Warren J Batchelor

List of Publications by Year
in descending order

108	2,337	201575	265120
papers	citations	27 h-index	42 g-index

110	110	110	2339
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Gelation mechanism of cellulose nanofibre gels: A colloids and interfacial perspective. Journal of Colloid and Interface Science, 2018, 509, 39-46.	5.0	141
2	Estimation of cellulose nanofibre aspect ratio from measurements of fibre suspension gel point. Cellulose, 2013, 20, 1885-1896.	2.4	133
3	Pickering Emulsions Electrostatically Stabilized by Cellulose Nanocrystals. Frontiers in Chemistry, 2018, 6, 409.	1.8	97
4	Effect of cellulose nanofiber dimensions on sheet forming through filtration. Cellulose, 2012, 19, 561-574.	2.4	91
5	Cellulose nanofibre composite membranes â€“ Biodegradable and recyclable UF membranes. Chemical Engineering Journal, 2015, 265, 138-146.	6.6	71
6	Cellulose nanofibre aerogel filter with tuneable pore structure for oil/water separation and recovery. RSC Advances, 2016, 6, 21435-21438.	1.7	62
7	Effect of refining and homogenization on nanocellulose fiber development, sheet strength and energy consumption. Cellulose, 2019, 26, 4767-4786.	2.4	60
8	Water Resistant Cellulose â€“ Titanium Dioxide Composites for Photocatalysis. Scientific Reports, 2018, 8, 2306.	1.6	59
9	Rapid preparation of cellulose nanofibre sheet. Cellulose, 2013, 20, 211-215.	2.4	58
10	Rapid preparation of smooth nanocellulose films using spray coating. Cellulose, 2017, 24, 2669-2676.	2.4	48
11	Gel point as a measure of cellulose nanofibre quality and feedstock development with mechanical energy. Cellulose, 2016, 23, 3051-3064.	2.4	47
12	A study on growth and pyrolysis characteristics of microalgae using Thermogravimetric Analysis-Infrared Spectroscopy and synchrotron Fourier Transform Infrared Spectroscopy. Bioresource Technology, 2017, 229, 1-10.	4.8	45
13	Effect of polyelectrolyte morphology and adsorption on the mechanism of nanocellulose flocculation. Journal of Colloid and Interface Science, 2016, 481, 158-167.	5.0	44
14	Nanocellulose-montmorillonite composites of low water vapour permeability. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 540, 233-241.	2.3	43
15	ZnO/Cellulose Nanofiber Composites for Sustainable Sunlight-Driven Dye Degradation. ACS Applied Nano Materials, 2020, 3, 10284-10295.	2.4	43
16	Producing nanofibres from carrots with a chemical-free process. Carbohydrate Polymers, 2018, 184, 307-314.	5.1	40
17	Carboxylated nanocellulose foams as superabsorbents. Journal of Colloid and Interface Science, 2019, 538, 433-439.	5.0	40
18	Effect of cationic polyacrylamide on the processing and properties of nanocellulose films. Journal of Colloid and Interface Science, 2015, 447, 113-119.	5.0	38

