Jong-Whan Rhim

List of Publications by Year
in descending order

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207 papers	21,745 citations	5268 83 h-index	10445 139 g-index
213 all docs	213 docs citations	213 times ranked	13669 citing authors

#	Article	IF	Citations
1	Bio-nanocomposites for food packaging applications. Progress in Polymer Science, 2013, 38, 1629-1652.	24.7	1,490
2	Preparation and Characterization of Chitosan-Based Nanocomposite Films with Antimicrobial Activity. Journal of Agricultural and Food Chemistry, 2006, 54, 5814-5822.	5.2	812
3	Natural Biopolymer-Based Nanocomposite Films for Packaging Applications. Critical Reviews in Food Science and Nutrition, 2007, 47, 411-433.	10.3	644
4	Tensile, water vapor barrier and antimicrobial properties of PLA/nanoclay composite films. LWT - Food Science and Technology, 2009, 42, 612-617.	5.2	516
5	Physical and mechanical properties of water resistant sodium alginate films. LWT - Food Science and Technology, 2004, 37, 323-330.	5.2	438
6	Properties and characterization of bionanocomposite films prepared with various biopolymers and ZnO nanoparticles. Carbohydrate Polymers, 2014, 106, 190-199.	10.2	361
7	Preparation, characterization, and antimicrobial activity of gelatin/ZnO nanocomposite films. Food Hydrocolloids, 2015, 45, 264-271.	10.7	333
8	Physical, mechanical and antimicrobial properties of gelatin based active nanocomposite films containing AgNPs and nanoclay. Food Hydrocolloids, 2014, 35, 644-652.	10.7	323
9	Chitosan-based biodegradable functional films for food packaging applications. Innovative Food Science and Emerging Technologies, 2020, 62, 102346.	5.6	318
10	Physicochemical properties of gelatin/silver nanoparticle antimicrobial composite films. Food Chemistry, 2014, 148, 162-169.	8.2	317
11	Effect of clay contents on mechanical and water vapor barrier properties of agar-based nanocomposite films. Carbohydrate Polymers, 2011, 86, 691-699.	10.2	302
12	Preparation of nanocellulose from micro-crystalline cellulose: The effect on the performance and properties of agar-based composite films. Carbohydrate Polymers, 2016, 135, 18-26.	10.2	276
13	Carboxymethyl cellulose-based antioxidant and antimicrobial active packaging film incorporated with curcumin and zinc oxide. International Journal of Biological Macromolecules, 2020, 148, 666-676.	7.5	275
14	Characterization of bionanocomposite films prepared with agar and paper-mulberry pulp nanocellulose. Carbohydrate Polymers, 2014, 110, 480-488.	10.2	267
15	Anthocyanin food colorant and its application in pH-responsive color change indicator films. Critical Reviews in Food Science and Nutrition, 2021, 61, 2297-2325.	10.3	263
16	pH-responsive chitosan-based film incorporated with alizarin for intelligent packaging applications. Food Hydrocolloids, 2020, 102, 105629.	10.7	239
17	Incorporation of zinc oxide nanoparticles improved the mechanical, water vapor barrier, UV-light barrier, and antibacterial properties of PLA-based nanocomposite films. Materials Science and Engineering C, 2018, 93, 289-298.	7.3	229
18	Amino acid mediated synthesis of silver nanoparticles and preparation of antimicrobial agar/silver nanoparticles composite films. Carbohydrate Polymers, 2015, 130, 353-363.	10.2	225

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19	Preparation, characterization, and antimicrobial activity of chitin nanofibrils reinforced carrageenan nanocomposite films. Carbohydrate Polymers, 2015, 117, 468-475.	10.2	223
20	Isolation of cellulose nanocrystals from grain straws and their use for the preparation of carboxymethyl cellulose-based nanocomposite films. Carbohydrate Polymers, 2016, 150, 187-200.	10.2	218
21	Carrageenan-based hydrogels and films: Effect of ZnO and CuO nanoparticles on the physical, mechanical, and antimicrobial properties. Food Hydrocolloids, 2017, 67, 45-53.	10.7	218
