

Declan M Devine

List of Publications by Year in descending order

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82
papers

2,711
citations

201385

27
h-index

197535

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.	2.7	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.	1.6	217
3	Fused Filament Fabrication of PEEK: A Review of Process-Structure-Property Relationships. <i>Polymers</i> , 2020, 12, 1665.	2.0	118
4	Material Considerations for Fused-Filament Fabrication of Solid Dosage Forms. <i>Pharmaceutics</i> , 2018, 10, 44.	2.0	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.	3.1	101
7	Hydrogel/bioactive glass composites for bone regeneration applications: Synthesis and characterisation. <i>Materials Science and Engineering C</i> , 2013, 33, 4203-4212.	3.8	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.	1.5	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.	1.6	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.	2.6	72
11	Synthesis and characterisation of chemically crosslinked N-vinyl pyrrolidinone (NVP) based hydrogels. <i>European Polymer Journal</i> , 2005, 41, 1272-1279.	2.6	71
12	The synthesis of a physically crosslinked NVP based hydrogel. <i>Polymer</i> , 2003, 44, 7851-7860.	1.8	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.	1.1	67
14	Applications of Digital Twin across Industries: A Review. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 5727.	1.3	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.	2.6	65
16	Multifunctional polyvinylpyrrolidinone-polyacrylic acid copolymer hydrogels for biomedical applications. <i>International Journal of Pharmaceutics</i> , 2006, 326, 50-59.	2.6	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.	2.3	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.	2.6	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.	2.6	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.	2.6	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.	1.7	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.	2.0	32
23	Extraction Method Plays Critical Role in Antibacterial Activity of Propolis-Loaded Hydrogels. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 1248-1257.	1.6	32
24	Halloysite nanotube reinforced polylactic acid composite. <i>Polymer Composites</i> , 2017, 38, 2166-2173.	2.3	32
25	Investigation of the effects of orientation on freeze/thawed Polyvinyl alcohol hydrogel properties. <i>Materials Today Communications</i> , 2018, 17, 82-93.	0.9	32
26	Preparation of Biodegradable Polyethylene Glycol Dimethacrylate Hydrogels via Thiol-ene Chemistry. <i>Polymers</i> , 2019, 11, 1339.	2.0	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.	1.2	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.	1.5	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.	1.9	27
30	A novel pH-sensitive ceramic hydrogel for biomedical applications. <i>Polymers for Advanced Technologies</i> , 2015, 26, 1439-1446.	1.6	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.	1.8	25
32	Effect of Stereolithography 3D Printing on the Properties of PEGDMA Hydrogels. <i>Polymers</i> , 2020, 12, 2015.	2.0	22
33	Antimicrobial PAA/PAH Electrospun Fiber Containing Green Synthesized Zinc Oxide Nanoparticles for Wound Healing. <i>Materials</i> , 2021, 14, 2889.	1.3	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.	2.4	20
35	Faster Release of Lumen-Loaded Drugs than Matrix-Loaded Equivalent in Polylactic Acid/Halloysite Nanotubes. <i>Materials</i> , 2019, 12, 1830.	1.3	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. Journal of Materials Science, 2005, 40, 3429-3436.	1.7	19
38	The incorporation of an organically modified layered silicate in monolithic polymeric matrices produced using hot melt extrusion. Materials Chemistry and Physics, 2007, 103, 419-426.	2.0	19
39	Synthesis and characterization of high density polyethylene/peat ash composites. Composites Part B: Engineering, 2016, 94, 312-321.	5.9	19
40	Surface- ϵ -modified halloysite nanotubes reinforced poly(lactic acid) for use in biodegradable coronary stents. Journal of Applied Polymer Science, 2018, 135, 46521.	1.3	19
41	Modulating the mechanical properties of photopolymerised polyethylene glycol-polypropylene glycol hydrogels for bone regeneration. Journal of Materials Science, 2012, 47, 6577-6585.	1.7	18
42	Composite cryogels for dual drug delivery and enhanced mechanical properties. Polymer Composites, 2018, 39, E210.	2.3	17
43	Alfa fiber/polypropylene composites: Influence of fiber extraction method and chemical treatments. Journal of Applied Polymer Science, 2019, 136, 47392.	1.3	17
44	Additive manufacturing of PLA/HNT nanocomposites for biomedical applications. Procedia Manufacturing, 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. Biomedical Materials (Bristol), 2019, 14, 054101.	1.7	15
46	Calcium Phosphate Based Three-Dimensional Cold Plotted Bone Scaffolds for Critical Size Bone Defects. BioMed Research International, 2014, 2014, 1-10.	0.9	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. Polymer, 2019, 183, 121870.	1.8	13
48	Optimizing the hardness of SLA printed objects by using the neural network and genetic algorithm. Procedia Manufacturing, 2019, 38, 117-124.	1.9	13
49	Biodegradation and Antimicrobial Properties of Zinc Oxide-Polymer Composite Materials for Urinary Stent Applications. Coatings, 2020, 10, 1002.	1.2	13
50	The Development of Hot Melt Extruded Biocompatible Controlled Release Drug Delivery Devices. International Journal of Polymeric Materials and Polymeric Biomaterials, 2014, 63, 476-485.	1.8	12
51	Extended release of proteins following encapsulation in hydroxyapatite/chitosan composite scaffolds for bone tissue engineering applications. Materials Science and Engineering C, 2018, 84, 281-289.	3.8	12
52	The synthesis and characterisation of grafted random styrene butadiene for biomedical applications. Journal of Materials Science, 2009, 44, 889-896.	1.7	11
53	Analysis of the Mechanical Properties of Solvent Cast Blends of PLA/PCL. Applied Mechanics and Materials, 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.	0.9	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.	1.5	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.	1.5	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.	0.6	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.	1.7	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.	2.0	9
63	Negative Temperature Sensitive Hydrogels in Controlled Drug Delivery. <i>Macromolecular Symposia</i> , 2008, 266, 53-58.	0.4	8
64	Degradable Nanocomposites for Fused Filament Fabrication Applications. <i>Journal of Manufacturing and Materials Processing</i> , 2018, 2, 29.	1.0	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.	2.1	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.	1.2	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.	2.1	4
71	Extruded Monofilament and Multifilament Thermoplastic Stitching Yarns. <i>Fibers</i> , 2017, 5, 45.	1.8	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.	1.4	3

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73	Influence of extrusion screw speed on the properties of halloysite nanotube impregnated polylactic acid nanocomposites. Journal of Polymer Engineering, 2021, 41, 499-508.	0.6	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. Polymer Composites, 2019, 40, 1654-1662.	2.3	2
76	Antimicrobial Active Bioplastics Using Triangular Silver Nanoplate Integrated Polycaprolactone and Polylactic Acid Films. Materials, 2021, 14, 1132.	1.3	2
77	Bioresorbable Polymers. , 2019, , .		2
78	Transfer and Optimisation of Injection Moulding Manufacture of Medical Devices Using Scientific Moulding Principles. Journal of Manufacturing and Materials Processing, 2021, 5, 113.	1.0	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. Proceedings of SPIE, 2016, , .	0.8	1
80	Melt Processed Polymer Blends for Potential Regenerative Medicine Applications. Applied Mechanics and Materials, 0, 679, 92-100.	0.2	0
81	Monitoring of Extracellular Matrix Protein Conformations in the Presence of Biomimetic Bone Tissue Regeneration Scaffolds. Key Engineering Materials, 2020, 865, 43-47.	0.4	0
82	Self-Photopolymerizable Hydrogelâ€“Ceramic Composites with Scavenger Properties. Polymers, 2022, 14, 1261.	2.0	0