Rupy Kaur Matharu

List of Publications by Year
in descending order

91	2,911	32	49
papers	citations	h-index	g-index
		136950	197818

92	92	92	3258
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Forming of Polymer Nanofibers by a Pressurised Gyration Process. Macromolecular Rapid Communications, 2013, 34, 1134-1139.	3.9	188
2	Bacterial cellulose micro-nano fibres for wound healing applications. Biotechnology Advances, 2020, 41, 107549.	11.7	144
3	Developments in Pressurized Gyration for the Mass Production of Polymeric Fibers. Macromolecular Materials and Engineering, 2018, 303, 1800218.	3.6	111
4	Experimental and theoretical investigation of the fluid behavior during polymeric fiber formation with and without pressure. Applied Physics Reviews, 2019, 6, 041401.	11.3	94
5	A comparison of methods to assess the antimicrobial activity of nanoparticle combinations on bacterial cells. PLoS ONE, 2018, 13, e0192093.	2.5	74
6	Preparation of Multilayered Polymeric Structures Using a Novel Fourâ€Needle Coaxial Electrohydrodynamic Device. Macromolecular Rapid Communications, 2014, 35, 618-623.	3.9	70
7	Microstructure and antibacterial efficacy of graphene oxide nanocomposite fibres. Journal of Colloid and Interface Science, 2020, 571, 239-252.	9.4	67
8	Formation of Protein and Proteinâ€“Gold Nanoparticle Stabilized Microbubbles by Pressurized Gyration. Langmuir, 2015, 31, 659-666.	3.5	65
9	Highly Stretchable and Highly Resilient Polymerâ€“Clay Nanocomposite Hydrogels with Low Hysteresis. ACS Applied Materials & Interfaces, 2017, 9, 22223-22234.	8.0	65
10	Evaluation of burst release and sustained release of pioglitazone-loaded fibrous mats on diabetic wound healing: an <i>in vitro</i> and <i>in vivo</i> comparison study. Journal of the Royal Society Interface, 2020, 17, 20190712.	3.4	65
11	Nanocomposites: suitable alternatives as antimicrobial agents. Nanotechnology, 2018, 29, 282001.	2.6	63
12	Polymerâ€“Magnetic Composite Fibers for Remote-Controlled Drug Release. ACS Applied Materials & Interfaces, 2018, 10, 15524-15531.	8.0	61
13	Solubilityâ€“spinnability map and model for the preparation of fibres of polyethylene (terephthalate) using gyration and pressure. Chemical Engineering Journal, 2015, 280, 344-353.	12.7	57
14	Current methodologies and approaches for the formation of coreâ€“sheath polymer fibers for biomedical applications. Applied Physics Reviews, 2020, 7, .	11.3	56
15	Accelerated diabetic wound healing by topical application of combination oral antidiabetic agents-loaded nanofibrous scaffolds: An in vitro and in vivo evaluation study. Materials Science and Engineering C, 2021, 119, 111586.	7.3	54
16	Mucoadhesion of Progesterone-Loaded Drug Delivery Nanofiber Constructs. ACS Applied Materials & Interfaces, 2018, 10, 13381-13389.	8.0	51
17	Coupling Infusion and Gyration for the Nanoscale Assembly of Functional Polymer Nanofibers Integrated with Genetically Engineered Proteins. Macromolecular Rapid Communications, 2015, 36, 1322-1328.	3.9	50
18	The effect of grapheneâ€“poly(methyl methacrylate) fibres on microbial growth. Interface Focus, 2018, 8, 20170058.	3.0	50

