Hiroyuki Yano

List of Publications by Year
in descending order

86 papers	11,243 citations	46984 47 h-index	51562 86 g-index
87 all docs	87 docs citations	87 times ranked	8160 citing authors

#	Article	IF	Citations
1	Optically Transparent Nanofiber Paper. Advanced Materials, 2009, 21, 1595-1598.	11.1	941
2	Optically Transparent Composites Reinforced with Networks of Bacterial Nanofibers. Advanced Materials, 2005, 17, 153-155.	11.1	908
3	Obtaining Cellulose Nanofibers with a Uniform Width of 15 nm from Wood. Biomacromolecules, 2007, 8, 3276-3278.	2.6	794
4	Nano-fibrillation of pulp fibers for the processing of transparent nanocomposites. Applied Physics A: Materials Science and Processing, 2007, 89, 461-466.	1.1	554
5	The effect of crystallization of PLA on the thermal and mechanical properties of microfibrillated cellulose-reinforced PLA composites. Composites Science and Technology, 2009, 69, 1187-1192.	3.8	526
6	Transparent Nanocomposites Based on Cellulose Produced by Bacteria Offer Potential Innovation in the Electronics Device Industry. Advanced Materials, 2008, 20, 1849-1852.	11.1	480
7	The Effect of Hemicelluloses on Wood Pulp Nanofibrillation and Nanofiber Network Characteristics. Biomacromolecules, 2008, 9, 1022-1026.	2.6	447
8	Preparation of Chitin Nanofibers with a Uniform Width as Î±-Chitin from Crab Shells. Biomacromolecules, 2009, 10, 1584-1588.	2.6	441
9	Optically transparent composites reinforced with plant fiber-based nanofibers. Applied Physics A: Materials Science and Processing, 2005, 81, 1109-1112.	1.1	408
10	Surface Modification of Bacterial Cellulose Nanofibers for Property Enhancement of Optically Transparent Composites:Â Dependence on Acetyl-Group DS. Biomacromolecules, 2007, 8, 1973-1978.	2.6	389
11	Bacterial cellulose: the ultimate nano-scalar cellulose morphology for the production of high-strength composites. Applied Physics A: Materials Science and Processing, 2005, 80, 93-97.	1.1	334
12	Comparison of the characteristics of cellulose microfibril aggregates of wood, rice straw and potato tuber. Cellulose, 2009, 16, 1017-1023.	2.4	326
13	Optically transparent woodâ€"cellulose nanocomposite as a base substrate for flexible organic light-emitting diode displays. Composites Science and Technology, 2009, 69, 1958-1961.	3.8	311
14	Production of microfibrillated cellulose (MFC)-reinforced polylactic acid (PLA) nanocomposites from sheets obtained by a papermaking-like process. Composites Science and Technology, 2009, 69, 1293-1297.	3.8	262
15	Surface and Interface Engineering for Nanocellulosic Advanced Materials. Advanced Materials, 2021, 33, e2002264.	11.1	239
16	Nanofibrillation of Wood Pulp Using a High-Speed Blender. Biomacromolecules, 2011, 12, 348-353.	2.6	213
17	The effect of fiber content on the mechanical and thermal expansion properties of biocomposites based on microfibrillated cellulose. Cellulose, 2008, 15, 555-559.	2.4	193
18	Effective Youngâ€™s Modulus of Bacterial and Microfibrillated Cellulose Fibrils in Fibrous Networks. Biomacromolecules, 2012, 13, 1340-1349.	2.6	189

