Moritz Knoche

List of Publications by Year
in descending order

137 papers	3,409 citations	147801 31 h-index	189892 50 g-index
140 all docs	140 docs citations	140 times ranked	1618 citing authors

#	Article	IF	Citations
1	Effect of droplet size and carrier volume on performance of foliage-applied herbicides. Crop Protection, 1994, 13, 163-178.	2.1	203
2	Composition of the cuticle of developing sweet cherry fruit. Phytochemistry, 2007, 68, 1017-1025.	2.9	142
3	Organosilicone surfactant performance in agricultural spray application: a review. Weed Research, 1994, 34, 221-239.	1.7	94
4	Studies on water transport through the sweet cherry fruit surface: characterizing conductance of the cuticular membrane using pericarp segments. Planta, 2000, 212, 127-135.	3.2	88
5	Analysing fruit shape in sweet cherry (Prunus avium L.). Scientia Horticulturae, 2002, 96, 139-150.	3.6	87
6	Changes in strain and deposition of cuticle in developing sweet cherry fruit. Physiologia Plantarum, 2004, 120, 667-677.	5.2	83
7	Transcriptional dynamics of the developing sweet cherry (Prunus avium L.) fruit: sequencing, annotation and expression profiling of exocarp-associated genes. Horticulture Research, 2014, 1, 11.	6.3	82
8	Water on the Surface Aggravates Microscopic Cracking of the Sweet Cherry Fruit Cuticle. Journal of the American Society for Horticultural Science, 2006, 131, 192-200.	1.0	76
9	Identification of putative candidate genes involved in cuticle formation in Prunus avium (sweet) Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.9	74
10	Russeting in apple and pear: a plastic periderm replaces a stiff cuticle. AoB PLANTS, 2013, 5, pls048-pls048.	2.3	74
11	Characterization of Microcracks in the Cuticle of Developing Sweet Cherry Fruit. Journal of the American Society for Horticultural Science, 2005, 130, 487-495.	1.0	73
12	Performance and stability of the organosilicon surfactant L-77: effect of pH, concentration, and temperature. Journal of Agricultural and Food Chemistry, 1991, 39, 202-206.	5.2	72
13	Studies on water transport through the sweet cherry fruit surface: II. Conductance of the cuticle in relation to fruit development. Planta, 2001, 213, 927-936.	3.2	72
14	Ongoing Growth Challenges Fruit Skin Integrity. Critical Reviews in Plant Sciences, 2017, 36, 190-215.	5.7	68
15	Russeting and Microcracking of â€˜Golden Deliciousâ€™ Apple Fruit Concomitantly Decline Due to Gibberellin A4+7 Application. Journal of the American Society for Horticultural Science, 2011, 136, 159-164.	1.0	67
16	Mechanical properties of cuticles and their primary determinants. Journal of Experimental Botany, 2017, 68, 5351-5367.	4.8	63
17	Intracuticular wax fixes and restricts strain in leaf and fruit cuticles. New Phytologist, 2013, 200, 134-143.	7.3	60
18	Surface characteristics of sweet cherry fruit: stomata-number, distribution, functionality and surface wetting. Scientia Horticulturae, 2003, 97, 265-278.	3.6	57

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19	Calcium and the physiology of sweet cherries: A review. Scientia Horticulturae, 2019, 245, 107-115.	3.6	57
20	Studies on water transport through the sweet cherry fruit surface: IX. Comparing permeability in water uptake and transpiration. Planta, 2005, 220, 474-485.	3.2	54
21	Xylem, phloem, and transpiration flows in developing sweet cherry fruit. Trees - Structure and Function, 2016, 30, 1821-1830.	1.9	52
22	Cell wall swelling, fracture mode, and the mechanical properties of cherry fruit skins are closely related. Planta, 2017, 245, 765-777.	3.2	52
