Pratheep Kumar Annamalai

List of Publications by Year
in descending order

71	3,938	172207 29	118652 62
papers	citations	h-index	g-index
75	75	75	4660
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanoscale particles for polymer degradation and stabilizationâ€"Trends and future perspectives. Progress in Polymer Science, 2009, 34, 479-515.	11.8	560
2	An overview on the degradability of polymer nanocomposites. Polymer Degradation and Stability, 2005, 88, 234-250.	2.7	509
3	Bioinspired Mechanically Adaptive Polymer Nanocomposites with Water-Activated Shape-Memory Effect. Macromolecules, 2011, 44, 6827-6835.	2.2	301
4	Recent Advances in Biodegradable Nanocomposites. Journal of Nanoscience and Nanotechnology, 2005, 5, 497-526.	0.9	251
5	Cell proliferation and controlled drug release studies of nanohybrids based on chitosan-g-lactic acid and montmorillonite. Acta Biomaterialia, 2009, 5, 93-100.	4.1	211
6	A systematic study substituting polyether polyol with palm kernel oil based polyester polyol in rigid polyurethane foam. Industrial Crops and Products, 2015, 66, 16-26.	2.5	154
7	Biocomposites of cellulose reinforced starch: Improvement of properties by photo-induced crosslinking. Bioresource Technology, 2008, 99, 8803-8809.	4.8	132
8	Water-Responsive Mechanically Adaptive Nanocomposites Based on Styreneâ€"Butadiene Rubber and Cellulose Nanocrystalsâ€"Processing Matters. ACS Applied Materials & Interfaces, 2014, 6, 967-976.	4.0	131
9	The use of cellulose nanocrystals to enhance the thermal insulation properties and sustainability of rigid polyurethane foam. Industrial Crops and Products, 2017, 107, 114-121.	2.5	130
10	Molecularly Engineered Lignin-Derived Additives Enable Fire-Retardant, UV-Shielding, and Mechanically Strong Polylactide Biocomposites. Biomacromolecules, 2021, 22, 1432-1444.	2.6	94
11	Understanding the ageing aspects of natural ester based insulation liquid in power transformer. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 246-257.	1.8	82
12	Isolation of cellulose nanofibrils from Triodia pungens via different mechanical methods. Cellulose, 2015, 22, 2483-2498.	2.4	81
13	Degradability of composites, prepared from ethyleneâ€"propylene copolymer and jute fiber under accelerated aging and biotic environments. Materials Chemistry and Physics, 2005, 92, 458-469.	2.0	72
14	Production of cellulose nanocrystals via a scalable mechanical method. RSC Advances, 2015, 5, 57133-57140.	1.7	72
15	Easily deconstructed, high aspect ratio cellulose nanofibres from Triodia pungens; an abundant grass of Australia's arid zone. RSC Advances, 2015, 5, 32124-32132.	1.7	60
16	Biodegradation of Î³-sterilised biomedical polyolefins under composting and fungal culture environments. Polymer Degradation and Stability, 2006, 91, 1105-1116.	2.7	59
17	Reinforcement of natural rubber latex using lignocellulosic nanofibers isolated from spinifex grass. Nanoscale, 2017, 9, 9510-9519.	2.8	59
18	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.	2.5	56

