

# Douglas J Gardner

## List of Publications by Year in descending order

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82  
papers

4,733  
citations

94269

37  
h-index

102304

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 Grafting 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 Wood-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(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. <i>Rapid Prototyping Journal</i> , 2020, 26, 993-1003.	1.6	6
20	Nanocellulose Dewatering and Drying: Current State and Future Perspectives. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 9601-9615.	3.2	79
21	Cellulose nanofibrils versus cellulose nanocrystals: Comparison of performance in flexible multilayer films for packaging applications. <i>Food Packaging and Shelf Life</i> , 2020, 23, 100464.	3.3	66
22	Dewatering Behavior of a Wood-Cellulose Nanofibril Particulate System. <i>Scientific Reports</i> , 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. <i>Additive Manufacturing</i> , 2019, 30, 100922.	1.7	117
24	Electrospinning of Cellulose Nanocrystal-Filled Poly (Vinyl Alcohol) Solutions: Material Property Assessment. <i>Nanomaterials</i> , 2019, 9, 805.	1.9	24
25	Fully Bio-Based Hybrid Composites Made of Wood, Fungal Mycelium and Cellulose Nanofibrils. <i>Scientific Reports</i> , 2019, 9, 3766.	1.6	69
26	Thermal properties of spray-dried cellulose nanofibril-reinforced polypropylene composites from extrusion-based additive manufacturing. <i>Journal of Thermal Analysis and Calorimetry</i> , 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. <i>Progress in Additive Manufacturing</i> , 2018, 3, 165-171.	2.5	30
28	Reinforcement of natural fiber yarns by cellulose nanomaterials: A multi-scale study. <i>Industrial Crops and Products</i> , 2018, 111, 471-481.	2.5	27
29	Moisture and Oxygen Barrier Properties of Cellulose Nanomaterial-Based Films. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 49-70.	3.2	354
30	Mechanisms contributing to mechanical property changes in composites of polypropylene reinforced with spray-dried cellulose nanofibrils. <i>Cellulose</i> , 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. <i>Cellulose</i> , 2018, 25, 6305-6317.	2.4	25
32	Effect of fused deposition modeling process parameters on the mechanical properties of a filled polypropylene. <i>Progress in Additive Manufacturing</i> , 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. <i>Journal of Composites Science</i> , 2018, 2, 7.	1.4	35
34	Closed-loop recycling of polyamide12 powder from selective laser sintering into sustainable composites. <i>Journal of Cleaner Production</i> , 2018, 195, 765-772.	4.6	24
35	Cellulose nanofibril-reinforced polypropylene composites for material extrusion: Rheological properties. <i>Polymer Engineering and Science</i> , 2018, 58, 793-801.	1.5	39
36	Effect of fused layer modeling (FLM) processing parameters on impact strength of cellular polypropylene. <i>Polymer</i> , 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). <i>Polymer</i> , 2017, 114, 242-248.	1.8	204
38	Preparation and property assessment of neat lignocellulose nanofibrils (LCNF) and their composite films. <i>Cellulose</i> , 2017, 24, 2455-2468.	2.4	60
39	Dry-Spun Neat Cellulose Nanofibril Filaments: Influence of Drying Temperature and Nanofibril Structure on Filament Properties. <i>Polymers</i> , 2017, 9, 392.	2.0	31
40	Cellulose Nanomaterials as Binders: Laminate and Particulate Systems. <i>Journal of Renewable Materials</i> , 2016, 4, 365-376.	1.1	52
41	Thermal stability of cellulose nanomaterials and their composites with polyvinyl alcohol (PVA). <i>Journal of Thermal Analysis and Calorimetry</i> , 2016, 126, 1371-1386.	2.0	62
42	Production and Characterization of Laminates of Paper and Cellulose Nanofibrils. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 25520-25528.	4.0	30
43	Maleic anhydride polypropylene modified cellulose nanofibril polypropylene nanocomposites with enhanced impact strength. <i>Polymer Composites</i> , 2016, 37, 782-793.	2.3	58
44	Dynamic mechanical thermal analysis (DMTA) of cellulose nanofibril/nanoclay/pMDI nanocomposites. <i>Composites Part B: Engineering</i> , 2016, 90, 126-132.	5.9	44
45	Drying cellulose-based materials containing copper nanoparticles. <i>Cellulose</i> , 2015, 22, 2665-2681.	2.4	17
