Shujun Wang

List of Publications by Year
in descending order

124 papers	7,617 citations	46636 47 h-index	57558 83 g-index
125 all docs	125 docs citations	125 times ranked	5486 citing authors

#	Article	IF	Citations
1	Starch Retrogradation: A Comprehensive Review. Comprehensive Reviews in Food Science and Food Safety, 2015, 14, 568-585.	12.2	1,130
2	Molecular disassembly of starch granules during gelatinization and its effect on starch digestibility: a review. Food and Function, 2013, 4, 1564.	4.6	509
3	Effect of Acid Hydrolysis on Starch Structure and Functionality: A Review. Critical Reviews in Food Science and Nutrition, 2015, 55, 1081-1097.	10.1	327
4	Starchâ€“lipid and starchâ€“lipidâ€“protein complexes: A comprehensive review. Comprehensive Reviews in Food Science and Food Safety, 2020, 19, 1056-1079.	12.2	289
5	Effect of fatty acids on functional properties of normal wheat and waxy wheat starches: A structural basis. Food Chemistry, 2016, 190, 285-292.	8.4	236
6	High internal phase emulsions stabilized by starch nanocrystals. Food Hydrocolloids, 2018, 82, 230-238.	10.9	199
7	Alkali-Induced Changes in Functional Properties and <i>in Vitro</i> Digestibility of Wheat Starch: The Role of Surface Proteins and Lipids. Journal of Agricultural and Food Chemistry, 2014, 62, 3636-3643.	5.3	173
8	Molecular order and functional properties of starches from three waxy wheat varieties grown in China. Food Chemistry, 2015, 181, 43-50.	8.4	153
9	Mechanisms Underlying the Formation of Complexes between Maize Starch and Lipids. Journal of Agricultural and Food Chemistry, 2018, 66, 272-278.	5.3	133
10	Insights into the Formation and Structures of Starchâ€“Proteinâ€“Lipid Complexes. Journal of Agricultural and Food Chemistry, 2017, 65, 1960-1966.	5.3	129
11	Structural Orders of Wheat Starch Do Not Determine the <i>In Vitro</i> Enzymatic Digestibility. Journal of Agricultural and Food Chemistry, 2017, 65, 1697-1706.	5.3	127
12	New insights on the mechanism of acid degradation of pea starch. Carbohydrate Polymers, 2012, 87, 1941-1949.	10.5	125
13	Annealing improves paste viscosity and stability of starch. Food Hydrocolloids, 2017, 62, 203-211.	10.9	121
14	Changes of multi-scale structure during mimicked DSC heating reveal the nature of starch gelatinization. Scientific Reports, 2016, 6, 28271.	3.4	119
15	Effects of Chain Length and Degree of Unsaturation of Fatty Acids on Structure and in Vitro Digestibility of Starchâ€“Proteinâ€“Fatty Acid Complexes. Journal of Agricultural and Food Chemistry, 2018, 66, 1872-1880.	5.3	113
16	Applications of ionic liquids in starch chemistry: a review. Green Chemistry, 2020, 22, 2162-2183.	9.4	113
17	Mechanisms of starch gelatinization during heating of wheat flour and its effect on inÂvitro starch digestibility. Food Hydrocolloids, 2018, 82, 370-378.	10.9	105
18	Effect of alkali treatment on structure and function of pea starch granules. Food Chemistry, 2012, 135, 1635-1642.	8.4	104