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19	Scalable processing of thermoplastic polyurethane nanocomposites toughened with nanocellulose. Chemical Engineering Journal, 2016, 302, 406-416.	6.6	54
20	Spinifex nanocellulose derived hard carbon anodes for high-performance sodium-ion batteries. Sustainable Energy and Fuels, 2017, 1, 1090-1097.	2.5	48
21	Novel hybrid of clay, cellulose, and thermoplastics. I. Preparation and characterization of composites of ethyleneâ€“propylene copolymer. Journal of Applied Polymer Science, 2007, 104, 2672-2682.	1.3	44
22	Hybrid polyether-palm oil polyester polyol based rigid polyurethane foam reinforced with cellulose nanocrystal. Industrial Crops and Products, 2018, 112, 378-388.	2.5	40
23	High aspect ratio nanocellulose from an extremophile spinifex grass by controlled acid hydrolysis. Cellulose, 2017, 24, 3753-3766.	2.4	37
24	Valorisation of technical lignin in rigid polyurethane foam: a critical evaluation on trends, guidelines and future perspectives. Green Chemistry, 2021, 23, 8725-8753.	4.6	36
25	A mixed acid methodology to produce thermally stable cellulose nanocrystal at high yield using phosphoric acid. Journal of Bioresources and Bioproducts, 2022, 7, 99-108.	11.8	33
26	Stability of chitosan/montmorillonite nanohybrid towards enzymatic degradation on grafting with poly(lactic acid). Materials Science and Technology, 2014, 30, 587-592.	0.8	32
27	Cellulose Nanofibers as Rheology Modifiers and Enhancers of Carbonization Efficiency in Polyacrylonitrile. ACS Sustainable Chemistry and Engineering, 2017, 5, 3296-3304.	3.2	32
28	Preparation and characterization of novel hybrid of chitosan-g-lactic acid and montmorillonite. Journal of Biomedical Materials Research - Part A, 2006, 78A, 372-382.	2.1	31
29	An Overview of Celluloseâ€Based Nanogenerators. Advanced Materials Technologies, 2021, 6, 2001164.	3.0	31
30	Effect of Î³-dose rate on crystallinity and morphological changes of Î³-sterilized biomedical polypropylene. Polymer Degradation and Stability, 2009, 94, 272-277.	2.7	30
31	Stabilization of Î³-sterilized biomedical polyolefins by synergistic mixtures of oligomeric stabilizers. Polymer Degradation and Stability, 2006, 91, 2451-2464.	2.7	26
32	Stabilization of Î³-sterilized biomedical polyolefins by synergistic mixtures of oligomeric stabilizers. Part II. Polypropylene matrix. Polymer Degradation and Stability, 2007, 92, 299-309.	2.7	25
33	Potassiumâ€Ion Storage in Celluloseâ€Derived Hard Carbon: The Role of Functional Groups. Batteries and Supercaps, 2020, 3, 953-960.	2.4	24
34	Preparation and characterization of bioceramic nanocomposites based on hydroxyapatite (HA) and carboxymethyl cellulose (CMC). Macromolecular Research, 2010, 18, 1160-1167.	1.0	23
35	Facile Tuning of the Surface Energy of Cellulose Nanofibers for Nanocomposite Reinforcement. ACS Omega, 2018, 3, 15933-15942.	1.6	23
36	Photo-stabilization of EPDMâ€“clay nanocomposites: effect of antioxidant on the preparation and durability. Polymers for Advanced Technologies, 2007, 18, 891-900.	1.6	21

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37	Review on Colloidal Quantum Dots Luminescent Solar Concentrators. ChemistrySelect, 2021, 6, 4948-4967.	0.7	21
38	Toughening of natural rubber nanocomposites by the incorporation of nanoscale lignin combined with an industrially relevant leaching process. Industrial Crops and Products, 2021, 159, 113063.	2.5	20
39	Dispersion Methodology for Technical Lignin into Polyester Polyol for High-Performance Polyurethane Insulation Foam. ACS Applied Polymer Materials, 2021, 3, 3528-3537.	2.0	18
40	Chitosan-based bionanocomposites for biomedical application. Bioinspired, Biomimetic and Nanobiomaterials, 2018, 7, 219-227.	0.7	17
41	Influence of Different Nanocellulose Additives on Processing and Performance of PAN-Based Carbon Fibers. ACS Omega, 2019, 4, 9720-9730.	1.6	17
42	Can clay nanoparticles accelerate environmental biodegradation of polyolefins?. Materials Science and Technology, 2014, 30, 593-602.	0.8	16
43	Influence of moisture dependency of pressboard on transformer winding clamping pressure. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 3191-3200.	1.8	16
44	Polymers from Biomass: Characterization, Modification, Degradation, and Applications. International Journal of Polymer Science, 2016, 2016, 1-2.	1.2	15
45	Durability of Natural Fiber-reinforced Composites of Ethyleneâ€"Propylene Copolymer under Accelerated Weathering and Composting Conditions. Journal of Thermoplastic Composite Materials, 2005, 18, 489-508.	2.6	14
46	Photo-/Bio-degradability of Agro Waste and Ethyleneâ€"Propylene Copolymers Composites Under Abiotic and Biotic Environments. Journal of Polymers and the Environment, 2006, 14, 203-212.	2.4	14
47	Kinetics of mass transfer during vapour-induced phase separation (VIPS) process and its influence on poly-(vinylidene fluoride) (PVDF)membrane structure and surface morphology. Desalination and Water Treatment, 2011, 34, 204-210.	1.0	13
48	Biodegradation of packaging materials: composting of polyolefins. Macromolecular Symposia, 2003, 197, 411-420.	0.4	12
49	Optimisation of resin extraction from an Australian arid grass â€˜Triodia pungensâ€™ and its preliminary evaluation as an anti-termite timber coating. Industrial Crops and Products, 2014, 59, 241-247.	2.5	12
50	Synthesis and characterization of cellulose nanocrystals as reinforcing agent in solely palm based polyurethane foam. AIP Conference Proceedings, 2017, , .	0.3	12
51	Pyrolysis of brominated polyethylene as an alternative carbon fibre precursor. Polymer Degradation and Stability, 2020, 172, 109057.	2.7	11
52	Lignocellulosic plant cell wall variation influences the structure and properties of hard carbon derived from sorghum biomass. Carbon Trends, 2022, 7, 100168.	1.4	10
53	Atomic Layer Deposition of Metal Oxide on Nanocellulose for Enabling Microscopic Characterization of Polymer Nanocomposites. Small, 2018, 14, e1803439.	5.2	9
54	Rational analysis of dispersion and solubility of Kraft lignin in polyols for polyurethanes. Industrial Crops and Products, 2022, 185, 115129.	2.5	9