23	Surface Moisture Induces Microcracks in the Cuticle of â€˜Golden Deliciousâ€™ Apple. Hortscience: A Publication of the American Society for Hortcultural Science, 2008, 43, 1929-1931.	1.0	48
24	Evidence for Surfactant Solubilization of Plant Epicuticular Wax. Journal of Agricultural and Food Chemistry, 2001, 49, 1809-1816.	5.2	43
25	Fruit growth, cuticle deposition, water uptake, and fruit cracking in jostaberry, gooseberry, and black currant. Scientia Horticulturae, 2011, 128, 289-296.	3.6	38
26	Studies on Water Transport Through the Sweet Cherry Fruit Surface: IV. Regions of Preferential Uptake. Hortscience: A Publication of the American Society for Hortcultural Science, 2002, 37, 637-641.	1.0	35
27	Structural and physiological changes associated with the skin spot disorder in apple. Postharvest Biology and Technology, 2012, 64, 111-118.	6.0	33
28	Studies on Water Transport through the Sweet Cherry Fruit Surface: V. Conductance for Water Uptake. Journal of the American Society for Horticultural Science, 2002, 127, 325-332.	1.0	33
29	Mature Sweet Cherries Have Low Turgor. Journal of the American Society for Horticultural Science, 2014, 139, 3-12.	1.0	33
30	Physical rupture of the xylem in developing sweet cherry fruit causes progressive decline in xylem sap inflow rate. Planta, 2017, 246, 659-672.	3.2	32
31	Deposition and Strain of the Cuticle of Developing European Plum Fruit. Journal of the American Society for Horticultural Science, 2007, 132, 597-602.	1.0	32
32	Water Potential and Its Components in Developing Sweet Cherry. Journal of the American Society for Horticultural Science, 2014, 139, 349-355.	1.0	32
33	Mechanical Properties of Skins of Sweet Cherry Fruit of Differing Susceptibilities to Cracking. Journal of the American Society for Horticultural Science, 2016, 141, 162-168.	1.0	32
34	Evidence for a radial strain gradient in apple fruit cuticles. Planta, 2014, 240, 891-897.	3.2	31
35	Rain Cracking in Sweet Cherries is not Due to Excess Water Uptake but to Localized Skin Phenomena. Journal of the American Society for Horticultural Science, 2016, 141, 653-660.	1.0	31
36	Mismatch between cuticle deposition and area expansion in fruit skins allows potentially catastrophic buildup of elastic strain. Planta, 2016, 244, 1145-1156.	3.2	31

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37	Stress and Strain in the Sweet Cherry Skin. Journal of the American Society for Horticultural Science, 2012, 137, 383-390.	1.0	31
38	Surfactant-induced phytotoxicity: evidence for interaction with epicuticular wax fine structure. Crop Protection, 1992, 11, 51-56.	2.1	30
39	Crack initiation and propagation in sweet cherry skin: A simple chain reaction causes the crack to â€˜runâ€™. PLoS ONE, 2019, 14, e0219794.	2.5	30
40	Malic Acid Promotes Cracking of Sweet Cherry Fruit. Journal of the American Society for Horticultural Science, 2015, 140, 280-287.	1.0	29
41	Studies on octylphenoxy surfactants: XI. Effect on NAA diffusion through the isolated tomato fruit cuticular membrane. Pest Management Science, 1993, 38, 211-217.	0.4	28
42	Water Movement through the Surfaces of the Grape Berry and Its Stem. American Journal of Enology and Viticulture, 2011, 62, 340-350.	1.7	28
43	Biaxial tensile tests identify epidermis and hypodermis as the main structural elements of sweet cherry skin. AoB PLANTS, 2014, 6, .	2.3	26
44	Mechanical Properties of Apple Skin Are Determined by Epidermis and Hypodermis. Journal of the American Society for Horticultural Science, 2014, 139, 139-147.	1.0	26