22	Preparation and characterization of sodium carboxymethyl cellulose/cotton linter cellulose nanofibril composite films. Carbohydrate Polymers, 2015, 127, 101-109.	10.2	210
23	Antimicrobial and physical-mechanical properties of agar-based films incorporated with grapefruit seed extract. Carbohydrate Polymers, 2014, 102, 708-716.	10.2	207
24	pH-sensitive (halochromic) smart packaging films based on natural food colorants for the monitoring of food quality and safety. Trends in Food Science and Technology, 2020, 105, 93-144.	15.1	207
25	Effect of nano-clay type on the physical and antimicrobial properties of whey protein isolate/clay composite films. Journal of Food Engineering, 2009, 91, 468-473.	5.2	204
26	Soy protein isolateâ€“dialdehyde starch films. Industrial Crops and Products, 1998, 8, 195-203.	5.2	198
27	Preparation and application of agar/alginate/collagen ternary blend functional food packaging films. International Journal of Biological Macromolecules, 2015, 80, 460-468.	7.5	192
28	Preparation and characterization of agar/lignin/silver nanoparticles composite films with ultraviolet light barrier and antibacterial properties. Food Hydrocolloids, 2017, 71, 76-84.	10.7	190
29	Melanin-mediated synthesis of silver nanoparticle and its use for the preparation of carrageenan-based antibacterial films. Food Hydrocolloids, 2019, 88, 237-246.	10.7	189
30	Effect of the processing methods on the performance of polylactide films: Thermocompression versus solvent casting. Journal of Applied Polymer Science, 2006, 101, 3736-3742.	2.6	180
31	pH-responsive pectin-based multifunctional films incorporated with curcumin and sulfur nanoparticles. Carbohydrate Polymers, 2020, 230, 115638.	10.2	177
32	pH-responsive color indicator films based on methylcellulose/chitosan nanofiber and barberry anthocyanins for real-time monitoring of meat freshness. International Journal of Biological Macromolecules, 2021, 166, 741-750.	7.5	176
33	Preparation of sulfur nanoparticle-incorporated antimicrobial chitosan films. Food Hydrocolloids, 2018, 82, 116-123.	10.7	172
34	Mechanical and water barrier properties of agar/Îº-carrageenan/konjac glucomannan ternary blend biohydrogel films. Carbohydrate Polymers, 2013, 96, 71-81.	10.2	171
35	Development and characterization of carrageenan/grapefruit seed extract composite films for active packaging. International Journal of Biological Macromolecules, 2014, 68, 258-266.	7.5	169
36	Preparation of antimicrobial and antioxidant gelatin/curcumin composite films for active food packaging application. Colloids and Surfaces B: Biointerfaces, 2020, 188, 110761.	5.0	163

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37	Preparation of carbohydrate-based functional composite films incorporated with curcumin. Food Hydrocolloids, 2020, 98, 105302.	10.7	156
38	Preparation of antimicrobial agar/banana powder blend films reinforced with silver nanoparticles. Food Hydrocolloids, 2016, 60, 476-485.	10.7	155
39	Carrageenan-based antimicrobial bionanocomposite films incorporated with ZnO nanoparticles stabilized by melanin. Food Hydrocolloids, 2019, 90, 500-507.	10.7	155
40	Effect of clay content on the physical and antimicrobial properties of whey protein isolate/organo-clay composite films. LWT - Food Science and Technology, 2010, 43, 279-284.	5.2	153
41	Preparation of bioactive functional poly(lactic acid)/curcumin composite film for food packaging application. International Journal of Biological Macromolecules, 2020, 162, 1780-1789.	7.5	152
42	Gelatin-based functional films integrated with grapefruit seed extract and TiO2 for active food packaging applications. Food Hydrocolloids, 2021, 112, 106314.	10.7	150
