Simultaneous reinforcing and toughening: New nanoco polyurethane filled with low loading level of starch nan

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Citation Report

ARTICLE

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IF CITATIONS

Structure and Mechanical Properties of Poly(lactic acid) Filled with (Starch) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 747 Td (nanocrystal)â 3.6 118

-	293, 763-770.	0.0	
2	Effects of starch nanocrystalâ€ <i>graft</i> â€polycaprolactone on mechanical properties of waterborne polyurethaneâ€based nanocomposites. Journal of Applied Polymer Science, 2009, 111, 619-627.	2.6	20
3	A Novel Thermoformable Bionanocomposite Based on Cellulose Nanocrystal <i>â€graftâ€</i> Poly(<i>ε</i> aprolactone). Macromolecular Materials and Engineering, 2009, 294, 59-67.	3.6	105
4	Structure and properties of new thermoforming bionanocomposites based on chitin whiskerâ€ <i>graft</i> â€polycaprolactone. Journal of Applied Polymer Science, 2009, 112, 2830-2837.	2.6	70
5	Effects of polymerâ€grafted natural nanocrystals on the structure and mechanical properties of poly(lactic acid): A case of cellulose whiskerâ€ <i>graft</i> â€polycaprolactone. Journal of Applied Polymer Science, 2009, 113, 3417-3425.	2.6	200
6	Transitional properties of starch colloid with particle size reduction from micro- to nanometer. Journal of Colloid and Interface Science, 2009, 339, 117-124.	9.4	233
7	Rheological behavior of waterborne polyurethane/starch aqueous dispersions during cure. Polymer, 2009, 50, 5474-5481.	3.8	32
8	One-pot polymerization, surface grafting, and processing of waterborne polyurethane-cellulose nanocrystal nanocomposites. Journal of Materials Chemistry, 2009, 19, 7137.	6.7	288
9	Starch Nanoparticles: A Review. Biomacromolecules, 2010, 11, 1139-1153.	5.4	860
10	Role of starch nanocrystals and cellulose whiskers in synergistic reinforcement of waterborne polyurethane. Carbohydrate Polymers, 2010, 80, 665-671.	10.2	140
11	Extraction of cellulose whiskers from cassava bagasse and their applications as reinforcing agent in natural rubber. Industrial Crops and Products, 2010, 32, 486-490.	5.2	173
12	Structure and properties of polysaccharide nanocrystal-doped supramolecular hydrogels based on Cyclodextrin inclusion. Polymer, 2010, 51, 4398-4407.	3.8	140
13	The catalytic oxidation of biomass to new materials focusing on starch, cellulose and lignin. Coordination Chemistry Reviews, 2010, 254, 1854-1870.	18.8	185
14	Processing of Polymer Nanocomposites Reinforced with Polysaccharide Nanocrystals. Molecules, 2010, 15, 4111-4128.	3.8	248
15	Evidence of Micro- and Nanoscaled Particles during Starch Nanocrystals Preparation and Their Isolation. Biomacromolecules, 2011, 12, 3039-3046.	5.4	93
16	Preparation, Modification, and Application of Starch Nanocrystals in Nanomaterials: A Review. Journal of Nanomaterials, 2011, 2011, 1-13.	2.7	83
17	Facile synthesis of waterborne UV-curable polyurethane/silica nanocomposites and morphology, physical properties of its nanostructured films. Progress in Organic Coatings, 2011, 70, 1-8.	3.9	88
18	Sorption potential of modified nanocrystals for the removal of aromatic organic pollutant from aqueous solution. Industrial Crops and Products, 2011, 33, 350-357.	5.2	48