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19	Inter-fibre contacts in random fibrous materials: experimental verification of theoretical dependence on porosity and fibre width. Journal of Materials Science, 2006, 41, 8377-8381.	1.7	36
20	Bismuth phosphinate incorporated nanocellulose sheets with antimicrobial and barrier properties for packaging applications. Journal of Cleaner Production, 2020, 246, 119016.	4.6	36
21	Effect of tethered and free microfibrillated cellulose (MFC) on the properties of paper composites. Cellulose, 2013, 20, 1925-1935.	2.4	35
22	Flexible spray coating process for smooth nanocellulose film production. Cellulose, 2018, 25, 1725-1741.	2.4	35
23	Nanocellulose films as air and water vapour barriers: A recyclable and biodegradable alternative to polyolefin packaging. Sustainable Materials and Technologies, 2019, 22, e00115.	1.7	34
24	Effects of fibre dimension and charge density on nanocellulose gels. Journal of Colloid and Interface Science, 2018, 525, 119-125.	5.0	33
25	Cellulose nanofibers from recycled and virgin wood pulp: A comparative study of fiber development. Carbohydrate Polymers, 2020, 234, 115900.	5.1	33
26	Engineering cellulose fibre inorganic composites for depth filtration and adsorption. Separation and Purification Technology, 2018, 203, 209-216.	3.9	32
27	Sustainable production process of mechanically prepared nanocellulose from hardwood and softwood: A comparative investigation of refining energy consumption at laboratory and pilot scale. Industrial Crops and Products, 2021, 171, 113868.	2.5	28
28	Characterizing highly fibrillated nanocellulose by modifying the gel point methodology. Carbohydrate Polymers, 2020, 227, 115340.	5.1	27
29	Particle size distributions for cellulose nanocrystals measured by atomic force microscopy: an interlaboratory comparison. Cellulose, 2021, 28, 1387-1403.	2.4	27
30	Bismuth Phosphinates in Biâ€Nanocellulose Composites and their Efficacy towards Multiâ€Drug Resistant Bacteria. Chemistry - A European Journal, 2018, 24, 12938-12949.	1.7	24
31	Water interaction in paper cellulose fibres as investigated by NMR pulsed field gradient. Carbohydrate Polymers, 2012, 87, 361-367.	5.1	23
32	Building Dual-Scale Roughness Using Inorganic Pigments for Fabrication of Superhydrophobic Paper. Industrial & Engineering Chemistry Research, 2017, 56, 3618-3628.	1.8	23
33	ASSUREDâ€compliant pointâ€ofâ€care diagnostics for the detection of human viral infections. Reviews in Medical Virology, 2022, 32, e2263.	3.9	23
34	Evaluation of properties and specific energy consumption of spinifex-derived lignocellulose fibers produced using different mechanical processes. Cellulose, 2019, 26, 6555-6569.	2.4	21
35	Preparing Bombyx mori Silk Nanofibers Using a Sustainable and Scalable Approach. ACS Sustainable Chemistry and Engineering, 2020, 8, 1155-1162.	3.2	21
36	Smooth deuterated cellulose films for the visualisation of adsorbed bio-macromolecules. Scientific Reports, 2016, 6, 36119.	1.6	20

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37	Microfibrilated cellulose as a model for soft colloid flocculation with polyelectrolytes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 516, 325-335.	2.3	20
38	An energy efficient production of high moisture barrier nanocellulose/carboxymethyl cellulose films via spray-deposition technique. Carbohydrate Polymers, 2020, 250, 116911.	5.1	20
39	Intrinsic tensile properties of cocoon silk fibres can be estimated by removing flaws through repeated tensile tests. Journal of the Royal Society Interface, 2015, 12, 20150177.	1.5	19
40	The use of cellulose nanofibres to reduce the wet strength polymer quantity for development of cleaner filters. Journal of Cleaner Production, 2019, 215, 226-231.	4.6	19
41	Superior non-woven sheet forming characteristics of low-density cationic polymer-cellulose nanofibre colloids. Cellulose, 2014, 21, 3541-3550.	2.4	18
42	Paper engineered with cellulosic additives: effect of length scale. Cellulose, 2014, 21, 2901-2911.	2.4	18
43	Bio-deuterated cellulose thin films for enhanced contrast in neutron reflectometry. Cellulose, 2017, 24, 11-20.	2.4	18
44	Simplification of gel point characterization of cellulose nano and microfiber suspensions. Cellulose, 2021, 28, 6995-7006.	2.4	18
45	Life cycle assessment comparison of industrial effluent management strategies. Journal of Cleaner Production, 2014, 79, 168-181.	4.6	17
46	Strong cellulose nanofibreâ€“nanosilica composites with controllable pore structure. Cellulose, 2017, 24, 2511-2521.	2.4	17
47	Visualization and Quantification of IgG Antibody Adsorbed at the Celluloseâ€“Liquid Interface. Biomacromolecules, 2017, 18, 2439-2445.	2.6	17
48	Recent advancements, trends, fundamental challenges and opportunities in spray deposited cellulose nanofibril films for packaging applications. Science of the Total Environment, 2022, 836, 155654.	3.9	17
49	Adsorption of cationic polyacrylamide at the celluloseâ€“liquid interface: A neutron reflectometry study. Journal of Colloid and Interface Science, 2015, 448, 88-99.	5.0	16
50	Engineering cellulose nanofibre suspensions to control filtration resistance and sheet permeability. Cellulose, 2016, 23, 391-402.	2.4	16
51	Multi-Layer Filters: Adsorption and Filtration Mechanisms for Improved Separation. Frontiers in Chemistry, 2018, 6, 417.	1.8	16
52	Cellulose fibre- perlite depth filters with cellulose nanofibre top coating for improved filtration performance. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 583, 123997.	2.3	16
53	Engineering surface roughness of nanocellulose film via spraying to produce smooth substrates. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 589, 124396.	2.3	16
54	Development of a Paper-Based Microfluidic System for a Continuous High-Flow-Rate Fluid Manipulation. Analytical Chemistry, 2020, 92, 7307-7316.	3.2	15

