Douglas J Gardner

List of Publications by Year
in descending order

82 papers	4,733 citations	94381 37 h-index	102432 66 g-index
85 all docs	85 docs citations	85 times ranked	4964 citing authors

#	Article	IF	Citations
1	Recycling of natural fiber composites: Challenges and opportunities. Resources, Conservation and Recycling, 2022, 177, 105962.	5.3	62
2	Pretreatment of lignocellulosic feedstocks for cellulose nanofibril production. Cellulose, 2022, 29, 4835-4876.	2.4	22
3	Recyclable grease-proof cellulose nanocomposites with enhanced water resistance for food serving applications. Cellulose, 2022, 29, 5623-5643.	2.4	7
4	Transparent Multifunctional Cellulose Nanocrystal Films Prepared Using Trivalent Metal Ion Exchange for Food Packaging. ACS Sustainable Chemistry and Engineering, 2022, 10, 9419-9430.	3.2	14
5	Flexible polyurethane foams reinforced with organic and inorganic nanofillers. Journal of Applied Polymer Science, 2021, 138, 49983.	1.3	20
6	Aqueous Polymer Modification of Cellulose Nanofibrils by Graftingâ€Through a Reactive Methacrylate Group. Macromolecular Rapid Communications, 2021, 42, e2000531.	2.0	21
7	Recent Advances in Functional Materials through Cellulose Nanofiber Templating. Advanced Materials, 2021, 33, e2005538.	11.1	77
8	Towards a cellulose-based society: opportunities and challenges. Cellulose, 2021, 28, 4511-4543.	2.4	27
9	Properties of Woodâ€"Plastic Composites Manufactured from Two Different Wood Feedstocks: Wood Flour and Wood Pellets. Polymers, 2021, 13, 2769.	2.0	18
10	Review on Nonconventional Fibrillation Methods of Producing Cellulose Nanofibrils and Their Applications. Biomacromolecules, 2021, 22, 4037-4059.	2.6	45
11	Recycled Cardboard Containers as a Low Energy Source for Cellulose Nanofibrils and Their Use in Poly(<scp>l</scp>-lactide) Nanocomposites. ACS Sustainable Chemistry and Engineering, 2021, 9, 13460-13470.	3.2	14
12	Alignment of Cellulose Nanofibers: Harnessing Nanoscale Properties to Macroscale Benefits. ACS Nano, 2021, 15, 3646-3673.	7.3	108
13	Step aside, aluminum honeycomb. Science, 2021, 374, 400-401.	6.0	0
14	Elasto-Plastic Finite Element Modeling of Short Carbon Fiber Reinforced 3D Printed Acrylonitrile Butadiene Styrene Composites. Jom, 2020, 72, 475-484.	0.9	12
15	Material Extrusion Additive Manufacturing of Wood and Lignocellulosic Filled Composites. Polymers, 2020, 12, 2115.	2.0	52
16	Towards industrial-scale production of cellulose nanocomposites using melt processing: A critical review on structure-processing-property relationships. Composites Part B: Engineering, 2020, 201, 108297.	5.9	41
17	High-Strength Polylactic Acid (PLA) Biocomposites Reinforced by Epoxy-Modified Pine Fibers. ACS Sustainable Chemistry and Engineering, 2020, 8, 13236-13247.	3.2	59
18	Biopolymer blends of polyhydroxybutyrate and polylactic acid reinforced with cellulose nanofibrils. Carbohydrate Polymers, 2020, 250, 116867.	5.1	56

