

Nicholas J Dunne

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

115
papers

2,854
citations

29
h-index

49
g-index

120
ext. papers

3,501
ext. citations

5.5
avg, IF

5.64
L-index

#	Paper	IF	Citations
115	Printability of calcium phosphate: calcium sulfate powders for the application of tissue engineered bone scaffolds using the 3D printing technique. <i>Materials Science and Engineering C</i> , 2014 , 38, 1-10	8.3	162
114	Effect of microporosity on scaffolds for bone tissue engineering. <i>International Journal of Energy Production and Management</i> , 2018 , 5, 115-124	5.3	154
113	Development and characterization of self-assembling nanoparticles using a bio-inspired amphipathic peptide for gene delivery. <i>Journal of Controlled Release</i> , 2014 , 189, 141-9	11.7	128
112	Critical review: Injectability of calcium phosphate pastes and cements. <i>Acta Biomaterialia</i> , 2017 , 50, 1-19	10.8	127
111	The relationship between porosity and fatigue characteristics of bone cements. <i>Biomaterials</i> , 2003 , 24, 239-45	15.6	92
110	Influence of mixing techniques on the physical properties of acrylic bone cement. <i>Biomaterials</i> , 2001 , 22, 1819-26	15.6	83
109	In vitro study of the efficacy of acrylic bone cement loaded with supplementary amounts of gentamicin: effect on mechanical properties, antibiotic release, and biofilm formation. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2007 , 78, 774-85	4.3	76
108	Curing characteristics of acrylic bone cement. <i>Journal of Materials Science: Materials in Medicine</i> , 2002 , 13, 17-22	4.5	75
107	Mechanical properties and cellular response of novel electrospun nanofibers for ligament tissue engineering: Effects of orientation and geometry. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016 , 61, 258-270	4.1	72
106	DNA vaccination for cervical cancer; a novel technology platform of RALA mediated gene delivery via polymeric microneedles. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2017 , 13, 921-932	6	66
105	Electrospinning of natural polymers for the production of nanofibres for wound healing applications. <i>Materials Science and Engineering C</i> , 2020 , 114, 110994	8.3	66
104	Graphene oxide versus graphene for optimisation of PMMA bone cement for orthopaedic applications. <i>Materials Science and Engineering C</i> , 2017 , 77, 1003-1011	8.3	63
103	Shrinkage stresses in bone cement. <i>Biomaterials</i> , 2003 , 24, 2933-40	15.6	63
102	Fatigue and biocompatibility properties of a poly(methyl methacrylate) bone cement with multi-walled carbon nanotubes. <i>Acta Biomaterialia</i> , 2012 , 8, 1201-12	10.8	62
101	Incorporation of multiwalled carbon nanotubes to acrylic based bone cements: effects on mechanical and thermal properties. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2010 , 3, 136-45	4.1	60
100	Biofilm formation by bacteria isolated from retrieved failed prosthetic hip implants in an in vitro model of hip arthroplasty antibiotic prophylaxis. <i>Journal of Orthopaedic Research</i> , 2007 , 25, 2-10	3.8	57
99	MicroRNA as Therapeutic Targets for Chronic Wound Healing. <i>Molecular Therapy - Nucleic Acids</i> , 2017 , 8, 46-55	10.7	56

