Stephen T Beirne

List of Publications by Year
in descending order

77	3,757	159358	133063
papers	citations	30 h-index	59 g-index

78	78	78	5567
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Knitted Strain Sensor Textiles of Highly Conductive All-Polymeric Fibers. ACS Applied Materials & Interfaces, 2015, 7, 21150-21158.	4.0	267
2	In situ handheld threeâ€dimensional bioprinting for cartilage regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 611-621.	1.3	232
3	A wearable electrochemical sensor for the real-time measurement of sweat sodium concentration. Analytical Methods, 2010, 2, 342.	1.3	226
4	Development of the Biopen: a handheld device for surgical printing of adipose stem cells at a chondral wound site. Biofabrication, 2016, 8, 015019.	3.7	186
5	Bio-ink for on-demand printing of living cells. Biomaterials Science, 2013, 1, 224-230.	2.6	184
6	Three dimensional (3D) printed electrodes for interdigitated supercapacitors. Electrochemistry Communications, 2014, 41, 20-23.	2.3	179
7	Carbon Nanotube â€“ Reduced Graphene Oxide Composites for Thermal Energy Harvesting Applications. Advanced Materials, 2013, 25, 6602-6606.	11.1	178
8	High Power Density Electrochemical Thermocells for Inexpensively Harvesting Lowâ€Grade Thermal Energy. Advanced Materials, 2017, 29, 1605652.	11.1	166
9	Extrusion printing of ionicâ€“covalent entanglement hydrogels with high toughness. Journal of Materials Chemistry B, 2013, 1, 4939.	2.9	154
10	Development of Graphene Oxide/Polyaniline Inks for High Performance Flexible Microsupercapacitors via Extrusion Printing. Advanced Functional Materials, 2018, 28, 1706592.	7.8	144
11	â€˜SWEATCHâ€™: A Wearable Platform for Harvesting and Analysing Sweat Sodium Content. Electroanalysis, 2016, 28, 1283-1289.	1.5	117
12	Advanced Wearable Thermocells for Body Heat Harvesting. Advanced Energy Materials, 2020, 10, 2002539.	10.2	97
13	3D printed metal columns for capillary liquid chromatography. Analyst, The, 2014, 139, 6343-6347.	1.7	87
14	Manganositeâ€“microwave exfoliated graphene oxide composites for asymmetric supercapacitor device applications. Electrochimica Acta, 2013, 101, 99-108.	2.6	83
15	3D Printing for Electrocatalytic Applications. Joule, 2019, 3, 1835-1849.	11.7	80
16	3Dâ€Printed Conical Arrays of TiO₂ Electrodes for Enhanced Photoelectrochemical Water Splitting. Advanced Energy Materials, 2017, 7, 1701060.	10.2	75
17	Three-Dimensional Printing of Abrasive, Hard, and Thermally Conductive Synthetic Microdiamondâ€“Polymer Composite Using Low-Cost Fused Deposition Modeling Printer. ACS Applied Materials & Interfaces, 2019, 11, 4353-4363.	4.0	73
18	Recent Development of Fabricating Flexible Microâ€Supercapacitors for Wearable Devices. Advanced Materials Technologies, 2018, 3, 1800028.	3.0	69