#	Article	IF	CITATIONS
19	Ceramic membrane filtration for isolating starch nanocrystals. Carbohydrate Polymers, 2011, 86, 1565-1572.	10.2	43
20	Influence of botanic origin and amylose content on the morphology of starch nanocrystals. Journal of Nanoparticle Research, 2011, 13, 7193-7208.	1.9	126
21	Starch nanoparticle formation via reactive extrusion and related mechanism study. Carbohydrate Polymers, 2011, 85, 208-214.	10.2	130
22	Synthesis and properties of novel rosinâ€based waterâ€borne polyurethane. Polymer International, 2011, 60, 1521-1526.	3.1	31
23	Preparation and properties of starch nanocrystals/carboxymethyl chitosan nanocomposite films. Starch/Staerke, 2011, 63, 528-535.	2.1	70
24	Synthesis and properties of grafted latices from a soybean oilâ€based waterborne polyurethane and acrylics. Journal of Applied Polymer Science, 2011, 119, 3305-3314.	2.6	32
25	Effects of starch nanocrystals on structure and properties of waterborne polyurethane-based composites. Carbohydrate Polymers, 2011, 85, 824-831.	10.2	62
26	New waterborne polyurethane-based nanocomposites reinforced with low loading levels of chitin whisker. EXPRESS Polymer Letters, 2011, 5, 362-373.	2.1	44
27	11 Other polysaccharide nanocrystals. , 0, , .		0
28	The effect of gamma irradiation and surfactants on the size distribution of nanoparticles based on soluble starch. Radiation Physics and Chemistry, 2012, 81, 913-914.	2.8	25
29	Preparation, properties and applications of polysaccharide nanocrystals in advanced functional nanomaterials: a review. Nanoscale, 2012, 4, 3274.	5.6	768
30	Biocomposites based on polycaprolactone reinforced with alfa fibre mats. Composites Part A: Applied Science and Manufacturing, 2012, 43, 742-747.	7.6	23
31	Effects of Cellulose Nanowhiskers on Mechanical, Dielectric, and Rheological Properties of Poly(3-hydroxybutyrate- <i>co</i> -3-hydroxyvalerate)/Cellulose Nanowhisker Composites. Industrial & Engineering Chemistry Research, 2012, 51, 2941-2951.	3.7	108
32	Characterization of nanoparticles prepared by acid hydrolysis of various starches. Starch/Staerke, 2012, 64, 367-373.	2.1	175
33	Influence of native starch's properties on starch nanocrystals thermal properties. Carbohydrate Polymers, 2012, 87, 658-666.	10.2	140
34	Biocompatible elastomer of waterborne polyurethane based on castor oil and polyethylene glycol with cellulose nanocrystals. Carbohydrate Polymers, 2012, 87, 2068-2075.	10.2	141
35	Effect of silica nanoparticles on structure and properties of waterborne UV-curable polyurethane nanocomposites. Polymer Bulletin, 2012, 68, 1469-1482.	3.3	31
36	Comparative Sustainability Assessment of Starch Nanocrystals. Journal of Polymers and the Environment, 2013, 21, 71-80.	5.0	27