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19	Preparation of monodisperse microbubbles using an integrated embedded capillary T-junction with electrohydrodynamic focusing. Lab on A Chip, 2014, 14, 2437-2446.	6.0	49
20	Binary polyhydroxyalkanoate systems for soft tissue engineering. Acta Biomaterialia, 2018, 71, 225-234.	8.3	47
21	Generation of poly(N-vinylpyrrolidone) nanofibres using pressurised gyration. Materials Science and Engineering C, 2014, 39, 168-176.	7.3	42
22	Antibacterial Activity and Biosensing of PVA-Lysozyme Microbubbles Formed by Pressurized Gyration. Langmuir, 2015, 31, 9771-9780.	3.5	42
23	Making Nonwoven Fibrous Poly(Îµâ€caprolactone) Constructs for Antimicrobial and Tissue Engineering Applications by Pressurized Melt Gyration. Macromolecular Materials and Engineering, 2016, 301, 922-934.	3.6	42
24	Novel Making of Bacterial Cellulose Blended Polymeric Fiber Bandages. Macromolecular Materials and Engineering, 2018, 303, 1700607.	3.6	40
25	Simultaneous Application of Pressure-Infusion-Gyration to Generate Polymeric Nanofibers. Macromolecular Materials and Engineering, 2017, 302, 1600564.	3.6	39
26	Generation of Coreâ€"Sheath Polymer Nanofibers by Pressurised Gyration. Polymers, 2020, 12, 1709.	4.5	39
27	Making nanofibres of mucoadhesive polymer blends for vaginal therapies. European Polymer Journal, 2015, 70, 186-196.	5.4	38
28	The development of progesterone-loaded nanofibers using pressurized gyration: A novel approach to vaginal delivery for the prevention of pre-term birth. International Journal of Pharmaceutics, 2018, 540, 31-39.	5.2	38
29	Comparative Study of the Antimicrobial Effects of Tungsten Nanoparticles and Tungsten Nanocomposite Fibres on Hospital Acquired Bacterial and Viral Pathogens. Nanomaterials, 2020, 10, 1017.	4.1	38
30	Electrohydrodynamic Bubbling: An Alternative Route to Fabricate Porous Structures of Silk Fibroin Based Materials. Biomacromolecules, 2013, 14, 1412-1422.	5.4	35
31	Development and Characterization of Amorphous Nanofiber Drug Dispersions Prepared Using Pressurized Gyration. Molecular Pharmaceutics, 2015, 12, 3851-3861.	4.6	35
32	The comparision of glybenclamide and metformin-loaded bacterial cellulose/gelatin nanofibres produced by a portable electrohydrodynamic gun for diabetic wound healing. European Polymer Journal, 2020, 134, 109844.	5.4	35
33	Fabrication of Biomaterials via Controlled Protein Bubble Generation and Manipulation. Biomacromolecules, 2011, 12, 4291-4300.	5.4	34
34	Antimicrobial activity of telluriumâ€loaded polymeric fiber meshes. Journal of Applied Polymer Science, 2018, 135, 46368.	2.6	34
35	Beads, beaded-fibres and fibres: Tailoring the morphology of poly(caprolactone) using pressurised gyration. Materials Science and Engineering C, 2016, 69, 1373-1382.	7.3	33
36	A Comparison of Electricâ€Fieldâ€Driven and Pressureâ€Driven Fiber Generation Methods for Drug Delivery. Macromolecular Materials and Engineering, 2018, 303, 1700577.	3.6	32