98	Applications of Carbon Nanotubes in Bone Tissue Regeneration and Engineering: Superiority, Concerns, Current Advancements, and Prospects. <i>Nanomaterials</i> , 2019 , 9,	5.4	55
97	Calcium Phosphate Nanoparticles for Therapeutic Applications in Bone Regeneration. <i>Nanomaterials</i> , 2019 , 9,	5.4	53
96	Mesenchymal stem cell fate following non-viral gene transfection strongly depends on the choice of delivery vector. <i>Acta Biomaterialia</i> , 2017 , 55, 226-238	10.8	50
95	Pore-forming bioinks to enable spatio-temporally defined gene delivery in bioprinted tissues. <i>Journal of Controlled Release</i> , 2019 , 301, 13-27	11.7	50
94	Twinning anisotropy of tantalum during nanoindentation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 627, 249-261	5.3	46
93	Hydroxyapatite bone substitutes developed via replication of natural marine sponges. <i>Journal of Materials Science: Materials in Medicine</i> , 2010 , 21, 2255-61	4.5	46
92	Review of patents on microneedle applicators. <i>Recent Patents on Drug Delivery and Formulation</i> , 2011 , 5, 11-23	1.4	45
91	DNA vaccination for cervical cancer: Strategic optimisation of RALA mediated gene delivery from a biodegradable microneedle system. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2018 , 127, 288-297	5.7	40
90	DNA vaccination via RALA nanoparticles in a microneedle delivery system induces a potent immune response against the endogenous prostate cancer stem cell antigen. <i>Acta Biomaterialia</i> , 2019 , 96, 480-490	10.8	36
89	Effect of MWCNT addition on the thermal and rheological properties of polymethyl methacrylate bone cement. <i>Carbon</i> , 2011 , 49, 2893-2904	10.4	36
88	Influence of multiwall carbon nanotube functionality and loading on mechanical properties of PMMA/MWCNT bone cements. <i>Journal of Materials Science: Materials in Medicine</i> , 2010 , 21, 2287-92	4.5	35
87	Development of a bovine collagen-apatitic calcium phosphate cement for potential fracture treatment through vertebroplasty. <i>Acta Biomaterialia</i> , 2012 , 8, 4043-52	10.8	34
86	Influence of alginate backbone on efficacy of thermo-responsive alginate-g-P(NIPAAm) hydrogel as a vehicle for sustained and controlled gene delivery. <i>Materials Science and Engineering C</i> , 2019 , 95, 409-421	8.3	29
85	Hierarchically Structured Electrospun Scaffolds with Chemically Conjugated Growth Factor for Ligament Tissue Engineering. <i>Tissue Engineering - Part A</i> , 2017 , 23, 823-836	3.9	26
84	Delivery of RALA/siFKBPL nanoparticles via electrospun bilayer nanofibres: An innovative angiogenic therapy for wound repair. <i>Journal of Controlled Release</i> , 2019 , 316, 53-65	11.7	26
83	Optimisation of the mechanical and handling properties of an injectable calcium phosphate cement. <i>Journal of Materials Science: Materials in Medicine</i> , 2010 , 21, 2299-305	4.5	25
82	Biomechanical studies on biomaterial degradation and co-cultured cells: mechanisms, potential applications, challenges and prospects. <i>Journal of Materials Chemistry B</i> , 2019 , 7, 7439-7459	7.3	23
81	Development of three-dimensional printing polymer-ceramic scaffolds with enhanced compressive properties and tuneable resorption. <i>Materials Science and Engineering C</i> , 2018 , 93, 975-986	8.3	23

80	Graphene and graphene oxide functionalisation with silanes for advanced dispersion and reinforcement of PMMA-based bone cements. <i>Materials Science and Engineering C</i> , 2019 , 104, 109946	8.3	23
79	Development of calcium phosphate cement for the augmentation of traumatically fractured porcine specimens using vertebroplasty. <i>Journal of Biomechanics</i> , 2013 , 46, 711-5	2.9	23
78	Simple Radical Polymerization of Poly(Alginate-Graft-N-Isopropylacrylamide) Injectable Thermoresponsive Hydrogel with the Potential for Localized and Sustained Delivery of Stem Cells and Bioactive Molecules. <i>Macromolecular Bioscience</i> , 2017 , 17, 1700118	5.5	23
77	Calcium Phosphate Nanoparticles-Based Systems for RNAi Delivery: Applications in Bone Tissue Regeneration. <i>Nanomaterials</i> , 2020 , 10,	5.4	22
76	In vitro study investigating the mechanical properties of acrylic bone cement containing calcium carbonate nanoparticles. <i>Journal of Materials Science: Materials in Medicine</i> , 2008 , 19, 3327-33	4.5	21
75	Biocompatibility of calcium phosphate bone cement with optimized mechanical properties. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2016 , 104, 308-15	3.5	21
74	In vitro testing of chitosan in gentamicin-loaded bone cement: no antimicrobial effect and reduced mechanical performance. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2008 , 79, 851-60	4.3	20
73	Incorporation of chitosan in acrylic bone cement: effect on antibiotic release, bacterial biofilm formation and mechanical properties. <i>Journal of Materials Science: Materials in Medicine</i> , 2008 , 19, 1609-15	4.5	20
72	Incorporation of multi-walled carbon nanotubes to PMMA bone cement improves cytocompatibility and osseointegration. <i>Materials Science and Engineering C</i> , 2019 , 103, 109823	8.3	19
71	Effects of Heat Treatment on the Mechanical and Degradation Properties of 3D-Printed Calcium-Sulphate-Based Scaffolds. <i>ISRN Biomaterials</i> , 2013 , 2013, 1-10		19
70	Carboxyl functionalised MWCNT/polymethyl methacrylate bone cement for orthopaedic applications. <i>Journal of Biomaterials Applications</i> , 2014 , 29, 209-221	2.9	18
69	Effects of poly (ε-caprolactone) coating on the properties of three-dimensional printed porous structures. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017 , 70, 68-83	4.1	16
68	RALA complexed β-TCP nanoparticle delivery to mesenchymal stem cells induces bone formation in tissue engineered constructs in vitro and in vivo. <i>Journal of Materials Chemistry B</i> , 2017 , 5, 1753-1764	7.3	16
67	Experimental and computational approach investigating burst fracture augmentation using PMMA and calcium phosphate cements. <i>Annals of Biomedical Engineering</i> , 2014 , 42, 751-62	4.7	16
66	Thermal characteristics of curing acrylic bone cement. <i>IRBM News</i> , 2001 , 22, 88-97		16
65	Extent and mechanism of phase separation during the extrusion of calcium phosphate pastes. <i>Journal of Materials Science: Materials in Medicine</i> , 2016 , 27, 29	4.5	16
64	Hypoxia mimicking hydrogels to regulate the fate of transplanted stem cells. <i>Acta Biomaterialia</i> , 2019 , 88, 314-324	10.8	16
63	Systemic RALA/iNOS Nanoparticles: A Potent Gene Therapy for Metastatic Breast Cancer Coupled as a Biomarker of Treatment. <i>Molecular Therapy - Nucleic Acids</i> , 2017 , 6, 249-258	10.7	14