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19	Multitechnology Biofabrication: A New Approach for the Manufacturing of Functional Tissue Structures?. Trends in Biotechnology, 2020, 38, 1316-1328.	4.9	68
20	3D printed titanium micro-bore columns containing polymer monoliths for reversed-phase liquid chromatography. Analytica Chimica Acta, 2016, 910, 84-94.	2.6	64
21	Human Neural Tissues from Neural Stem Cells Using Conductive Biogel and Printed Polymer Microelectrode Arrays for 3D Electrical Stimulation. Advanced Healthcare Materials, 2019, 8, e1900425.	3.9	62
22	Monitoring chemical plumes in an environmental sensing chamber with a wireless chemical sensor network. Sensors and Actuators B: Chemical, 2007, 121, 142-149.	4.0	57
23	Development of a Coaxial 3D Printing Platform for Biofabrication of Implantable Isletâ€Containing Constructs. Advanced Healthcare Materials, 2019, 8, e1801181.	3.9	55
24	Conductive Tough Hydrogel for Bioapplications. Macromolecular Bioscience, 2018, 18, 1700270.	2.1	52
25	Facile Fabrication of Flexible Microsupercapacitor with High Energy Density. Advanced Materials Technologies, 2016, 1, 1600166.	3.0	48
26	Investigating the Effect of Column Geometry on Separation Efficiency using 3D Printed Liquid Chromatographic Columns Containing Polymer Monolithic Phases. Analytical Chemistry, 2018, 90, 1186-1194.	3.2	42
27	Evaluation of a low cost wireless chemical sensor network for environmental monitoring. , 2008, , .		41
28	3Dâ€Printed Wearable Electrochemical Energy Devices. Advanced Functional Materials, 2022, 32, 2103092.	7.8	37
29	Coaxial additive manufacture of biomaterial composite scaffolds for tissue engineering. Biofabrication, 2014, 6, 025002.	3.7	34
30	Electrical Stimulation with a Conductive Polymer Promotes Neurite Outgrowth and Synaptogenesis in Primary Cortical Neurons in 3D. Scientific Reports, 2018, 8, 9855.	1.6	34
31	Fabrication and characterization of a magnetic micro-actuator based on deformable Fe-doped PDMS artificial cilium using 3D printing. Smart Materials and Structures, 2015, 24, 035015.	1.8	33
32	The significance of supporting electrolyte on poly (vinyl alcohol)â€“iron(II)/iron(III) solid-state electrolytes for wearable thermo-electrochemical cells. Electrochemistry Communications, 2021, 124, 106938.	2.3	30
33	Supercapacitors: Development of Graphene Oxide/Polyaniline Inks for High Performance Flexible Microsupercapacitors via Extrusion Printing (Adv. Funct. Mater. 21/2018). Advanced Functional Materials, 2018, 28, 1870142.	7.8	29
34	Development of rhamnose-rich hydrogels based on sulfated xylorhamno-uronic acid toward wound healing applications. Biomaterials Science, 2019, 7, 3497-3509.	2.6	24
35	Processable Thermally Conductive Polyurethane Composite Fibers. Macromolecular Materials and Engineering, 2019, 304, 1800542.	1.7	24
36	Free-form co-axial bioprinting of a gelatin methacryloyl bio-ink by direct in situ photo-crosslinking during extrusion. Bioprinting, 2020, 19, e00087.	2.9	24

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37	Wireless aquatic navigator for detection and analysis (WANDA). Sensors and Actuators B: Chemical, 2010, 150, 425-435.	4.0	23
38	Novel porous thermosensitive gel electrolytes for wearable thermo-electrochemical cells. Chemical Engineering Journal, 2022, 449, 137775.	6.6	22
39	A 3Dâ€Printed Electrochemical Water Splitting Cell. Advanced Materials Technologies, 2019, 4, 1900433.	3.0	20
40	The optimisation of a paired emitterâ€“detector diode optical pH sensing device. Sensors and Actuators B: Chemical, 2011, 153, 182-187.	4.0	19
41	3D bioprinting dermal-like structures using species-specific ulvan. Biomaterials Science, 2021, 9, 2424-2438.	2.6	19
42	Extrusion Printed Graphene/Polycaprolactone/Composites for Tissue Engineering. Materials Science Forum, 0, 773-774, 496-502.	0.3	18
43	Remote Real-Time Monitoring of Subsurface Landfill Gas Migration. Sensors, 2011, 11, 6603-6628.	2.1	17
44	Autonomous greenhouse gas measurement system for analysis of gas migration on landfill sites. , 2010, , .		16
45	System and process development for coaxial extrusion in fused deposition modelling. Rapid Prototyping Journal, 2017, 23, 543-550.	1.6	16
46	Advanced fabrication approaches to controlled delivery systems for epilepsy treatment. Expert Opinion on Drug Delivery, 2018, 15, 915-925.	2.4	16
47	Bipolar electroactive conducting polymers for wireless cell stimulation. Applied Materials Today, 2020, 21, 100804.	2.3	16
48	Performance enhancement of single-walled nanotubeâ€“microwave exfoliated graphene oxide composite electrodes using a stacked electrode configuration. Journal of Materials Chemistry A, 2014, 2, 14835-14843.	5.2	14
49	Electrotactic ionic liquid droplets. Sensors and Actuators B: Chemical, 2017, 239, 1069-1075.	4.0	14
50	3D printing of highly flexible, cytocompatible nanocomposites for thermal management. Journal of Materials Science, 2021, 56, 6385-6400.	1.7	14
51	The Bionic Bra: Using electromaterials to sense and modify breast support to enhance active living. Journal of Rehabilitation and Assistive Technologies Engineering, 2018, 5, 205566831877590.	0.6	12
52	Additive Manufacturing, Modeling and Performance Evaluation of 3D Printed Fins for Surfboards. MRS Advances, 2017, 2, 913-920.	0.5	12
53	Wireless electrochemiluminescence at functionalised gold microparticles using 3D titanium electrode arrays. Chemical Communications, 2021, 57, 4642-4645.	2.2	11
54	Data on the bipolar electroactive conducting polymers for wireless cell stimulation. Data in Brief, 2020, 33, 106406.	0.5	10

