Bronwyn Laycock

List of Publications by Year
in descending order

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87	3,882	172457	133252
papers	citations	29 h-index	59 g-index

87	87	87	4520
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Lifetime prediction of biodegradable polymers. Progress in Polymer Science, 2017, 71, 144-189.	24.7	416
2	The chemomechanical properties of microbial polyhydroxyalkanoates. Progress in Polymer Science, 2013, 38, 536-583.	24.7	372
3	Degradation and stabilization of polyurethane elastomers. Progress in Polymer Science, 2019, 90, 211-268.	24.7	345
4	The chemomechanical properties of microbial polyhydroxyalkanoates. Progress in Polymer Science, 2014, 39, 397-442.	24.7	166
5	Environmental impact of biodegradable food packaging when considering food waste. Journal of Cleaner Production, 2018, 180, 325-334.	9.3	156
6	Public attitudes towards bioplastics â€“ knowledge, perception and end-of-life management. Resources, Conservation and Recycling, 2019, 151, 104479.	10.8	139
7	The rate of biodegradation of PHA bioplastics in the marine environment: A meta-study. Marine Pollution Bulletin, 2019, 142, 15-24.	5.0	137
8	Composites of Wood and Biodegradable Thermoplastics: A Review. Polymer Reviews, 2018, 58, 444-494.	10.9	134
9	Mainstream Ammonium Recovery to Advance Sustainable Urban Wastewater Management. Environmental Science & Technology, 2019, 53, 11066-11079.	10.0	126
10	Public attitudes towards plastics. Resources, Conservation and Recycling, 2019, 147, 227-235.	10.8	114
11	Techno-economic assessment of poly-3-hydroxybutyrate (PHB) production from methaneâ€"The case for thermophilic bioprocessing. Journal of Environmental Chemical Engineering, 2016, 4, 3724-3733.	6.7	102
12	The Opportunity for High-Performance Biomaterials from Methane. Microorganisms, 2016, 4, 11.	3.6	97
13	Physicochemical and mechanical properties of mixed culture polyhydroxyalkanoate (PHBV). European Polymer Journal, 2013, 49, 904-913.	5.4	90
14	Biodegradation in a soil environment of activated sludge derived polyhydroxyalkanoate (PHBV). Polymer Degradation and Stability, 2012, 97, 2301-2312.	5.8	80
15	Sporulation capability and amylosome conservation among diverse human colonic and rumen isolates of the keystone starchâ€degrader Ruminococcus bromii. Environmental Microbiology, 2018, 20, 324-336.	3.8	79
16	Wood-PHA Composites: Mapping Opportunities. Polymers, 2018, 10, 751.	4.5	59
17	A simple methodology for improving the performance and sustainability of rigid polyurethane foam by incorporating industrial lignin. Industrial Crops and Products, 2018, 117, 149-158.	5.2	56
18	Rapid removal of ammonium from domestic wastewater using polymer hydrogels. Scientific Reports, 2018, 8, 2912.	3.3	53

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19	Microbial nanowires â€“ Electron transport and the role of synthetic analogues. Acta Biomaterialia, 2018, 69, 1-30.	8.3	51
20	Crystallisation and fractionation of selected polyhydroxyalkanoates produced from mixed cultures. New Biotechnology, 2014, 31, 345-356.	4.4	45
21	The challenges in lifetime prediction of oxodegradable polyolefin and biodegradable polymer films. Polymer Degradation and Stability, 2017, 145, 102-119.	5.8	43
22	Fluxes in PHA-storing microbial communities during enrichment and biopolymer accumulation processes. New Biotechnology, 2016, 33, 61-72.	4.4	37
23	Toxin Degradation by Rumen Microorganisms: A Review. Toxins, 2020, 12, 664.	3.4	37
24	Mechanical and physical stability of polyhydroxyalkanoate (PHA)-based wood plastic composites (WPCs) under natural weathering. Polymer Testing, 2019, 73, 214-221.	4.8	36
25	Mixed culture polyhydroxyalkanoate-rich biomass assessment and quality control using thermogravimetric measurement methods. Polymer Degradation and Stability, 2017, 144, 110-120.	5.8	35
26	Extrusion of wood fibre reinforced poly(hydroxybutyrate-co-hydroxyvalerate) (PHBV) biocomposites: Statistical analysis of the effect of processing conditions on mechanical performance. Polymer Degradation and Stability, 2019, 159, 1-14.	5.8	34
27	Synthesis of starch graft-copolymers via reactive extrusion: Process development and structural analysis. Carbohydrate Polymers, 2020, 227, 115066.	10.2	34
28	Cellulose Nanofibers as Rheology Modifiers and Enhancers of Carbonization Efficiency in Polyacrylonitrile. ACS Sustainable Chemistry and Engineering, 2017, 5, 3296-3304.	6.7	32
29	In-line monitoring of thermal degradation of PHA during melt-processing by Near-Infrared spectroscopy. New Biotechnology, 2014, 31, 357-363.	4.4	31
30	Waste Activated Sludge as Biomass for Production of Commercial-Grade Polyhydroxyalkanoate (PHA). Waste and Biomass Valorization, 2013, 4, 117-127.	3.4	30
31	Thermal properties and crystallization behavior of fractionated blocky and random polyhydroxyalkanoate copolymers from mixed microbial cultures. Journal of Applied Polymer Science, 2014, 131, .	2.6	29
32	Understanding the effect of copolymer content on the processability and mechanical properties of polyhydroxyalkanoate (PHA)/wood composites. Composites Part A: Applied Science and Manufacturing, 2019, 124, 105437.	7.6	28
33	Allylsilanes from allylchlorides and silylcuprates. Tetrahedron Letters, 1983, 24, 5785-5788.	1.4	27
34	Mechanical performance and long-term indoor stability of polyhydroxyalkanoate (PHA)-based wood plastic composites (WPCs) modified by non-reactive additives. European Polymer Journal, 2018, 98, 337-346.	5.4	27
35	The effect of comonomer concentration and distribution on the photo-oxidative degradation of linear low density polyethylene films. Polymer, 2017, 119, 66-75.	3.8	26
36	Modified Poly(acrylic acid)-Based Hydrogels for Enhanced Mainstream Removal of Ammonium from Domestic Wastewater. Environmental Science & Technology, 2020, 54, 9573-9583.	10.0	24