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19	Optically transparent bionanofiber composites with low sensitivity to refractive index of the polymer matrix. Applied Physics Letters, 2005, 87, 243110.	1.5	175
20	Comparison of the characteristics of cellulose microfibril aggregates isolated from fiber and parenchyma cells of Moso bamboo (Phyllostachys pubescens). Cellulose, 2010, 17, 271-277.	2.4	166
21	Nanofibrillation of pulp fibers by twin-screw extrusion. Cellulose, 2015, 22, 421-433.	2.4	131
22	Fiber-content dependency of the optical transparency and thermal expansion of bacterial nanofiber reinforced composites. Applied Physics Letters, 2006, 88, 133124.	1.5	117
23	Formation of hydrogels from cellulose nanofibers. Carbohydrate Polymers, 2011, 85, 733-737.	5.1	117
24	Toughness enhancement of cellulose nanocomposites by alkali treatment of the reinforcing cellulose nanofibers. Cellulose, 2008, 15, 323-331.	2.4	109
25	Thermo-mechanical properties of microfibrillated cellulose-reinforced partially crystallized PLA composites. Cellulose, 2010, 17, 771-778.	2.4	109
26	Cellulose nanofiber-based hydrogels with high mechanical strength. Cellulose, 2012, 19, 1907-1912.	2.4	108
27	Surface modification of cellulose nanofibers with alkenyl succinic anhydride for high-density polyethylene reinforcement. Composites Part A: Applied Science and Manufacturing, 2016, 83, 72-79.	3.8	100
28	Effects of hydrophobic-modified cellulose nanofibers (CNFs) on cell morphology and mechanical properties of high void fraction polypropylene nanocomposite foams. Composites Part A: Applied Science and Manufacturing, 2017, 98, 166-173.	3.8	87
29	Water Hyacinth: A Sustainable Lignin-Poor Cellulose Source for the Production of Cellulose Nanofibers. ACS Sustainable Chemistry and Engineering, 2019, 7, 18884-18893.	3.2	82
30	Fabrication of optically transparent chitin nanocomposites. Applied Physics A: Materials Science and Processing, 2011, 102, 325-331.	1.1	80
31	Development of continuous process enabling nanofibrillation of pulp and melt compounding. Cellulose, 2013, 20, 201-210.	2.4	80
32	Optically transparent nanofiber sheets by deposition of transparent materials: A concept for a roll-to-roll processing. Applied Physics Letters, 2009, 94, 233117.	1.5	78
33	Preparation of tough cellulose II nanofibers with high thermal stability from wood. Cellulose, 2014, 21, 1505-1515.	2.4	75
34	Individual cotton cellulose nanofibers: pretreatment and fibrillation technique. Cellulose, 2014, 21, 1517-1528.	2.4	75
35	Unprecedented Development of Ultrahigh Expansion Injection-Molded Polypropylene Foams by Introducing Hydrophobic-Modified Cellulose Nanofibers. ACS Applied Materials & Interfaces, 2017, 9, 9250-9254.	4.0	72
36	High-strength nanocomposite based on fibrillated chemi-thermomechanical pulp. Composites Science and Technology, 2009, 69, 2434-2437.	3.8	68

