

# David Nisbet

## List of Publications by Year in descending order

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110  
papers

4,753  
citations

70961

41  
h-index

106150

65  
g-index

120  
all docs

120  
docs citations

120  
times ranked

6286  
citing authors

#	ARTICLE	IF	CITATIONS
1	Review Paper: A Review of the Cellular Response on Electrospun Nanofibers for Tissue Engineering. <i>Journal of Biomaterials Applications</i> , 2009, 24, 7-29.	1.2	264
2	Bioinspired surface modification of orthopedic implants for bone tissue engineering. <i>Biomaterials</i> , 2019, 219, 119366.	5.7	204
3	Ultra-Durable and Transparent Self-Cleaning Surfaces by Large-Scale Self-Assembly of Hierarchical Interpenetrated Polymer Networks. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 13615-13623.	4.0	179
4	Three-Dimensional Nanofibrous Scaffolds Incorporating Immobilized BDNF Promote Proliferation and Differentiation of Cortical Neural Stem Cells. <i>Stem Cells and Development</i> , 2010, 19, 843-852.	1.1	158
5	Neural tissue engineering of the CNS using hydrogels. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2008, 87B, 251-263.	1.6	145
6	Neurite infiltration and cellular response to electrospun polycaprolactone scaffolds implanted into the brain. <i>Biomaterials</i> , 2009, 30, 4573-4580.	5.7	140
7	Stability of ZIF-8 nanopowders in bacterial culture media and its implication for antibacterial properties. <i>Chemical Engineering Journal</i> , 2021, 413, 127511.	6.6	137
8	Controlling initial biodegradation of magnesium by a biocompatible strontium phosphate conversion coating. <i>Acta Biomaterialia</i> , 2014, 10, 1463-1474.	4.1	135
9	Mimosa Origami: A nanostructure-enabled directional self-organization regime of materials. <i>Science Advances</i> , 2016, 2, e1600417.	4.7	108
10	Characterization of neural stem cells on electrospun poly( $\mu$ -caprolactone) submicron scaffolds: evaluating their potential in neural tissue engineering. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2008, 19, 623-634.	1.9	106
11	Biomaterials for Brain Tissue Engineering. <i>Australian Journal of Chemistry</i> , 2010, 63, 1143.	0.5	99
12	Interaction of embryonic cortical neurons on nanofibrous scaffolds for neural tissue engineering. <i>Journal of Neural Engineering</i> , 2007, 4, 35-41.	1.8	96
13	Performance-driven design of Biocompatible Mg alloys. <i>Jom</i> , 2011, 63, 28-34.	0.9	96
14	Functionalized composite scaffolds improve the engraftment of transplanted dopaminergic progenitors in a mouse model of Parkinson's disease. <i>Biomaterials</i> , 2016, 74, 89-98.	5.7	89
15	Peptide-Based Scaffolds Support Human Cortical Progenitor Graft Integration to Reduce Atrophy and Promote Functional Repair in a Model of Stroke. <i>Cell Reports</i> , 2017, 20, 1964-1977.	2.9	88
16	Promoting engraftment of transplanted neural stem cells/progenitors using biofunctionalised electrospun scaffolds. <i>Biomaterials</i> , 2012, 33, 9188-9197.	5.7	87
17	Method to Impart Electro- and Biofunctionality to Neural Scaffolds Using Graphene-Polyelectrolyte Multilayers. <i>ACS Applied Materials &amp; Interfaces</i> , 2012, 4, 4524-4531.	4.0	80
18	In vivo assessment of grafted cortical neural progenitor cells and host response to functionalized self-assembling peptide hydrogels and the implications for tissue repair. <i>Journal of Materials Chemistry B</i> , 2014, 2, 7771-7778.	2.9	71