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37	Value-added bioplastics from services of wastewater treatment. Water Practice and Technology, 2015, 10, 546-555.	2.0	23
38	Insights into the biodegradation of PHA / wood composites: Micro- and macroscopic changes. Sustainable Materials and Technologies, 2019, 21, e00099.	3.3	22
39	Antagonism between transition metal pro-oxidants in polyethylene films. Polymer Degradation and Stability, 2012, 97, 1178-1188.	5.8	21
40	Polyhydroxyalkanoate coatings restrict moisture uptake and associated loss of barrier properties of thermoplastic starch films. Journal of Applied Polymer Science, 2018, 135, 46379.	2.6	21
41	Cell interactions with perfluoropolyether-based network copolymers. Journal of Biomaterials Science, Polymer Edition, 1999, 10, 217-233.	3.5	20
42	Starch Applications. , 2014, , 381-419.		19
43	The effect of common agrichemicals on the environmental stability of polyethylene films. Polymer Degradation and Stability, 2015, 120, 53-60.	5.8	19
44	Biomimetic Peptide Nanowires Designed for Conductivity. ACS Omega, 2019, 4, 1748-1756.	3.5	19
45	Mechanical properties of poly(3â€hydroxybutyrateâ€coâ€3â€hydroxyvalerate)/wood flour composites: Effect of interface modifiers. Journal of Applied Polymer Science, 2018, 135, 46828.	2.6	18
46	Understanding the Mobilization of a Nitrification Inhibitor from Novel Slow Release Pellets, Fabricated through Extrusion Processing with PHBV Biopolymer. Journal of Agricultural and Food Chemistry, 2019, 67, 2449-2458.	5.2	18
47	The effect of methane and odd-chain fatty acids on 3-hydroxybutyrate (3HB) and 3-hydroxyvalerate (3HV) synthesis by a Methylosinus-dominated mixed culture. Bioresources and Bioprocessing, 2019, 6, .	4.2	18
48	Syntheesis and stereochemistry of acidolysis of some cyclohept-2-enylstannames and -silanes. Tetrahedron, 1988, 44, 3819-3831.	1.9	17
49	Influence of Different Nanocellulose Additives on Processing and Performance of PAN-Based Carbon Fibers. ACS Omega, 2019, 4, 9720-9730.	3.5	17
50	Near complete genome sequence of the animal feed probiotic, Bacillus amyloliquefaciens H57. Standards in Genomic Sciences, 2016, 11, 60.	1.5	16
51	Thermophilic production of poly(3-hydroxybutyrate-co-3-hydrovalerate) by a mixed methane-utilizing culture. New Biotechnology, 2019, 53, 49-56.	4.4	16
52	Zeolite shape selectivity impact on LDPE and PP catalytic pyrolysis products and coke nature. Sustainable Energy and Fuels, 2022, 6, 1587-1602.	4.9	15
53	The Urgent Need to Re-engineer Nitrogen-Efficient Food Production for the Planet. , 2018, , 35-69.		14
54	The morphology of crystallisation of PHBV/PHBV copolymer blends. European Polymer Journal, 2019, 112, 104-119.	5.4	14