62	Biocompatibility of calcium phosphate bone cement with optimised mechanical properties: an in vivo study. <i>Journal of Materials Science: Materials in Medicine</i> , 2016 , 27, 191	4.5	14
61	Performance of calcium deficient hydroxyapatite-polyglycolic acid composites: an in vitro study. <i>Journal of Materials Science: Materials in Medicine</i> , 2010 , 21, 2263-70	4.5	14
60	Synthesis and Evaluation of a Thermoresponsive Degradable Chitosan-Grafted PNIPAAm Hydrogel as a "Smart" Gene Delivery System. <i>Materials</i> , 2020 , 13,	3.5	13
59	Porous Materials with Tunable Structure and Mechanical Properties via Templated Layer-by-Layer Assembly. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 21968-73	9.5	13
58	Gene therapy with RALA/iNOS composite nanoparticles significantly enhances survival in a model of metastatic prostate cancer. <i>Cancer Nanotechnology</i> , 2018 , 9, 5	7.9	13
57	Critical comparison of two methods for the determination of nanomechanical properties of a material: application to synthetic and natural biomaterials. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2006 , 78, 312-7	3.5	13
56	Feasibility of the use of poultry waste as polymer additives and implications for energy, cost and carbon. <i>Journal of Cleaner Production</i> , 2021 , 291, 125948	10.3	13
55	Rational design and characterisation of a linear cell penetrating peptide for non-viral gene delivery. <i>Journal of Controlled Release</i> , 2021 , 330, 1288-1299	11.7	13
54	Chemical modification of multiwalled carbon nanotube with a bifunctional caged ligand for radioactive labelling. <i>Acta Materialia</i> , 2014 , 64, 54-61	8.4	12
53	Identification of a suitable sterilisation method for collagen derived from a marine Demosponge. <i>International Journal of Nano and Biomaterials</i> , 2012 , 4, 148	0.2	12
52	Multi-objective optimisation of material properties and strut geometry for poly(L-lactic acid) coronary stents using response surface methodology. <i>PLoS ONE</i> , 2019 , 14, e0218768	3.7	11
51	Improved osteogenic differentiation of human amniotic mesenchymal stem cells on gradient nanostructured Ti surface. <i>Journal of Biomedical Materials Research - Part A</i> , 2020 , 108, 1824-1833	5.4	11
50	Composite cryogels for dual drug delivery and enhanced mechanical properties. <i>Polymer Composites</i> , 2018 , 39, E210-E220	3	11
49	Advances in Biodegradable 3D Printed Scaffolds with Carbon-Based Nanomaterials for Bone Regeneration. <i>Materials</i> , 2020 , 13,	3.5	11
48	Applications of materials for dural reconstruction in pre-clinical and clinical studies: Advantages and drawbacks, efficacy, and selections. <i>Materials Science and Engineering C</i> , 2020 , 117, 111326	8.3	11
47	Peptide-modified bone repair materials: Factors influencing osteogenic activity. <i>Journal of Biomedical Materials Research - Part A</i> , 2019 , 107, 1491-1512	5.4	10
46	Development of TMTP-1 targeted designer biopolymers for gene delivery to prostate cancer. <i>International Journal of Pharmaceutics</i> , 2016 , 500, 144-53	6.5	10
45	MiRNA 34a: a therapeutic target for castration-resistant prostate cancer. <i>Expert Opinion on Therapeutic Targets</i> , 2016 , 20, 1075-85	6.4	10