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37	A novel treatment strategy for preterm birth: Intra-vaginal progesterone-loaded fibrous patches. International Journal of Pharmaceutics, 2020, 588, 119782.	5.2	31
38	Surface interactions and viability of coronaviruses. Journal of the Royal Society Interface, 2021, 18, 20200798.	3.4	31
39	Preparation of poly(glycerol sebacate) fibers for tissue engineering applications. European Polymer Journal, 2019, 121, 109297.	5.4	30
40	Antiâ€fungal bandages containing cinnamon extract. International Wound Journal, 2019, 16, 730-736.	2.9	30
41	Coâ€Culture of Keratinocyteâ€<i>Staphylococcus aureus</i> on Cuâ€Agâ€Zn/CuO and Cuâ€Agâ€W Nanoparticle Loaded Bacterial Cellulose:PMMA Bandages. Macromolecular Materials and Engineering, 2019, 304, 1800537.	3.6	30
42	Novel Preparation, Microstructure, and Properties of Polyacrylonitrile-Based Carbon Nanofiberâ€"Graphene Nanoplatelet Materials. ACS Omega, 2016, 1, 202-211.	3.5	28
43	Viral filtration using carbonâ€based materials. Medical Devices & Sensors, 2020, 3, e10107.	2.7	27
44	Harnessing Polyhydroxyalkanoates and Pressurized Gyration for Hard and Soft Tissue Engineering. ACS Applied Materials & Interfaces, 2021, 13, 32624-32639.	8.0	27
45	Fiber Forming Capability of Binary and Ternary Compositions in the Polymer System: Bacterial Celluloseâ€"Polycaprolactoneâ€"Polylactic Acid. Polymers, 2019, 11, 1148.	4.5	26
46	Facile one-pot formation of ceramic fibres from preceramic polymers by pressurised gyration. Ceramics International, 2015, 41, 6067-6073.	4.8	24
47	Electrospinning Optimization of Eudragit E PO with and without Chlorpheniramine Maleate Using a Design of Experiment Approach. Molecular Pharmaceutics, 2019, 16, 2557-2568.	4.6	22
48	Metal-based nanoparticles for combating antibiotic resistance. Applied Physics Reviews, 2021, 8, .	11.3	21
49	New Generation of Tunable Bioactive Shape Memory Mats Integrated with Genetically Engineered Proteins. Macromolecular Bioscience, 2017, 17, 1600270.	4.1	20
50	Coreâ€"sheath polymer nanofiber formation by the simultaneous application of rotation and pressure in a novel purpose-designed vessel. Applied Physics Reviews, 2021, 8, .	11.3	20
51	Evolution of Surface Nanopores in Pressurised Gyrospun Polymeric Microfibers. Polymers, 2017, 9, 508.	4.5	19
52	Latest developments in innovative manufacturing to combine nanotechnology with healthcare. Nanomedicine, 2018, 13, 5-8.	3.3	19
53	An Inexpensive, Portable Device for Pointâ€ofâ€Need Generation of Silverâ€Nanoparticle Doped Cellulose Acetate Nanofibers for Advanced Wound Dressing. Macromolecular Materials and Engineering, 2018, 303, 1700586.	3.6	18
54	Honeycomb-like PLGA-<i>b</i>-PEG Structure Creation with T-Junction Microdroplets. Langmuir, 2018, 34, 7989-7997.	3.5	18

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55	Boron nitride nanoscrolls: Structure, synthesis, and applications. Applied Physics Reviews, 2019, 6, .	11.3	18
56	Coâ€Axial Gyroâ€Spinning of PCL/PVA/HA Coreâ€Sheath Fibrous Scaffolds for Bone Tissue Engineering. Macromolecular Bioscience, 2021, 21, e2100177.	4.1	18
57	Alleviating the toxicity concerns of antibacterial cinnamonâ€polycaprolactone biomaterials for healthcareâ€related biomedical applications. MedComm, 2021, 2, 236-246.	7.2	17
58	Electrosprayed microparticles: a novel drug delivery method. Expert Opinion on Drug Delivery, 2019, 16, 895-901.	5.0	16
59	Severe Acute Respiratory Syndrome Type 2â€Causing Coronavirus: Variants and Preventive Strategies. Advanced Science, 2022, 9, e2104495.	11.2	16
60	Effectiveness of Oil-Layered Albumin Microbubbles Produced Using Microfluidic T-Junctions in Series for In Vitro Inhibition of Tumor Cells. Langmuir, 2020, 36, 11429-11441.	3.5	15
61	Tailoring the surface of polymeric nanofibres generated by pressurised gyration. Surface Innovations, 2016, 4, 167-178.	2.3	14
62	Process Modeling for the Fiber Diameter of Polymer, Spun by Pressure-Coupled Infusion Gyration. ACS Omega, 2018, 3, 5470-5479.	3.5	14
63	Fiber Formation from Silk Fibroin Using Pressurized Gyration. Macromolecular Materials and Engineering, 2019, 304, 1800577.	3.6	14
64	Vitamin D3/vitamin K2/magnesium-loaded polylactic acid/tricalcium phosphate/polycaprolactone composite nanofibers demonstrated osteoinductive effect by increasing Runx2 via Wnt/Î²-catenin pathway. International Journal of Biological Macromolecules, 2021, 190, 244-258.	7.5	14
65	Characterisation of the Chemical Composition and Structural Features of Novel Antimicrobial Nanoparticles. Nanomaterials, 2017, 7, 152.	4.1	13
66	Rapid and label-free detection of COVID-19 using coherent anti-Stokes Raman scattering microscopy. MRS Communications, 2020, 10, 566-572.	1.8	13
67	The effect of solvent and pressure on polycaprolactone solutions for particle and fibre formation. European Polymer Journal, 2022, 173, 111300.	5.4	13
68	Novel Preparation of Monodisperse Microbubbles by Integrating Oscillating Electric Fields with Microfluidics. Micromachines, 2018, 9, 497.	2.9	12
69	Effect of humidity on the generation and control of the morphology of honeycomb-like polymeric structures by electrospinning. European Polymer Journal, 2014, 61, 72-82.	5.4	11
70	Novel encapsulation systems and processes for overcoming the challenges of polypharmacy. Current Opinion in Pharmacology, 2014, 18, 28-34.	3.5	11
71	Evolution of self-generating porous microstructures in polyacrylonitrile-cellulose acetate blend fibres. Materials and Design, 2017, 134, 259-271.	7.0	11
72	Alginate foam-based three-dimensional culture to investigate drug sensitivity in primary leukaemia cells. Journal of the Royal Society Interface, 2018, 15, 20170928.	3.4	11