45	Studies on Water Transport through the Sweet Cherry Fruit Surface. 10. Evidence for Polar Pathways across the Exocarp. Journal of Agricultural and Food Chemistry, 2006, 54, 3951-3958.	5.2	25
46	Gibberellins Increase Cuticle Deposition in Developing Tomato Fruit. Plant Growth Regulation, 2007, 51, 1-10.	3.4	24
47	Fruit apoplast tension draws xylem water into mature sweet cherries. Scientia Horticulturae, 2016, 209, 270-278.	3.6	24
48	Sweet Cherry Skin Has a Less Negative Osmotic Potential than the Flesh. Journal of the American Society for Horticultural Science, 2015, 140, 472-479.	1.0	24
49	Russeting partially restores apple skin permeability to water vapour. Planta, 2019, 249, 849-860.	3.2	22
50	Russeting in Apple Is Initiated After Exposure to Moisture Endsâ€"I. Histological Evidence. Plants, 2020, 9, 1293.	3.5	22
51	Finite dose diffusion studies: I. Characterizing cuticular penetration in a model system using NAA and isolated tomato fruit cuticles. Pest Management Science, 2000, 56, 1005-1015.	3.4	21
52	Calcium physiology of sweet cherry fruits. Trees - Structure and Function, 2020, 34, 1157-1167.	1.9	21
53	Rain-induced cracking of sweet cherries.. , 2017, , 140-165.		21
54	Effect of non-ionic surfactants on ethylene release and leaf growth of Phaseolus vulgaris L.. Scientia Horticulturae, 1991, 46, 1-11.	3.6	20

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55	Expression of putative aquaporin genes in sweet cherry is higher in flesh than skin and most are downregulated during development. Scientia Horticulturae, 2019, 244, 304-314.	3.6	20
56	Studies on Water Transport through the Sweet Cherry Fruit Surface: VIII. Effect of Selected Cations on Water Uptake and Fruit Cracking. Journal of the American Society for Horticultural Science, 2004, 129, 781-788.	1.0	20
57	Localized bursting of mesocarp cells triggers catastrophic fruit cracking. Horticulture Research, 2019, 6, 79.	6.3	19
58	Surface moisture increases microcracking and water vapour permeance of apple fruit skin. Plant Biology, 2021, 23, 74-82.	3.8	19
59	Pedicel Transpiration in Sweet Cherry Fruit: Mechanisms, Pathways, and Factors. Journal of the American Society for Horticultural Science, 2015, 140, 136-143.	1.0	19
60	Interaction of Surfactant and Leaf Surface in Glyphosate Absorption. Weed Science, 1993, 41, 87-93.	1.5	17
61	Substantial water uptake into detached grape berries occurs through the stem surface. Australian Journal of Grape and Wine Research, 2012, 18, 109-114.	2.1	17
62	Urea Penetration of Isolated Tomato Fruit Cuticles. Journal of the American Society for Horticultural Science, 1994, 119, 761-764.	1.0	17
63	Lenticels and apple fruit transpiration. Postharvest Biology and Technology, 2020, 167, 111221.	6.0	16
64	Russeting in Apple is Initiated after Exposure to Moisture Ends: Molecular and Biochemical Evidence. Plants, 2021, 10, 65.	3.5	16
65	Russeting of Fruits: Etiology and Management. Horticulturae, 2022, 8, 231.	2.8	16
66	Studies on Water Transport through the Sweet Cherry Fruit Surface. 11. FeCl3Decreases Water Permeability of Polar Pathways. Journal of Agricultural and Food Chemistry, 2006, 54, 6294-6302.	5.2	15
67	Russeting in Apple Seems Unrelated to the Mechanical Properties of the Cuticle at Maturity. Hortscience: A Publication of the American Society for Hortcultural Science, 2013, 48, 1135-1138.	1.0	15
68	Late-season Surface Water Induces Skin Spot in Apple. Hortscience: A Publication of the American Society for Horticultural Science, 2014, 49, 1324-1327.	1.0	15