44	Processing-property relationships of biaxially stretched poly(L-lactic acid) sheet for application in coronary stents. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018 , 86, 113-121	4.1	10
43	Real time monitoring of the polymerisation of PMMA bone cement using Raman spectroscopy. <i>Journal of Materials Science: Materials in Medicine</i> , 2009 , 20, 2427-31	4.5	9
42	Long-term hip loading in unilateral total hip replacement patients is no different between limbs or compared to healthy controls at similar walking speeds. <i>Journal of Biomechanics</i> , 2018 , 80, 8-15	2.9	8
41	Patient positioning and cup orientation during total hip arthroplasty: assessment of current UK practice. <i>HIP International</i> , 2019 , 29, 89-95	1.7	8
40	Incorporation of poultry eggshell and litter ash as high loading polymer fillers in polypropylene. <i>Composites Part C: Open Access</i> , 2020 , 3, 100080	1.6	8
39	Binder jetting additive manufacturing of hydroxyapatite powders: Effects of adhesives on geometrical accuracy and green compressive strength. <i>Additive Manufacturing</i> , 2020 , 36, 101645	6.1	8
38	Surrogate Outcome Measures of In Vitro Osteoclast Resorption of Tricalcium Phosphate. <i>Advanced Healthcare Materials</i> , 2017 , 6, 1600947	10.1	7
37	Collagen/GAG scaffolds activated by RALA-siMMP-9 complexes with potential for improved diabetic foot ulcer healing. <i>Materials Science and Engineering C</i> , 2020 , 114, 111022	8.3	7
36	Investigating Approaches for Three-Dimensional Printing of Hydroxyapatite Scaffolds for Bone Regeneration. <i>Key Engineering Materials</i> , 2014 , 631, 306-311	0.4	7
35	Advances in biofabrication techniques for collagen-based 3D in vitro culture models for breast cancer research. <i>Materials Science and Engineering C</i> , 2021 , 122, 111944	8.3	7
34	The influence of coating technology on the mechanical performance of montmorillonite nanoclay reinforced acrylic bone cement. <i>International Journal of Nano and Biomaterials</i> , 2008 , 1, 237	0.2	6
33	Evaluation of an accelerated aging medium for acrylic bone cement based on analysis of nanoindentation measurements on laboratory-prepared and retrieved specimens. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2007 , 81, 544-50	3.5	6
32	Characterisation and constitutive modelling of biaxially stretched poly(L-lactic acid) sheet for application in coronary stents. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019 , 97, 346-354	4.1	5
31	Effect of combined flexion and external rotation on measurements of the proximal femur from anteroposterior pelvic radiographs. <i>Orthopaedics and Traumatology: Surgery and Research</i> , 2018 , 104, 449-454	2.9	5
30	Development of operator independent bone cement vacuum mixing system for joint replacement surgery. <i>Plastics, Rubber and Composites</i> , 2006 , 35, 317-323	1.5	4
29	Incorporation of montmorillonite nanoclay to acrylic bone cement: effect on mechanical properties and morphology. <i>International Journal of Nano and Biomaterials</i> , 2007 , 1, 138	0.2	4
28	Translational Application of 3D Bioprinting for Cartilage Tissue Engineering. <i>Bioengineering</i> , 2021 , 8,	5.3	4
27	Rational design and characterisation of an amphipathic cell penetrating peptide for non-viral gene delivery. <i>International Journal of Pharmaceutics</i> , 2021 , 596, 120223	6.5	4

