

Declan M Devine

List of Publications by Year in descending order

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82
papers

2,711
citations

201674

27
h-index

197818

49
g-index

83
all docs

83
docs citations

83
times ranked

3037
citing authors

#	ARTICLE	IF	CITATIONS
1	Digital Twin: Origin to Future. <i>Applied System Innovation</i> , 2021, 4, 36.	4.6	279
2	Green synthesis of zinc oxide nanoparticles: A review of the synthesis methodology and mechanism of formation. <i>Sustainable Chemistry and Pharmacy</i> , 2020, 15, 100223.	3.3	217
3	Fused Filament Fabrication of PEEK: A Review of Process-Structure-Property Relationships. <i>Polymers</i> , 2020, 12, 1665.	4.5	118
4	Material Considerations for Fused-Filament Fabrication of Solid Dosage Forms. <i>Pharmaceutics</i> , 2018, 10, 44.	4.5	116
5	Review of Multifarious Applications of Poly (Lactic Acid). <i>Polymer-Plastics Technology and Engineering</i> , 2016, 55, 1057-1075.	1.9	108
6	Chemical surface modification of calcium carbonate particles with stearic acid using different treating methods. <i>Applied Surface Science</i> , 2016, 378, 320-329.	6.1	101
7	Hydrogel/bioactive glass composites for bone regeneration applications: Synthesis and characterisation. <i>Materials Science and Engineering C</i> , 2013, 33, 4203-4212.	7.3	94
8	Mechanical properties and thermal behaviour of PEGDMA hydrogels for potential bone regeneration application. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 1219-1227.	3.1	91
9	Coating of carbon fiber reinforced polyetheretherketone implants with titanium to improve bone apposition. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2013, 101B, 591-598.	3.4	82
10	Lower critical solution temperature control and swelling behaviour of physically crosslinked thermosensitive copolymers based on N-isopropylacrylamide. <i>European Polymer Journal</i> , 2006, 42, 2540-2548.	5.4	72
11	Synthesis and characterisation of chemically crosslinked N-vinyl pyrrolidinone (NVP) based hydrogels. <i>European Polymer Journal</i> , 2005, 41, 1272-1279.	5.4	71
12	The synthesis of a physically crosslinked NVP based hydrogel. <i>Polymer</i> , 2003, 44, 7851-7860.	3.8	70
13	Review of Catheter-Associated Urinary Tract Infections and <i>In Vitro</i> Urinary Tract Models. <i>Journal of Healthcare Engineering</i> , 2018, 2018, 1-16.	1.9	67
14	Applications of Digital Twin across Industries: A Review. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 5727.	2.5	67
15	The synthesis, characterisation, phase behaviour and swelling of temperature sensitive physically crosslinked poly(1-vinyl-2-pyrrolidinone)/poly(N-isopropylacrylamide) hydrogels. <i>European Polymer Journal</i> , 2006, 42, 69-80.	5.4	65
16	Multifunctional polyvinylpyrrolidinone-polyacrylic acid copolymer hydrogels for biomedical applications. <i>International Journal of Pharmaceutics</i> , 2006, 326, 50-59.	5.2	58
17	Synthesis and in Vivo Behavior of PVP/CMC/Agar Hydrogel Membranes Impregnated with Silver Nanoparticles for Wound Healing Applications. <i>ACS Applied Bio Materials</i> , 2018, 1, 1842-1852.	4.6	56
18	Preparation of monolithic matrices for oral drug delivery using a supercritical fluid assisted hot melt extrusion process. <i>International Journal of Pharmaceutics</i> , 2007, 329, 62-71.	5.2	54

