Michelle C Laplaca

List of Publications by Year
in descending order

63 papers	3,628 citations	108046 37 h-index	156644 58 g-index
63 all docs	63 docs citations	63 times ranked	4865 citing authors

#	Article	IF	Citations
1	Lipidome Alterations following Mild Traumatic Brain Injury in the Rat. Metabolites, 2022, 12, 150.	1.3	7
2	Immuno-suppressive hydrogels enhance allogeneic MSC survival after transplantation in the injured brain. Biomaterials, 2021, 266, 120419.	5.7	34
3	Pre-Clinical Common Data Elements for Traumatic Brain Injury Research: Progress and Use Cases. Journal of Neurotrauma, 2021, 38, 1399-1410.	1.7	22
4	A Novel Neuropsychological Tool for Immersive Assessment of Concussion and Correlation with Subclinical Head Impacts. Neurotrauma Reports, 2021, 2, 232-244.	0.5	4
5	Neuronal Plasma Membrane Integrity is Transiently Disturbed by Traumatic Loading. Neuroscience Insights, 2020, 15, 263310552094609.	0.9	7
6	3-D multi-electrode arrays detect early spontaneous electrophysiological activity in 3-D neuronal-astrocytic co-cultures. Biomedical Engineering Letters, 2020, 10, 579-591.	2.1	6
7	Mechanoporation is a potential indicator of tissue strain and subsequent degeneration following experimental traumatic brain injury. Clinical Biomechanics, 2019, 64, 2-13.	0.5	31
8	A Comparison of Student and Parent Knowledge and Perceived Confidence About Brain Injury and Concussion. Topics in Language Disorders, 2019, 39, 313-334.	0.9	13
9	Molecular dynamics simulations showing 1-palmitoyl-2-oleoyl-phosphatidylcholine (POPC) membrane mechanoporation damage under different strain paths. Journal of Biomolecular Structure and Dynamics, 2019, 37, 1346-1359.	2.0	8
10	Discovery of Lipidome Alterations Following Traumatic Brain Injury via High-Resolution Metabolomics. Journal of Proteome Research, 2018, 17, 2131-2143.	1.8	44
11	Pre-Clinical Testing of Therapies for Traumatic Brain Injury. Journal of Neurotrauma, 2018, 35, 2737-2754.	1.7	68
12	Bilateral gene interaction hierarchy analysis of the cell death gene response emphasizes the significance of cell cycle genes following unilateral traumatic brain injury. BMC Genomics, 2016, 17, 130.	1.2	18
13	Pre-Clinical Traumatic Brain Injury Common Data Elements: Toward a Common Language Across Laboratories. Journal of Neurotrauma, 2015, 32, 1725-1735.	1.7	86
14	A three-dimensional image processing program for accurate, rapid, and semi-automated segmentation of neuronal somata with dense neurite outgrowth. Frontiers in Neuroanatomy, 2015, 9, 87.	0.9	7
15	Randomized, Placebo-Controlled, Double-Blind Pilot Study of D-Cycloserine in Chronic Stroke. Rehabilitation Research and Practice, 2015, 2015, 1-14.	0.5	8
16	Protease-degradable PEG-maleimide coating with on-demand release of IL-1Ra to improve tissue response to neural electrodes. Biomaterials, 2015, 44, 55-70.	5.7	55
17	The effect of conditional inactivation of beta 1 integrins using twist 2 Cre, Osterix Cre and osteocalcin Cre lines on skeletal phenotype. Bone, 2014, 68, 131-141.	1.4	40
18	Host response to microgel coatings on neural electrodes implanted in the brain. Journal of Biomedical Materials Research - Part A, 2014, 102, 1486-1499.	2.1	46

#	Article	IF	Citations
19	Ambient Nanoelectrospray Ionization with In-Line Microdialysis for Spatially Resolved Transient Biochemical Monitoring within Cell Culture Environments. Analytical Chemistry, 2012, 84, 2072-2075.	3.2	12
20	Metal-Transfer-Micromolded Three-Dimensional Microelectrode Arrays for in-vitro Brain-Slice Recordings. Journal of Microelectromechanical Systems, 2011, 20, 396-409.	1.7	32
21	Perspectives on the Role of Bioengineering in Neurotrauma Research. Journal of Neurotrauma, 2011, 28, 2201-2202.	1.7	3
22	Stem cell survival and functional outcome after traumatic brain injury is dependent on transplant timing and location. Restorative Neurology and Neuroscience, 2011, 29, 215-225.	0.4	37
23	Effects of freezing profile parameters on the survival of cryopreserved rat embryonic neural cells. Journal of Neuroscience Methods, 2011, 201, 9-16.	1.3	20
24	Variations in rigidity and ligand density influence neuronal response in methylcelluloseâ€"laminin hydrogels. Acta Biomaterialia, 2011, 7, 4102-4108.	4.1	43
25	Highly-compliant, microcable neuroelectrodes fabricated from thin-film gold and PDMS. Biomedical Microdevices, 2011, 13, 361-373.	1.4	59
26	Development and characterization of a packaged mechanically actuated microtweezer system. Sensors and Actuators A: Physical, 2011, 167, 502-511.	2.0	18
27	Trauma-Induced Plasmalemma Disruptions in Three-Dimensional Neural Cultures Are Dependent on Strain Modality and Rate. Journal of Neurotrauma, 2011, 28, 2219-2233.	1.7	97
28	Synapse-to-neuron ratio is inversely related to neuronal density in mature neuronal cultures. Brain Research, 2010, 1359, 44-55.	1.1	74
29	Neural mechanobiology and neuronal vulnerability to traumatic loading. Journal of Biomechanics, 2010, 43, 71-78.	0.9	66
30	Biomimetic Microenvironment Modulates Neural Stem Cell Survival, Migration, and Differentiation. Tissue Engineering - Part A, 2010, 16, 3747-3758.	1.6	67
31	SUâ€8 2000 rendered cytocompatible for neuronal bioMEMS applications. Journal of Biomedical Materials Research - Part A, 2009, 89A, 138-151.	2.1	23
32	Plasma membrane damage as a marker of neuronal injury. , 2009, 2009, 1113-6.		29
33	Spun-cast micromolding for etchless micropatterning of electrically functional PDMS structures. Journal of Micromechanics and Microengineering, 2009, 19, 107002.	1.5	9
34	Spinal Cord Contusion Causes Acute Plasma Membrane Damage. Journal of Neurotrauma, 2009, 26, 563-574.	1.7	38
35	A microperfused incubator for tissue mimetic 3D cultures. Biomedical Microdevices, 2009, 11, 1155-1165.	1.4	37
36	Laminin and fibronectin scaffolds enhance neural stem cell transplantation into the injured brain. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 208-217.	1.3	193

