

Mehdi Tajvidi

List of Publications by Year in descending order

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103
papers

3,904
citations

117453

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h-index

143772

57
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105
all docs

105
docs citations

105
times ranked

3819
citing authors

#	ARTICLE	IF	CITATIONS
1	Moisture and Oxygen Barrier Properties of Cellulose Nanomaterial-Based Films. ACS Sustainable Chemistry and Engineering, 2018, 6, 49-70.	3.2	354
2	Cellulose Nanomaterialsâ€™ Binding Properties and Applications: A Review. Molecules, 2018, 23, 2684.	1.7	267
3	Effect of natural fibers on thermal and mechanical properties of natural fiber polypropylene composites studied by dynamic mechanical analysis. Journal of Applied Polymer Science, 2006, 101, 4341-4349.	1.3	193
4	Mechanical properties of composites from sawdust and recycled plastics. Journal of Applied Polymer Science, 2006, 100, 3641-3645.	1.3	142
5	Time-temperature superposition principle applied to a kenaf-fiber/high-density polyethylene composite. Journal of Applied Polymer Science, 2005, 97, 1995-2004.	1.3	114
6	Alignment of Cellulose Nanofibers: Harnessing Nanoscale Properties to Macroscale Benefits. ACS Nano, 2021, 15, 3646-3673.	7.3	108
7	Water uptake and mechanical characteristics of natural filler-polypropylene composites. Journal of Applied Polymer Science, 2003, 88, 941-946.	1.3	104
8	Tensile properties of wood flour/kenaf fiber polypropylene hybrid composites. Journal of Applied Polymer Science, 2007, 105, 3054-3059.	1.3	101
9	Mechanical properties of wood plastic composite panels made from waste fiberboard and particleboard. Polymer Composites, 2008, 29, 606-610.	2.3	94
10	Long-term water uptake behavior of natural fiber/polypropylene composites. Journal of Applied Polymer Science, 2006, 99, 2199-2203.	1.3	78
11	Water Absorption Behavior of Composites from Sawdust and Recycled Plastics. Journal of Reinforced Plastics and Composites, 2007, 26, 341-348.	1.6	75
12	Fully Bio-Based Hybrid Composites Made of Wood, Fungal Mycelium and Cellulose Nanofibrils. Scientific Reports, 2019, 9, 3766.	1.6	69
13	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
14	Paper-Based Oil Barrier Packaging using Lignin-Containing Cellulose Nanofibrils. Molecules, 2020, 25, 1344.	1.7	65
15	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
16	Recycling of natural fiber composites: Challenges and opportunities. Resources, Conservation and Recycling, 2022, 177, 105962.	5.3	62
17	Isolation of lignocellulose nanofibrils (LCNF) and application as adhesive replacement in wood composites: example of fiberboard. Cellulose, 2017, 24, 3037-3050.	2.4	60
18	Preparation and property assessment of neat lignocellulose nanofibrils (LCNF) and their composite films. Cellulose, 2017, 24, 2455-2468.	2.4	60

#	ARTICLE	IF	CITATIONS
19	Utilization of Cellulose Nanofibrils as a Binder for Particleboard Manufacture. <i>BioResources</i> , 2017, 12, .	0.5	59
20	High-Strength Polylactic Acid (PLA) Biocomposites Reinforced by Epoxy-Modified Pine Fibers. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 13236-13247.	3.2	59
21	Evaluation of the incorporation of lignocellulose nanofibrils as sustainable adhesive replacement in medium density fiberboards. <i>Industrial Crops and Products</i> , 2017, 109, 27-36.	2.5	58
22	Cellulose Nanomaterials as Binders: Laminate and Particulate Systems. <i>Journal of Renewable Materials</i> , 2016, 4, 365-376.	1.1	52
23	Mechanical and Physical Properties of Wood-Plastic Composite Panels. <i>Journal of Reinforced Plastics and Composites</i> , 2010, 29, 310-319.	1.6	51
24	Thermal Degradation of Natural Fiber-reinforced Polypropylene Composites. <i>Journal of Thermoplastic Composite Materials</i> , 2010, 23, 281-298.	2.6	48
25	Static and dynamic mechanical properties of a kenaf fiber-wood flour/polypropylene hybrid composite. <i>Journal of Applied Polymer Science</i> , 2005, 98, 665-672.	1.3	47
26	Sustainable Barrier System via Self-Assembly of Colloidal Montmorillonite and Cross-linking Resins on Nanocellulose Interfaces. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1604-1615.	4.0	46
27	Mechanical Performance of Hemp Fiber Polypropylene Composites at Different Operating Temperatures. <i>Journal of Reinforced Plastics and Composites</i> , 2010, 29, 664-674.	1.6	45
28	Application of cellulose nanofibril (CNF) as coating on paperboard at moderate solids content and high coating speed using blade coater. <i>Progress in Organic Coatings</i> , 2018, 122, 207-218.	1.9	44
29	Long-term water uptake behavior of lignocellulosic-high density polyethylene composites. <i>Journal of Applied Polymer Science</i> , 2006, 102, 3907-3911.	1.3	43
30	Structural performance of hybrid SPFs-LSL cross-laminated timber panels. <i>Construction and Building Materials</i> , 2017, 149, 156-163.	3.2	43
31	Towards industrial-scale production of cellulose nanocomposites using melt processing: A critical review on structure-processing-property relationships. <i>Composites Part B: Engineering</i> , 2020, 201, 108297.	5.9	41
32	Effects of bentonite on physical, mechanical and barrier properties of cellulose nanofibril hybrid films for packaging applications. <i>Cellulose</i> , 2019, 26, 5363-5379.	2.4	38
33	Tunable Self-Assembly of Cellulose Nanowhiskers and Polyvinyl Alcohol Chains Induced by Surface Tension Torque. <i>Biomacromolecules</i> , 2014, 15, 60-65.	2.6	35
34	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
35	Cellulose and lignocellulose nanofibril suspensions and films: A comparison. <i>Carbohydrate Polymers</i> , 2020, 250, 117011.	5.1	34
36	Functionality of Surface Mycelium Interfaces in Wood Bonding. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 57431-57440.	4.0	32