69	Considerations in the Use of an Infinite-Dose System for Studying Surfactant Effects on Diffusion in Isolated Cuticles. Journal of Agricultural and Food Chemistry, 1994, 42, 1013-1018.	5.2	14
70	Studies on water transport through the sweet cherry fruit surface: III. Conductance of the cuticle in relation to fruit size. Physiologia Plantarum, 2002, 114, 414-421.	5.2	14
71	Patterns of microcracking in apple fruit skin reflect those of the cuticular ridges and of the epidermal cell walls. Planta, 2018, 248, 293-306.	3.2	14
72	Factors Affecting Mechanical Properties of the Skin of Sweet Cherry Fruit. Journal of the American Society for Horticultural Science, 2016, 141, 45-53.	1.0	14

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73	Postharvest osmotic dehydration of pedicels of sweet cherry fruit. Postharvest Biology and Technology, 2015, 108, 86-90.	6.0	13
74	Swelling of cell walls in mature sweet cherry fruit: factors and mechanisms. Planta, 2020, 251, 65.	3.2	13
75	Ventricular abnormality in patients with postpartum psychoses. Archives of Women's Mental Health, 1998, 1, 45-47.	2.6	12
76	Surfactant-Enhanced Penetration of Benzyladenine through Isolated Tomato Fruit Cuticular Membranes. Journal of Agricultural and Food Chemistry, 1998, 46, 2346-2352.	5.2	12
77	Effect of Triton X-100 concentration on NAA penetration through the isolated tomato fruit cuticular membrane. Crop Protection, 2004, 23, 141-146.	2.1	12
78	Russeting in â€˜Appleâ€™ Mango: Triggers and Mechanisms. Plants, 2020, 9, 898.	3.5	12
79	Calcium uptake through skins of sweet cherry fruit: Effects of different calcium salts and surfactants. Scientia Horticulturae, 2021, 276, 109761.	3.6	12
80	Russeting and Relative Growth Rate Are Positively Related in â€˜Conferenceâ€™ and â€˜Condoâ€™ Pear. Hortscience: A Publication of the American Society for Hortcultural Science, 2014, 49, 746-749.	1.0	12
81	Studies on octylphenoxy surfactants: IX. Effect of oxyethylene chain length on GA3 absorption by sour cherry leaves. Journal of Plant Growth Regulation, 1991, 10, 173-177.	5.1	11
82	Studies on Water Transport through the Sweet Cherry Fruit Surface. 7. Fe3+ and Al3+ Reduce Conductance for Water Uptake. Journal of Agricultural and Food Chemistry, 2002, 50, 7600-7608.	5.2	11
83	Predicting osmotic potential from measurements of refractive index in cherries, grapes and plums. PLoS ONE, 2018, 13, e0207626.	2.5	10
84	Russet Susceptibility in Apple Is Associated with Skin Cells that Are Larger, More Variable in Size, and of Reduced Fracture Strain. Plants, 2020, 9, 1118.	3.5	10
85	Rain cracking in sweet cherries is caused by surface wetness, not by water uptake. Scientia Horticulturae, 2020, 269, 109400.	3.6	10
86	595 The Cuticular Membrane: A Critical Factor in Rain-induced Cracking of Sweet Cherry Fruit. Hortscience: A Publication of the American Society for Hortcultural Science, 1999, 34, 549D-549.	1.0	10
87	Surfactants Influence Foliar Absorption of Gibberellic Acid by Sour Cherry Leaves. Journal of the American Society for Horticultural Science, 1992, 117, 80-84.	1.0	10
88	Studies on Water Transport through the Sweet Cherry Fruit Surface: XII. Variation in Cuticle Properties among Cultivars. Journal of the American Society for Horticultural Science, 2012, 137, 367-375.	1.0	10
89	Studies on water transport through the sweet cherry fruit surface. VI. Effect of hydrostatic pressure on water uptake. Journal of Horticultural Science and Biotechnology, 2002, 77, 609-614.	1.9	9
90	FOLIAR UPTAKE OF PGRS: BARRIERS, MECHANISMS, MODEL SYSTEMS, AND FACTORS. Acta Horticulturae, 2014, , 125-141.	0.2	9

