Jeffrey R Capadona

List of Publications by Year
in descending order

73 papers	5,622 citations	117571 34 h-index	98753 67 g-index
74 all docs	74 docs citations	74 times ranked	5947 citing authors

#	Article	IF	Citations
1	Platelet-mimicking procoagulant nanoparticles augment hemostasis in animal models of bleeding. Science Translational Medicine, 2022, 14, eabb8975.	5.8	35
2	Characterization of Active Electrode Yield for Intracortical Arrays: Awake versus Anesthesia. Micromachines, 2022, 13, 480.	1.4	6
3	Hybrid Fabrication Method for Microfluidic Channels Within a Polymer Nanocomposite for Neural Interfacing Applications. , 2021, , .		2
4	Intracortical Microelectrode Array Unit Yield under Chronic Conditions: A Comparative Evaluation. Micromachines, 2021, 12, 972.	1.4	16
5	Investigation of the Feasibility of Ventricular Delivery of Resveratrol to the Microelectrode Tissue Interface. Micromachines, 2021, 12, 1446.	1.4	6
6	Differential expression of genes involved in the acute innate immune response to intracortical microelectrodes. Acta Biomaterialia, 2020, 102, 205-219.	4.1	33
7	Investigating the Association between Motor Function, Neuroinflammation, and Recording Metrics in the Performance of Intracortical Microelectrode Implanted in Motor Cortex. Micromachines, 2020, 11, 838.	1.4	1
8	Bioelectronic Neural Implants. , 2020, , 1153-1168.		0
9	Editorial: Bridging the Gap in Neuroelectronic Interfaces. Frontiers in Neuroscience, 2020, 14, 457.	1.4	0
10	Second Harmonic Generation Imaging of Collagen in Chronically Implantable Electrodes in Brain Tissue. Frontiers in Neuroscience, 2020, 14, 95.	1.4	14
11	Mechanically adaptive implants fabricated with poly(2-hydroxyethyl methacrylate)-based negative photoresists. Journal of Materials Chemistry B, 2020, 8, 6357-6365.	2.9	7
12	Toward Standardization of Electrophysiology and Computational Tissue Strain in Rodent Intracortical Microelectrode Models. Frontiers in Bioengineering and Biotechnology, 2020, 8, 416.	2.0	12
13	Evaluation of an in vivo model for ventricular shunt infection: a pilot study using a novel antimicrobial-loaded polymer. Journal of Neurosurgery, 2019, 131, 587-595.	0.9	2
14	A graphical user interface to assess the neuroinflammatory response to intracortical microelectrodes. Journal of Neuroscience Methods, 2019, 317, 141-148.	1.3	4
15	Neuron-like neural probes. Nature Materials, 2019, 18, 429-431.	13.3	8
16	Sonic Hedgehog is expressed by hilar mossy cells and regulates cellular survival and neurogenesis in the adult hippocampus. Scientific Reports, 2019, 9, 17402.	1.6	25
17	Targeting CD14 on blood derived cells improves intracortical microelectrode performance. Biomaterials, 2018, 163, 163-173.	5.7	47
18	Inhibition of the cluster of differentiation 14 innate immunity pathway with IAXO-101 improves chronic microelectrode performance. Journal of Neural Engineering, 2018, 15, 025002.	1.8	31