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19	Comparison of fused-filament fabrication to direct compression and injection molding in the manufacture of oral tablets. <i>International Journal of Pharmaceutics</i> , 2019, 558, 328-340.	5.2	45
20	Mass-customization of oral tablets via the combination of 3D printing and injection molding. <i>International Journal of Pharmaceutics</i> , 2019, 569, 118611.	5.2	38
21	The synthesis, swelling behaviour and rheological properties of chemically crosslinked thermosensitive copolymers based on N-isopropylacrylamide. <i>Journal of Materials Science</i> , 2007, 42, 4136-4148.	3.7	34
22	The use of Agar as a novel filler for monolithic matrices produced using hot melt extrusion. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2006, 64, 75-81.	4.3	32
23	Extraction Method Plays Critical Role in Antibacterial Activity of Propolis-Loaded Hydrogels. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 1248-1257.	3.3	32
24	Halloysite nanotube reinforced polylactic acid composite. <i>Polymer Composites</i> , 2017, 38, 2166-2173.	4.6	32
25	Investigation of the effects of orientation on freeze/thawed Polyvinyl alcohol hydrogel properties. <i>Materials Today Communications</i> , 2018, 17, 82-93.	1.9	32
26	Preparation of Biodegradable Polyethylene Glycol Dimethacrylate Hydrogels via Thiol-ene Chemistry. <i>Polymers</i> , 2019, 11, 1339.	4.5	30
27	Fabrication and in vitro biological evaluation of photopolymerisable hydroxyapatite hydrogel composites for bone regeneration. <i>Journal of Biomaterials Applications</i> , 2014, 28, 1274-1283.	2.4	27
28	Evaluation of the materials properties, stability and cell response of a range of PEGDMA hydrogels for tissue engineering applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 99, 1-10.	3.1	27
29	Mechanism of formation, characterization and cytotoxicity of green synthesized zinc oxide nanoparticles obtained from <i>Ilex paraguariensis</i> leaves extract. <i>Nano Structures Nano Objects</i> , 2020, 24, 100532.	3.5	27
30	A novel pH-sensitive ceramic hydrogel for biomedical applications. <i>Polymers for Advanced Technologies</i> , 2015, 26, 1439-1446.	3.2	26
31	Compressive Strength and Bioactivity Properties of Photopolymerizable Hybrid Composite Hydrogels for Bone Tissue Engineering. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2014, 63, 641-650.	3.4	25
32	Effect of Stereolithography 3D Printing on the Properties of PEGDMA Hydrogels. <i>Polymers</i> , 2020, 12, 2015.	4.5	22
33	Antimicrobial PAA/PAH Electrospun Fiber Containing Green Synthesized Zinc Oxide Nanoparticles for Wound Healing. <i>Materials</i> , 2021, 14, 2889.	2.9	22
34	Bioactive composites fabricated by freezing-thawing method for bone regeneration applications. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2016, 54, 761-773.	2.1	20
35	Faster Release of Lumen-Loaded Drugs than Matrix-Loaded Equivalent in Polylactic Acid/Halloysite Nanotubes. <i>Materials</i> , 2019, 12, 1830.	2.9	20
36	Nanofillers can be used to enhance the thermal conductivity of commercially available SLA resins. <i>Procedia Manufacturing</i> , 2019, 38, 1236-1243.	1.9	20