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19	A comparative study of annealing of waxy, normal and high-amylose maize starches: The role of amylose molecules. Food Chemistry, 2014, 164, 332-338.	8.4	96
20	RS5 Produced More Butyric Acid through Regulating the Microbial Community of Human Gut Microbiota. Journal of Agricultural and Food Chemistry, 2021, 69, 3209-3218.	5.3	96
21	Structural and functional properties of starches from field peas. Food Chemistry, 2011, 126, 1546-1552.	8.4	95
22	Molecular mechanisms underlying the formation of starch-lipid complexes during simulated food processing: A dynamic structural analysis. Carbohydrate Polymers, 2020, 244, 116464.	10.5	94
23	Molecular disassembly of rice and lotus starches during thermal processing and its effect on starch digestibility. Food and Function, 2016, 7, 1188-1195.	4.6	85
24	Granular structure and allomorph position in C-type Chinese yam starch granule revealed by SEM, 13C CP/MAS NMR and XRD. Food Hydrocolloids, 2009, 23, 426-433.	10.9	84
25	Insights into molecular structure and digestion rate of oat starch. Food Chemistry, 2017, 220, 25-30.	8.4	82
26	Structural and functional properties of starches from Chinese chestnuts. Food Hydrocolloids, 2015, 43, 568-576.	10.9	80
27	Preparation and properties of halloysite nanotubes/plasticized Dioscorea opposita Thunb. starch composites. Carbohydrate Polymers, 2011, 83, 186-191.	10.5	77
28	Phase Transitions of Pea Starch over a Wide Range of Water Content. Journal of Agricultural and Food Chemistry, 2012, 60, 6439-6446.	5.3	70
29	New insights into loss of swelling power and pasting profiles of acid hydrolyzed starch granules. Starch/Staerke, 2012, 64, 538-544.	2.2	69
30	Phase transition and swelling behaviour of different starch granules over a wide range of water content. LWT - Food Science and Technology, 2014, 59, 597-604.	5.3	69
31	New insight into starch retrogradation: The effect of short-range molecular order in gelatinized starch. Food Hydrocolloids, 2021, 120, 106921.	10.9	69
32	Mechanistic studies of starch retrogradation and its effects on starch gel properties. Food Hydrocolloids, 2021, 120, 106914.	10.9	69
33	Retrogradation enthalpy does not always reflect the retrogradation behavior of gelatinized starch. Scientific Reports, 2016, 6, 20965.	3.4	65
34	Structural Changes of Starchâ€"Lipid Complexes during Postprocessing and Their Effect on In Vitro Enzymatic Digestibility. Journal of Agricultural and Food Chemistry, 2019, 67, 1530-1536.	5.3	65
35	Effects of particle size and water content during cooking on the physicopchemical properties and inÂvitro starch digestibility of milled durum wheat grains. Food Hydrocolloids, 2018, 77, 445-453.	10.9	64
36	Thermal and rheological properties of brown flour from Indica rice. Journal of Cereal Science, 2016, 70, 270-274.	3.7	62

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37	Effects of starch damage and yeast fermentation on acrylamide formation in bread. Food Control, 2017, 73, 230-236.	5.6	61
38	Discovery of a low-glycaemic index potato and relationship with starch digestion <i>in vitro</i>. British Journal of Nutrition, 2014, 111, 699-705.	2.7	60
39	Multiscale Structural Changes of Wheat and Yam Starches during Cooking and Their Effect on in Vitro Enzymatic Digestibility. Journal of Agricultural and Food Chemistry, 2017, 65, 156-166.	5.3	57
40	Revisiting Mechanisms Underlying Digestion of Starches. Journal of Agricultural and Food Chemistry, 2019, 67, 8212-8226.	5.3	56
41	Changes of starch during thermal processing of foods: Current status and future directions. Trends in Food Science and Technology, 2022, 119, 320-337.	15.7	56
42	Pea Starch Annealing: New Insights. Food and Bioprocess Technology, 2013, 6, 3564-3575.	4.9	55
43	Gelatinization behavior of starch: Reflecting beyond the endotherm measured by differential scanning calorimetry. Food Chemistry, 2019, 284, 53-59.	8.4	54
44	Toward a Better Understanding of Starchâ€"Monoglycerideâ€"Protein Interactions. Journal of Agricultural and Food Chemistry, 2018, 66, 13253-13259.	5.3	52
45	New insight into the interactions among starch, lipid and protein in model systems with different starches. Food Hydrocolloids, 2021, 112, 106323.	10.9	52
46	Multi-scale structures and functional properties of starches from Indica hybrid, Japonica and waxy rice. International Journal of Biological Macromolecules, 2017, 102, 136-143.	7.7	50
47	Effect of purple yam flour substitution for wheat flour on in vitro starch digestibility of wheat bread. Food Chemistry, 2019, 284, 118-124.	8.4	50
48	New insights into starch gelatinization by high pressure: Comparison with heat-gelatinization. Food Chemistry, 2020, 318, 126493.	8.4	50
49	Cloning, Expression, Purification, and Characterization of Cold-Adapted Î±-Amylase from Pseudoalteromonas arctica GS230. Protein Journal, 2010, 29, 591-597.	1.6	47
50	The semi-crystalline growth rings of C-type pea starch granule revealed by SEM and HR-TEM during acid hydrolysis. Carbohydrate Polymers, 2008, 74, 731-739.	10.5	44
51	The effect of NaCl on the formation of starch-lipid complexes. Food Chemistry, 2019, 299, 125133.	8.4	43
52	A method for characterizing short-range molecular order in amorphous starch. Carbohydrate Polymers, 2020, 242, 116405.	10.5	43
53	InÂvitro starch digestibility of rice flour is not affected by method of cooking. LWT - Food Science and Technology, 2017, 84, 536-543.	5.3	42
54	Conformation and location of amorphous and semi-crystalline regions in C-type starch granules revealed by SEM, NMR and XRD. Food Chemistry, 2008, 110, 39-46.	8.4	41