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19	Morphology and gelation of thermosensitive xyloglucan hydrogels. <i>Biophysical Chemistry</i> , 2006, 121, 14-20.	1.5	67
20	Mitochondrial DNA Haplotypes Define Gene Expression Patterns in Pluripotent and Differentiating Embryonic Stem Cells. <i>Stem Cells</i> , 2013, 31, 703-716.	1.4	65
21	Tuning the amino acid sequence of minimalist peptides to present biological signals via charge neutralised self assembly. <i>Soft Matter</i> , 2013, 9, 3915.	1.2	60
22	Interleukin-10 conjugated electrospun polycaprolactone (PCL) nanofibre scaffolds for promoting alternatively activated (M2) macrophages around the peripheral nerve in vivo. <i>Journal of Immunological Methods</i> , 2015, 420, 38-49.	0.6	60
23	Engineering Highly Interconnected Neuronal Networks on Nanowire Scaffolds. <i>Nano Letters</i> , 2017, 17, 3369-3375.	4.5	58
24	Specific control of cell-material interactions: Targeting cell receptors using ligand-functionalized polymer substrates. <i>Progress in Polymer Science</i> , 2014, 39, 1312-1347.	11.8	57
25	Tuning the mechanical and morphological properties of self-assembled peptide hydrogels via control over the gelation mechanism through regulation of ionic strength and the rate of pH change. <i>RSC Advances</i> , 2015, 5, 301-307.	1.7	56
26	Characterisation of minimalist co-assembled fluorenylmethyloxycarbonyl self-assembling peptide systems for presentation of multiple bioactive peptides. <i>Acta Biomaterialia</i> , 2016, 38, 11-22.	4.1	56
27	Scission of electrospun polymer fibres by ultrasonication. <i>Polymer</i> , 2013, 54, 4237-4252.	1.8	54
28	Dynamic and Responsive Growth Factor Delivery from Electrospun and Hydrogel Tissue Engineering Materials. <i>Advanced Healthcare Materials</i> , 2018, 7, 1700836.	3.9	54
29	Green Full Conversion of ZnO Nanopowders to Well-Dispersed Zeolitic Imidazolate Framework-8 (ZIF-8) Nanopowders via a Stoichiometric Mechanochemical Reaction for Fast Dye Adsorption. <i>Crystal Growth and Design</i> , 2020, 20, 2761-2773.	1.4	54
30	Colonization and maintenance of murine embryonic stem cells on poly( $\alpha$ -hydroxy esters). <i>Biomaterials</i> , 2004, 25, 4963-4970.	5.7	52
31	Rheological properties of high melt strength poly(ethylene terephthalate) formed by reactive extrusion. <i>Journal of Applied Polymer Science</i> , 2006, 100, 3646-3652.	1.3	52
32	Enhancing neurite outgrowth from primary neurones and neural stem cells using thermoresponsive hydrogel scaffolds for the repair of spinal cord injury. <i>Journal of Biomedical Materials Research - Part A</i> , 2009, 89A, 24-35.	2.1	49
33	Automated Fourier space region-recognition filtering for off-axis digital holographic microscopy. <i>Biomedical Optics Express</i> , 2016, 7, 3111.	1.5	49
34	An Outlook of Recent Advances in Chemiresistive Sensor-Based Electronic Nose Systems for Food Quality and Environmental Monitoring. <i>Sensors</i> , 2021, 21, 2271.	2.1	48
35	3D Electrospun scaffolds promote a cytotropic phenotype of cultured primary astrocytes. <i>Journal of Neurochemistry</i> , 2014, 130, 215-226.	2.1	47
36	Cytotoxic T cells swarm by homotypic chemokine signalling. <i>ELife</i> , 2020, 9, .	2.8	46