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91	Water Uptake Through the Surface of Fleshy Soft Fruit: Barriers, Mechanism, Factors, and Potential Role in Cracking. , 2015, , 147-166.		9
92	Strawberry fruit skins are far more permeable to osmotic water uptake than to transpirational water loss. PLoS ONE, 2021, 16, e0251351.	2.5	9
93	Factors affecting the absorption of gibberellin A3 by sour cherry leaves. Crop Protection, 1992, 11, 57-63.	2.1	8
94	Droplet sizing using silicone oils. Crop Protection, 2001, 20, 489-498.	2.1	8
95	Xylem conductance of sweet cherry pedicels. Trees - Structure and Function, 2015, 29, 1851-1860.	1.9	8
96	Sweet Cherry Fruit: Ideal Osmometers?. Frontiers in Plant Science, 2019, 10, 164.	3.6	8
97	Decreased deposition and increased swelling of cell walls contribute to increased cracking susceptibility of developing sweet cherry fruit. Planta, 2020, 252, 96.	3.2	8
98	Spray application factors and plant growth regulator performance: I. Bioassays and biological response. Pest Management Science, 1998, 54, 168-178.	0.4	7
99	Finite dose diffusion studies: II. Effect of concentration and pH on NAA penetration through isolated tomato fruit cuticles. Pest Management Science, 2000, 56, 1016-1022.	3.4	7
100	Finite dose diffusion studies: III. Effects of temperature, humidity and deposit manipulation on NAA penetration through isolated tomato fruit cuticles. Pest Management Science, 2001, 57, 737-742.	3.4	7
101	Characterizing Neck Shrivel in European Plum. Journal of the American Society for Horticultural Science, 2019, 144, 38-44.	1.0	7
102	Stability of the Organosilicone Surfactant Silwet L-77 in Growth Regulator Sprays. Hortscience: A Publication of the American Society for Hortcultural Science, 1991, 26, 1498-1500.	1.0	7
103	Orange peel disorder in sweet cherry: Mechanism and triggers. Postharvest Biology and Technology, 2018, 137, 119-128.	6.0	6
104	Spatial heterogeneity of flesh-cell osmotic potential in sweet cherry affects partitioning of absorbed water. Horticulture Research, 2020, 7, 51.	6.3	6
105	Xylem, phloem and transpiration flows in developing European plums. PLoS ONE, 2021, 16, e0252085.	2.5	6
106	Water Soaking Disorder in Strawberries: Triggers, Factors, and Mechanisms. Frontiers in Plant Science, 2021, 12, 694123.	3.6	6
107	Low cuticle deposition rate in â€˜Appleâ€™ mango increases elastic strain, weakens the cuticle and increases russet. PLoS ONE, 2021, 16, e0258521.	2.5	6
108	Pathways of postharvest water loss from banana fruit. Postharvest Biology and Technology, 2022, 191, 111979.	6.0	6

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109	Effect of Orchard Management Factors on Flesh Color of Two Red-Fleshed Apple Clones. Horticulturae, 2019, 5, 54.	2.8	5
110	Selective Solubilization of Tomato Fruit Epicuticular Wax Constituents by Triton X-100 Surfactant. Journal of Pesticide Sciences, 2001, 26, 16-20.	1.4	5
111	Effect of sweet cherry genes PaLACS2 and PaATT1 on cuticle deposition, composition and permeability in Arabidopsis. Tree Genetics and Genomes, 2014, 10, 1711-1721.	1.6	4
112	Shading affects fracture force and fracture strain of apple fruit skins. Scientia Horticulturae, 2020, 274, 109651.	3.6	4
113	Water Influx through the Wetted Surface of a Sweet Cherry Fruit: Evidence for an Associated Solute Efflux. Plants, 2020, 9, 440.	3.5	4
114	Xylem, phloem and transpiration flows in developing strawberries. Scientia Horticulturae, 2021, 288, 110305.	3.6	4
115	Mottling on Sweet Cherry Fruit Is Caused by Exocarp Strain. Journal of the American Society for Horticultural Science, 2013, 138, 18-23.	1.0	4