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55	Modification of Glutenin and Associated Changes in Digestibility Due to Methylglyoxal during Heat Processing. Journal of Agricultural and Food Chemistry, 2019, 67, 10734-10743.	5.3	38
56	Mechanisms underlying the effect of gluten and its hydrolysates on in vitro enzymatic digestibility of wheat starch. Food Hydrocolloids, 2021, 113, 106507.	10.9	38
57	Effect of laboratory milling on properties of starches isolated from different flour millstreams of hard and soft wheat. Food Chemistry, 2015, 172, 504-514.	8.4	37
58	Effects of hydrothermal-alkali and freezing-thawing pre-treatments on modification of corn starch with octenyl succinic anhydride. Carbohydrate Polymers, 2017, 175, 361-369.	10.5	37
59	Properties of starch from potatoes differing in glycemic index. Food and Function, 2014, 5, 2509-2515.	4.6	35
60	Drying methods used in starch isolation change properties of C-type chestnut (Castanea mollissima) starches. LWT - Food Science and Technology, 2016, 73, 663-669.	5.3	35
61	Physicochemical properties and inÂvitro digestibility of starches from field peas grown in China. LWT - Food Science and Technology, 2015, 64, 829-836.	5.3	34
62	New insights into gelatinization mechanisms of cereal endosperm starches. Scientific Reports, 2018, 8, 3011.	3.4	33
63	Octenyl Succinate Modification of Starch Enhances the Formation of Starchâ€“Lipid Complexes. Journal of Agricultural and Food Chemistry, 2021, 69, 14938-14950.	5.3	33
64	Effect of protein-fatty acid interactions on the formation of starch-lipid-protein complexes. Food Chemistry, 2021, 364, 130390.	8.4	32
65	Studies on the morphological, thermal and crystalline properties of starches separated from medicinal plants. Journal of Food Engineering, 2006, 76, 420-426.	5.3	30
66	Nature of thermal transitions of native and acid-hydrolysed pea starch: Does gelatinization really happen?. Carbohydrate Polymers, 2012, 87, 1507-1514.	10.5	28
67	Insights into structure and function of high pressure-modified starches with different crystalline polymorphs. International Journal of Biological Macromolecules, 2017, 102, 414-424.	7.7	27
68	Toward a Better Understanding of Different Dissolution Behavior of Starches in Aqueous Ionic Liquids at Room Temperature. ACS Omega, 2019, 4, 11312-11319.	3.6	27
69	Insights into structure-function relationships of starch from foxtail millet cultivars grown in China. International Journal of Biological Macromolecules, 2020, 155, 1176-1183.	7.7	27
70	Revealing the mechanisms of starch amylolysis affected by tea catechins using surface plasmon resonance. International Journal of Biological Macromolecules, 2020, 145, 527-534.	7.7	26
71	Dissolution of Maize Starch in Aqueous Ionic Liquids: The Role of Alkyl Chain Length of Cation and Water:Ionic Liquid Ratio. ACS Sustainable Chemistry and Engineering, 2019, 7, 6898-6905.	6.9	25
72	Effect of modified tapioca starches on the gelling properties of whey protein isolate. Food Hydrocolloids, 2019, 93, 87-91.	10.9	25