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37	Novel high-strength, micro fibrillated cellulose-reinforced polypropylene composites using a cationic polymer as compatibilizer. Cellulose, 2014, 21, 507-518.	2.4	66
38	Crosslinking via sulfur vulcanization of natural rubber and cellulose nanofibers incorporating unsaturated fatty acids. RSC Advances, 2015, 5, 29814-29819.	1.7	65
39	Surface Engineering of Cellulose Nanofiber by Adsorption of Diblock Copolymer Dispersant for Green Nanocomposite Materials. ACS Applied Materials & Interfaces, 2016, 8, 24893-24900.	4.0	65
40	Designing cellulose nanofiber surface for high density polyethylene reinforcement. Cellulose, 2018, 25, 3351-3362.	2.4	65
41	Effect of surface modification on the dispersion, rheological behavior, crystallization kinetics, and foaming ability of polypropylene/cellulose nanofiber nanocomposites. Composites Science and Technology, 2018, 168, 412-419.	3.8	61
42	Effect of a silane coupling agent on the mechanical properties of a microfibrillated cellulose composite. International Journal of Biological Macromolecules, 2015, 74, 428-432.	3.6	60
43	The role of cellulose nanofibres in supercritical foaming of polylactic acid and their effect on the foam morphology. Soft Matter, 2012, 8, 8704.	1.2	58
44	Strategy for the Improvement of the Mechanical Properties of Cellulose Nanofiber-Reinforced High-Density Polyethylene Nanocomposites Using Diblock Copolymer Dispersants. ACS Applied Materials & Interfaces, 2017, 9, 44079-44087.	4.0	53
45	The thermal stability of nanocellulose and its acetates with different degree of polymerization. Cellulose, 2016, 23, 451-464.	2.4	52
46	The synergetic effect of phenylphosphonic acid zinc and microfibrillated cellulose on the injection molding cycle time of PLA composites. Cellulose, 2011, 18, 689-698.	2.4	50
47	Manufacturing process centered on dry-pulp direct kneading method opens a door for commercialization of cellulose nanofiber reinforced composites. Chemical Engineering Journal, 2018, 354, 563-568.	6.6	48
48	Preparation of high-strength Î±-chitin nanofiber-based hydrogels under mild conditions. Cellulose, 2015, 22, 2543-2550.	2.4	47
49	Effect of Cellulose Nanofiber (CNF) Surface Treatment on Cellular Structures and Mechanical Properties of Polypropylene/CNF Nanocomposite Foams via Core-Back Foam Injection Molding. Polymers, 2019, 11, 249.	2.0	47
50	Zeta Potential Time Dependence Reveals the Swelling Dynamics of Wood Cellulose Nanofibrils. Langmuir, 2012, 28, 818-827.	1.6	45
51	The transparent crab: preparation and nanostructural implications for bioinspired optically transparent nanocomposites. Soft Matter, 2012, 8, 1369-1373.	1.2	43
52	Wood Pulpâ€Based Optically Transparent Film: A Paradigm from Nanofibers to Nanostructured Fibers. Advanced Optical Materials, 2014, 2, 231-234.	3.6	40
53	Optically transparent tough nanocomposites with a hierarchical structure of cellulose nanofiber networks prepared by the Pickering emulsion method. Composites Part A: Applied Science and Manufacturing, 2020, 132, 105811.	3.8	37
54	Three-Dimensional-Moldable Nanofiber-Reinforced Transparent Composites with a Hierarchically Self-Assembled â€œReverseâ€•Nacre-like Architecture. ACS Applied Materials & Interfaces, 2017, 9, 30177-30184.	4.0	35

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55	Improving the thermal stability of wood-based cellulose by esterification. Carbohydrate Polymers, 2018, 192, 28-36.	5.1	35
56	Self-organizing capacity of nanocelluloses via droplet evaporation. Soft Matter, 2013, 9, 3396.	1.2	33
57	Cellulose nanofibreâ€“poly(lactic acid) microcellular foams exhibiting high tensile toughness. Reactive and Functional Polymers, 2014, 85, 201-207.	2.0	29
58	UV grafting: surface modification of cellulose nanofibers without the use of organic solvents. Green Chemistry, 2019, 21, 4619-4624.	4.6	28
59	Dissolution and gelation of Î±-chitin nanofibers using a simple NaOH treatment at low temperatures. Cellulose, 2014, 21, 3339-3346.	2.4	27
60	Formation of high strength double-network gels from cellulose nanofiber/polyacrylamide via NaOH gelation treatment. Cellulose, 2018, 25, 5089-5097.	2.4	27
61	Evolution of cellular morphologies and crystalline structures in high-expansion isotactic polypropylene/cellulose nanofiber nanocomposite foams. RSC Advances, 2018, 8, 15405-15416.	1.7	25
62	Extremely stiff and strong nanocomposite hydrogels with stretchable cellulose nanofiber/poly(vinyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	2.4	25
63	Investigation of the mechanism and effectiveness of cationic polymer as a compatibilizer in microfibrillated cellulose-reinforced polyolefins. Cellulose, 2016, 23, 623-635.	2.4	24
64	Semiquantitative Structural Analysis of Highly Anisotropic Cellulose Nanocolloids. ACS Macro Letters, 2012, 1, 651-655.	2.3	19
65	Doubly curved nanofiber-reinforced optically transparent composites. Scientific Reports, 2015, 5, 16421.	1.6	19
66	Preparation by combined enzymatic and mechanical treatment and characterization of nanofibrillated cotton fibers. Cellulose, 2016, 23, 3639-3651.	2.4	18
67	Effect of preparation process of microfibrillated cellulose-reinforced polypropylene upon dispersion and mechanical properties. Cellulose, 2017, 24, 3789-3801.	2.4	18
68	Acetylation of Ground Pulp: Monitoring Acetylation via HSQC-NMR Spectroscopy. ACS Sustainable Chemistry and Engineering, 2017, 5, 1755-1762.	3.2	16
69	Biocomposites Composed of Polyamide 11 and Cellulose Nanofibers Pretreated with a Cationic Reagents. Nihon Reoroji Gakkaishi, 2016, 45, 39-47.	0.2	15
70	Polyamide 6 composites reinforced with nanofibrillated cellulose formed during compounding: Effect of acetyl group degree of substitution. Composites Part A: Applied Science and Manufacturing, 2021, 145, 106385.	3.8	15
71	Simplified Fabrication of Optically Transparent Composites Reinforced with Nanostructured Chitin. Journal of Polymers and the Environment, 2013, 21, 937-943.	2.4	14
72	Products of low-temperature pyrolysis of nanocellulose esters and implications for the mechanism of thermal stabilization. Cellulose, 2016, 23, 2887-2903.	2.4	14