43	Preparation of poly(lactide)/poly(butylene adipate-co-terephthalate) blend films using a solvent casting method and their food packaging application. LWT - Food Science and Technology, 2016, 68, 454-461.	5.2	146
44	Properties and characterization of agar/CuNP bionanocomposite films prepared with different copper salts and reducing agents. Carbohydrate Polymers, 2014, 114, 484-492.	10.2	142
45	Preparation and characterization of carrageenan-based nanocomposite films reinforced with clay mineral and silver nanoparticles. Applied Clay Science, 2014, 97-98, 174-181.	5.2	139
46	Isolation of cellulose nanocrystals from onion skin and their utilization for the preparation of agar-based bio-nanocomposites films. Cellulose, 2015, 22, 407-420.	4.9	136
47	Physicalâ€Mechanical Properties of Agar/Îºâ€Carrageenan Blend Film and Derived Clay Nanocomposite Film. Journal of Food Science, 2012, 77, N66-73.	3.1	135
48	Multifunctional nanocellulose/metal and metal oxide nanoparticle hybrid nanomaterials. Critical Reviews in Food Science and Nutrition, 2020, 60, 435-460.	10.3	135
49	Preparation and properties of carbohydrate-based composite films incorporated with CuO nanoparticles. Carbohydrate Polymers, 2017, 169, 264-271.	10.2	134
50	Preparation of poly(lactide)/lignin/silver nanoparticles composite films with UV light barrier and antibacterial properties. International Journal of Biological Macromolecules, 2018, 107, 1724-1731.	7.5	134
51	Effect of lignin on water vapor barrier, mechanical, and structural properties of agar/lignin composite films. International Journal of Biological Macromolecules, 2015, 81, 267-273.	7.5	133
52	Preparation of pectin/silver nanoparticles composite films with UV-light barrier and properties. International Journal of Biological Macromolecules, 2016, 92, 842-849.	7.5	133
53	Preparation and Characterization of Agar/Clay Nanocomposite Films: The Effect of Clay Type. Journal of Food Science, 2011, 76, N40-8.	3.1	131
54	Water resistance and mechanical properties of biopolymer (alginate and soy protein) coated paperboards. LWT - Food Science and Technology, 2006, 39, 806-813.	5.2	129

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55	Properties of alginate-based films reinforced with cellulose fibers and cellulose nanowhiskers isolated from mulberry pulp. Food Hydrocolloids, 2017, 63, 201-208.	10.7	129
56	Antimicrobial Activity of Organically Modified Nano-Clays. Journal of Nanoscience and Nanotechnology, 2008, 8, 5818-5824.	0.9	125
57	Characterization of carboxymethyl cellulose-based nanocomposite films reinforced with oxidized nanocellulose isolated using ammonium persulfate method. Carbohydrate Polymers, 2017, 174, 484-492.	10.2	122
58	Recent Advances in Intelligent Food Packaging Applications Using Natural Food Colorants. ACS Food Science & Technology, 2021, 1, 124-138.	2.7	120
59	Carrageenan-based functional hydrogel film reinforced with sulfur nanoparticles and grapefruit seed extract for wound healing application. Carbohydrate Polymers, 2019, 224, 115191.	10.2	116
60	Effective strategies of sustained release and retention enhancement of essential oils in active food packaging films/coatings. Food Chemistry, 2022, 367, 130671.	8.2	115
61	Preparation and characterization of bio-nanocomposite films of agar and silver nanoparticles: Laser ablation method. Carbohydrate Polymers, 2014, 103, 456-465.	10.2	113
62	Isolation and characterization of cellulose nanocrystals from garlic skin. Materials Letters, 2014, 129, 20-23.	2.6	111
63	Agar-based antioxidant composite films incorporated with melanin nanoparticles. Food Hydrocolloids, 2019, 94, 391-398.	10.7	110
64	Effect of sulfur nanoparticles on properties of alginate-based films for active food packaging applications. Food Hydrocolloids, 2021, 110, 106155.	10.7	110