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37	Drug release from a N-vinylpyrrolidinone/acrylic acid lubricious hydrophilic coating. <i>Journal of Materials Science</i> , 2005, 40, 3429-3436.	3.7	19
38	The incorporation of an organically modified layered silicate in monolithic polymeric matrices produced using hot melt extrusion. <i>Materials Chemistry and Physics</i> , 2007, 103, 419-426.	4.0	19
39	Synthesis and characterization of high density polyethylene/peat ash composites. <i>Composites Part B: Engineering</i> , 2016, 94, 312-321.	12.0	19
40	Surface- ϵ -modified halloysite nanotubes reinforced poly(lactic acid) for use in biodegradable coronary stents. <i>Journal of Applied Polymer Science</i> , 2018, 135, 46521.	2.6	19
41	Modulating the mechanical properties of photopolymerised polyethylene glycol-polypropylene glycol hydrogels for bone regeneration. <i>Journal of Materials Science</i> , 2012, 47, 6577-6585.	3.7	18
42	Composite cryogels for dual drug delivery and enhanced mechanical properties. <i>Polymer Composites</i> , 2018, 39, E210.	4.6	17
43	Alfa fiber/polypropylene composites: Influence of fiber extraction method and chemical treatments. <i>Journal of Applied Polymer Science</i> , 2019, 136, 47392.	2.6	17
44	Additive manufacturing of PLA/HNT nanocomposites for biomedical applications. <i>Procedia Manufacturing</i> , 2019, 38, 17-24.	1.9	16
45	A tough and novel dual-response PAA/P(NiPAAM-co-PEGDMA) IPN hydrogels with ceramics by photopolymerization for consolidation of bone fragments following fracture. <i>Biomedical Materials (Bristol)</i> , 2019, 14, 054101.	3.3	15
46	Calcium Phosphate Based Three-Dimensional Cold Plotted Bone Scaffolds for Critical Size Bone Defects. <i>BioMed Research International</i> , 2014, 2014, 1-10.	1.9	13
47	3D printed polymers are less stable than injection moulded counterparts when exposed to terminal sterilization processes using novel vaporized hydrogen peroxide and electron beam processes. <i>Polymer</i> , 2019, 183, 121870.	3.8	13
48	Optimizing the hardness of SLA printed objects by using the neural network and genetic algorithm. <i>Procedia Manufacturing</i> , 2019, 38, 117-124.	1.9	13
49	Biodegradation and Antimicrobial Properties of Zinc Oxide-Polymer Composite Materials for Urinary Stent Applications. <i>Coatings</i> , 2020, 10, 1002.	2.6	13
50	The Development of Hot Melt Extruded Biocompatible Controlled Release Drug Delivery Devices. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2014, 63, 476-485.	3.4	12
51	Extended release of proteins following encapsulation in hydroxyapatite/chitosan composite scaffolds for bone tissue engineering applications. <i>Materials Science and Engineering C</i> , 2018, 84, 281-289.	7.3	12
52	The synthesis and characterisation of grafted random styrene butadiene for biomedical applications. <i>Journal of Materials Science</i> , 2009, 44, 889-896.	3.7	11
53	Analysis of the Mechanical Properties of Solvent Cast Blends of PLA/PCL. <i>Applied Mechanics and Materials</i> , 0, 679, 50-56.	0.2	11
54	Tissue reaction to implants of different metals: A study using guide wires in cannulated screws. , 2009, 18, 40-48.		11