#	Article	IF	CITATIONS
37	Synthesis and characterization of waterborne UV-curable polyurethane nanocomposites based on the macromonomer surface modification of colloidal silica. Progress in Organic Coatings, 2013, 76, 1032-1039.	3.9	35
38	Plantain starch granules morphology, crystallinity, structure transition, and size evolution upon acid hydrolysis. Carbohydrate Polymers, 2013, 95, 207-213.	10.2	45
39	Structure and mechanical properties of new biomass-based nanocomposite: Castor oil-based polyurethane reinforced with acetylated cellulose nanocrystal. Carbohydrate Polymers, 2013, 95, 91-99.	10.2	91
40	Ultra-small and anionic starch nanospheres: Formation and vitro thrombolytic behavior study. Carbohydrate Polymers, 2013, 96, 426-434.	10.2	25
41	Effect of ultrasonic treatments on nanoparticle preparation of acid-hydrolyzed waxy maize starch. Carbohydrate Polymers, 2013, 93, 582-588.	10.2	124
44	Synthesis and properties of networking waterborne polyurethane/silica nanocomposites by addition of poly(ester amine) dendrimer. Polymer Composites, 2013, 34, 156-163.	4.6	16
45	Elastomer-Based Bio-Nanocomposites. Advanced Structured Materials, 2013, , 205-226.	0.5	0
46	Ultra-small and innocuous cationic starch nanospheres: Preparation, characterization and drug delivery study. International Journal of Biological Macromolecules, 2013, 58, 231-239.	7.5	32
47	Structure and mechanical properties of waterborne polyurethane-based composites filled with self-assembled supramolecular nanoplatelets. Journal Wuhan University of Technology, Materials Science Edition, 2013, 28, 773-780.	1.0	1
48	Effect of reaction conditions on grafting ratio and properties of starch nanocrystalsâ€ <i>g</i> â€polystyrene. Journal of Applied Polymer Science, 2014, 131, .	2.6	11
51	Starch Nanocrystals. Materials and Energy, 2014, , 89-103.	2.5	0
52	Surface Chemical Compositions and Dispersity of Starch Nanocrystals Formed by Sulfuric and Hydrochloric Acid Hydrolysis. PLoS ONE, 2014, 9, e86024.	2.5	52
53	TPU/PCL/nanomagnetite ternary shape memory composites: studies on their thermal, dynamic-mechanical, rheological and electrical properties. Iranian Polymer Journal (English Edition), 2014, 23, 137-145.	2.4	18
54	Preparation and application of starch nanoparticles for nanocomposites: A review. Reactive and Functional Polymers, 2014, 85, 97-120.	4.1	196
55	Crystalline starch based nanoparticles. Current Opinion in Colloid and Interface Science, 2014, 19, 397-408.	7.4	85
56	Influence of cellulose nanofibrils on soft and hard segments of polyurethane/cellulose nanocomposites and effect of humidity on their mechanical properties. Polymer Testing, 2014, 40, 99-105.	4.8	34
57	Functionalization of cotton fabric at low graphene nanoplate content for ultrastrong ultraviolet blocking. Carbon, 2014, 80, 565-574.	10.3	109
58	Structure, Morphology and Properties of Benzyl Starch Nanocrystals. Arabian Journal for Science and Engineering, 2014, 39, 6703-6710.	1.1	3

#	Article	IF	CITATIONS
59	Thermoset nanocomposites from two-component waterborne polyurethanes and cellulose whiskers. Carbohydrate Polymers, 2014, 105, 207-213.	10.2	53
60	Structure–property relationships and biocompatibility of carbohydrate crosslinked polyurethanes. Carbohydrate Polymers, 2014, 110, 338-344.	10.2	47
64	Thermal Properties of Banana Starch Nanocrystals Prepared by Acid Hydrolysis as Reinforcing Filler. Key Engineering Materials, 2015, 659, 516-521.	0.4	2
65	Preparation and Properties of Cellulose Laurate (CL)/Starch Nanocrystals Acetate (SNA) Bio-nanocomposites. Polymers, 2015, 7, 1331-1345.	4.5	13
68	Starch based polyurethanes: A critical review updating recent literature. Carbohydrate Polymers, 2015, 134, 784-798.	10.2	123
69	Bio-based polyurethane reinforced with cellulose nanofibers: A comprehensive investigation on the effect of interface. Carbohydrate Polymers, 2015, 122, 202-211.	10.2	124
70	Mechanical Properties of Eco-friendly Polymer Nanocomposites. Advanced Structured Materials, 2015, , 527-559.	0.5	4
71	Thermoset nanocomposites from waterborne bio-based epoxy resin and cellulose nanowhiskers. Carbohydrate Polymers, 2015, 127, 229-235.	10.2	72
72	The effect of soft segment on the microstructure and mechanical properties of waterborne UV-curable polyurethane/silica nanocomposites. Journal of Polymer Research, 2015, 22, 1.	2.4	4
73	Preparation, characterization and utilization of starch nanoparticles. Colloids and Surfaces B: Biointerfaces, 2015, 126, 607-620.	5.0	306
77	Dual modification of starch nanocrystals via crosslinking and esterification for enhancing their hydrophobicity. Food Research International, 2016, 87, 180-188.	6.2	52
78	Effects of Surface Structure and Morphology of Nanoclays on the Properties of Jatropha Curcas Oil-Based Waterborne Polyurethane/Clay Nanocomposites. Industrial & Engineering Chemistry Research, 2016, 55, 11689-11699.	3.7	54
79	Starch nanomaterials: aÂstate-of-the-art review and future trends. , 2016, , 237-269.		0
80	Nanocompounds as Formulating Aids. Food Preservation Technology, 2016, , 241-261.	0.0	0
81	Recent trends in environmentally friendly water-borne polyurethane coatings: A review. Korean Journal of Chemical Engineering, 2016, 33, 388-400.	2.7	113
82	A fast and efficient approach to prepare starch nanocrystals from normal corn starch. Food Hydrocolloids, 2016, 57, 132-138.	10.7	58
83	Synthesis, characterization and hydrophobicity of silylated starch nanocrystal. Carbohydrate Polymers, 2016, 136, 1203-1208.	10.2	51
84	Plant-derived nanostructures: types and applications. Green Chemistry, 2016, 18, 20-52.	9.0	341

