Ruth E Stark

List of Publications by Year
in descending order

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57 papers	2,074 citations	201575 27 h-index	254106 43 g-index
62 all docs	62 docs citations	62 times ranked	2469 citing authors

#	Article	IF	Citations
1	Fungal Melanin: What do We Know About Structure?. Frontiers in Microbiology, 2015, 6, 1463.	1.5	217
2	Following Fungal Melanin Biosynthesis with Solid-State NMR: Biopolymer Molecular Structures and Possible Connections to Cell-Wall Polysaccharides. Biochemistry, 2008, 47, 4701-4710.	1.2	88
3	Glycerol Is a Suberin Monomer. New Experimental Evidence for an Old Hypothesis1. Plant Physiology, 1999, 119, 1137-1146.	2.3	87
4	The structural unit of melanin in the cell wall of the fungal pathogen Cryptococcus neoformans. Journal of Biological Chemistry, 2019, 294, 10471-10489.	1.6	85
5	Nuclear magnetic resonance studies of cutin, an insoluble plant polyester. Macromolecules, 1988, 21, 2412-2417.	2.2	82
6	Isolation and spectral characterization of plant-cuticle polyesters. Journal of Agricultural and Food Chemistry, 1993, 41, 78-83.	2.4	73
7	Modeling suberization with peroxidase-catalyzed polymerization of hydroxycinnamic acids: Cross-coupling and dimerization reactions. Phytochemistry, 2006, 67, 743-753.	1.4	73
8	Solution-State Molecular Structure of Apo and Oleate-Liganded Liver Fatty Acid-Binding Protein. Biochemistry, 2007, 46, 12543-12556.	1.2	66
9	Solid-state NMR Reveals the Carbon-based Molecular Architecture of Cryptococcus neoformans Fungal Eumelanins in the Cell Wall. Journal of Biological Chemistry, 2015, 290, 13779-13790.	1.6	63
10	¹³C Nuclear Magnetic Resonance Study of Suberized Potato Cell Wall. Plant Physiology, 1989, 90, 783-787.	2.3	58
11	Nuclear magnetic resonance relaxation studies of plant polyester dynamics. 2. Suberized potato cell wall. Macromolecules, 1992, 25, 149-154.	2.2	57
12	Biosynthesis, Molecular Structure, and Domain Architecture of Potato Suberin:Â A13C NMR Study Using Isotopically Labeled Precursors. Journal of Agricultural and Food Chemistry, 2000, 48, 3298-3304.	2.4	52
13	Unlocking the Molecular Structure of Fungal Melanin Using 13C Biosynthetic Labeling and Solid-State NMR. Biochemistry, 2003, 42, 8105-8109.	1.2	51
14	A general protocol for temperature calibration of MAS NMR probes at arbitrary spinning speeds. Solid State Nuclear Magnetic Resonance, 2010, 38, 74-76.	1.5	51
15	Sustainable Fabrication of Plant Cuticle-Like Packaging Films from Tomato Pomace Agro-Waste, Beeswax, and Alginate. ACS Sustainable Chemistry and Engineering, 2018, 6, 14955-14966.	3.2	50
16	Nuclear magnetic resonance relaxation studies of plant polyester dynamics. 1. Cutin from limes. Macromolecules, 1990, 23, 2814-2819.	2.2	47
17	Characterization of the Triterpene Saponins of the Roots and Rhizomes of Blue Cohosh (Caulophyllum Thalictroides). Journal of Agricultural and Food Chemistry, 2001, 49, 5969-5974.	2.4	43
18	Melanin deposition in two Cryptococcus species depends on cell-wall composition and flexibility. Journal of Biological Chemistry, 2020, 295, 1815-1828.	1.6	43

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19	Using Solid-State NMR To Monitor the Molecular Consequences of Cryptococcus neoformans Melanization with Different Catecholamine Precursors. Biochemistry, 2012, 51, 6080-6088.	1.2	42
20	Elucidating the chemical structure of pyrogenic organic matter by combining magnetic resonance, mid-infrared spectroscopy and mass spectrometry. Organic Geochemistry, 2012, 51, 35-44.	0.9	40
21	Formation of Graphene Oxide Nanocomposites from Carbon Dioxide Using Ammonia Borane. Journal of Physical Chemistry C, 2012, 116, 2639-2644.	1.5	35
22	Comprehensive MS and Solid-State NMR Metabolomic Profiling Reveals Molecular Variations in Native Periderms from Four Solanum tuberosum Potato Cultivars. Journal of Agricultural and Food Chemistry, 2017, 65, 2258-2274.	2.4	35
23	Liver Fatty Acid-binding Protein Binds Monoacylglycerol in Vitro and in Mouse Liver Cytosol. Journal of Biological Chemistry, 2013, 288, 19805-19815.	1.6	33
24	Activation of Melanin Synthesis in Alternaria infectoria by Antifungal Drugs. Antimicrobial Agents and Chemotherapy, 2016, 60, 1646-1655.	1.4	32
25	Potato native and wound periderms are differently affected by down-regulation of FHT, a suberin feruloyl transferase. Phytochemistry, 2018, 147, 30-48.	1.4	32
26	N-acetylglucosamine affects Cryptococcus neoformans cell-wall composition and melanin architecture. Microbiology (United Kingdom), 2017, 163, 1540-1556.	0.7	30
27	Regulation of monoamine transporters and receptors by lipid microdomains: implications for depression. Neuropsychopharmacology, 2018, 43, 2165-2179.	2.8	29
28	Direct observation of cell wall glucans in whole cells ofSaccharomyces cerevisiae by magic-angle spinning13C-nmr. Biopolymers, 1994, 34, 1627-1635.	1.2	28
29	Demonstration of a common indole-based aromatic core in natural and synthetic eumelanins by solid-state NMR. Organic and Biomolecular Chemistry, 2014, 12, 6730-6736.	1.5	28
30	Deconstructing a Plant Macromolecular Assembly: Chemical Architecture, Molecular Flexibility, And Mechanical Performance of Natural and Engineered Potato Suberins. Biomacromolecules, 2014, 15, 799-811.	2.6	26
31	Mini-review: What nuclear magnetic resonance can tell us about protective tissues. Plant Science, 2012, 195, 120-124.	1.7	25
32	Solid-State ¹³C NMR Delineates the Architectural Design of Biopolymers in Native and Genetically Altered Tomato Fruit Cuticles. Biomacromolecules, 2016, 17, 215-224.	2.6	25
33	Solving the Jigsaw Puzzle of Wound-Healing Potato Cultivars: Metabolite Profiling and Antioxidant Activity of Polar Extracts. Journal of Agricultural and Food Chemistry, 2014, 62, 7963-7975.	2.4	24
34	Potato wound-healing tissues: A rich source of natural antioxidant molecules with potential for food preservation. Food Chemistry, 2016, 210, 473-480.	4.2	24
35	Solid-state NMR spectroscopy identifies three classes of lipids in Cryptococcus neoformans melanized cell walls and whole fungal cells. Journal of Biological Chemistry, 2020, 295, 15083-15096.	1.6	24
36	Multinuclear and magic-angle-spinning NMR investigations of molecular organization in phospholipid-triglyceride aqueous dispersions. Biochemistry, 1993, 32, 9926-9935.	1.2	23