46	Characterization of mechanical and morphological properties of cellulose reinforced polyamide 6 composites. <i>Cellulose</i> , 2015, 22, 3199-3215.	2.4	51
47	Biosynthesis of bacterial cellulose in the presence of different nanoparticles to create novel hybrid materials. <i>Carbohydrate Polymers</i> , 2015, 129, 148-155.	5.1	44
48	Preparation and characterization of transparent PMMA/cellulose-based nanocomposites. <i>Carbohydrate Polymers</i> , 2015, 127, 381-389.	5.1	105
49	Wood/Plastic Composite Technology. <i>Current Forestry Reports</i> , 2015, 1, 139-150.	3.4	116
50	Surface energy of cellulosic materials: The effect of particle morphology, particle size, and hydroxyl number. <i>Tappi Journal</i> , 2015, 14, 565-576.	0.2	5
51	Adhesion Theories in Wood Adhesive Bonding. <i>Reviews of Adhesion and Adhesives</i> , 2014, 2, 127-172.	3.3	35
52	Thermal analysis and crystallinity study of cellulose nanofibril-filled polypropylene composites. <i>Journal of Thermal Analysis and Calorimetry</i> , 2013, 113, 673-682.	2.0	36
53	Influence of drying method on the material properties of nanocellulose I: thermostability and crystallinity. <i>Cellulose</i> , 2013, 20, 2379-2392.	2.4	289
54	Influence of drying method on the surface energy of cellulose nanofibrils determined by inverse gas chromatography. <i>Journal of Colloid and Interface Science</i> , 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 nanofibril-filled polypropylene composites. <i>Journal of Applied Polymer Science</i> , 2013, 128, 3064-3076.	1.3	16
56	Polymer Nanocomposites from the Surface Energy Perspective. <i>Reviews of Adhesion and Adhesives</i> , 2013, 1, 175-215.	3.3	9
57	Southern pine impregnated with silicate solution containing cellulose nanofibrils. <i>Holzforschung</i> , 2012, 66, 735-737.	0.9	3
58	An Experimental Method for Three-Dimensional Dynamic Contact Angle Analysis. <i>Journal of Adhesion Science and Technology</i> , 2012, 26, 2199-2215.	1.4	7
59	Drying cellulose nanofibrils: in search of a suitable method. <i>Cellulose</i> , 2012, 19, 91-102.	2.4	366
60	Dispersion evaluation of microcrystalline cellulose/cellulose nanofibril-filled polypropylene composites using thermogravimetric analysis. <i>Journal of Thermal Analysis and Calorimetry</i> , 2011, 103, 1007-1015.	2.0	22
61	Production and Characterization of Cellulose Nanofibers from Wood Pulp. <i>Journal of Adhesion Science and Technology</i> , 2011, 25, 709-721.	1.4	66
62	Effect of extractives and storage on the pelletizing process of sawdust. <i>Fuel</i> , 2010, 89, 94-98.	3.4	78
63	Forced Air Plasma Treatment (FAPT) of Hybrid Wood Plastic Composite (WPC) Fiber Reinforced Plastic (FRP) Surfaces. <i>Composite Interfaces</i> , 2009, 16, 847-867.	1.3	19
64	Viscoelastic and thermal analysis of lignocellulosic material filled polypropylene bio-composites. <i>Journal of Thermal Analysis and Calorimetry</i> , 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 ( <i>Acer rubrum</i> ). <i>Journal of Wood Chemistry and Technology</i> , 2009, 29, 11-23.	0.9	9
66	Dynamic mechanical properties of extruded nylon-wood composites. <i>Polymer Composites</i> , 2008, 29, 372-379.	2.3	40
67	Adhesion and Surface Issues in Cellulose and Nanocellulose. <i>Journal of Adhesion Science and Technology</i> , 2008, 22, 545-567.	1.4	434
68	Characterizing the mechanism of improved adhesion of modified wood plastic composite (WPC) surfaces. <i>Journal of Adhesion Science and Technology</i> , 2007, 21, 1097-1116.	1.4	28
69	Cellulose fiber/polymer adhesion: effects of fiber/matrix interfacial chemistry on the micromechanics of the interphase. <i>Journal of Adhesion Science and Technology</i> , 2006, 20, 1649-1668.	1.4	53
70	X-ray photoelectron spectroscopy of wood treated with hydroxymethylated resorcinol. <i>International Journal of Adhesion and Adhesives</i> , 2006, 26, 550-554.	1.4	8
71	Surface treatments of wood-plastic composites (WPCs) to improve adhesion. <i>Journal of Adhesion Science and Technology</i> , 2006, 20, 1873-1887.	1.4	43
72	Fundamental aspects of wood as a component of thermoplastic composites. <i>Journal of Vinyl and Additive Technology</i> , 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	Acid-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