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37	Implantation of Functionalized Thermally Gelling Xyloglucan Hydrogel Within the Brain: Associated Neurite Infiltration and Inflammatory Response. <i>Tissue Engineering - Part A</i> , 2010, 16, 2833-2842.	1.6	45
38	Self-Assembled Peptides: Characterisation and In Vivo Response. <i>Biointerphases</i> , 2012, 7, 2.	0.6	45
39	Using minimalist self-assembling peptides as hierarchical scaffolds to stabilise growth factors and promote stem cell integration in the injured brain. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2018, 12, e1571-e1579.	1.3	44
40	The influence of biodegradable magnesium alloys on the osteogenic differentiation of human mesenchymal stem cells. <i>Journal of Biomedical Materials Research - Part A</i> , 2014, 102, n/a-n/a.	2.1	42
41	Biofunctionalisation of polymeric scaffolds for neural tissue engineering. <i>Journal of Biomaterials Applications</i> , 2012, 27, 369-390.	1.2	41
42	In vitro response to functionalized self-assembled peptide scaffolds for three-dimensional cell culture. <i>Biopolymers</i> , 2014, 102, 197-205.	1.2	41
43	Tailoring minimalist self-assembling peptides for localized viral vector gene delivery. <i>Nano Research</i> , 2016, 9, 674-684.	5.8	41
44	Surface and bulk characterisation of electrospun membranes: Problems and improvements. <i>Colloids and Surfaces B: Biointerfaces</i> , 2009, 71, 1-12.	2.5	39
45	Coassembled nanostructured bioscaffold reduces the expression of proinflammatory cytokines to induce apoptosis in epithelial cancer cells. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2016, 12, 1397-1407.	1.7	39
46	Temporally controlled release of multiple growth factors from a self-assembling peptide hydrogel. <i>Nanotechnology</i> , 2016, 27, 385102.	1.3	38
47	Temporally controlled growth factor delivery from a self-assembling peptide hydrogel and electrospun nanofibre composite scaffold. <i>Nanoscale</i> , 2017, 9, 13661-13669.	2.8	37
48	Engineering of Chitosan-Hydroxyapatite-Magnetite Hierarchical Scaffolds for Guided Bone Growth. <i>Materials</i> , 2019, 12, 2321.	1.3	37
49	Hierarchical amorphous nanofibers for transparent inherently super-hydrophilic coatings. <i>Journal of Materials Chemistry A</i> , 2014, 2, 15575-15581.	5.2	36
50	Harnessing stem cells and biomaterials to promote neural repair. <i>British Journal of Pharmacology</i> , 2019, 176, 355-368.	2.7	34
51	Is Viral Vector Gene Delivery More Effective Using Biomaterials?. <i>Advanced Healthcare Materials</i> , 2021, 10, e2001238.	3.9	34
52	Traction of 3D and 4D Printing in the Healthcare Industry: From Drug Delivery and Analysis to Regenerative Medicine. <i>ACS Biomaterials Science and Engineering</i> , 2022, 8, 2764-2797.	2.6	34
53	Biomimetic Materials and Their Utility in Modeling the 3-Dimensional Neural Environment. <i>IScience</i> , 2020, 23, 100788.	1.9	33
54	A Programmed Anti-inflammatory Nanoscaffold (PAIN) as a 3D Tool to Understand the Brain Injury Response. <i>Advanced Materials</i> , 2018, 30, e1805209.	11.1	32

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55	Flexible Transparent Hierarchical Nanomesh for Rose Petal-Like Droplet Manipulation and Lossless Transfer. <i>Advanced Materials Interfaces</i> , 2015, 2, 1500071.	1.9	31
56	Surface grafting of electrospun fibers using ATRP and RAFT for the control of biointerfacial interactions. <i>Biointerphases</i> , 2013, 8, 16.	0.6	30
57	Characterization of the Stability and Bio-functionality of Tethered Proteins on Bioengineered Scaffolds. <i>Journal of Biological Chemistry</i> , 2014, 289, 15044-15051.	1.6	29
58	In vitro evaluation of biodegradable magnesium alloys containing micro-alloying additions of strontium, with and without zinc. <i>Journal of Materials Chemistry B</i> , 2015, 3, 8874-8883.	2.9	29
59	Peptide Programmed Hydrogels as Safe Sanctuary Microenvironments for Cell Transplantation. <i>Advanced Functional Materials</i> , 2020, 30, 1900390.	7.8	29
60	Shear Containment of BDNF within Molecular Hydrogels Promotes Human Stem Cell Engraftment and Postinfarction Remodeling in Stroke. <i>Advanced Biology</i> , 2018, 2, 1800113.	3.0	28
61	Integrating Biomaterials and Stem Cells for Neural Regeneration. <i>Stem Cells and Development</i> , 2016, 25, 214-226.	1.1	26
62	Reducing Astrocytic Scarring after Traumatic Brain Injury with a Multifaceted Anti-Inflammatory Hydrogel System. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 2542-2549.	2.6	26
63	Large and Small Assembly: Combining Functional Macromolecules with Small Peptides to Control the Morphology of Skeletal Muscle Progenitor Cells. <i>Biomacromolecules</i> , 2018, 19, 825-837.	2.6	26
64	Scaffolds Formed via the Non-Equilibrium Supramolecular Assembly of the Synergistic ECM Peptides RGD and PHSRN Demonstrate Improved Cell Attachment in 3D. <i>Polymers</i> , 2018, 10, 690.	2.0	25
65	A study of the initial film growth of PEG-like plasma polymer films via XPS and NEXAFS. <i>Applied Surface Science</i> , 2014, 288, 288-294.	3.1	24
66	Review: Biomaterial systems to resolve brain inflammation after traumatic injury. <i>APL Bioengineering</i> , 2018, 2, 021502.	3.3	24
67	The effect of surface hydrophilicity on the behavior of embryonic cortical neurons. <i>Journal of Colloid and Interface Science</i> , 2006, 299, 647-655.	5.0	23
68	Ultra-Porous Nanoparticle Networks: A Biomimetic Coating Morphology for Enhanced Cellular Response and Infiltration. <i>Scientific Reports</i> , 2016, 6, 24305.	1.6	23
69	Facile Control over the Supramolecular Ordering of Self-assembled Peptide Scaffolds by Simultaneous Assembly with a Polysaccharide. <i>Scientific Reports</i> , 2017, 7, 4797.	1.6	23
70	Vertically configured nanostructure-mediated electroporation: a promising route for intracellular regulations and interrogations. <i>Materials Horizons</i> , 2020, 7, 2810-2831.	6.4	22
71	Optimally Hierarchical Nanostructured Hydroxyapatite Coatings for Superior Prosthesis Biointegration. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 24840-24849.	4.0	20
72	Tuneable Hybrid Hydrogels via Complementary Self-Assembly of a Bioactive Peptide with a Robust Polysaccharide. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 3340-3350.	2.6	20