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73	Highly Thermalâ€Resilient AgNW Transparent Electrode and Optical Device on Thermomechanically Superstable Cellulose Nanorodâ€Reinforced Nanocomposites. Advanced Optical Materials, 2019, 7, 1900532.	3.6	14
74	Life Cycle Greenhouse Gas Emissions of Acetylated Cellulose Nanofiber-Reinforced Polylactic Acid Based on Scale-Up from Lab-Scale Experiments. ACS Sustainable Chemistry and Engineering, 2021, 9, 10444-10452.	3.2	14
75	Improved resistance of chemically-modified nanocellulose against thermally-induced depolymerization. Carbohydrate Polymers, 2017, 164, 1-7.	5.1	13
76	Thermally Superstable Cellulosic-Nanorod-Reinforced Transparent Substrates Featuring Microscale Surface Patterns. ACS Nano, 2019, 13, 2015-2023.	7.3	13
77	Fabrication of optically transparent cotton fiber composite. Journal of Materials Science, 2018, 53, 10872-10878.	1.7	9
78	Influence of drying method and precipitated salts on pyrolysis for nanocelluloses. Cellulose, 2014, 21, 1631-1639.	2.4	8
79	Fabrication of ultrastiff and strong hydrogels by in situ polymerization in layered cellulose nanofibers. Cellulose, 2020, 27, 693-702.	2.4	8
80	Toughened Hydrogels through UV Grafting of Cellulose Nanofibers. ACS Sustainable Chemistry and Engineering, 2021, 9, 1507-1511.	3.2	8
81	Multi-functional effect of alkenyl-succinic-anhydride-modified microfibrillated celluloses as reinforcement and a dispersant of CaCO3 in high-density polyethylene. Cellulose, 2019, 26, 6641-6651.	2.4	7
82	Stiffened Nanocomposite Hydrogels by Using Modified Cellulose Nanofibers via Plug Flow Reactor Method. ACS Sustainable Chemistry and Engineering, 2019, 7, 9092-9096.	3.2	6
83	Strain-stiffening composite hydrogels through UV grafting of cellulose nanofibers. Cellulose, 2021, 28, 1489-1497.	2.4	5
84	Influences of dispersion media for chemically modified cellulose nanofibers on rheological and mechanical properties of cellulose nanofiber reinforced high-density polyethylene. Cellulose, 2021, 28, 4719-4728.	2.4	4
85	Hindrance to nanofibrillation of undried pulp produced by the kraft cooking process. Carbohydrate Polymers, 2022, 291, 119481.	5.1	4
86	Pre-fibrillation of pulps to manufacture cellulose nanofiber-reinforced high-density polyethylene using the dry pulp direct kneading method. Cellulose, 2022, 29, 2985-2998.	2.4	1