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19	Comparing mechanical properties of impact modified polypropylene-copolymer (IMPP) from injection molding (IM) and fused layer modeling (FLM) processes. Rapid Prototyping Journal, 2020, 26, 993-1003.	1.6	6
20	Nanocellulose Dewatering and Drying: Current State and Future Perspectives. ACS Sustainable Chemistry and Engineering, 2020, 8, 9601-9615.	3.2	79
21	Cellulose nanofibrils versus cellulose nanocrystals: Comparison of performance in flexible multilayer films for packaging applications. Food Packaging and Shelf Life, 2020, 23, 100464.	3.3	66
22	Dewatering Behavior of a Wood-Cellulose Nanofibril Particulate System. Scientific Reports, 2019, 9, 14584.	1.6	24
23	Enhancing the interlayer tensile strength of 3D printed short carbon fiber reinforced PETG and PLA composites via annealing. Additive Manufacturing, 2019, 30, 100922.	1.7	117
24	Electrospinning of Cellulose Nanocrystal-Filled Poly (Vinyl Alcohol) Solutions: Material Property Assessment. Nanomaterials, 2019, 9, 805.	1.9	24
25	Fully Bio-Based Hybrid Composites Made of Wood, Fungal Mycelium and Cellulose Nanofibrils. Scientific Reports, 2019, 9, 3766.	1.6	69
26	Thermal properties of spray-dried cellulose nanofibril-reinforced polypropylene composites from extrusion-based additive manufacturing. Journal of Thermal Analysis and Calorimetry, 2019, 136, 1069-1077.	2.0	22
27	Contribution of printing parameters to the interfacial strength of polylactic acid (PLA) in material extrusion additive manufacturing. Progress in Additive Manufacturing, 2018, 3, 165-171.	2.5	30
28	Reinforcement of natural fiber yarns by cellulose nanomaterials: A multi-scale study. Industrial Crops and Products, 2018, 111, 471-481.	2.5	27
29	Moisture and Oxygen Barrier Properties of Cellulose Nanomaterial-Based Films. ACS Sustainable Chemistry and Engineering, 2018, 6, 49-70.	3.2	354
30	Mechanisms contributing to mechanical property changes in composites of polypropylene reinforced with spray-dried cellulose nanofibrils. Cellulose, 2018, 25, 439-448.	2.4	33
31	Effect of wettability and surface free energy of collection substrates on the structure and morphology of dry-spun cellulose nanofibril filaments. Cellulose, 2018, 25, 6305-6317.	2.4	25
32	Effect of fused deposition modeling process parameters on the mechanical properties of a filled polypropylene. Progress in Additive Manufacturing, 2018, 3, 205-214.	2.5	44
33	Spray-Dried Cellulose Nanofibril-Reinforced Polypropylene Composites for Extrusion-Based Additive Manufacturing: Nonisothermal Crystallization Kinetics and Thermal Expansion. Journal of Composites Science, 2018, 2, 7.	1.4	35
34	Closed-loop recycling of polyamide12 powder from selective laser sintering into sustainable composites. Journal of Cleaner Production, 2018, 195, 765-772.	4.6	24
35	Cellulose nanofibrilâ€reinforced polypropylene composites for material extrusion: Rheological properties. Polymer Engineering and Science, 2018, 58, 793-801.	1.5	39
36	Effect of fused layer modeling (FLM) processing parameters on impact strength of cellular polypropylene. Polymer, 2017, 113, 74-80.	1.8	89

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37	Improving the impact strength of Poly(lactic acid) (PLA) in fused layer modeling (FLM). Polymer, 2017, 114, 242-248.	1.8	204
38	Preparation and property assessment of neat lignocellulose nanofibrils (LCNF) and their composite films. Cellulose, 2017, 24, 2455-2468.	2.4	60
39	Dry-Spun Neat Cellulose Nanofibril Filaments: Influence of Drying Temperature and Nanofibril Structure on Filament Properties. Polymers, 2017, 9, 392.	2.0	31
40	Cellulose Nanomaterials as Binders: Laminate and Particulate Systems. Journal of Renewable Materials, 2016, 4, 365-376.	1.1	52
41	Thermal stability of cellulose nanomaterials and their composites with polyvinyl alcohol (PVA). Journal of Thermal Analysis and Calorimetry, 2016, 126, 1371-1386.	2.0	62
42	Production and Characterization of Laminates of Paper and Cellulose Nanofibrils. ACS Applied Materials & Interfaces, 2016, 8, 25520-25528.	4.0	30
43	Maleic anhydride polypropylene modified cellulose nanofibril polypropylene nanocomposites with enhanced impact strength. Polymer Composites, 2016, 37, 782-793.	2.3	58
44	Dynamic mechanical thermal analysis (DMTA) of cellulose nanofibril/nanoclay/pMDI nanocomposites. Composites Part B: Engineering, 2016, 90, 126-132.	5.9	44
45	Drying cellulose-based materials containing copper nanoparticles. Cellulose, 2015, 22, 2665-2681.	2.4	17
46	Characterization of mechanical and morphological properties of cellulose reinforced polyamide 6 composites. Cellulose, 2015, 22, 3199-3215.	2.4	51
47	Biosynthesis of bacterial cellulose in the presence of different nanoparticles to create novel hybrid materials. Carbohydrate Polymers, 2015, 129, 148-155.	5.1	44
48	Preparation and characterization of transparent PMMAâ€“cellulose-based nanocomposites. Carbohydrate Polymers, 2015, 127, 381-389.	5.1	105
49	Woodâ€“Plastic Composite Technology. Current Forestry Reports, 2015, 1, 139-150.	3.4	116
50	Surface energy of cellulosic materials: The effect of particle morphology, particle size, and hydroxyl number. Tappi Journal, 2015, 14, 565-576.	0.2	5
51	Adhesion Theories in Wood Adhesive Bonding. Reviews of Adhesion and Adhesives, 2014, 2, 127-172.	3.3	35
52	Thermal analysis and crystallinity study of cellulose nanofibril-filled polypropylene composites. Journal of Thermal Analysis and Calorimetry, 2013, 113, 673-682.	2.0	36
53	Influence of drying method on the material properties of nanocellulose I: thermostability and crystallinity. Cellulose, 2013, 20, 2379-2392.	2.4	289
54	Influence of drying method on the surface energy of cellulose nanofibrils determined by inverse gas chromatography. Journal of Colloid and Interface Science, 2013, 405, 85-95.	5.0	81