		CITATION REPORT	
#	ARTICLE	IF	CITATIONS
85	Characterization of starch films impregnated with starch nanoparticles prepared by 2,2,6,6-tetramethylpiperidine-1-oxyl (TEMPO)-mediated oxidation. Food Chemistry, 2016, 192, 865-872.	8.2	44
86	Thermal and dynamic mechanical properties of cellulose nanofibers reinforced epoxy composites. International Journal of Biological Macromolecules, 2017, 102, 822-828.	7.5	206
87	Plant Biotechnology: Recent Advancements and Developments. , 2017, , .		16
88	Do production processes influence the mechanical properties of bleached alfa pulpboard?. Cellulose, 2017, 24, 2313-2329.	4.9	4
89	11. Other polysaccharide nanocrystals. , 2017, , 577-620.		1
90	Production of Starch Nanocrystals from Agricultural Materials Using Mild Acid Hydrolysis Method: Optimization and Characterization. Polymers From Renewable Resources, 2017, 8, 91-116.	1.3	14
91	Effect of molar ratio [NCO]/[OH] groups during prepolymer chains extending step on the morphology and selected mechanical properties of final bioâ€based thermoplastic poly(etherâ€urethane) materials. Polymer Engineering and Science, 2018, 58, E199.	3.1	19
92	Starch Nanoparticles. , 2018, , 691-745.		11
93	Synthesis and characterization of a waterborne polyurethane made from castor oil and tartaric acid. European Polymer Journal, 2018, 102, 151-160.	5.4	44
94	Polyethyleneâ€gâ€starch nanoparticle biocomposites: Physicochemical properties and biodegradation studies. Polymer Composites, 2018, 39, E426.	4.6	7
95	Improved natural rubber composites reinforced with a complex filler network of biobased nanoparticles and ionomer. Materials Chemistry and Physics, 2018, 203, 156-165.	4.0	11
96	Analyzing the influence of different synthetic talcs in waterborne polyurethane nanocomposites obtainment. Journal of Applied Polymer Science, 2018, 135, 46107.	2.6	8
97	Fiber-Reinforced Composites. Polymers and Polymeric Composites, 2018, , 1-30.	0.6	0
98	Nano-sized Starch: Preparations and Applications. , 2018, , 147-176.		1
99	Polymeric Nanocomposites and Nanocoatings for Food Packaging: A Review. Materials, 2018, 11, 1834.	2.9	175
100	Conversion of Potato Starch and Peel Waste to High Value Nanocrystals. Potato Research, 2018, 61, 341-351.	2.7	15
101	Mechanical, dynamic, and thermomechanical properties of coir/pineapple leaf fiber reinforced polylactic acid hybrid biocomposites. Polymer Composites, 2019, 40, 2000-2011.	4.6	75
102	Nanocellulose-Polymer Composites: Novel Materials for Food Packaging Applications. , 2019, , 553-599.		11