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73	Effect of Drying Methods on Properties of Potato Flour and Noodles Made with Potato Flour. Foods, 2021, 10, 1115.	4.3	25
74	Mechanisms Underlying the Formation of Amyloseâ€" Lauric Acidâ^'Î²-Lactoglobulin Complexes: Experimental and Molecular Dynamics Studies. Journal of Agricultural and Food Chemistry, 2022, 70, 10635-10643.	5.3	24
75	Effect of dual modification by annealing and ultrahigh pressure on properties of starches with different polymorphs. Carbohydrate Polymers, 2017, 174, 549-557.	10.5	23
76	Starch Spherulites Prepared by a Combination of Enzymatic and Acid Hydrolysis of Normal Corn Starch. Journal of Agricultural and Food Chemistry, 2018, 66, 6357-6363.	5.3	23
77	Trypsin and chymotrypsin are necessary for in vitro enzymatic digestion of rice starch. RSC Advances, 2017, 7, 3660-3666.	3.7	20
78	Effects of cooling rate and complexing temperature on the formation of starch-lauric acid-Î²-lactoglobulin complexes. Carbohydrate Polymers, 2021, 253, 117301.	10.5	20
79	Effect of Debranching and Differential Ethanol Precipitation on the Formation and Fermentation Properties of Maize Starchâ€"Lipid Complexes. Journal of Agricultural and Food Chemistry, 2022, 70, 9132-9142.	5.3	19
80	Partial characterization of starches from Dioscorea opposita Thunb. cultivars. Journal of Food Engineering, 2008, 88, 287-293.	5.3	18
81	In vitro digestibility of starches with different crystalline polymorphs at low Î±-amylase activity to substrate ratio. Food Chemistry, 2021, 349, 129170.	8.4	18
82	The new insight on ultrastructure of C-type starch granules revealed by acid hydrolysis. International Journal of Biological Macromolecules, 2008, 43, 216-220.	7.7	17
83	Effect of pH on formation of starch complexes with lauric acid and Î²-lactoglobulin. LWT - Food Science and Technology, 2020, 132, 109915.	5.3	17
84	Mechanisms Underlying the Effect of Tea Extracts on <i>In Vitro</i> Digestion of Wheat Starch. Journal of Agricultural and Food Chemistry, 2021, 69, 8227-8235.	5.3	17
85	Nature of phase transitions of waxy maize starch in water-ionic liquid mixtures. International Journal of Biological Macromolecules, 2018, 112, 315-325.	7.7	16
86	Dissolution Behavior of Maize Starch in Aqueous Ionic Liquids: Effect of Anionic Structure and Water/Ionic Liquid Ratio. ACS Omega, 2019, 4, 14981-14986.	3.6	16
87	Inhibition of in vitro enzymatic starch digestion by coffee extract. Food Chemistry, 2021, 358, 129837.	8.4	16
88	Dissolution of Cellulose in Ionic Liquidâ€"DMSO Mixtures: Roles of DMSO/IL Ratio and the Cation Alkyl Chain Length. ACS Omega, 2021, 6, 27225-27232.	3.6	16
89	Methods for characterizing the structure of starch in relation to its applications: a comprehensive review. Critical Reviews in Food Science and Nutrition, 2023, 63, 4799-4816.	10.1	16
90	Effects of Debranching on the Formation of Maize Starchâ€"Lauric Acidâ^'Î²-Lactoglobulin Complexes. Journal of Agricultural and Food Chemistry, 2021, 69, 9086-9093.	5.3	15