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37	Effect of compatibilizer on the natural durability of wood flour/high density polyethylene composites against rainbow fungus (<i>Coriolus versicolor</i>). <i>Polymer Composites</i> , 2007, 28, 273-277.	2.3	31
38	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
39	Effect of bark flour content on the hygroscopic characteristics of wood-polypropylene composites. <i>Journal of Applied Polymer Science</i> , 2008, 110, 3116-3120.	1.3	30
40	Effect of Thermomechanical Degradation of Polypropylene on Mechanical Properties of Wood-Polypropylene Composites. <i>Journal of Composite Materials</i> , 2009, 43, 2543-2554.	1.2	30
41	Effect of fiber content and type, compatibilizer, and heating rate on thermogravimetric properties of natural fiber high density polyethylene composites. <i>Polymer Composites</i> , 2009, 30, 1226-1233.	2.3	30
42	Production and Characterization of Laminates of Paper and Cellulose Nanofibrils. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 25520-25528.	4.0	30
43	Impact strength improvement of wood flour-recycled polypropylene composites. <i>Journal of Applied Polymer Science</i> , 2012, 124, 1074-1080.	1.3	29
44	Recycled Natural Fiber Polypropylene Composites: Water Absorption/Desorption Kinetics and Dimensional Stability. <i>Journal of Polymers and the Environment</i> , 2010, 18, 500-509.	2.4	28
45	Effects of Water Absorption on Creep Behavior of Wood-Plastic Composites. <i>Journal of Composite Materials</i> , 2008, 42, 993-1002.	1.2	27
46	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
47	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
48	Strong Highly Anisotropic Magnetocellulose Nanocomposite Films Made by Chemical Peeling and In Situ Welding at the Interface Using an Ionic Liquid. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 8165-8172.	4.0	24
49	Dewatering Behavior of a Wood-Cellulose Nanofibril Particulate System. <i>Scientific Reports</i> , 2019, 9, 14584.	1.6	24
50	Hygroscopic thickness swelling rate of composites from sawdust and recycled plastics. <i>Wood Science and Technology</i> , 2008, 42, 161-168.	1.4	23
51	Natural Durability of a Bagasse Fiber/ Polypropylene Composite Exposed to Rainbow Fungus (<i>Coriolus</i>) Tj ETQq1 1 0,784314,rgBT /Over	1.6	23
52	Effect of the delignification of wood fibers on the mechanical properties of wood fiber-polypropylene composites. <i>Journal of Applied Polymer Science</i> , 2006, 102, 4759-4763.	1.3	22
53	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
54	Effect of Cellulose Fiber Reinforcement on the Temperature Dependent Mechanical Performance of Nylon 6. <i>Journal of Reinforced Plastics and Composites</i> , 2009, 28, 2781-2790.	1.6	21