#	Article	IF	CITATIONS
103	Effect of a Novel Chemical Treatment on Nanocellulose Fibers for Enhancement of Mechanical, Electrochemical and Tribological Characteristics of Epoxy Bio-nanocomposites. Fibers and Polymers, 2019, 20, 1918-1944.	2.1	22
104	Advanced Functional Materials from Nanopolysaccharides. Springer Series in Biomaterials Science and Engineering, 2019, , .	1.0	12
105	Production of Sago (Metroxylon Sp.) Starch Nanoparticles Using Hydrolysis-High Shear Homogenization (HSH) Method. IOP Conference Series: Earth and Environmental Science, 2019, 258, 012046.	0.3	4
106	Effect of Chitin Nanocrystals on the Formation of Shish-Kebab Crystals in Bimodal Polyethylene Injection Bar. Polymer Science - Series A, 2019, 61, 627-634.	1.0	4
107	Enhanced Mechanical and Barrier Performance of Poly (Lactic Acid) Based Nanocomposites Using Surface Acetylated Starch Nanocrystals. Journal of Polymers and the Environment, 2019, 27, 2078-2088.	5.0	15
108	Fiber-Reinforced Composites. Polymers and Polymeric Composites, 2019, , 417-446.	0.6	5
109	Synthesis of waterborne polyurethane using snow as dispersant: Structures and properties controlled by polyols utilization. Journal of Materials Science and Technology, 2019, 35, 1491-1498.	10.7	17
110	Preparation and characterization of polyurethane–silica hybrid films. Pigment and Resin Technology, 2019, 48, 357-362.	0.9	1
111	Surface chemical functionalization of starch nanocrystals modified by 3-aminopropyl triethoxysilane. International Journal of Biological Macromolecules, 2019, 126, 987-993.	7.5	24
112	Synthesis, characterization and hydrophobicity of esterified waxy potato starch nanocrystals. Industrial Crops and Products, 2019, 130, 111-117.	5.2	33
113	Synthesis and modification approaches for starch nanoparticles for their emerging food industrial applications: A review. Food Research International, 2020, 128, 108765.	6.2	83
114	Empirical Modelling of Hydrodynamic Effects on Starch Nanoparticles Precipitation in a Spinning Disc Reactor. Nanomaterials, 2020, 10, 2202.	4.1	6
115	Novel Polyhydroxyalkanoate-Based Biocomposites Obtained by Solution Casting and Their Application for Bacteria Removal and Domestic Wastewater Purification. Journal of Polymers and the Environment, 2020, 28, 1893-1900.	5.0	10
116	Enhancing the mechanical and thermal properties of waterborne polyurethane composites with thermoset epoxy resin microspheres. New Journal of Chemistry, 2020, 44, 9896-9902.	2.8	6
117	Biobased Epoxy Synthesized from a Vanillin Derivative and Its Reinforcement Using Lignin-Containing Cellulose Nanofibrils. ACS Sustainable Chemistry and Engineering, 2020, 8, 11215-11223.	6.7	54
118	Food-grade particle stabilized pickering emulsion using modified sago (Metroxylon sagu) starch nanocrystal. Journal of Food Engineering, 2020, 280, 109974.	5.2	57
119	High strength epoxy nanocomposites reinforced by epoxy functionalized aramid nanofibers. Polymer, 2020, 195, 122438.	3.8	46
120	Research advances in chemical modifications of starch for hydrophobicity and its applications: A review. Carbohydrate Polymers, 2020, 240, 116292.	10.2	155

