Jiajia Rao

List of Publications by Year
in descending order

86 papers	6,218 citations	71102 41 h-index	69250 77 g-index
87 all docs	87 docs citations	87 times ranked	5396 citing authors

#	Article	IF	Citations
1	Food-Grade Nanoemulsions: Formulation, Fabrication, Properties, Performance, Biological Fate, and Potential Toxicity. Critical Reviews in Food Science and Nutrition, 2011, 51, 285-330.	10.3	1,237
2	Technological advances in site-directed spin labeling of proteins. Current Opinion in Structural Biology, 2013, 23, 725-733.	5.7	262
3	Food-grade microemulsions, nanoemulsions and emulsions: Fabrication from sucrose monopalmitate & lemon oil. Food Hydrocolloids, 2011, 25, 1413-1423.	10.7	212
4	Formation of Flavor Oil Microemulsions, Nanoemulsions and Emulsions: Influence of Composition and Preparation Method. Journal of Agricultural and Food Chemistry, 2011, 59, 5026-5035.	5.2	203
5	Improving the Efficacy of Essential Oils as Antimicrobials in Foods: Mechanisms of Action. Annual Review of Food Science and Technology, 2019, 10, 365-387.	9.9	172
6	Stabilization of Phase Inversion Temperature Nanoemulsions by Surfactant Displacement. Journal of Agricultural and Food Chemistry, 2010, 58, 7059-7066.	5.2	170
7	Pea protein isolateâ€"high methoxyl pectin soluble complexes for improving pea protein functionality: Effect of pH, biopolymer ratio and concentrations. Food Hydrocolloids, 2018, 80, 245-253.	10.7	166
8	Food-grade microemulsions and nanoemulsions: Role of oil phase composition on formation and stability. Food Hydrocolloids, 2012, 29, 326-334.	10.7	163
9	Pea protein isolate-gum Arabic Maillard conjugates improves physical and oxidative stability of oil-in-water emulsions. Food Chemistry, 2019, 285, 130-138.	8.2	163
10	How Do Enzymes Orient When Trapped on Metalâ€"Organic Framework (MOF) Surfaces?. Journal of the American Chemical Society, 2018, 140, 16032-16036.	13.7	138
11	Effect of alkaline extraction pH on structure properties, solubility, and beany flavor of yellow pea protein isolate. Food Research International, 2020, 131, 109045.	6.2	138
12	Lemon oil solubilization in mixed surfactant solutions: Rationalizing microemulsion & nanoemulsion formation. Food Hydrocolloids, 2012, 26, 268-276.	10.7	134
13	Physical properties, antifungal and mycotoxin inhibitory activities of five essential oil nanoemulsions: Impact of oil compositions and processing parameters. Food Chemistry, 2019, 291, 199-206.	8.2	123
14	HS-SPME-GC-MS/olfactometry combined with chemometrics to assess the impact of germination on flavor attributes of chickpea, lentil, and yellow pea flours. Food Chemistry, 2019, 280, 83-95.	8.2	122
15	Functionality and structure of yellow pea protein isolate as affected by cultivars and extraction pH. Food Hydrocolloids, 2020, 108, 106008.	10.7	116
16	The structural modification of pea protein concentrate with gum Arabic by controlled Maillard reaction enhances its functional properties and flavor attributes. Food Hydrocolloids, 2019, 92, 30-40.	10.7	114
17	Effect of germination on the chemical composition, thermal, pasting, and moisture sorption properties of flours from chickpea, lentil, and yellow pea. Food Chemistry, 2019, 295, 579-587.	8.2	107
18	Solid dispersion-based spray-drying improves solubility and mitigates beany flavour of pea protein isolate. Food Chemistry, 2019, 278, 665-673.	8.2	106