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55	All-Natural Smart Mycelium Surface with Tunable Wettability. <i>ACS Applied Bio Materials</i> , 2021, 4, 1015-1022.	2.3	21
56	Effects of Density, Cellulose Nanofibrils Addition Ratio, Pressing Method, and Particle Size on the Bending Properties of Wet-formed Particleboard. <i>BioResources</i> , 2017, 12, .	0.5	21
57	Effect of Particle Size, Fiber Content and Compatibilizer on the Long-term Water Absorption and Thickness Swelling Behavior of Reed Flour/Polypropylene Composites. <i>Journal of Reinforced Plastics and Composites</i> , 2009, 28, 2341-2351.	1.6	20
58	Flexible polyurethane foams reinforced with organic and inorganic nanofillers. <i>Journal of Applied Polymer Science</i> , 2021, 138, 49983.	1.3	20
59	Effect of chemical reagents on the mechanical properties of natural fiber polypropylene composites. <i>Polymer Composites</i> , 2006, 27, 563-569.	2.3	19
60	Printing Birefringent Figures by Surface Tension-Directed Self-Assembly of a Cellulose Nanocrystal/Polymer Ink Components. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1538-1545.	4.0	18
61	Impacts of wood preservative treatments on some physico-mechanical properties of wood flour/high density polyethylene composites. <i>Construction and Building Materials</i> , 2012, 35, 246-250.	3.2	17
62	Multi-layer oil-resistant food serving containers made using cellulose nanofiber coated wood flour composites. <i>Carbohydrate Polymers</i> , 2021, 267, 118221.	5.1	17
63	Physical and Mechanical Properties of Wood-Plastic Composites Made with Microfibrillar Blends of LDPE, HDPE and PET. <i>Fibers and Polymers</i> , 2019, 20, 2156-2165.	1.1	16
64	Characterization and properties of hybrid foams from nanocellulose and kaolin-microfibrillated cellulose composite. <i>Scientific Reports</i> , 2020, 10, 17459.	1.6	16
65	Enhancing the Oxygen Barrier Properties of Nanocellulose at High Humidity: Numerical and Experimental Assessment. <i>Sustainable Chemistry</i> , 2020, 1, 198-208.	2.2	16
66	Tuning physical, mechanical and barrier properties of cellulose nanofibril films through film drying techniques coupled with thermal compression. <i>Cellulose</i> , 2021, 28, 11345-11366.	2.4	16
67	Structure-Property Relationships in Hybrid Cellulose Nanofibrils/Nafion-Based Ionic Polymer-Metal Composites. <i>Materials</i> , 2019, 12, 1269.	1.3	15
68	Fungal and enzymatic pretreatments in hot-pressed lignocellulosic bio-composites: A critical review. <i>Journal of Cleaner Production</i> , 2022, 353, 131659.	4.6	15
69	Production and mechanical characterization of free-standing pigmented paper coating layers with latex and starch as binder. <i>Progress in Organic Coatings</i> , 2018, 123, 138-145.	1.9	14
70	Experimental investigation of the hygrothermal creep strain of woodâ€‘plastic composite lumber made from thermally modified wood. <i>Journal of Thermoplastic Composite Materials</i> , 2020, 33, 1248-1268.	2.6	14
71	Highly Efficient Iron Oxide Nanoparticles Immobilized on Cellulose Nanofibril Aerogels for Arsenic Removal from Water. <i>Nanomaterials</i> , 2021, 11, 2818.	1.9	14
72	Transparent Multifunctional Cellulose Nanocrystal Films Prepared Using Trivalent Metal Ion Exchange for Food Packaging. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 9419-9430.	3.2	14