65	Preparation of a shikonin-based pH-sensitive color indicator for monitoring the freshness of fish and pork. Food Chemistry, 2021, 337, 127995.	8.2	109
66	Pectin/pullulan blend films for food packaging: Effect of blending ratio. Food Chemistry, 2021, 347, 129022.	8.2	109
67	Mechanical and barrier properties of biodegradable soy protein isolate-based films coated with polylactic acid. LWT - Food Science and Technology, 2007, 40, 232-238.	5.2	108
68	Preparation of Gelatin/Carrageenan-Based Color-Indicator Film Integrated with Shikonin and Propolis for Smart Food Packaging Applications. ACS Applied Bio Materials, 2021, 4, 770-779.	4.6	104
69	Effect of PLA lamination on performance characteristics of agar/Î¹-carrageenan/clay bio-nanocomposite film. Food Research International, 2013, 51, 714-722.	6.2	103
70	Effect of post-treatments and concentration of cotton linter cellulose nanocrystals on the properties of agar-based nanocomposite films. Carbohydrate Polymers, 2015, 134, 20-29.	10.2	99
71	Preparation and characterization of functional sodium caseinate/guar gum/TiO2/cumin essential oil composite film. International Journal of Biological Macromolecules, 2020, 145, 835-844.	7.5	99
72	Preparation and Properties of Biodegradable Multilayer Films Based on Soy Protein Isolate and Poly(lactide). Industrial & Engineering Chemistry Research, 2006, 45, 3059-3066.	3.7	98

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73	CMC and CNF-based alizarin incorporated reversible pH-responsive color indicator films. Carbohydrate Polymers, 2020, 246, 116614.	10.2	98
74	Effect of copper salts and reducing agents on characteristics and antimicrobial activity of copper nanoparticles. Materials Letters, 2014, 132, 307-311.	2.6	97
75	Effect of melanin nanoparticles on the mechanical, water vapor barrier, and antioxidant properties of gelatin-based films for food packaging application. Food Packaging and Shelf Life, 2019, 21, 100363.	7.5	97
76	Bioactive agar-based functional composite film incorporated with copper sulfide nanoparticles. Food Hydrocolloids, 2019, 93, 156-166.	10.7	97
77	Grapefruit seed extract incorporated antimicrobial LDPE and PLA films: Effect of type of polymer matrix. LWT - Food Science and Technology, 2016, 74, 338-345.	5.2	96
78	Alginate-based nanocomposite films reinforced with halloysite nanotubes functionalized by alkali treatment and zinc oxide nanoparticles. International Journal of Biological Macromolecules, 2018, 118, 1824-1832.	7.5	96
79	Curcumin and its uses in active and smart food packaging applications - a comprehensive review. Food Chemistry, 2022, 375, 131885.	8.2	96
80	Tocopherol-mediated synthesis of silver nanoparticles and preparation of antimicrobial PBAT/silver nanoparticles composite films. LWT - Food Science and Technology, 2016, 72, 149-156.	5.2	95
81	Increase in water resistance of paperboard by coating with poly(lactide). Packaging Technology and Science, 2007, 20, 393-402.	2.8	90
82	Characterization of nanocelluloses isolated from Ushar (Calotropis procera) seed fiber: Effect of isolation method. Materials Letters, 2016, 168, 146-150.	2.6	90
83	Fabrication of bioactive binary composite film based on gelatin/chitosan incorporated with cinnamon essential oil and rutin. Colloids and Surfaces B: Biointerfaces, 2021, 204, 111830.	5.0	87
84	Antimicrobial wrapping paper coated with a ternary blend of carbohydrates (alginate, carboxymethyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	10.2	86
85	Gelatin/agar-based color-indicator film integrated with Clitoria ternatea flower anthocyanin and zinc oxide nanoparticles for monitoring freshness of shrimp. Food Hydrocolloids, 2022, 124, 107294.	10.7	85
86	Preparation of sulfur nanoparticles and their antibacterial activity and cytotoxic effect. Materials Science and Engineering C, 2018, 92, 508-517.	7.3	82