26	Development and optimisation of extruded bio-based polymers from poultry feathers. <i>European Polymer Journal</i> , 2021 , 158, 110678	5.2	4
25	Critical evaluation of pulse-echo ultrasonic test method for the determination of setting and mechanical properties of acrylic bone cement: influence of mixing technique. <i>Ultrasonics</i> , 2015 , 56, 279-86	3.5	3
24	Nanocomposite-coated porous templates for engineered bone scaffolds: a parametric study of layer-by-layer assembly conditions. <i>Biomedical Materials (Bristol)</i> , 2019 , 14, 065008	3.5	3
23	Polymeric Scaffolds for Tissue Engineering. <i>International Journal of Polymer Science</i> , 2014 , 2014, 1-2	2.4	3
22	Optimisation of a two-liquid component pre-filled acrylic bone cement system: a design of experiments approach to optimise cement final properties. <i>Journal of Materials Science: Materials in Medicine</i> , 2014 , 25, 2287-96	4.5	3
21	Investigations on drop penetration and wetting characteristics of powder-liquid systems in relation to the mixing of acrylic bone cement. <i>International Journal of Nano and Biomaterials</i> , 2010 , 3, 20	0.2	3
20	Influence of preoperative femoral orientation on radiographic measures of femoral head height in total hip replacement. <i>Clinical Biomechanics</i> , 2021 , 81, 105247	2.2	3
19	Emerging areas of bone repair materials 2019 , 411-446		2
18	Improving the Intercellular Uptake and Osteogenic Potency of Calcium Phosphate via Nanocomplexation with the RALA Peptide. <i>Nanomaterials</i> , 2020 , 10,	5.4	2
17	Hydrothermal synthesis of coccolith rich chalk to hydroxyapatite. <i>International Journal of Nano and Biomaterials</i> , 2012 , 4, 81	0.2	2
16	Operative and radiographic acetabular component orientation in total hip replacement: Influence of pelvic orientation and surgical positioning technique. <i>Medical Engineering and Physics</i> , 2019 , 64, 7-14	2.4	2
15	Development of a Spray-Dried Formulation of Peptide-Dna Nanoparticles into a Dry Powder for Pulmonary Delivery Using Factorial Design.. <i>Pharmaceutical Research</i> , 2022 , 1	4.5	2
14	Biomechanics of Vertebroplasty: Effect of Cement Viscosity on Mechanical Behaviour. <i>Key Engineering Materials</i> , 2013 , 587, 416-421	0.4	1
13	Bone cement mixing. Theatre staff's views and opinions. <i>Journal of Perioperative Practice</i> , 2000 , 10, 619-23		1
12	Poultry feather disulphide bond breakdown to enable bio-based polymer production. <i>Polymers From Renewable Resources</i> , 204124792110087	0.4	1
11	Exploiting the anticancer effects of a nitrogen bisphosphonate nanomedicine for glioblastoma multiforme. <i>Journal of Nanobiotechnology</i> , 2021 , 19, 127	9.4	1
10	Advanced G-MPS-PMMA Bone Cements: Influence of Graphene Silanisation on Fatigue Performance, Thermal Properties and Biocompatibility. <i>Nanomaterials</i> , 2021 , 11,	5.4	1
9	Hydroxyapatite sonosensitization of ultrasound-triggered, thermally responsive hydrogels: An on-demand delivery system for bone repair applications. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2021 , 109, 1622-1633	3.5	1

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|---|--|-----|---|
| 8 | Production of Feather-Based Biopolymers as a Direct Alternative to Synthetic Plastics. <i>ACS Sustainable Chemistry and Engineering</i> , 2022 , 10, 486-494 | 8.3 | 1 |
| 7 | Ethical aspects of the biologicalisation of manufacturing. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2021 , 34, 178-185 | 3.4 | 0 |
| 6 | Carbon Nanotubes in Acrylic Bone Cement. <i>Springer Series in Biomaterials Science and Engineering</i> , 2013 , 173-199 | 0.6 | |
| 5 | Effect of vacuum mixing and manual pressurisation on residual strains in polymethyl methacrylate bone cement mantles. <i>International Journal of Nano and Biomaterials</i> , 2010 , 3, 49 | 0.2 | |
| 4 | Influence de la flexion et de la rotation latérale combinées de la hanche sur les mensurations morphométriques du fémur proximal sur des radiographies de bassin de face. <i>Revue De Chirurgie Orthopedique Et Traumatologique</i> , 2018 , 104, 312 | 0 | |
| 3 | The Mechanical Properties of the Scaffolds Reinforced by Fibres or Tubes for Tissue Repair 2017 , 79-111 | | |
| 2 | Nanoparticles beyond the blood-brain barrier for glioblastoma 2021 , 707-747 | | |
| 1 | Microneedles for Gene Therapy: Overcoming Extracellular and Intracellular Barriers 2018 , 129-175 | | |