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55	Characterization of an Ovine Bilateral Critical Sized Bone Defect Iliac Wing Model to Examine Treatment Modalities Based on Bone Tissue Engineering. <i>BioMed Research International</i> , 2014, 2014, 1-7.	1.9	10
56	Melt Extruded Bioresorbable Polymer Composites for Potential Regenerative Medicine Applications. <i>Polymer-Plastics Technology and Engineering</i> , 2016, 55, 432-446.	1.9	10
57	Multiple recycling of a <sc>PLA</sc>/<sc>PHB</sc> biopolymer blend for sustainable packaging applications: Rheology–morphology, thermal, and mechanical performance analysis. <i>Polymer Engineering and Science</i> , 2022, 62, 1764-1774.	3.1	10
58	Influence of gamma and electron beam sterilization on the stability of a premixed injectable calcium phosphate cement for trauma indications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 77, 116-124.	3.1	9
59	The production of a novel poly(vinyl alcohol) hydrogel cryogenic spheres for immediate release using a droplet system. <i>Biomedical Physics and Engineering Express</i> , 2019, 5, 045017.	1.2	9
60	Nanocellulose for peripheral nerve regeneration in rabbits using citric acid as crosslinker with chitosan and freeze/thawed PVA. <i>Biomedical Materials (Bristol)</i> , 2021, 16, 055011.	3.3	9
61	Polymer-Based Additive Manufacturing: Historical Developments, Process Types and Material Considerations. , 2019, , 1-22.		9
62	Physical Properties of Shellac Material Used for Hot Melt Extrusion with Potential Application in the Pharmaceutical Industry. <i>Polymers</i> , 2021, 13, 3723.	4.5	9
63	Negative Temperature Sensitive Hydrogels in Controlled Drug Delivery. <i>Macromolecular Symposia</i> , 2008, 266, 53-58.	0.7	8
64	Degradable Nanocomposites for Fused Filament Fabrication Applications. <i>Journal of Manufacturing and Materials Processing</i> , 2018, 2, 29.	2.2	8
65	Stereolithography (SLA) utilised to print injection mould tooling in order to evaluate thermal and mechanical properties of commercial polypropylene. <i>Procedia Manufacturing</i> , 2021, 55, 205-212.	1.9	7
66	Electrospinning of Hydrogels for Biomedical Applications. <i>Gels Horizons: From Science To Smart Materials</i> , 2018, , 219-258.	0.3	6
67	3D Printed End of Arm Tooling (EOAT) for Robotic Automation. <i>Robotics</i> , 2018, 7, 49.	3.5	5
68	Electrospun hydrogels composites for bone tissue engineering. , 2019, , 39-70.		5
69	Synthesis and photopolymerisation of maleic polyvinyl alcohol based hydrogels for bone tissue engineering. <i>Journal of Polymer Research</i> , 2014, 21, 1.	2.4	4
70	Effect of unidirectional freezing using a thermal camera on polyvinyl (alcohol) for aligned porous cryogels. <i>Quantitative InfraRed Thermography Journal</i> , 2021, 18, 177-186.	4.2	4
71	Extruded Monofilament and Multifilament Thermoplastic Stitching Yarns. <i>Fibers</i> , 2017, 5, 45.	4.0	3
72	Pathogen displacement during intermittent catheter insertion: a novel <i>in vitro</i> urethra model. <i>Journal of Applied Microbiology</i> , 2020, 128, 1191-1200.	3.1	3

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73	Influence of extrusion screw speed on the properties of halloysite nanotube impregnated polylactic acid nanocomposites. <i>Journal of Polymer Engineering</i> , 2021, 41, 499-508.	1.4	3
74	Healing pattern of reamed bone following bone harvesting by a RIA device. , 2015, 29, 97-104.		3
75	Photopolymerization for filling porous ceramic matrix: Improvement of mechanical properties and drug delivering behavior. <i>Polymer Composites</i> , 2019, 40, 1654-1662.	4.6	2
76	Antimicrobial Active Bioplastics Using Triangular Silver Nanoplate Integrated Polycaprolactone and Polylactic Acid Films. <i>Materials</i> , 2021, 14, 1132.	2.9	2
77	Bioresorbable Polymers. , 2019, , .		2
78	Transfer and Optimisation of Injection Moulding Manufacture of Medical Devices Using Scientific Moulding Principles. <i>Journal of Manufacturing and Materials Processing</i> , 2021, 5, 113.	2.2	2
79	To assess the reparative ability of differentiated mesenchymal stem cells in a rat critical size bone repair defect model using high frequency co-registered photoacoustic/ultrasound imaging and micro computed tomography. <i>Proceedings of SPIE</i> , 2016, , .	0.8	1
80	Melt Processed Polymer Blends for Potential Regenerative Medicine Applications. <i>Applied Mechanics and Materials</i> , 0, 679, 92-100.	0.2	0
81	Monitoring of Extracellular Matrix Protein Conformations in the Presence of Biomimetic Bone Tissue Regeneration Scaffolds. <i>Key Engineering Materials</i> , 2020, 865, 43-47.	0.4	0
82	Self-Photopolymerizable Hydrogelâ€“Ceramic Composites with Scavenger Properties. <i>Polymers</i> , 2022, 14, 1261.	4.5	0