87	Extraction and Characterization of Cellulose Microfibers from Agricultural Wastes of Onion and Garlic. Journal of Natural Fibers, 2018, 15, 465-473.	3.1	81
88	Preparation of carrageenan-based functional nanocomposite films incorporated with melanin nanoparticles. Colloids and Surfaces B: Biointerfaces, 2019, 176, 317-324.	5.0	79
89	Gelatin/agar-based functional film integrated with Pickering emulsion of clove essential oil stabilized with nanocellulose for active packaging applications. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 627, 127220.	4.7	79
90	Carrageenan-Based Functional Films Integrated with CuO-Doped Titanium Nanotubes for Active Food-Packaging Applications. ACS Sustainable Chemistry and Engineering, 2021, 9, 9300-9307.	6.7	78

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91	Preparation of multifunctional chitin nanowhiskers/ZnO-Ag NPs and their effect on the properties of carboxymethyl cellulose-based nanocomposite film. Carbohydrate Polymers, 2017, 169, 467-479.	10.2	76
92	CMC and CNF-based intelligent pH-responsive color indicator films integrated with shikonin to monitor fish freshness. Food Control, 2021, 126, 108046.	5.5	76
93	Antioxidant and antimicrobial poly(vinyl alcohol)-based films incorporated with grapefruit seed extract and curcumin. Journal of Environmental Chemical Engineering, 2021, 9, 104694.	6.7	75
94	Preparations and characterization of alginate/silver composite films: Effect of types of silver particles. Carbohydrate Polymers, 2016, 146, 208-216.	10.2	74
95	Preparation of antimicrobial hybrid nano-materials using regenerated cellulose and metallic nanoparticles. International Journal of Biological Macromolecules, 2018, 107, 17-27.	7.5	73
96	Gelatin/Carrageenan-Based Functional Films with Carbon Dots from Enoki Mushroom for Active Food Packaging Applications. ACS Applied Polymer Materials, 2021, 3, 6437-6445.	4.4	73
97	Effect of CuS reinforcement on the mechanical, water vapor barrier, UV-light barrier, and antibacterial properties of alginate-based composite films. International Journal of Biological Macromolecules, 2020, 164, 37-44.	7.5	71
98	Preparation of antibacterial poly(lactide)/poly(butylene adipate-co-terephthalate) composite films incorporated with grapefruit seed extract. International Journal of Biological Macromolecules, 2018, 120, 846-852.	7.5	70
99	Fabrication of chitosan-based functional nanocomposite films: Effect of quercetin-loaded chitosan nanoparticles. Food Hydrocolloids, 2021, 121, 107065.	10.7	69
100	Titanium dioxide (TiO2) for the manufacture of multifunctional active food packaging films. Food Packaging and Shelf Life, 2022, 31, 100806.	7.5	68
101	Functionalization of halloysite nanotubes for the preparation of carboxymethyl cellulose-based nanocomposite films. Applied Clay Science, 2017, 150, 138-146.	5.2	66
102	Carboxymethyl cellulose-based multifunctional film combined with zinc oxide nanoparticles and grape seed extract for the preservation of high-fat meat products. Sustainable Materials and Technologies, 2021, 29, e00325.	3.3	66
103	Effect of water activity and temperature on the color change of red pepper (Capsicum annuum L.) powder. Food Science and Biotechnology, 2011, 20, 215-222.	2.6	65
104	Lignin-mediated green synthesis of AgNPs in carrageenan matrix for wound dressing applications. International Journal of Biological Macromolecules, 2020, 159, 859-869.	7.5	65
105	Effect of blended colorants of anthocyanin and shikonin on carboxymethyl cellulose/agar-based smart packaging film. International Journal of Biological Macromolecules, 2021, 183, 305-315.	7.5	64
106	Isolation and characterization of melanin from black garlic and sepia ink. LWT - Food Science and Technology, 2019, 99, 17-23.	5.2	63