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73	Transcriptomic analysis and 3D bioengineering of astrocytes indicate ROCK inhibition produces cytotoxic astrogliosis. <i>Frontiers in Neuroscience</i> , 2015, 9, 50.	1.4	19
74	Low Fouling Electrospun Scaffolds with Clicked Bioactive Peptides for Specific Cell Attachment. <i>Biomacromolecules</i> , 2015, 16, 2109-2118.	2.6	18
75	Optimizing interfacial features to regulate neural progenitor cells using polyelectrolyte multilayers and brain derived neurotrophic factor. <i>Biointerphases</i> , 2011, 6, 189-199.	0.6	17
76	Harnessing the self-assembly of peptides for the targeted delivery of anti-cancer agents. <i>Materials Horizons</i> , 2020, 7, 1996-2010.	6.4	17
77	Tuning the selectivity of highly sensitive chemiresistive nanoparticle networks by encapsulation with metal-organic frameworks. <i>Journal of Materials Chemistry C</i> , 2021, 9, 17331-17340.	2.7	17
78	Bioprinting and Biofabrication with Peptide and Protein Biomaterials. <i>Advances in Experimental Medicine and Biology</i> , 2017, 1030, 95-129.	0.8	16
79	Peptide Hydrogel Scaffold for Mesenchymal Precursor Cells Implanted to Injured Adult Rat Spinal Cord. <i>Tissue Engineering - Part A</i> , 2021, 27, 993-1007.	1.6	16
80	Tissue Programmed Hydrogels Functionalized with GDNF Improve Human Neural Grafts in Parkinson's Disease. <i>Advanced Functional Materials</i> , 2021, 31, 2105301.	7.8	16
81	Hydrogel-immobilized Supercharged Proteins. <i>Advanced Biology</i> , 2018, 2, 1700240.	3.0	14
82	Optimization of Aqueous SI-ATRP Grafting of Poly(Oligo(Ethylene Glycol) Methacrylate) Brushes from Benzyl Chloride Macroinitiator Surfaces. <i>Macromolecular Bioscience</i> , 2015, 15, 799-811.	2.1	13
83	The effect of a superhydrophobic coating on moisture absorption and tensile strength of 3D-printed carbon-fibre/polyamide. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 145, 106380.	3.8	13
84	Controlling integrin-based adhesion to a degradable electrospun fibre scaffold via SI-ATRP. <i>Journal of Materials Chemistry B</i> , 2016, 4, 7314-7322.	2.9	12
85	Galactose-functionalised PCL nanofibre scaffolds to attenuate inflammatory action of astrocytes in vitro and in vivo. <i>Journal of Materials Chemistry B</i> , 2017, 5, 4073-4083.	2.9	12
86	Effect of phyto-fabricated nanoscale organic-iron complex on photo-fermentative hydrogen production by <i>Rhodospseudomonas palustris</i> MP2 and <i>Rhodospseudomonas palustris</i> MP4. <i>Biomass and Bioenergy</i> , 2020, 140, 105667.	2.9	12
87	Enhancing Peptide Biomaterials for Biofabrication. <i>Polymers</i> , 2021, 13, 2590.	2.0	11
88	When Less Gold is More: Selective Attomolar Biosensing at the Nanoscale. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	11
89	Non-oxidized cellulose nanofibers as a topical hemostat: In vitro thromboelastometry studies of structure vs function. <i>Carbohydrate Polymers</i> , 2021, 265, 118043.	5.1	10
90	Replace and repair: Biomimetic bioprinting for effective muscle engineering. <i>APL Bioengineering</i> , 2021, 5, 031502.	3.3	9