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19	A Mosquito Inspired Strategy to Implant Microprobes into the Brain. Scientific Reports, 2018, 8, 122.	1.6	67
20	The Neuroinflammatory Response to Nanopatterning Parallel Grooves into the Surface Structure of Intracortical Microelectrodes. Advanced Functional Materials, 2018, 28, 1704420.	7.8	39
21	Potential for thermal damage to the bloodâ€"brain barrier during craniotomy: implications for intracortical recording microelectrodes. Journal of Neural Engineering, 2018, 15, 034001.	1.8	48
22	Understanding the Role of Innate Immunity in the Response to Intracortical Microelectrodes. Critical Reviews in Biomedical Engineering, 2018, 46, 341-367.	0.5	18
23	Understanding the Effects of Both CD14-Mediated Innate Immunity and Device/Tissue Mechanical Mismatch in the Neuroinflammatory Response to Intracortical Microelectrodes. Frontiers in Neuroscience, 2018, 12, 772.	1.4	17
24	Prospects for a Robust Cortical Recording Interface. , 2018, , 393-413.		1
25	Rodent Behavioral Testing to Assess Functional Deficits Caused by Microelectrode Implantation in the Rat Motor Cortex. Journal of Visualized Experiments, 2018, , .	0.2	5
26	Characterization of the Neuroinflammatory Response to Thiol-ene Shape Memory Polymer Coated Intracortical Microelectrodes. Micromachines, 2018, 9, 486.	1.4	30
27	A Novel Single Animal Motor Function Tracking System Using Simple, Readily Available Software. Journal of Visualized Experiments, 2018, , .	0.2	1
28	The Role of Toll-Like Receptor 2 and 4 Innate Immunity Pathways in Intracortical Microelectrode-Induced Neuroinflammation. Frontiers in Bioengineering and Biotechnology, 2018, 6, 113.	2.0	18
29	Bioinspired materials and systems for neural interfacing. Current Opinion in Biomedical Engineering, 2018, 6, 110-119.	1.8	27
30	Implantation of Neural Probes in the Brain Elicits Oxidative Stress. Frontiers in Bioengineering and Biotechnology, 2018, 6, 9.	2.0	74
31	Anti-inflammatory Approaches to Mitigate the Neuroinflammatory Response to Brain-Dwelling Intracortical Microelectrodes. Journal of Immunological Sciences, 2018, 2, 15-21.	0.5	9
32	Microelectrode implantation in motor cortex causes fine motor deficit: Implications on potential considerations to Brain Computer Interfacing and Human Augmentation. Scientific Reports, 2017, 7, 15254.	1.6	55
33	Sterilization of Thiol-ene/Acrylate Based Shape Memory Polymers for Biomedical Applications. Macromolecular Materials and Engineering, 2017, 302, 1600331.	1.7	30
34	Status Epilepticus due to Intraperitoneal Injection of Vehicle Containing Propylene Glycol in Sprague Dawley Rats. Veterinary Medicine International, 2017, 2017, 1-6.	0.6	2
35	Engineering and commercialization of human-device interfaces, from bone to brain. Biomaterials, 2016, 95, 35-46.	5.7	34
36	High-throughput in vitro assay to evaluate the cytotoxicity of liberated platinum compounds for stimulating neural electrodes. Journal of Neuroscience Methods, 2016, 273, 1-9.	1.3	15

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37	Influence of resveratrol release on the tissue response to mechanically adaptive cortical implants. Acta Biomaterialia, 2016, 29, 81-93.	4.1	57
38	Mechanically adaptive materials for intracortical implants. , 2015, , .		4
39	Progress towards biocompatible intracortical microelectrodes for neural interfacing applications. Journal of Neural Engineering, 2015, 12, 011001.	1.8	309
40	Reducing the â€œStressâ€ Antioxidative Therapeutic and Material Approaches May Prevent Intracortical Microelectrode Failure. ACS Macro Letters, 2015, 4, 275-279.	2.3	31
41	In vitro evaluation and in vivo demonstration of a biomimetic, hemocompatible, microfluidic artificial lung. Lab on A Chip, 2015, 15, 1366-1375.	3.1	42
42	Compliant intracortical implants reduce strains and strain rates in brain tissue<i>in vivo</i>. Journal of Neural Engineering, 2015, 12, 036002.	1.8	85
43	Implications of chronic daily anti-oxidant administration on the inflammatory response to intracortical microelectrodes. Journal of Neural Engineering, 2015, 12, 046002.	1.8	38
44	Curcumin-releasing mechanically adaptive intracortical implants improve the proximal neuronal density and bloodâ€“brain barrier stability. Acta Biomaterialia, 2014, 10, 2209-2222.	4.1	113
45	A comparison of neuroinflammation to implanted microelectrodes in rat and mouse models. Biomaterials, 2014, 35, 5637-5646.	5.7	38
46	The effects of PEG-based surface modification of PDMS microchannels on long-term hemocompatibility. Journal of Biomedical Materials Research - Part A, 2014, 102, n/a-n/a.	2.1	45
47	The effect of residual endotoxin contamination on the neuroinflammatory response to sterilized intracortical microelectrodes. Journal of Materials Chemistry B, 2014, 2, 2517-2529.	2.9	36
48	Development of superoxide dismutase mimetic surfaces to reduce accumulation of reactive oxygen species for neural interfacing applications. Journal of Materials Chemistry B, 2014, 2, 2248-2258.	2.9	43
49	Mechanically-compliant intracortical implants reduce the neuroinflammatory response. Journal of Neural Engineering, 2014, 11, 056014.	1.8	219
50	The roles of blood-derived macrophages and resident microglia in the neuroinflammatory response to implanted Intracortical microelectrodes. Biomaterials, 2014, 35, 8049-8064.	5.7	77
51	Microscale Characterization of a Mechanically Adaptive Polymer Nanocomposite With Cotton-Derived Cellulose Nanocrystals for Implantable BioMEMS. Journal of Microelectromechanical Systems, 2014, 23, 774-784.	1.7	9
52	The effect of resveratrol on neurodegeneration and blood brain barrier stability surrounding intracortical microelectrodes. Biomaterials, 2013, 34, 7001-7015.	5.7	118
53	Bioinspired Water-Enhanced Mechanical Gradient Nanocomposite Films That Mimic the Architecture and Properties of the Squid Beak. Journal of the American Chemical Society, 2013, 135, 5167-5174.	6.6	112
54	Environmentally-controlled Microtensile Testing of Mechanically-adaptive Polymer Nanocomposites for ex vivo Characterization. Journal of Visualized Experiments, 2013, , e50078.	0.2	7