107	Cellulose nanofiber-based coating film integrated with nitrogen-functionalized carbon dots for active packaging applications of fresh fruit. Postharvest Biology and Technology, 2022, 186, 111845.	6.0	63
108	Preparation and properties of melt-intercalated linear low density polyethylene/clay nanocomposite films prepared by blow extrusion. LWT - Food Science and Technology, 2012, 48, 43-51.	5.2	62

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109	Preparation of multifunctional carboxymethyl cellulose-based films incorporated with chitin nanocrystal and grapefruit seed extract. International Journal of Biological Macromolecules, 2020, 152, 1038-1046.	7.5	60
110	Antioxidant pectin/pullulan edible coating incorporated with Vitis vinifera grape seed extract for extending the shelf life of peanuts. Postharvest Biology and Technology, 2022, 183, 111740.	6.0	60
111	Effects of preparation method on properties of poly(butylene adipate-co-terephthalate) films. Food Science and Biotechnology, 2015, 24, 1679-1685.	2.6	59
112	Synthesis of Carboxymethyl Cellulose and Agar-Based Multifunctional Films Reinforced with Cellulose Nanocrystals and Shikonin. ACS Applied Polymer Materials, 2021, 3, 1060-1069.	4.4	59
113	Fabrication of pectin/agar blended functional film: Effect of reinforcement of melanin nanoparticles and grapefruit seed extract. Food Hydrocolloids, 2021, 118, 106823.	10.7	59
114	Properties of Poly(lactide)â€Coated Paperboard for the Use of 1â€Way Paper Cup. Journal of Food Science, 2009, 74, E105-11.	3.1	58
115	Fabrication of cellulose nanofiber-based functional color indicator film incorporated with shikonin extracted from Lithospermum erythrorhizon root. Food Hydrocolloids, 2021, 114, 106566.	10.7	58
116	Facile approach for large-scale production of metal and metal oxide nanoparticles and preparation of antibacterial cotton pads. Carbohydrate Polymers, 2017, 163, 137-145.	10.2	57
117	Application of antimicrobial active packaging film made of semolina flour, nano zinc oxide and nanoâ€kaolin to maintain the quality of lowâ€moisture mozzarella cheese during lowâ€temperature storage. Journal of the Science of Food and Agriculture, 2019, 99, 2716-2725.	3.5	57
118	New insight into melanin for food packaging and biotechnology applications. Critical Reviews in Food Science and Nutrition, 2022, 62, 4629-4655.	10.3	57
119	Cellulose Nanofiber-Based Nanocomposite Films Reinforced with Zinc Oxide Nanorods and Grapefruit Seed Extract. Nanomaterials, 2021, 11, 877.	4.1	57
120	Switchable Dual-Function and Bioresponsive Materials to Control Bacterial Infections. ACS Applied Materials & Interfaces, 2019, 11, 22897-22914.	8.0	55
121	Effects of various types of cellulose nanofibers on the physical properties of the CNF-based films. Journal of Environmental Chemical Engineering, 2021, 9, 106043.	6.7	55
122	Carrageenan/agar-based functional film integrated with zinc sulfide nanoparticles and Pickering emulsion of tea tree essential oil for active packaging applications. International Journal of Biological Macromolecules, 2021, 193, 2038-2046.	7.5	55
123	Effect of types of zinc oxide nanoparticles on structural, mechanical and antibacterial properties of poly(lactide)/poly(butylene adipate-co-terephthalate) composite films. Food Packaging and Shelf Life, 2019, 21, 100327.	7.5	54
124	Development of Multifunctional Pullulan/Chitosan-Based Composite Films Reinforced with ZnO Nanoparticles and Propolis for Meat Packaging Applications. Foods, 2021, 10, 2789.	4.3	54
125	Green and facile synthesis of carboxymethylcellulose/ZnO nanocomposite hydrogels crosslinked with Zn2+ ions. International Journal of Biological Macromolecules, 2020, 162, 229-235.	7.5	51