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91	Green synthesis of acetylated maize starch in different imidazolium carboxylate and choline carboxylate ionic liquids. Carbohydrate Polymers, 2022, 288, 119353.	10.5	15
92	Extraction and identification of internal granule proteins from waxy wheat starch. Starch/Staerke, 2013, 65, 186-190.	2.2	14
93	Effect of CaCl2 pre-treatment on the succinylation of potato starch. Food Chemistry, 2019, 288, 291-296.	8.4	14
94	Phase transition of maize starch in aqueous ionic liquids: Effects of water:ionic liquid ratio and cation alkyl chain length. Industrial Crops and Products, 2020, 144, 112043.	5.4	14
95	Structural disorganization of cereal, tuber and bean starches in aqueous ionic liquid at room temperature: Role of starch granule surface structure. Carbohydrate Polymers, 2021, 258, 117677.	10.5	14
96	Comparison of starches separated from three different F. cirrhosa. Journal of Food Engineering, 2007, 80, 417-422.	5.3	12
97	Role of Î±-Dicarbonyl Compounds in the Inhibition Effect of Reducing Sugars on the Formation of 2-Amino-1-methyl-6-phenylimidazo[4,5-<i>b</i>]pyridine. Journal of Agricultural and Food Chemistry, 2017, 65, 10084-10092.	5.3	12
98	Novel Green Synthesis of Octenyl Succinic Anhydride Esters of Granular Starch. ACS Sustainable Chemistry and Engineering, 2020, 8, 16503-16514.	6.9	12
99	Insights into the starch gelatinization behavior inside intact cotyledon cells. International Journal of Biological Macromolecules, 2020, 163, 541-549.	7.7	12
100	Morphological and Crystalline Properties of Starches from New Sources-Traditional Chinese Medicines (TCMs). Starch/Staerke, 2008, 60, 110-114.	2.2	10
101	Laser-MIG arc hybrid brazing-fusion welding of Al alloy to galvanized steel with different filler metals. Acta Metallurgica Sinica (English Letters), 2013, 26, 177-182.	2.9	9
102	Effects of Reduced Nitrogen Fertilization and Irrigation on Structure and Physicochemical Properties of Starch in Two Bread Wheat Cultivars. Agriculture (Switzerland), 2021, 11, 26.	3.1	9
103	Effects of Heat Stress and Cultivar on the Functional Properties of Starch in Chinese Wheat. Cereal Chemistry, 2017, 94, 443-450.	2.2	8
104	Interactions Between Starch, Proteins and Lipids and the Formation of Ternary Complexes With Distinct Properties. , 2019, , 487-493.		6
105	Botanical Sources of Starch. , 2020, , 9-27.		6
106	Revisiting the Formation of Starchâ€"Monoglycerideâ€"Protein Complexes: Effects of Octenyl Succinic Anhydride Modification. Journal of Agricultural and Food Chemistry, 2023, 71, 19033-19044.	5.3	5
107	Alterations of polysaccharides, starch gelatinization, and retrogradation. , 2021, , 171-214.		4
108	Multiscale Structures of Starch Granules. , 2020, , 41-55.		4

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109	Novel Approach for Quantitative Characterization of Short-Range Molecular Order in Gelatinized Starch by X-ray Diffraction. Biomacromolecules, 2023, 24, 1267-1273.	5.6	4
110	Degradation of Potato Starch and the Antioxidant Activity of the Hydrolysates. Journal of Food Processing and Preservation, 2017, 41, e13068.	1.9	3
111	Starch Modification and Application. , 2020, , 131-149.		3
112	Inhibition of In Vitro Amylolysis of Wheat Starch by Gluten Peptides. Journal of Agricultural and Food Chemistry, 2023, 71, 7514-7520.	5.3	3
113	Novel Type of Slowly Digested Starch Complex with Antioxidant Properties. Biomacromolecules, 2024, 25, 2914-2924.	5.6	3
114	Rheological, Pasting, and Textural Properties of Starch. , 2020, , 121-129.		2
115	Starch, Treatment, and Modification. , 0, , 1-26.		1
116	Phase Transitions of Starch and Molecular Mechanisms. , 2020, , 77-120.		1
117	Structure and Functional Properties of Purple Yam (<i>Dioscorea alata</i> L.) Starch from China. Starch/Staerke, 2022, 74, .	2.2	1
118	Binding of Specific Tea Polyphenols to Hydrolytic Enzymes and Their Inhibitory Effects on Oat Starch Digestion. ACS Food Science & Technology, 2023, 3, 1532-1539.	2.7	1
119	Interaction between amylose, fatty acid, and Î²â€lactoglobulin to study multiple biomacromolecules selfâ€assembly and application. Aggregate, 0, , .	13.0	1
120	Structural Factors That Determine the Amylolytic Properties of Starchâ€“Lipid Complexes. Journal of Agricultural and Food Chemistry, 2024, 72, 13918-13928.	5.3	1
121	Acid Stable <i>Î±</i>-Amylase Supplementation in Sourdough Enhanced Lactic Acid Bacterial Performance and the Quality of Bread. Journal of Biobased Materials and Bioenergy, 2021, 15, 392-398.	0.3	0
122	Development of pea protein isolate-based complexes as a novel delivery system for capsaicin. Food Hydrocolloids, 2024, 149, 109542.	10.9	0
123	Molecular Mechanisms Underlying the Effects of Small Intestinal Fermentation on Enhancement of Prebiotic Characteristics of Cellulose in the Large Intestine. Journal of Agricultural and Food Chemistry, 2024, 72, 3596-3605.	5.3	0
124	Simple Method for Preparing Starch Inclusion Complexes with Enhanced Amylolysis Resistance and Antioxidant Properties. Biomacromolecules, 0, , .	5.6	0