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55	Refining and the development of fibre properties. Nordic Pulp and Paper Research Journal, 1999, 14, 285-291.	0.3	14
56	Application and interpretation of zero and short-span testing on nanofibre sheet materials. Nordic Pulp and Paper Research Journal, 2012, 27, 343-351.	0.3	14
57	Cationic polyacrylamide induced nanoparticles assembly in a cellulose nanofiber network. Journal of Colloid and Interface Science, 2018, 529, 180-186.	5.0	14
58	Effect of nanoparticles size and polyelectrolyte on nanoparticles aggregation in a cellulose fibrous matrix. Journal of Colloid and Interface Science, 2018, 510, 190-198.	5.0	13
59	High-performance homogenized and spray coated nanofibrillated cellulose-montmorillonite barriers. Cellulose, 2021, 28, 405-416.	2.4	13
60	Preparation and benchmarking of novel cellulose nanopaper. Cellulose, 2022, 29, 4393-4411.	2.4	13
61	Protein Paper from Exfoliated Eri Silk Nanofibers. Biomacromolecules, 2020, 21, 1303-1314.	2.6	12
62	Cellulose nanofiber diameter distributions from microscopy image analysis: effect of measurement statistics and operator. Cellulose, 2020, 27, 4189-4208.	2.4	12
63	Life Cycle Assessment of Advanced Industrial Wastewater Treatment Within an Urban Environment. Journal of Industrial Ecology, 2013, 17, 712-721.	2.8	11
64	Assembly of nanoparticles-polyelectrolyte complexes in nanofiber cellulose structures. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2017, 513, 373-379.	2.3	11
65	An analytical model for number of fibreâ€“fibre contacts in paper and expressions for relative bonded area (RBA). Journal of Materials Science, 2007, 42, 522-528.	1.7	10
66	Impact of structural changes in heteroleptic bismuth phosphinates on their antibacterial activity in Bi-nanocellulose composites. Dalton Transactions, 2020, 49, 7341-7354.	1.6	10
67	Polyamide-amine-epichlorohydrin (PAE) induced TiO2 nanoparticles assembly in cellulose network. Journal of Colloid and Interface Science, 2020, 575, 317-325.	5.0	10
68	Composites of mesoporous silica precipitated on nanofibrillated cellulose and microfibrillated cellulose: Effect of fibre diameter and reaction conditions on particle size and mesopore diameter. Microporous and Mesoporous Materials, 2021, 311, 110701.	2.2	10
69	Rapid Detection of Gram-Positive and -Negative Bacteria in Water Samples Using Mannan-Binding Lectin-Based Visual Biosensor. ACS Sensors, 2022, 7, 951-959.	4.0	10
70	Life cycle assessment of cellulose nanofibril films via spray deposition and vacuum filtration pathways for small scale production. Journal of Cleaner Production, 2022, 342, 130890.	4.6	10
71	Nanocellulose for gel electrophoresis. Journal of Colloid and Interface Science, 2019, 540, 148-154.	5.0	9
72	Recycling cellulose nanofibers from wood pulps provides drainage improvements for high strength sheets in papermaking. Journal of Cleaner Production, 2021, 312, 127731.	4.6	9