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19	Nutraceutical nanoemulsions: influence of carrier oil composition (digestible <i>versus</i>) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 2013, 93, 3175-3183.	3.5	105
20	Impact of lemon oil composition on formation and stability of model food and beverage emulsions. Food Chemistry, 2012, 134, 749-757.	8.2	100
21	Plant proteins from green pea and chickpea: Extraction, fractionation, structural characterization and functional properties. Food Hydrocolloids, 2022, 123, 107165.	10.7	85
22	Occurrence and preventive strategies to control mycotoxins in cerealâ€based food. Comprehensive Reviews in Food Science and Food Safety, 2020, 19, 928-953.	11.7	82
23	Traditional fermented soybean products: processing, flavor formation, nutritional and biological activities. Critical Reviews in Food Science and Nutrition, 2022, 62, 1971-1989.	10.3	77
24	The impact of hempseed dehulling on chemical composition, structure properties and aromatic profile of hemp protein isolate. Food Hydrocolloids, 2020, 106, 105889.	10.7	69
25	Phase behavior, thermodynamic and microstructure of concentrated pea protein isolate-pectin mixture: Effect of pH, biopolymer ratio and pectin charge density. Food Hydrocolloids, 2020, 101, 105556.	10.7	68
26	Phase behavior and complex coacervation of concentrated pea protein isolate-beet pectin solution. Food Chemistry, 2020, 307, 125536.	8.2	67
27	Changes in odor characteristics of pulse protein isolates from germinated chickpea, lentil, and yellow pea: Role of lipoxygenase and free radicals. Food Chemistry, 2020, 314, 126184.	8.2	67
28	Ferreting out the secrets of industrial hemp protein as emerging functional food ingredients. Trends in Food Science and Technology, 2021, 112, 1-15.	15.1	63
29	Formation, characterization, and potential food application of rice bran wax oleogels: Expeller-pressed corn germ oil versus refined corn oil. Food Chemistry, 2020, 309, 125704.	8.2	62
30	Phenolic compounds in germinated cereal and pulse seeds: Classification, transformation, and metabolic process. Critical Reviews in Food Science and Nutrition, 2020, 60, 740-759.	10.3	61
31	Impact of defatting treatment and oat varieties on structural, functional properties, and aromatic profile of oat protein. Food Hydrocolloids, 2021, 112, 106368.	10.7	60
32	Physicochemical properties and aroma profiles of flaxseed proteins extracted from whole flaxseed and flaxseed meal. Food Hydrocolloids, 2020, 104, 105731.	10.7	55
33	Influence of oil phase composition on the antifungal and mycotoxin inhibitory activity of clove oil nanoemulsions. Food and Function, 2018, 9, 2872-2882.	4.6	51
34	Alginate-based double-network hydrogel improves the viability of encapsulated probiotics during simulated sequential gastrointestinal digestion: Effect of biopolymer type and concentrations. International Journal of Biological Macromolecules, 2020, 165, 1675-1685.	7.5	51
35	Enhancement of antifungal and mycotoxin inhibitory activities of food-grade thyme oil nanoemulsions with natural emulsifiers. Food Control, 2019, 106, 106709.	5.5	48
36	Size-Tunable Metalâ€"Organic Framework-Coated Magnetic Nanoparticles for Enzyme Encapsulation and Large-Substrate Biocatalysis. ACS Applied Materials & Interfaces, 2020, 12, 41794-41801.	8.0	47