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55	Stab injury and device implantation within the brain results in inversely multiphasic neuroinflammatory and neurodegenerative responses. Journal of Neural Engineering, 2012, 9, 046020.	1.8	209
56	Mechanically adaptive nanocomposites for neural interfacing. MRS Bulletin, 2012, 37, 581-589.	1.7	91
57	An organotypic spinal cord slice culture model to quantify neurodegeneration. Journal of Neuroscience Methods, 2012, 211, 280-288.	1.3	31
58	Reduction of autofluorescence at the microelectrodeâ€"cortical tissue interface improves antibody detection. Journal of Neuroscience Methods, 2012, 203, 96-105.	1.3	61
59	Biomimetic mechanically adaptive nanocomposites. Progress in Polymer Science, 2010, 35, 212-222.	11.8	196
60	Natural Biopolymers: Novel Templates for the Synthesis of Nanostructures. Langmuir, 2010, 26, 8497-8502.	1.6	167
61	Stimuli-Responsive Mechanically Adaptive Polymer Nanocomposites. ACS Applied Materials & Interfaces, 2010, 2, 165-174.	4.0	146
62	Bio-inspired mechanically-adaptive nanocomposites derived from cotton cellulose whiskers. Journal of Materials Chemistry, 2010, 20, 180-186.	6.7	156
63	Polymer Nanocomposites with Nanowhiskers Isolated from Microcrystalline Cellulose. Biomacromolecules, 2009, 10, 712-716.	2.6	235
64	Polymer brushes and self-assembled monolayers: Versatile platforms to control cell adhesion to biomaterials (Review). Biointerphases, 2009, 4, FA3-FA16.	0.6	174
65	Stimuli-Responsive Polymer Nanocomposites Inspired by the Sea Cucumber Dermis. Science, 2008, 319, 1370-1374.	6.0	881
66	Nanocomposites based on cellulose whiskers and (semi)conducting conjugated polymers. Journal of Materials Chemistry, 2007, 17, 2746.	6.7	98
67	Preparation of Homogeneous Dispersions of Tunicate Cellulose Whiskers in Organic Solvents. Biomacromolecules, 2007, 8, 1353-1357.	2.6	248
68	A versatile approach for the processing of polymer nanocomposites with self-assembled nanofibre templates. Nature Nanotechnology, 2007, 2, 765-769.	15.6	393
69	Integrin specificity and enhanced cellular activities associated with surfaces presenting a recombinant fibronectin fragment compared to RGD supports. Biomaterials, 2006, 27, 5459-5470.	5.7	221
70	Surface-Nucleated Assembly of Fibrillar Extracellular Matrices. Advanced Materials, 2005, 17, 2604-2608.	11.1	25
71	Fibronectin Adsorption and Cell Adhesion to Mixed Monolayers of Tri(ethylene glycol)- and Methyl-Terminated Alkanethiolsâ€. Langmuir, 2003, 19, 1847-1852.	1.6	74
72	Micropatterned Surfaces to Engineer Focal Adhesions for Analysis of Cell Adhesion Strengthening. Langmuir, 2002, 18, 5579-5584.	1.6	93

#	Article	IF	Citations
73	Brain responses to neural prostheses. , 0, , 554-564.		1