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73	Investigation of the effect of drying and refining on the fiberâ€“fiber shear bond strength measured using tensile fracture line analysis of sheets weakened by acid gas exposure. Cellulose, 2011, 18, 1407-1421.	2.4	8
74	Biocompatibility and selective antibacterial activity of a bismuth phosphinato-nanocellulose hydrogel. Cellulose, 2021, 28, 4701-4718.	2.4	8
75	Flotation as a separation technology for recovering pulp fines and sustainable nanocellulose production. Separation and Purification Technology, 2021, 270, 118810.	3.9	8
76	Cellulose nanocrystals to modulate the self-assembly of graphene oxide in suspension. Materials and Design, 2022, 216, 110572.	3.3	8
77	Characterisation of cellulose nanocrystals by rheology and small angle X-ray scattering (SAXS). Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 651, 129532.	2.3	8
78	Calculation of the relative bonded area and scattering coefficient from sheet density and fibre shape. Holzforschung, 2006, 60, 253-258.	0.9	7
79	Novel In-situ Precipitation Process to Engineer Low Permeability Porous Composite. Scientific Reports, 2018, 8, 10747.	1.6	7
80	Impact of heat drying on the physical and environmental characteristics of the nanocellulose-based films produced via spray deposition technique. Cellulose, 2020, 27, 10225-10239.	2.4	7
81	Exfoliating B. mori silk into high aspect ratio nanofibrils facilitated by response surface methodology. International Journal of Biological Macromolecules, 2020, 164, 2389-2398.	3.6	7
82	Moulding of micropatterned nanocellulose films and their application in fluid handling. Journal of Colloid and Interface Science, 2021, 587, 162-172.	5.0	7
83	An analytical solution for the load distribution along a fibre in a nonwoven network. Mechanics of Materials, 2008, 40, 975-981.	1.7	6
84	Bismuth phosphinato incorporated antibacterial filter paper for drinking water disinfection. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 627, 127167.	2.3	6
85	One-pot treatment of cellulose using iron oxide catalysts to produce nanocellulose and water-soluble oxidised cellulose. Carbohydrate Polymers, 2022, 282, 119060.	5.1	6
86	Surface-sensitive method to determine calcium carbonate filler contents in cellulose matrices. Cellulose, 2010, 17, 407-415.	2.4	5
87	Measurement of short span stress-strain curves of paper. Nordic Pulp and Paper Research Journal, 2003, 18, 44-50.	0.3	4
88	The Tradeâ€off Between Environmental Impacts in Water Recycling Systems Using Industrial Effluent. Journal of Industrial Ecology, 2014, 18, 771-783.	2.8	4
89	Depth filtration application of nanofibrillated cellulose-mesoporous silica nanoparticle composites as double-layer membranes. Journal of Environmental Chemical Engineering, 2022, 10, 106892.	3.3	4
90	Photocatalytic Degradation of 1,4-Dioxane and Malachite Green over Zinc Oxide/Cellulose Nanofiber Using UVA/B from Direct Sunlight and a Continuous Flow Reactor. ACS ES&T Water, 2022, 2, 786-797.	2.3	4

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91	Investigation of lint particle adhesion in offset printing using Weibull statistics. Journal of Adhesion Science and Technology, 2013, 27, 339-353.	1.4	3
92	Upgrading waste whitewater fines from a pinus radiata thermomechanical pulping mill. Nordic Pulp and Paper Research Journal, 2017, 32, 656-665.	0.3	3
93	Influence of Size and Chemical Additives on the Fabrication of Micropattern Nanocellulose Films. ACS Sustainable Chemistry and Engineering, 2021, 9, 11714-11723.	3.2	3
94	Upgrading waste whitewater fines from a pinus radiata thermomechanical pulping mill. Nordic Pulp and Paper Research Journal, 2017, 32, 656-665.	0.3	3
95	Priorities for development of standard test methods to support the commercialization of cellulose nanomaterials. Tappi Journal, 2019, 18, 245-260.	0.2	3
96	Contributions of Transformation and Microcracking to the Plastic Deformation of Magnesia-Partially-Stabilized Zirconia. Journal of the American Ceramic Society, 1993, 76, 1895-1897.	1.9	2
97	Monoclinic Phase Measurement in Mg-PSZ Using X-ray Diffraction. Journal of the American Ceramic Society, 1996, 79, 2477-2480.	1.9	2
98	A new cyclic loading method for measuring sheet fracture toughness. International Journal of Fracture, 2003, 123, 15-27.	1.1	2
99	Characterisation of Lint Particle Removal in Offset Printing with Weibull Statistics. Journal of Adhesion Science and Technology, 2010, 24, 619-633.	1.4	2
100	Effect of paper and printing press variables on the rates of adhesion failure in the linting of offset printing. Journal of Adhesion Science and Technology, 2014, 28, 1935-1948.	1.4	2
101	Matching the biomass to the bioproduct. ChemistrySelect, 2016, 1, .	0.7	2
102	1. Matching the biomass to the bioproduct. , 2016, , 1-44.		2
103	Analysis of strains in the fracture process zone. Nordic Pulp and Paper Research Journal, 2005, 20, 392-398.	0.3	2
104	The effect of pulp type on the performance of microfibrillar lignocellulosic bismuth-based active packaging material. Cellulose, 2022, 29, 4599-4611.	2.4	1
105	Thermal expansion measurements on creep tested Mg-PSZ. Thermochimica Acta, 1993, 218, 113-122.	1.2	0
106	Dynamic Optical Measurement of Lint Accumulation during Offset Printing. BioResources, 2014, 10, .	0.5	0
107	Acoustic emission and tack of heat-set inks during setting on MWC-papers and fountain solution emulsification. Nordic Pulp and Paper Research Journal, 2007, 22, 432-440.	0.3	0
108	Preparation of coumarin polymer grafted nanocellulose films to form high performance, photoresponsive barrier layers. Journal of Polymer Science, 0, , .	2.0	0