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55	The Evolution of Polymer Composition during PHA Accumulation: The Significance of Reducing Equivalents. Bioengineering, 2017, 4, 20.	3.5	13
56	Synthesis of starch graft-copolymers via reactive extrusion and their ammonium sorption properties. Chemical Engineering Journal, 2020, 398, 124291.	12.7	13
57	Early-stage photodegradation of aromatic poly(urethane-urea) elastomers. Polymer Degradation and Stability, 2018, 157, 181-198.	5.8	12
58	Polyhydroxyalkanoate (PHA) Bioplastics from Organic Waste. , 2019, , 615-638.		12
59	Rapid and solvent-free synthesis of pH-responsive graft-copolymers based on wheat starch and their properties as potential ammonium sorbents. International Journal of Biological Macromolecules, 2020, 149, 477-486.	7.5	12
60	Ambient climate and soil effects on the headspace under clear mulch film. Agricultural Systems, 2016, 142, 41-50.	6.1	11
61	Pyrolysis of brominated polyethylene as an alternative carbon fibre precursor. Polymer Degradation and Stability, 2020, 172, 109057.	5.8	11
62	The volume of recyclable polyethylene terephthalate plastic in operating rooms â€“ A one-month prospective audit. American Journal of Surgery, 2020, 220, 853-855.	1.8	11
63	Effect of soil environment on the photoâ€degradation of polyethylene films. Journal of Applied Polymer Science, 2015, 132, .	2.6	10
64	Sorbents can tailor nitrogen release from organic wastes to match the uptake capacity of crops. Science of the Total Environment, 2018, 645, 1474-1483.	8.0	10
65	Mechanical Stability of Polyhydroxyalkanoate (PHA)-Based Wood Plastic Composites (WPCs). Journal of Polymers and the Environment, 2020, 28, 1571-1577.	5.0	10
66	Magnetic poly(acrylic acid)-based hydrogels for rapid ammonium sorption and efficient sorbent separation from sewage. Environmental Science and Ecotechnology, 2021, 6, 100097.	13.5	10
67	Fractionation of microbial populations in a PHA accumulating mixed culture and associated PHA content and composition. International Journal of Biological Macromolecules, 2014, 71, 53-58.	7.5	9
68	Experimental data for extrusion processing and tensile properties of poly(hydroxybutyrate-co-hydroxyvalerate) (PHBV) polymer and wood fibre reinforced PHBV biocomposites. Data in Brief, 2019, 22, 687-692.	1.0	9
69	Hydrocarbon hydrogen carriers for catalytic transfer hydrogenation of guaiacol. International Journal of Hydrogen Energy, 2020, 45, 27381-27391.	7.1	9
70	Silylcuprate Routes to Cyclohex-2-enylsilanes. Australian Journal of Chemistry, 1988, 41, 693.	0.9	8
71	Geo-Agriculture: Reviewing Opportunities through Which the Geosphere Can Help Address Emerging Crop Production Challenges. Agronomy, 2020, 10, 971.	3.0	8
72	Stereochemistry of acidolysis of cyclohept-2-enyl-silanes and -stannanes. Journal of the Chemical Society Chemical Communications, 1986, , 954.	2.0	7

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73	Investigation of the Bromination/Dehydrobromination of Long Chain Alkanes. Industrial & Engineering Chemistry Research, 2017, 56, 9411-9418.	3.7	7
74	A review on Pimelea poisoning of livestock. Toxicon, 2020, 186, 46-57.	1.6	7
75	Can Nitrogen Source and Nitrification Inhibitors Affect In-Season Nitrogen Supply?. Communications in Soil Science and Plant Analysis, 2020, 51, 2189-2204.	1.4	7
76	Designing for effective controlled release in agricultural products: new insights into the complex nature of the polymerâ€“active agent relationship and implications for use. Journal of the Science of Food and Agriculture, 2020, 100, 4723-4733.	3.5	6
77	Assessing the effect of aromatic residue placement on the Î±-helical peptide structure and nanofibril formation of 21-mer peptides. Molecular Systems Design and Engineering, 2020, 5, 521-531.	3.4	4
78	Extraction and determination of the Pimelea toxin simplexin in complex plant-polymer biocomposites using ultrahigh-performance liquid chromatography coupled with quadrupole Orbitrap mass spectrometry. Analytical and Bioanalytical Chemistry, 2021, 413, 5121-5133.	3.7	4
79	Probing Peptide Nanowire Conductivity by THz Nanoscopy. Nanotechnology, 2021, 33, .	2.6	3
80	Role of Catalyst Support's Physicochemical Properties on Catalytic Transfer Hydrogenation over Palladium Catalysts. ChemCatChem, 0, , .	3.7	2
81	High-resolution micro-computed tomography reveals cracking in a hydrophobic composite; a new mechanism for mobilisation in controlled release applications. Biosystems Engineering, 2021, 203, 44-54.	4.3	1
82	Factors Controlling Lifetimes of Polyhydroxyalkanoates and their Composites in the Natural Environment. , 2020, , 339-382.		1
83	Effects of Natural Weathering on Aesthetics, Thermal and Mechanical Properties of Completely Biodegradable Composites. Composites Science and Technology, 2022, , 173-188.	0.6	1
84	Erratum to â€œThe chemomechanical properties of microbial polyhydroxyalkanoatesâ€•[Prog. Polym. Sci. 38 (2013) 536â€“583]. Progress in Polymer Science, 2014, 39, 396.	24.7	0
85	Biopolymer Composites for Slow Release to Manage Pimelea Poisoning in Cattle. Proceedings (mdpi), 2020, 36, .	0.2	0
86	Modelling the Controlled Release of Toxins in a Rumen Environment. Proceedings (mdpi), 2020, 36, .	0.2	0
87	Adsorbents for the Sequestration of the Pimelea Toxin, Simplexin. Proceedings (mdpi), 2020, 36, .	0.2	0