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55	Additive manufacturing enables personalised porous high-density polyethylene surgical implant manufacturing with improved tissue and vascular ingrowth. Applied Materials Today, 2021, 22, 100965.	2.3	10
56	3D Printed Electrodes for Improved Gas Reactant Transport for Electrochemical Reactions. 3D Printing and Additive Manufacturing, 2018, 5, 215-219.	1.4	9
57	Three-Dimensional Printed Braided Sleeves for Manufacturing McKibben Artificial Muscles. 3D Printing and Additive Manufacturing, 2019, 6, 57-62.	1.4	9
58	Porosity of Bleb Capsule declines rapidly with Fluid Challenge. Journal of Current Glaucoma Practice, 2016, 10, 91-96.	0.1	9
59	Wearable technology for the real-time analysis of sweat during exercise. , 2008, , .		8
60	All-polymer wearable thermoelectrochemical cells harvesting body heat. IScience, 2021, 24, 103466.	1.9	8
61	Fused filament fabrication 3D printed polylactic acid electroosmotic pumps. Lab on A Chip, 2021, 21, 3338-3351.	3.1	7
62	Electrochemiluminescence at 3D Printed Titanium Electrodes. Frontiers in Chemistry, 2021, 9, 662810.	1.8	7
63	Laser Sintering Approaches for Bone Tissue Engineering. Polymers, 2022, 14, 2336.	2.0	7
64	Hollowâ€Fiber Melt Electrowriting Using a 3Dâ€Printed Coaxial Nozzle. Advanced Engineering Materials, 2022, 24, 2100750.	1.6	6
65	Wearable Photoâ€Thermoâ€Electrochemical Cells (PTECs) Harvesting Solar Energy. Macromolecular Rapid Communications, 2022, 43, e2200001.	2.0	6
66	Development of a Coaxial Melt Extrusion Printing process for specialised composite bioscaffold fabrication. , 2013, , .		5
67	Determination of Bleb Capsule Porosity With an Experimental Glaucoma Drainage Device and Measurement System. JAMA Ophthalmology, 2015, 133, 549.	1.4	5
68	Sensor node localisation using a stereo camera rig. , 2007, , .		3
69	Chemical event tracking using a low-cost wireless chemical sensing network. , 2008, , .		3
70	Cell compatible encapsulation of filaments into 3D hydrogels. Biofabrication, 2016, 8, 025013.	3.7	3
71	Ionic interactions to tune mechanical and electrical properties of hydrated liquid crystal graphene oxide films. Materials Chemistry and Physics, 2017, 186, 90-97.	2.0	3
72	Automatic reaction to a chemical event detected by a low-cost wireless chemical sensing network. , 2009, , .		2

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73	Modeling the upper airway: A precursor to personalized surgical interventions for the treatment of sleep apnea. Journal of Biomedical Materials Research - Part A, 2020, 108, 1419-1425.	2.1	2
74	Melt polymer drawn single and multi-capillary fibre-based electroosmotic pumps. Microfluidics and Nanofluidics, 2022, 26, .	1.0	1
75	Wearable Sensor for Real-Time Monitoring of Electrolytes in Sweat. Proceedings (mdpi), 2017, 1, 724.	0.2	0
76	Smart polymer implants as an emerging technology for treating airway collapse in obstructive sleep apnea: a pilot (proof of concept) study. Journal of Clinical Sleep Medicine, 2021, 17, 315-324.	1.4	0
77	Microcosm: A Low Cost 3-D Wireless Sensor Test-Bed Within a Controllable Environment. Lecture Notes in Computer Science, 2006, , 820-834.	1.0	0