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37	Gum Arabic-Mediated Synthesis of Glyco-pea Protein Hydrolysate via Maillard Reaction Improves Solubility, Flavor Profile, and Functionality of Plant Protein. Journal of Agricultural and Food Chemistry, 2019, 67, 10195-10206.	5.2	46
38	Structure characteristics and functionality of water-soluble fraction from high-intensity ultrasound treated pea protein isolate. Food Hydrocolloids, 2022, 125, 107409.	10.7	46
39	Optimization of lipid nanoparticle formation for beverage applications: Influence of oil type, cosolvents, and cosurfactants on nanoemulsion properties. Journal of Food Engineering, 2013, 118, 198-204.	5.2	45
40	Enzyme Immobilization on Graphite Oxide (GO) Surface via One-Pot Synthesis of GO/Metalâ€"Organic Framework Composites for Large-Substrate Biocatalysis. ACS Applied Materials & Interfaces, 2020, 12, 23119-23126.	8.0	45
41	Genotype x Environmental Effects on Yielding Ability and Seed Chemical Composition of Industrial Hemp (<i>Cannabis sativa</i> L.) Varieties Grown in North Dakota, USA. JAOCS, Journal of the American Oil Chemists' Society, 2019, 96, 1417-1425.	1.9	44
42	Physical properties and cookie-making performance of oleogels prepared with crude and refined soybean oil: a comparative study. Food and Function, 2020, 11, 2498-2508.	4.6	39
43	Improvement of the Antioxidative Activity of Soluble Phenolic Compounds in Chickpea by Germination. Journal of Agricultural and Food Chemistry, 2018, 66, 6179-6187.	5.2	38
44	Physicochemical and structural properties of proteins extracted from dehulled industrial hempseeds: Role of defatting process and precipitation pH. Food Hydrocolloids, 2020, 108, 106065.	10.7	38
45	Structure and functionality of oat protein extracted by choline chlorideâ€'dihydric alcohol deep eutectic solvent and its water binary mixtures. Food Hydrocolloids, 2021, 112, 106330.	10.7	38
46	Modification of pulse proteins for improved functionality and flavor profile: A comprehensive review. Comprehensive Reviews in Food Science and Food Safety, 2021, 20, 3036-3060.	11.7	38
47	Structure-relaxation mechanism for the response of T4 lysozyme cavity mutants to hydrostatic pressure. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E2437-46.	7.1	36
48	Viability of <i>Lactobacillus rhamnosus</i> GG microencapsulated in alginate/chitosan hydrogel particles during storage and simulated gastrointestinal digestion: role of chitosan molecular weight. Soft Matter, 2020, 16, 1877-1887.	2.7	35
49	Lipid oxidation in base algae oil and water-in-algae oil emulsion: Impact of natural antioxidants and emulsifiers. Food Research International, 2016, 85, 162-169.	6.2	34
50	Probing the structural basis and adsorption mechanism of an enzyme on nano-sized protein carriers. Nanoscale, 2017, 9, 3512-3523.	5.6	34
51	Influence of nonionic and ionic surfactants on the antifungal and mycotoxin inhibitory efficacy of cinnamon oil nanoemulsions. Food and Function, 2019, 10, 2817-2827.	4.6	34
52	Effect of chitosan coatings on physical stability, antifungal and mycotoxin inhibitory activities of lecithin stabilized cinnamon oil-in-water emulsions. LWT - Food Science and Technology, 2019, 106, 98-104.	5.2	32
53	Unraveling the mechanism by which high intensity ultrasound improves the solubility of commercial pea protein isolates. Food Hydrocolloids, 2022, 131, 107823.	10.7	31
54	Clove oil-in-water nanoemulsion: Mitigates growth of Fusarium graminearum and trichothecene mycotoxin production during the malting of Fusarium infected barley. Food Chemistry, 2020, 312, 126120.	8.2	29

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55	Toward a comprehensive understanding of ultracentrifugal milling on the physicochemical properties and aromatic profile of yellow pea flour. Food Chemistry, 2021, 345, 128760.	8.2	29
56	Microencapsulation of hemp seed oil by pea protein isolateâˆ'sugar beet pectin complex coacervation: Influence of coacervation pH and wall/core ratio. Food Hydrocolloids, 2021, 113, 106423.	10.7	28
57	Uncovering aroma boundary compositions of barley malts by untargeted and targeted flavoromics with HS-SPME-GC-MS/olfactometry. Food Chemistry, 2022, 394, 133541.	8.2	27
58	Improving Antioxidant Activity of Î²-Lactoglobulin by Nature-Inspired Conjugation with Gentisic Acid. Journal of Agricultural and Food Chemistry, 2019, 67, 11741-11751.	5.2	25
59	Maillard-driven chemistry to tune the functionality of pea protein: Structure characterization, site-specificity, and aromatic profile. Trends in Food Science and Technology, 2021, 114, 658-671.	15.1	25
60	Combining solid dispersion-based spray drying with cyclodextrin to improve the functionality and mitigate the beany odor of pea protein isolate. Carbohydrate Polymers, 2020, 245, 116546.	10.2	21
61	Optimization and validation of in-situ derivatization and headspace solid-phase microextraction for gas chromatographyâ€"mass spectrometry analysis of 3-MCPD esters, 2-MCPD esters and glycidyl esters in edible oils via central composite design. Food Chemistry, 2020, 307, 125542.	8.2	20
62	Conjugation of Pea Protein Isolate via Maillard-Driven Chemistry with Saccharide of Diverse Molecular Mass: Molecular Interactions Leading to Aggregation or Glycation. Journal of Agricultural and Food Chemistry, 2020, 68, 10157-10166.	5.2	20
63	Identification of extraction pH and cultivar associated aromatic compound changes in spray dried pea protein isolate using untargeted and targeted metabolomic approaches. Journal of Agriculture and Food Research, 2020, 2, 100032.	2.5	19
64	Improving the functionality of pea protein isolate through co-spray drying with emulsifying salt or disaccharide. Food Hydrocolloids, 2021, 113, 106534.	10.7	18
65	Plant-based food hydrogels: Constitutive characteristics, formation, and modulation. Current Opinion in Colloid and Interface Science, 2021, 56, 101505.	7.4	18
66	A combination of monoacylglycerol crystalline network and hydrophilic antioxidants synergistically enhances the oxidative stability of gelled algae oil. Food and Function, 2019, 10, 315-324.	4.6	17
67	One-step extraction of oat protein by choline chloride-alcohol deep eutectic solvents: Role of chain length of dihydric alcohol. Food Chemistry, 2022, 376, 131943.	8.2	17
68	Physicochemical property changes and aroma differences of fermented yellow pea flours: role of <i>Lactobacilli</i> and fermentation time. Food and Function, 2021, 12, 6950-6963.	4.6	16
69	Design, synthesis and characterization of lysozymeâ€"gentisic acid dual-functional conjugates with antibacterial/antioxidant activities. Food Chemistry, 2022, 370, 131032.	8.2	15
70	Inversion of Polymeric Micelles Probed by Spin Labeled Peptide Incorporation and Electron Paramagnetic Resonance. Journal of Physical Chemistry C, 2018, 122, 25692-25699.	3.1	13
71	Chitosan coatings on lecithin stabilized emulsions inhibit mycotoxin production by Fusarium pathogens. Food Control, 2018, 92, 276-285.	5.5	13
72	Effects of ethanol modified supercritical carbon dioxide extraction and particle size on the physical, chemical, and functional properties of yellow pea flour. Cereal Chemistry, 2020, 97, 1133-1147.	2.2	13