126	Recent progress in konjac glucomannan-based active food packaging films and property enhancement strategies. Food Hydrocolloids, 2022, 128, 107572.	10.7	51

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127	Fabrication of Quercetin-Loaded Biopolymer Films as Functional Packaging Materials. ACS Applied Polymer Materials, 2021, 3, 2131-2137.	4.4	50
128	Gelatin/agar-based multifunctional film integrated with copper-doped zinc oxide nanoparticles and clove essential oil Pickering emulsion for enhancing the shelf life of pork meat. Food Research International, 2022, 160, 111690.	6.2	50
129	Isolation of oxidized nanocellulose from rice straw using the ammonium persulfate method. Cellulose, 2018, 25, 2143-2149.	4.9	48
130	Pectin/gelatin-based bioactive composite films reinforced with sulfur functionalized carbon dots. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 636, 128123.	4.7	48
131	Effect of freezing temperature on rehydration and water vapor adsorption characteristics of freeze-dried rice porridge. Journal of Food Engineering, 2011, 104, 484-491.	5.2	47
132	CMC-based functional film incorporated with copper-doped TiO2 to prevent banana browning. Food Hydrocolloids, 2022, 122, 107104.	10.7	47
133	Sulfur Quantum Dots as Fillers in Gelatin/Agar-Based Functional Food Packaging Films. ACS Applied Nano Materials, 2021, 4, 14292-14302.	5.0	47
134	Effect of moisture content on tensile properties of paper-based food packaging materials. Food Science and Biotechnology, 2010, 19, 243-247.	2.6	45
135	Effect of oxidized chitin nanocrystals isolated by ammonium persulfate method on the properties of carboxymethyl cellulose-based films. Carbohydrate Polymers, 2017, 175, 712-720.	10.2	45
136	New insight into sulfur nanoparticles: Synthesis and applications. Critical Reviews in Environmental Science and Technology, 2021, 51, 2329-2356.	12.8	45
137	Effect of chitosan modified halloysite on the physical and functional properties of pullulan/chitosan biofilm integrated with rutin. Applied Clay Science, 2021, 211, 106205.	5.2	45
138	Carboxymethyl cellulose-based functional film integrated with chitosan-based carbon quantum dots for active food packaging applications. Progress in Organic Coatings, 2022, 166, 106794.	3.9	45
139	Antimicrobial activity of sulfur nanoparticles: Effect of preparation methods. Arabian Journal of Chemistry, 2020, 13, 6580-6588.	4.9	44
140	Comparative antibacterial and antifungal activities of sulfur nanoparticles capped with chitosan. Microbial Pathogenesis, 2020, 144, 104178.	2.9	43
141	Carbon quantum dots-based antifungal coating film for active packaging application of avocado. Food Packaging and Shelf Life, 2022, 33, 100878.	7.5	43
142	Melanin-Mediated Synthesis of Copper Oxide Nanoparticles and Preparation of Functional Agar/CuO NP Nanocomposite Films. Journal of Nanomaterials, 2019, 2019, 1-10.	2.7	42
143	Preparation of turmeric-derived sulfur-functionalized carbon dots: antibacterial and antioxidant activity. Journal of Materials Science, 2022, 57, 2941-2952.	3.7	42
144	Fabrication of Copper Sulfide Nanoparticles and Limonene Incorporated Pullulan/Carrageenan-Based Film with Improved Mechanical and Antibacterial Properties. Polymers, 2020, 12, 2665.	4.5	41

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145	Gelatin-Based Film Integrated with Copper Sulfide Nanoparticles for Active Packaging Applications. Applied Sciences (Switzerland), 2021, 11, 6307.	2.5	41
146	Antimicrobial nanofillers reinforced biopolymer composite films for active food packaging applications - A review. Sustainable Materials and Technologies, 2022, 32, e00353.	3.3	40
147	Preparation of carrageenan-based nanocomposite films incorporated with functionalized halloysite using AgNP and sodium dodecyl sulfate. Food Hydrocolloids, 2020, 106, 105934.	10.7	39