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73	Physical Properties of Novel Layered Composites of Wood Flour and PVC. <i>Journal of Reinforced Plastics and Composites</i> , 2008, 27, 1759-1765.	1.6	13
74	Effects of reprocessing on the hygroscopic behavior of natural fiber high-density polyethylene composites. <i>Journal of Applied Polymer Science</i> , 2011, 122, 1258-1267.	1.3	13
75	One-dimensional core-shell cellulose-akaganeite hybrid nanocrystals: synthesis, characterization, and magnetic field induced self-assembly. <i>RSC Advances</i> , 2014, 4, 52542-52549.	1.7	13
76	Birefringence-based orientation mapping of cellulose nanofibrils in thin films. <i>Cellulose</i> , 2020, 27, 677-692.	2.4	13
77	Improving fire retardancy of unheated and heat-treated fir wood by nano-sepiolite. <i>European Journal of Wood and Wood Products</i> , 2021, 79, 841-849.	1.3	13
78	Evaluation of Time Dependent Behavior of a Wood Flour/High Density Polyethylene Composite. <i>Journal of Reinforced Plastics and Composites</i> , 2010, 29, 132-143.	1.6	12
79	The synergy between cellulose nanofibrils and calcium carbonate in a hybrid composite system. <i>Cellulose</i> , 2020, 27, 3773-3787.	2.4	12
80	Comprehensive Insight into Foams Made of Thermomechanical Pulp Fibers and Cellulose Nanofibrils via Microwave Radiation. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 10113-10122.	3.2	12
81	Laminated Wallboard Panels Made with Cellulose Nanofibrils as a Binder: Production and Properties. <i>Materials</i> , 2020, 13, 1303.	1.3	10
82	Bending moment resistance of corner joints constructed with spline under diagonal tension and compression. <i>Journal of Forestry Research</i> , 2012, 23, 481-490.	1.7	9
83	Effects of temperature on the mechanical properties of beech (<i>Fagus orientalis</i> Lipsky) and lime (<i>Tilia begonifolia</i>) wood. <i>Wood Material Science and Engineering</i> , 2009, 4, 147-153.	1.1	8
84	Physical and Mechanical Properties of a Highly Filled Old Corrugated Container (OCC) Fiber/Polyethylene Composite. <i>Journal of Reinforced Plastics and Composites</i> , 2010, 29, 1166-1172.	1.6	8
85	Influence of Strain Rate on the Flexural Properties of a Wood Flour/HDPE Composite. <i>Journal of Reinforced Plastics and Composites</i> , 2008, 27, 1701-1708.	1.6	7
86	Effects of Accelerated Freeze-Thaw Cycling on Physical and Mechanical Properties of Wood Flour/PVC Composites. <i>Journal of Reinforced Plastics and Composites</i> , 2009, 28, 1841-1846.	1.6	7
87	Viscoelastic mapping of spruce-polyurethane bond line area using AM-FM atomic force microscopy. <i>International Journal of Adhesion and Adhesives</i> , 2017, 79, 59-66.	1.4	7
88	Recyclable grease-proof cellulose nanocomposites with enhanced water resistance for food serving applications. <i>Cellulose</i> , 2022, 29, 5623-5643.	2.4	7
89	Evaluation of the adhesion performance of latex-starch mixtures to calcium carbonate surfaces. <i>Nordic Pulp and Paper Research Journal</i> , 2019, 34, 318-325.	0.3	6
90	Mechanical and thermal behavior of cellulose nanocrystals-incorporated Acrodur® sustainable hybrid composites for automotive applications. <i>Journal of Composite Materials</i> , 2020, 54, 3159-3169.	1.2	6

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91	Modeling Microwave Heating and Drying of Lignocellulosic Foams through Coupled Electromagnetic and Heat Transfer Analysis. <i>Processes</i> , 2021, 9, 2001.	1.3	6
92	Bending moment resistance of dowel corner joints in case-type furniture under diagonal compression load. <i>Journal of Forestry Research</i> , 2014, 25, 981-984.	1.7	5
93	Woody material structural degradation through decomposition on the forest floor. <i>Canadian Journal of Forest Research</i> , 2018, 48, 111-115.	0.8	5
94	Effects of fungal biodegradation on structure-property relationships of medium density fibre board and hybrid polypropylene composite made from sugar-cane residue. <i>International Wood Products Journal</i> , 2021, 12, 152-163.	0.6	5
95	Cracking at the fold in double layer coated paper: the influence of latex and starch composition. <i>Tappi Journal</i> , 2019, 18, 93-99.	0.2	5
96	High-temperature creep behavior of wheat straw isotactic/impact-modified polypropylene composites. <i>Journal of Thermoplastic Composite Materials</i> , 2015, 28, 1406-1422.	2.6	4
97	Modeling the hygrothermal creep behavior of wood plastic composite (WPC) lumber made from thermally modified wood. <i>Journal of Thermoplastic Composite Materials</i> , 2020, 33, 1109-1124.	2.6	4
98	Exploration of membrane-based dehumidification system to improve the energy efficiency of kiln drying processes: Part 1 - Factors that affect moisture removal efficiency. <i>Wood and Fiber Science</i> , 2020, 52, 313-325.	0.2	4
99	A feasibility study of using two-component polyurethane adhesive in constructing wooden structures. <i>Journal of Forestry Research</i> , 2014, 25, 477-482.	1.7	3
100	Contact-dewatered cellulose nanomaterials for reinforced biopolymer composites. <i>Materials Today Communications</i> , 2022, 31, 103443.	0.9	2
101	Thermal transitions and temperature dependent mechanical behavior of wheat straw/talc isotactic/impact modified polypropylene composites. <i>Journal of Reinforced Plastics and Composites</i> , 2013, 32, 1430-1443.	1.6	1
102	Numerical Simulation of the Water Vapor Separation of a Moisture-Selective Hollow-Fiber Membrane for the Application in Wood Drying Processes. <i>Membranes</i> , 2021, 11, 593.	1.4	1
103	Step aside, aluminum honeycomb. <i>Science</i> , 2021, 374, 400-401.	6.0	0