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55	Conducting polymerâ€“graphite binary and hybrid composites. , 2017, , 1-34.		7
56	Single Step Synthesis and Properties of M/MFe₂O₄ and PVDF/M/MFe₂O₄ (M = Co, Ni) Magnetic Nanocomposites. Science of Advanced Materials, 2009, 1, 262-268.	0.1	7
57	Dip-and-Drag Lateral Force Spectroscopy for Measuring Adhesive Forces between Nanofibers. Langmuir, 2016, 32, 13340-13348.	1.6	5
58	Synthesis, characterization, and performance evaluation of novel stabilized TDI-based polyurethane coatings under accelerated weathering. Journal of Vinyl and Additive Technology, 2005, 11, 13-20.	1.8	4
59	Nanocellulose-based carbon as electrode materials for sodium-ion batteries. , 2021, , 295-312.		4
60	High-Resolution R2R-Compatible Printing of Carbon Nanotube Conductive Patterns Enabled by Cellulose Nanocrystals. ACS Applied Nano Materials, 2022, 5, 1574-1587.	2.4	4
61	A cleaner processing approach for cellulose reinforced thermoplastic polyurethane nanocomposites. Polymer Engineering and Science, 0, , .	1.5	4
62	Biopolymeric Nanocomposites as Environment Benign Materials. , 2011, , 519-535.		3
63	Processing and rheological properties of polyol/cellulose nanofibre dispersions for polyurethanes. Polymer, 2022, 255, 125130.	1.8	3
64	Effect of pressboard ageing on power transformer mechanical vibration characteristics. , 2015, , .		2
65	Fire Resistance Cellulosic Fibers for Biocomposites. , 2016, , 365-384.		2
66	Celluloseâ€Based Nanogenerators: An Overview of Celluloseâ€Based Nanogenerators (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	3.0	2
67	3D enabled facile fabrication of substrates with human tongue characteristics for analysing the tribological behaviour of food emulsions. Innovative Food Science and Emerging Technologies, 2021, 73, 102803.	2.7	2
68	Studies on the feasibility of recycled polystyrene doped with NLO active <i>meta</i>â€Nitroaniline for optoelectronics applications. Polymers for Advanced Technologies, 2011, 22, 1865-1871.	1.6	1
69	Preparation of Cellulose Nanocrystal/Polymer Nanocomposites via Sol-Gel Processes. Materials and Energy, 2014, , 23-34.	2.5	0
70	Polymer Nanocomposites Characterization: Atomic Layer Deposition of Metal Oxide on Nanocellulose for Enabling Microscopic Characterization of Polymer Nanocomposites (Small 46/2018). Small, 2018, 14, 1870217.	5.2	0
71	Nanocellulose: a sustainable nanomaterial for controlled drug delivery applications. , 2022, , 217-253.		0