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73	Modification of physicochemical, functional properties, and digestibility of macronutrients in common bean (Phaseolus vulgaris L.) flours by different thermally treated whole seeds. Food Chemistry, 2022, 382, 132570.	8.2	13
74	A sulfonated mesoporous silica nanoparticle for enzyme protection against denaturants and controlled release under reducing conditions. Journal of Colloid and Interface Science, 2019, 556, 292-300.	9.4	12
75	In situ monitoring of protein transfer into nanoscale channels. Cell Reports Physical Science, 2021, 2, 100576.	5.6	12
76	The viability of complex coacervate encapsulated probiotics during simulated sequential gastrointestinal digestion affected by wall materials and drying methods. Food and Function, 2021, 12, 8907-8919.	4.6	11
77	Effect of germination time on antioxidative activity and composition of yellow pea soluble free and polar soluble bound phenolic compounds. Food and Function, 2019, 10, 6840-6850.	4.6	10
78	Modification of Î²-lactoglobulin by phenolic conjugations: Protein structural changes and physicochemical stabilities of stripped hemp oil-in-water emulsions stabilized by the conjugates. Food Hydrocolloids, 2022, 128, 107578.	10.7	10
79	Nutraceutical potential of industrial hemp (<i>Cannabis sativa</i> L.) extracts: physicochemical stability and bioaccessibility of cannabidiol (CBD) nanoemulsions. Food and Function, 2022, 13, 4502-4512.	4.6	10
80	Effect of high oleic soybean oil oleogels on the properties of doughs and corresponding bakery products. JAOCS, Journal of the American Oil Chemists' Society, 2022, 99, 1071-1083.	1.9	9
81	Emerging applications of site-directed spin labeling electron paramagnetic resonance (SDSL-EPR) to study food protein structure, dynamics, and interaction. Trends in Food Science and Technology, 2021, 109, 37-50.	15.1	8
82	Unlocking the potential of minimally processed corn germ oil and high oleic soybean oil to prepare oleogels for bakery application. Food and Function, 2020, 11, 10329-10340.	4.6	7
83	Statistical evaluation to validate matrix-matched calibration for standardized beany odor compound quantitation in yellow pea flour using HS-SPME-GC-MS. Food and Function, 2022, 13, 3968-3981.	4.6	7
84	Maximizing the applicability of continuous wave (CW) Electron Paramagnetic Resonance (EPR): what more can we do after a century?. Journal of Magnetic Resonance Open, 2022, 10-11, 100060.	1.1	3
85	Structural, and functional properties of phosphorylated pea protein isolate by simplified co-spray drying process. Food Chemistry, 2022, 393, 133441.	8.2	3
86	Comparison of the Proximate Compositions, Nutritional Minerals, Pasting Properties, and Aroma Differences of Flours from Selected Yellow Pea Cultivars Grown across the Northern Great Plains. ACS Food Science & Technology, 2021, 1, 1529-1537.	2.7	2