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55	Morphological properties of impact fracture surfaces and essential work of fracture analysis of cellulose nanofibrilâ€filled polypropylene composites. Journal of Applied Polymer Science, 2013, 128, 3064-3076.	1.3	16
56	Polymer Nanocomposites from the Surface Energy Perspective. Reviews of Adhesion and Adhesives, 2013, 1, 175-215.	3.3	9
57	Southern pine impregnated with silicate solution containing cellulose nanofibrils. Holzforschung, 2012, 66, 735-737.	0.9	3
58	An Experimental Method for Three-Dimensional Dynamic Contact Angle Analysis. Journal of Adhesion Science and Technology, 2012, 26, 2199-2215.	1.4	7
59	Drying cellulose nanofibrils: in search of a suitable method. Cellulose, 2012, 19, 91-102.	2.4	366
60	Dispersion evaluation of microcrystalline cellulose/cellulose nanofibril-filled polypropylene composites using thermogravimetric analysis. Journal of Thermal Analysis and Calorimetry, 2011, 103, 1007-1015.	2.0	22
61	Production and Characterization of Cellulose Nanofibers from Wood Pulp. Journal of Adhesion Science and Technology, 2011, 25, 709-721.	1.4	66
62	Effect of extractives and storage on the pelletizing process of sawdust. Fuel, 2010, 89, 94-98.	3.4	78
63	Forced Air Plasma Treatment (FAPT) of Hybrid Wood Plastic Composite (WPC)â€“Fiber Reinforced Plastic (FRP) Surfaces. Composite Interfaces, 2009, 16, 847-867.	1.3	19
64	Viscoelastic and thermal analysis of lignocellulosic material filled polypropylene bio-composites. Journal of Thermal Analysis and Calorimetry, 2009, 98, 553-558.	2.0	27
65	Inverse Gas Chromatography for Determining the Surface Free Energy and Acid-Base Chemical Characteristics of a Water Extracted Hardwood (Acer rubrum). Journal of Wood Chemistry and Technology, 2009, 29, 11-23.	0.9	9
66	Dynamic mechanical properties of extruded nylonâ€“wood composites. Polymer Composites, 2008, 29, 372-379.	2.3	40
67	Adhesion and Surface Issues in Cellulose and Nanocellulose. Journal of Adhesion Science and Technology, 2008, 22, 545-567.	1.4	434
68	Characterizing the mechanism of improved adhesion of modified wood plastic composite (WPC) surfaces. Journal of Adhesion Science and Technology, 2007, 21, 1097-1116.	1.4	28
69	Cellulose fiber/polymer adhesion: effects of fiber/matrix interfacial chemistry on the micromechanics of the interphase. Journal of Adhesion Science and Technology, 2006, 20, 1649-1668.	1.4	53
70	X-ray photoelectron spectroscopy of wood treated with hydroxymethylated resorcinol. International Journal of Adhesion and Adhesives, 2006, 26, 550-554.	1.4	8
71	Surface treatments of woodâ€“plastic composites (WPCs) to improve adhesion. Journal of Adhesion Science and Technology, 2006, 20, 1873-1887.	1.4	43
72	Fundamental aspects of wood as a component of thermoplastic composites. Journal of Vinyl and Additive Technology, 2003, 9, 96-104.	1.8	81

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73	Wood Composite Protection. ACS Symposium Series, 2003, , 399-419.	0.5	24
74	Acidâ€“base characterization of wood and selected thermoplastics. Journal of Adhesion Science and Technology, 2002, 16, 1625-1649.	1.4	31
75	Dynamic Wettability of Different Machined Wood Surfaces. Journal of Adhesion, 2001, 76, 185-200.	1.8	40
76	A new model to determine contact angles on swelling polymer particles by the column wicking method. Journal of Adhesion Science and Technology, 2000, 14, 301-314.	1.4	25
77	Factors influencing contact angle measurements on wood particles by column wicking. Journal of Adhesion Science and Technology, 1999, 13, 1363-1374.	1.4	46
78	Surface properties of silicone-containing block-graft copolymer/polystyrene systems. Journal of Adhesion Science and Technology, 1999, 13, 1017-1027.	1.4	7
79	Surface energetics and acid-base character of sized and unsized paper handsheets. Journal of Adhesion Science and Technology, 1995, 9, 1403-1411.	1.4	16
80	Dynamic wettability of wood. Langmuir, 1991, 7, 2498-2502.	1.6	118
81	Bonding Surface Activated Hardwood Flakeboard with Phenol-Formaldehyde Resin. Holzforschung, 1991, 45, 215-222.	0.9	12
82	Bonding Surface Activated Hardwood Flakeboard with Phenol-formaldehyde Resin. I. Physical and Mechanical Properties. Holzforschung, 1990, 44, 201-206.	0.9	6