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73	Utilising Co-Axial Electrospinning as a Taste-Masking Technology for Paediatric Drug Delivery. Pharmaceutics, 2021, 13, 1665.	4.5	11
74	Facile One-Pot Method for All Aqueous Green Formation of Biocompatible Silk Fibroin-Poly(Ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 1290-1300.	5.2	11
75	Self-assembled micro-stripe patterning of sessile polymeric nanofluid droplets. Journal of Colloid and Interface Science, 2020, 561, 470-480.	9.4	10
76	Nextâ€generation Antimicrobial Peptides (AMPs) incorporated nanofibre wound dressings. Medical Devices & Sensors, 2021, 4, e10144.	2.7	10
77	Perspective: Covid-19; emerging strategies and material technologies. Emergent Materials, 2021, 4, 3-8.	5.7	10
78	Porous Graphene Composite Polymer Fibres. Polymers, 2021, 13, 76.	4.5	10
79	Manufacturing Cyclodextrin Fibers Using Water. Macromolecular Materials and Engineering, 2022, 307, .	3.6	9
80	Nozzleâ€Pressurized Gyration: A Novel Fiber Manufacturing Process. Macromolecular Materials and Engineering, 2022, 307, .	3.6	9
81	Biofabrication of Gelatin Tissue Scaffolds with Uniform Pore Size via Microbubble Assembly. Macromolecular Materials and Engineering, 2019, 304, 1900394.	3.6	7
82	COVIDâ€19: Facemasks, healthcare policies and risk factors in the crucial initial months of a global pandemic. Medical Devices & Sensors, 2020, 3, e10120.	2.7	7
83	Binary polymer systems for biomedical applications. International Materials Reviews, 2023, 68, 184-224.	19.3	7
84	Optimised release of tetracycline hydrochloride from core-sheath fibres produced by pressurised gyration. Journal of Drug Delivery Science and Technology, 2022, 72, 103359.	3.0	7
85	Empirical modelling and optimization of pressure-coupled infusion gyration parameters for the nanofibre fabrication. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190008.	2.1	6
86	Microstructure of fibres pressure-spun from polyacrylonitrileâ€"graphene oxide composite mixtures. Composites Science and Technology, 2020, 197, 108214.	7.8	6
87	Exploiting the antiviral potential of intermetallic nanoparticles. Emergent Materials, 2022, 5, 1251-1260.	5.7	6
88	The biomedical applications of graphene. Interface Focus, 2018, 8, 20180006.	3.0	5
89	A Portable Device for the Generation of Drug-Loaded Three-Compartmental Fibers Containing Metronidazole and Iodine for Topical Application. Pharmaceutics, 2020, 12, 373.	4.5	5
90	Optimization of Processâ€Control Parameters for the Diameter of Electrospun Hydrophilic Polymeric Composite Nanofibers. Macromolecular Materials and Engineering, 2021, 306, 2100471.	3.6	4

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91	Sustainable Macromolecular Materials and Engineering. Macromolecular Materials and Engineering, 2022, 307, .	3.6	2