148	Gelatin-based packaging material incorporated with potato skins carbon dots as functional filler. Industrial Crops and Products, 2022, 181, 114820.	5.2	39
149	Effects of poly(butylene adipate-co-terephthalate) coating on the water resistant, mechanical, and antibacterial properties of Kraft paper. Progress in Organic Coatings, 2018, 123, 153-159.	3.9	38
150	Effect of Zn salts and hydrolyzing agents on the morphology and antibacterial activity of zinc oxide nanoparticles. Environmental Chemistry Letters, 2019, 17, 1105-1109.	16.2	38
151	Preparation of pectin/agar-based functional films integrated with zinc sulfide nano petals for active packaging applications. Colloids and Surfaces B: Biointerfaces, 2021, 207, 111999.	5.0	38
152	Fabrication of Carboxymethyl Cellulose/Agar-Based Functional Films Hybridized with Alizarin and Grapefruit Seed Extract. ACS Applied Bio Materials, 2021, 4, 4470-4478.	4.6	37
153	Starch and Agar-Based Color-Indicator Films Integrated with Shikonin for Smart Packaging Application of Shrimp. ACS Food Science & Technology, 2021, 1, 1963-1969.	2.7	37
154	Curcumin Incorporated Poly(Butylene Adipate-co-Terephthalate) Film with Improved Water Vapor Barrier and Antioxidant Properties. Materials, 2020, 13, 4369.	2.9	36
155	Synthesis of Fe3O4@SiO2@PAMAM dendrimer@AgNP hybrid nanoparticles for the preparation of carrageenan-based functional nanocomposite film. Food Packaging and Shelf Life, 2020, 24, 100473.	7.5	36
156	Preparation and characterization of B, S, and N-doped glucose carbon dots: Antibacterial, antifungal, and antioxidant activity. Sustainable Materials and Technologies, 2022, 32, e00397.	3.3	35
157	Alginate-based multifunctional films incorporated with sulfur quantum dots for active packaging applications. Colloids and Surfaces B: Biointerfaces, 2022, 215, 112519.	5.0	35
158	One-step preparation of banana powder/silver nanoparticles composite films. Journal of Food Science and Technology, 2017, 54, 497-506.	2.8	33
159	Effect of isolation methods of chitin nanocrystals on the properties of chitin-silver hybrid nanoparticles. Carbohydrate Polymers, 2018, 197, 349-358.	10.2	33
160	Starch/agar-based functional films integrated with enoki mushroom-mediated silver nanoparticles for active packaging applications. Food Bioscience, 2022, 49, 101867.	4.4	33
161	Bionanocomposite Films for Food Packaging Applications. , 2018, , .		32
162	Advances in pullulan utilization for sustainable applications in food packaging and preservation: A mini-review. Trends in Food Science and Technology, 2022, 125, 43-53.	15.1	32

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163	Physicochemical Properties of Onion Powder as Influenced by Drying Methods. Journal of the Korean Society of Food Science and Nutrition, 2007, 36, 342-347.	0.9	31
164	Functional edible films/coatings integrated with lactoperoxidase and lysozyme and their application in food preservation. Food Control, 2022, 133, 108670.	5.5	31
165	Biopolymer-Based Composite Packaging Materials with Nanoparticles. , 2014, , 413-442.		30
166	Mechanical, thermal, and water vapor barrier properties of regenerated cellulose/nano-SiO2 composite films. Cellulose, 2018, 25, 7153-7165.	4.9	30
167	In situ synthesis of multi-functional gelatin/resorcinol/silver nanoparticles composite films. Food Packaging and Shelf Life, 2019, 22, 100399.	7.5	30
168	Tea polyphenols (TP): a promising natural additive for the manufacture of multifunctional active food packaging films. Critical Reviews in Food Science and Nutrition, 2023, 63, 288-301.	10.3	30
169	Genipin-Crosslinked Gelatin/Chitosan-Based Functional Films Incorporated with Rosemary Essential Oil and Quercetin. Materials, 2022, 15, 3769.	2.9	30
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