Thomas Boland

List of Publications by Citations

63 papers	8,141 citations	34 h-index	67 g-index
67 ext. papers	8,927 ext. citations	6.5 avg, IF	5.86 L-index

#	Paper	IF	Citations
63	Organ printing: computer-aided jet-based 3D tissue engineering. *Trends in Biotechnology*, **2003**, 21, 157-61	15.1	960
62	Inkjet printing of viable mammalian cells. *Biomaterials*, **2005**, 26, 93-9	15.6	800
61	Application of inkjet printing to tissue engineering. *Biotechnology Journal*, **2006**, 1, 910-7	5.6	604
60	Inkjet printing for high-throughput cell patterning. *Biomaterials*, **2004**, 25, 3707-15	15.6	585
59	Human microvasculature fabrication using thermal inkjet printing technology. *Biomaterials*, **2009**, 30, 6221-7	15.6	518
58	Biofabrication: reappraising the definition of an evolving field. *Biofabrication*, **2016**, 8, 013001	10.5	387
57	Viability and electrophysiology of neural cell structures generated by the inkjet printing method. *Biomaterials*, **2006**, 27, 3580-8	15.6	367
56	Cell and organ printing 1: protein and cell printers. *The Anatomical Record*, **2003**, 272, 491-6		349
55	Thermal inkjet printing in tissue engineering and regenerative medicine. *Recent Patents on Drug Delivery and Formulation*, **2012**, 6, 149-55	1.4	347
54	Biofabrication: A Guide to Technology and Terminology. *Trends in Biotechnology*, **2018**, 36, 384-402	15.1	309
53	Rapid prototyping of tissue-engineering constructs, using photopolymerizable hydrogels and stereolithography. *Tissue Engineering*, **2004**, 10, 1316-22		299
52	Cell and organ printing 2: fusion of cell aggregates in three-dimensional gels. *The Anatomical Record*, **2003**, 272, 497-502		264
51	Cell damage evaluation of thermal inkjet printed Chinese hamster ovary cells. *Biotechnology and Bioengineering*, **2010**, 106, 963-9	4.9	250
50	Direct measurement of hydrogen bonding in DNA nucleotide bases by atomic force microscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **1995**, 92, 5297-301	11.5	216
49	Drop-on-demand printing of cells and materials for designer tissue constructs. *Materials Science and Engineering C*, **2007**, 27, 372-376	8.3	169
48	The relationship between ligand-binding thermodynamics and protein-ligand interaction forces measured by atomic force microscopy. *Biophysical Journal*, **1995**, 69, 2125-30	2.9	152
47	Characterization of Patterned Self-Assembled Monolayers and Protein Arrays Generated by the Ink-Jet Method *Langmuir*, **2003**, 19, 1462-1466	4	121

46	Fabrication and characterization of bio-engineered cardiac pseudo tissues. *Biofabrication*, **2009**, 1, 035001	10.5	114
45	Construction of high-density bacterial colony arrays and patterns by the ink-jet method. *Biotechnology and Bioengineering*, **2004**, 85, 29-33	4.9	113
44	The role of independently variable grafting density and layer thickness of polymer nanolayers on peptide adsorption and cell adhesion. *Biomaterials*, **2007**, 28, 763-71	15.6	95
43	Characterization of the physical properties of model biomembranes at the nanometer scale with the atomic force microscope. *Faraday Discussions*, **1998**, 79-94; discussion 137-57	3.6	93
42	In vivo assessment of printed microvasculature in a bilayer skin graft to treat full-thickness wounds. *Tissue Engineering - Part A*, **2015**, 21, 224-33	3.9	89
41	Synthesis and characterization of biodegradable elastomeric polyurethane scaffolds fabricated by the inkjet technique. *Biomaterials*, **2008**, 29, 3781-91	15.6	87
40	Electrophysiological characterization of embryonic hippocampal neurons cultured in a 3D collagen hydrogel. *Biomaterials*, **2009**, 30, 4377-83	15.6	86
39	Two-Dimensional Assembly of Purines and Pyrimidines on Au(111). *Langmuir*, **1994**, 10, 3845-3852	4	83
38	Cell and organ printing turns 15: Diverse research to commercial transitions. *MRS Bulletin*, **2013**, 38, 834-843	3.3	73
37	Frictional properties of poly(MPC-co-BMA) phospholipid polymer for catheter applications. *Biomaterials*, **2003**, 24, 5121-9	15.6	73
36	Advances in tissue engineering: cell printing. *Journal of Thoracic and Cardiovascular Surgery*, **2005**, 129, 470-2	1.5	60
35	Biocompatible, large-format, inkjet printed heterostructure MoS2-graphene photodetectors on conformable substrates. *Npj 2D Materials and Applications*, **2017**, 1,	8.8	59
34	Minimally invasive tissue engineering composites and cell printing. *IEEE Engineering in Medicine and Biology Magazine*, **2003**, 22, 84-91		54
33	Loading dependent swelling and release properties of novel biodegradable, elastic and environmental stimuli-sensitive polyurethanes. *Journal of Controlled Release*, **2008**, 131, 128-36	11.7	50
32	Surface chemical composition and fibrinogen adsorption-retention of fluoropolymer films deposited from an RF glow discharge. *Plasmas and Polymers*, **1996**, 1, 299-326		47
31	Nanotribology of CoCr□HMWPE TJR prosthesis using atomic force microscopy. *Wear*, **2002**, 253, 1145-1155	3.5	39
30	Thermal inkjet bioprinting triggers the activation of the VEGF pathway in human microvascular endothelial cells in vitro. *Biofabrication*, **2019**, 11, 045005	10.5	34
29	In vitro evaluation of phosphonylated low-density polyethylene for vascular applications. *Journal of Biomedical Materials Research Part B*, **2002**, 62, 514-24		29