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37	Isolation and Identification of Triglycerides and Ester Oligomers from Partial Degradation of Potato Suberin. Journal of Agricultural and Food Chemistry, 2010, 58, 1040-1045.	2.4	23
38	Complete isomer-specific 1H and 13C NMR assignments of the heme resonances of rat liver outer mitochondrial membrane cytochrome b 5. Journal of Biological Inorganic Chemistry, 1999, 4, 87-98.	1.1	22
39	Tree taxa and pyrolysis temperature interact to control the efficacy of pyrogenic organic matter formation. Biogeochemistry, 2016, 130, 103-116.	1.7	22
40	Unconventional Constituents and Shared Molecular Architecture of the Melanized Cell Wall of C. neoformans and Spore Wall of S. cerevisiae. Journal of Fungi (Basel, Switzerland), 2020, 6, 329.	1.5	21
41	Defensive Armor of Potato Tubers: Nonpolar Metabolite Profiling, Antioxidant Assessment, and Solid-State NMR Compositional Analysis of Suberin-Enriched Wound-Healing Tissues. Journal of Agricultural and Food Chemistry, 2015, 63, 6810-6822.	2.4	20
42	Tailoring NMR experiments for structural characterization of amorphous biological solids: A practical guide. Solid State Nuclear Magnetic Resonance, 2020, 109, 101686.	1.5	20
43	The melanization road more traveled by: Precursor substrate effects on melanin synthesis in cell-free and fungal cell systems. Journal of Biological Chemistry, 2018, 293, 20157-20168.	1.6	18
44	NMR of a Phospholipid: Modules for Advanced Laboratory Courses. Journal of Chemical Education, 2001, 78, 1248.	1.1	16
45	Temporal resistance of potato tubers: Antibacterial assays and metabolite profiling of wound-healing tissue extracts from contrasting cultivars. Phytochemistry, 2019, 159, 75-89.	1.4	15
46	Cryptococcus neoformans melanization incorporates multiple catecholamines to produce polytypic melanin. Journal of Biological Chemistry, 2022, 298, 101519.	1.6	13
47	NMR characterization of hydration and thermal stress in tomato fruit cuticles. Phytochemistry, 2008, 69, 2689-2695.	1.4	11
48	1H, 15N and 13C resonance assignments and secondary structure of apo liver fatty acid-binding protein. Journal of Biomolecular NMR, 1998, 12, 197-199.	1.6	9
49	Interacting Controls of Pyrolysis Temperature and Plant Taxa on the Degradability of PyOM in Fire-Prone Northern Temperate Forest Soil. Soil Systems, 2018, 2, 48.	1.0	9
50	Two fatty acidâ€binding proteins expressed in the intestine interact differently with endocannabinoids. Protein Science, 2020, 29, 1606-1617.	3.1	8
51	Building Blocks of the Protective Suberin Plant Polymer Self-Assemble into Lamellar Structures with Antibacterial Potential. ACS Omega, 2022, 7, 3978-3989.	1.6	5
52	Protocols and pitfalls in obtaining fatty acid-binding proteins for biophysical studies of ligand-protein and protein-protein interactions. Biochemistry and Biophysics Reports, 2017, 10, 318-324.	0.7	4
53	Needle in a haystack: Antibacterial activity-guided fractionation of a potato wound tissue extract. Bioorganic and Medicinal Chemistry, 2020, 28, 115428.	1.4	4
54	Lyophilization induces physicochemical alterations in cryptococcal exopolysaccharide. Carbohydrate Polymers, 2022, 291, 119547.	5.1	4

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55	Characterization of lipid rafts in human platelets using nuclear magnetic resonance: A pilot study. Biochemistry and Biophysics Reports, 2017, 10, 132-136.	0.7	3
56	A chemical window into the impact of RNAi silencing of the StNAC103 gene in potato tuber periderms: Soluble metabolites, suberized cell walls, and antibacterial defense. Phytochemistry, 2021, 190, 112885.	1.4	1
57	Biophysical Investigation of Gastrointestinal Fatty Acid Binding Proteins (FABPs) with Fatty Acid Ethanolamides (FAEs). FASEB Journal, 2018, 32, 799.6.	0.2	1