#	Article	IF	CITATIONS
121	Polysaccharide-Based Biomaterials in Tissue Engineering: A Review. Tissue Engineering - Part B: Reviews, 2021, 27, 604-626.	4.8	81
122	Bio-based polyurethane aqueous dispersions. ChemistrySelect, 2023, 8, 1967-2000.	1.5	2
123	Effect of masterbatch drying methods on the properties of rubber reinforced with renewable hydrophilic filler. Journal of Elastomers and Plastics, 2022, 54, 3-21.	1.5	0
124	Sago starch nanocrystal-stabilized Pickering emulsions: Stability and rheological behavior. International Journal of Biological Macromolecules, 2021, 182, 197-206.	7.5	22
125	Starch and Nanoparticle. , 2014, , 1-28.		1
126	Starch and Nanoparticle. , 2015, , 417-449.		7
127	Starch Nanoparticles: Their Preparation and Applications. , 2017, , 213-232.		6
128	Nanopolysaccharides in Barrier Composites. Springer Series in Biomaterials Science and Engineering, 2019, , 321-366.	1.0	3
129	Starch: State-of-the-Art, New Challenges and Opportunities. RSC Green Chemistry, 2015, , 1-16.	0.1	2
130	Analysis of polyurethane top-coat destruction influence on erosion kinetics of polyurethane-epoxy coating system. Eksploatacja I Niezawodnosc, 2019, 21, 103-114.	2.0	4
131	Exploratory Study in Critical Success Factors for e- Management Implementation Success in Al-hukama Firm for Producing Drugs and Medical Requirements. International Journal of E-Education E-Business E-Management and E-Learning, 2015, 5, 13-22.	0.3	2
132	Preparation and Characterization of Starch Nanocrystals. RSC Green Chemistry, 2015, , 60-108.	0.1	0
133	Applications of Starch Nanocrystal-based Blends, Composites and Nanocomposites. RSC Green Chemistry, 2015, , 143-216.	0.1	0
134	Application of Starch Nanocomposites in the Food Industry. RSC Green Chemistry, 2015, , 352-402.	0.1	0
135	Extraction and Characterization of Nanomaterials from Agrowaste. , 2020, , 841-897.		0
136	Advances in Functional Biopolymer-Based Nanocomposites for Active Food Packaging Applications. Polymers, 2021, 13, 4198.	4.5	42
139	Progress in Starch-Based Materials for Food Packaging Applications. Polysaccharides, 2022, 3, 136-177.	4.8	48
140	Nanocomposite Starch Films: A New Approach for Biodegradable Packaging Materials. Starch/Staerke, 2022, 74, .	2.1	25

#	Article	IF	CITATIONS
141	Preparation of graphene-starch composite film and its application in sensor materials. International Journal of Biological Macromolecules, 2022, 207, 365-373.	7.5	9
142	Synthesis, Characterization and Thermal Properties of Intrinsic Selfâ€Healing Polyurethane Nanocomposites. ChemistrySelect, 2022, 7, .	1.5	1
143	Chemical-mechanical treatment of potato starch for isolation of nanocrystal particles. Chimica Techno Acta, 2022, 9, 20229313.	0.7	0
144	Structural, Morphological, and Textural Properties of Biopolymers. , 2022, , 1-41.		0
145	Starch-based environment friendly, edible and antimicrobial films reinforced with medicinal plants. Frontiers in Nutrition, 0, 9, .	3.7	5
146	Cellulose nanocrystal functionalized aramid nanofiber reinforced epoxy nanocomposites with high strength and toughness. Nanotechnology, 2023, 34, 245703.	2.6	5
147	Biogeneration of Valuable Nanomaterials from Agro-Wastes: A Comprehensive Review. Agronomy, 2023, 13, 561.	3.0	10
148	Structural, Morphological, and Textural Properties of Biopolymers. , 2023, , 323-363.		0
149	Characterization of Starch Nanocrystals from <i>Lablab purpureus</i> (L.) Sweet and Its Application as a Stabilizer in Pickering Emulsions. Starch/Staerke, 2023, 75, .	2.1	1
150	Thermal properties of cellulose nanofibrils and nickel-titanium alloy-reinforced sustainable smart composites. Wood Material Science and Engineering, 0, , 1-7.	2.3	1
151	Environmental Impact of Biobased Materials. , 2023, , 213-245.		0
152	Starch-based nanomaterials, their properties and sources. , 2024, , 1-22.		0
153	Polymer–nanostarch composites for food packaging. , 2024, , 157-187.		0

153Polymer–nanostarch composites for food packaging. , 2024, , 157-187.