28	Nanoindentation properties of compression-moulded ultra-high molecular weight polyethylene. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2003**, 217, 357-66	1.7	20
27	Atomic force microscopy of synthetic barite microcrystals. *Journal of Crystal Growth*, **1997**, 172, 231-248	1.6	15
26	Design and implementation of a two-dimensional inkjet bioprinter. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 6001-5	0.9	14
25	Thermal Bioprinting Causes Ample Alterations of Expression of LUCAT1, IL6, CCL26, and NRN1L Genes and Massive Phosphorylation of Critical Oncogenic Drug Resistance Pathways in Breast Cancer Cells. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 82	5.8	12
24	A new approach to fabricate agarose microstructures. *Polymers for Advanced Technologies*, **2013**, 24, 895-902	3.2	12
23	A quantitative approach to studying structures and orientation at self-assembled monolayer/fluid interfaces. *Journal of Colloid and Interface Science*, **2003**, 257, 116-20	9.3	11
22	Effects of the sample preparation temperature on the nanostructure of compression moulded ultrahigh molecular weight polyethylene. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2002**, 216, 123-33	1.7	11
21	Collagen Matrix Alignment Using Inkjet Printer Technology. *Materials Research Society Symposia Proceedings*, **2008**, 1094, 1		10
20	Experimental and numerical modeling of variable friction between nanoregions in coventional and crosslinked UHMWPE. *Journal of Biomechanical Engineering*, **2004**, 126, 111-9	2.1	10
19	Layer-by-layer printing of cells and its application to tissue engineering. *Materials Research Society Symposia Proceedings*, **2004**, 845, 5		9
18	Printable Cellular Scaffold Using Self-Crosslinking Agents. *Journal of Imaging Science and Technology*, **2012**, 56, 1-5	1.2	7
17	Design and Validation of an Open-Hardware Print-Head for Bioprinting Application. *Procedia Engineering*, **2015**, 110, 98-105		6
16	Solution dispersed 2D graphene & MoS2 for an inkjet printed biocompatible photodetector **2016**,		5
15	BUILDing SCHOLARS: enhancing diversity among U.S. biomedical researchers in the Southwest. *BMC Proceedings*, **2017**, 11, 12	2.3	4
14	2D and 3D thermally bioprinted human MCF-7 breast cancer cells: A promising model for drug discovery.. *Journal of Clinical Oncology*, **2019**, 37, 2605-2605	2.2	4
13	Synthesis and characterization of a photocleavable collagen-like peptide. *Organic and Biomolecular Chemistry*, **2018**, 16, 1000-1013	3.9	3
12	Photolysis of a peptide with -peptidyl-7-nitroindoline units using two-photon absorption. *Biomedical Optics Express*, **2016**, 7, 4654-4659	3.5	3
11	Systems engineering challenges in inkjet biofabrication **2007**,		2

10	Growth-Inhibitory Effect of Chemotherapeutic Drugs Dispensed by Inkjet Bioprinting on Cancer and Non-Cancer Cells. *Journal of Imaging Science and Technology*, **2016**, 60, 404061-404066	1.2	2
9	Biopolymers and Cells275-305		2
8	How to Define Biofabrication? Review of the Book Biofabrication: Micro- and Nano-Fabrication, Printing, Patterning, and Assemblies, Edited by Gabor Forgacs and Wei Sun (William Andrew, 2013, 265 Pages). *3D Printing and Additive Manufacturing*, **2014**, 1, 52-54	4	1
7	Precision Printing of Cells and Biomaterials Onto 3D Matrices **2007**, 77		1
6	Molecular basis of cell adhesion to polymers characterized AFM. *Critical Reviews in Biomedical Engineering*, **2000**, 28, 195-6	1.1	1
5	Photovoltaic surfaces enable clonal myoblastic cell release using visible light as external stimulation. *Biotechnology Journal*, **2016**, 11, 393-8	5.6	1
4	Bioprinting of Decellularized Porcine Cardiac Tissue for Large-Scale Aortic Models.. *Frontiers in Bioengineering and Biotechnology*, **2022**, 10, 855186	5.8	0
3	Organ printing332-374		
2	Fabricating Neural and Cardiomyogenic Stem Cell Structures by a Novel Rapid Prototyping the Inkjet Printing Method. *Materials Research Society Symposia Proceedings*, **2004**, 845, 30		
1	Two-photon flow cytometry with laser scanning two-dimensional airy beams. *Optics Communications*, **2022**, 508, 127804	2	