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91	Changing Fate: Reprogramming Cells via Engineered Nanoscale Delivery Materials. <i>Advanced Materials</i> , 2022, 34, e2108757.	11.1	9
92	Deletion of the Complex I Subunit NDUFS4 Adversely Modulates Cellular Differentiation. <i>Stem Cells and Development</i> , 2016, 25, 239-250.	1.1	8
93	A Commentary on the Need for 3D-Biologically Relevant In Vitro Environments to Investigate Astrocytes and Their Role in Central Nervous System Inflammation. <i>Neurochemical Research</i> , 2016, 41, 589-592.	1.6	8
94	Using UV-Responsive Nanoparticles to Provide <i>In Situ</i> Control of Growth Factor Delivery and a More Constant Release Profile from a Hydrogel Environment. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 12068-12076.	4.0	7
95	The Potential of Stem Cells and Tissue Engineered Scaffolds for Repair of the Central Nervous System. , 2012, , 97-111.		6
96	Engineering Fractal Photonic Metamaterials by Stochastic Self-Assembly of Nanoparticles. <i>Advanced Photonics Research</i> , 2021, 2, 2100020.	1.7	6
97	Extracellular Matrix Biomimetic Hydrogels, Encapsulated with Stromal Cell-Derived Factor 1, Improve the Composition of Foetal Tissue Grafts in a Rodent Model of Parkinson's Disease. <i>International Journal of Molecular Sciences</i> , 2022, 23, 4646.	1.8	6
98	Shining a light on the hidden structure of gelatin methacryloyl bioinks using small-angle X-ray scattering (SAXS). <i>Materials Chemistry Frontiers</i> , 2021, 5, 8025-8036.	3.2	5
99	Synthetic Multi-level Matrices for Bone Regeneration. , 2011, , 99-122.		5
100	Shielding Surfaces from Viruses and Bacteria with a Multiscale Coating. <i>Advanced Science</i> , 2022, 9, .	5.6	4
101	Bio-nanotechnology Approaches to Neural Tissue Engineering. , 2010, , .		3
102	Biodesigned bioinks for 3D printing via divalent crosslinking of self-assembled peptide-polysaccharide hybrids. <i>Materials Today Advances</i> , 2022, 14, 100243.	2.5	3
103	Self-Assembled Peptide Nanostructures for the Fabrication of Cell Scaffolds. , 2015, , 33-61.		2
104	Hybrid Self-Assembling Peptide/Gelatin Methacrylate (GelMA) Bioink Blend for Improved Bioprintability and Primary Myoblast Response. <i>Advanced NanoBiomed Research</i> , 0, , 2100106.	1.7	2
105	Tissue Engineering of Organs: Brain Tissues. , 2011, , 457-492.		1
106	Harnessing stem cells and biomaterials to promote neural repair. <i>British Journal of Pharmacology</i> , 2019, 176, 355-368.	2.7	1
107	Self-Assembled Peptide Habitats to Model Tumor Metastasis. <i>Gels</i> , 2022, 8, 332.	2.1	1
108	Adaptive spatial filtering for off-axis digital holographic microscopy based on region recognition approach with iterative thresholding. , 2016, , .		0

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109	Probing the Interfacial Structure of Bilayer Plasma Polymer Films via Neutron Reflectometry. <i>Plasma Processes and Polymers</i> , 2016, 13, 534-543.	1.6	0
110	A Hydrogel as a Bespoke Delivery Platform for Stromal Cell-Derived Factor-1. <i>Gels</i> , 2022, 8, 224.	2.1	0