal of Quantum Chemistry, 2003, 92, 457-456.	2.0	9
50	Elemental Speciation by Parallel Elemental and Molecular Mass Spectrometry and Peak Profile Matching. Analytical Chemistry, 2006, 78, 8445-8455.	6.5	9
51	Polymeric Sorbent Sheets Coupled to Direct Analysis in Real Time Mass Spectrometry for Trace-Level Volatile Analysisâ€"A Multi-Vineyard Evaluation Study. Foods, 2020, 9, 409.	4.3	9
52	Effects of Concentration Prior to Cold-Stabilization on Anthocyanin Stability in Concord Grape Juice. Journal of Agricultural and Food Chemistry, 2010, 58, 11325-11332.	5.2	8
53	Production of Isotopically Labeled Standards from a Uniformly Labeled Precursor for Quantitative Volatile Metabolomic Studies. Analytical Chemistry, 2012, 84, 5400-5406.	6.5	8
54	Behavior of Glycosylated Monoterpenes, C₁₃-Norisoprenoids, and Benzenoids in Vitis vinifera cv. Riesling during Ripening and Following Hedging. ACS Symposium Series, 2013, , 109-124.	0.5	7

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55	Rapid Analysis of Volatile Phenols from Grape Juice by Immersive Sorbent Sheet Extraction Prior to Direct Analysis in Real-Time Mass Spectrometry (DART-MS). Journal of Agricultural and Food Chemistry, 2021, 69, 12344-12353.	5.2	7
56	Stable QTL for malate levels in ripe fruit and their transferability acrossVitisspecies. Horticulture Research, 2022, 9, uhac009.	6.3	6
57	Malate Content in Wild Vitis spp. Demonstrates a Range of Behaviors during Berry Maturation. American Journal of Enology and Viticulture, 2020, 71, 80-87.	1.7	5
58	Nonlinear Behavior of Protein and Tannin in Wine Produced by Cofermentation of an Interspecific Hybrid (Vitis spp.) and vinifera Cultivar. American Journal of Enology and Viticulture, 2020, 71, 26-32.	1.7	5
59	Brine-Releasable Hydrogen Sulfide in Wine: Mechanism of Release from Copper Complexes and Effects of Glutathione. Journal of Agricultural and Food Chemistry, 2021, 69, 13164-13172.	5.2	5
60	Berry Anthocyanin, Acid, and Volatile Trait Analyses in a Grapevine-Interspecific F2 Population Using an Integrated GBS and rhAmpSeq Genetic Map. Plants, 2022, 11, 696.	3.5	5
61	Decoupling the effects of heating and flaming on chemical and sensory changes during flambÃ© cooking. International Journal of Gastronomy and Food Science, 2012, 1, 90-95.	3.0	4
62	Assessment of the Validity of Maturity Metrics for Predicting the Volatile Composition of Concord Grape Juice. Journal of Food Science, 2012, 77, C319-25.	3.1	4
63	Decreasing pH Results in a Reduction of Anthocyanin Coprecipitation during Cold Stabilization of Purple Grape Juice. Molecules, 2015, 20, 556-572.	3.8	3
64	Identification of QTLs for berry acid and tannin in a <i>Vitis aestivalis</i>-derived 'Norton'-based population. Fruit Research, 2021, 1, 1-11.	2.0	3
65	Review of Thirteen Years of CTS Winery Laboratory Collaborative Data. American Journal of Enology and Viticulture, 2015, 66, 321-339.	1.7	2
66	Analysis of Free Hydrogen Sulfide in Wines Using Gas Detection Tubes. Catalyst Discovery Into Practice, 0, , catalyst.2021.21003.	0.5	2
67	Optimization of conditions for Greek style yogurt acid whey demineralization and its effects on filterability. International Dairy Journal, 2021, 123, 105163.	3.0	2
68	A Computational Approach for Balancing Competing Objectives in Winegrape Production. American Journal of Enology and Viticulture, 2012, 63, 296-300.	1.7	1
69	Gas Detection Tubes for Measurement of Molecular and Free SO2 in Wine. ACS Symposium Series, 2015, , 51-67.	0.5	1
70	The Genetic Basis of Anthocyanin Acylation in North American Grapes (Vitis spp.). Genes, 2021, 12, 1962.	2.4	1
71	The Perception of Riesling Varietal Character. , 2014, , 503-506.		0
72	Swellable Sorbent Coatings for Parallel Extraction, Storage, and Analysis of Plant Metabolites. Journal of Agricultural and Food Chemistry, 2022, 70, 7805-7814.	5.2	0