116	Spray application factors and plant growth regulator performance: II. Foliar uptake of gibberellic acid and 2, 4-D. Pest Management Science, 1999, 55, 166-174.	0.4	4
117	Surface Moisture Induces Microcracks and Increases Water Vapor Permeance of Fruit Skins of Mango cv. Apple. Horticulturae, 2022, 8, 545.	2.8	4
118	Spray application factors and plant growth regulator performance: III. Interaction of daminozide uptake, translocation and phytotoxicity in bean seedlings. Pest Management Science, 2000, 56, 43-48.	3.4	3
119	Characterizing Penetration of Aminoethoxyvinylglycine (AVG) through Isolated Tomato Fruit Cuticles. Journal of Plant Growth Regulation, 2013, 32, 596-603.	5.1	3
120	Time to Fracture and Fracture Strain are Negatively Related in Sweet Cherry Fruit Skin. Journal of the American Society for Horticultural Science, 2016, 141, 485-489.	1.0	3
121	The permeability concept: a useful tool in analyzing water transport through the sweet cherry fruit surface. Acta Horticulturae, 2017, , 367-374.	0.2	3
122	Cutin Synthesis in Developing, Field-Grown Apple Fruit Examined by External Feeding of Labelled Precursors. Plants, 2021, 10, 497.	3.5	3
123	Penetration ofÂsweet cherry skin by 45Ca-salts: pathways and factors. Scientific Reports, 2021, 11, 11142.	3.3	3
124	Factors affecting cuticle synthesis in apple fruit identified under field conditions. Scientia Horticulturae, 2021, 290, 110512.	3.6	3
125	Epidermal Segments: A Useful Model System for Studying Water Transport through Fruit Surfaces. Hortscience: A Publication of the American Society for Hortcultural Science, 2003, 38, 1410-1413.	1.0	3
126	Direct Evidence for a Radial Gradient in Age of the Apple Fruit Cuticle. Frontiers in Plant Science, 2021, 12, 730837.	3.6	3

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127	Accurate Quantification of Anthocyanin in Red Flesh Apples Using Digital Photography and Image Analysis. Horticulturae, 2022, 8, 145.	2.8	3
128	Spray application factors and plant growth regulator performance: II. Foliar uptake of gibberellic acid and 2,4-D. Pest Management Science, 1999, 55, 166-174.	0.4	2
129	Spray Application Factors and Plant Growth Regulator Performance: IV. Dose Response Relationships. Journal of the American Society for Horticultural Science, 2000, 125, 195-199.	1.0	2
130	The mechanism of rain cracking of sweet cherry fruit. Italus Hortus, 0, 26, 59-65.	0.9	2
131	Nondestructive Determination of Fruit Surface Area Using Archimedean Buoyancy. Hortscience: A Publication of the American Society for Hortcultural Science, 2020, 55, 1647-1653.	1.0	2
132	EFFECTS OF PH, TEMPERATURE, HUMIDITY, AND REWETTING ON CUTICULAR PENETRATION OF ABA. Acta Horticulturae, 2014, , 143-150.	0.2	1
133	PENETRATION OF OCTYLPHENOXY SURFACTANTS THROUGH ISOLATED TOMATO FRUIT CUTICLES. Hortscience: A Publication of the American Society for Hortcultural Science, 1990, 25, 1145g-1146.	1.0	1
134	Effect of Receiver pH on Infinite Dose Diffusion of 55FeCl3 across the Sweet Cherry Fruit Exocarp. Journal of the American Society for Horticultural Science, 2010, 135, 95-101.	1.0	1
135	Sweet cherry flesh cells burst in non-random clusters along minor veins. Planta, 2022, 255, 100.	3.2	1
136	Curvature of carrot (Daucus carota L.) sticks is related to number and distribution of xylem vessels. Postharvest Biology and Technology, 2001, 22, 133-139.	6.0	0
137	Xylogenesis and phloemogenesis in the flesh of sweet cherry fruit are limited to early-stage development. Scientific Reports, 2022, 12, .	3.3	0