#	Article	IF	Citations
37	Shearâ€induced intracellular loading of cells with molecules by controlled microfluidics. Biotechnology and Bioengineering, 2008, 99, 846-854.	1.7	69
38	Three-dimensional neural constructs: a novel platform for neurophysiological investigation. Journal of Neural Engineering, 2008, 5, 333-341.	1.8	108
39	Microfluidic engineered high cell density three-dimensional neural cultures. Journal of Neural Engineering, 2007, 4, 159-172.	1.8	49
40	Fibronectin and Laminin Increase in the Mouse Brain after Controlled Cortical Impact Injury. Journal of Neurotrauma, 2007, 24, 226-230.	1.7	52
41	In vitro neural injury model for optimization of tissueâ€engineered constructs. Journal of Neuroscience Research, 2007, 85, 3642-3651.	1.3	49
42	Strain rate-dependent induction of reactive astrogliosis and cell death in three-dimensional neuronalâ€"astrocytic co-cultures. Brain Research, 2007, 1158, 103-115.	1.1	145
43	Three dimensional MEMS microfluidic perfusion system for thick brain slice cultures. Biomedical Microdevices, 2007, 9, 7-13.	1.4	59
44	Collagen-Dependent Neurite Outgrowth and Response to Dynamic Deformation in Three-Dimensional Neuronal Cultures. Annals of Biomedical Engineering, 2007, 35, 835-846.	1.3	71
45	Role of plasma fibronectin in the foreign body response to biomaterials. Biomaterials, 2007, 28, 3626-3631.	5.7	109
46	High Rate Shear Insult Delivered to Cortical Neurons Produces Heterogeneous Membrane Permeability Alterations. , 2006, 2006, 2384-7.		17
47	Neuronal Response to High Rate Shear Deformation Depends on Heterogeneity of the Local Strain Field. Journal of Neurotrauma, 2006, 23, 1304-1319.	1.7	87
48	High rate shear strain of three-dimensional neural cell cultures: a new in vitro traumatic brain injury model. Journal of Biomechanics, 2005, 38, 1093-1105.	0.9	192
49	Mechanical trauma induces immediate changes in neuronal network activity. Journal of Neural Engineering, 2005, 2, 148-158.	1.8	50
50	Neural progenitor cell transplants promote long-term functional recovery after traumatic brain injury. Brain Research, 2004, 1026, 11-22.	1.1	156
51	Specific Î²1 integrins mediate adhesion, migration, and differentiation of neural progenitors derived from the embryonic striatum. Molecular and Cellular Neurosciences, 2004, 27, 22-31.	1.0	100
52	Mechanical Stretch to Neurons Results in a Strain Rate and Magnitude-Dependent Increase in Plasma Membrane Permeability. Journal of Neurotrauma, 2003, 20, 1039-1049.	1.7	185
53	Fibronectin Promotes Survival and Migration of Primary Neural Stem Cells Transplanted into the Traumatically Injured Mouse Brain. Cell Transplantation, 2002, 11, 283-295.	1.2	130
54	Temporal Patterns of Poly(ADP-Ribose) Polymerase Activation in the Cortex Following Experimental Brain Injury in the Rat. Journal of Neurochemistry, 2002, 73, 205-213.	2.1	91

#	Article	IF	Citations
55	Regional and Temporal Alterations in DNA Fragmentation Factor (DFF)-Like Proteins Following Experimental Brain Trauma in the Rat. Journal of Neurochemistry, 2002, 73, 1650-1659.	2.1	37
56	Fibronectin promotes survival and migration of primary neural stem cells transplanted into the traumatically injured mouse brain. Cell Transplantation, 2002, 11, 283-95.	1.2	43
57	Pharmacologic Inhibition of Poly(ADP-Ribose) Polymerase Is Neuroprotective Following Traumatic Brain Injury in Rats. Journal of Neurotrauma, 2001, 18, 369-376.	1.7	136
58	Dynamic mechanical deformation of neurons triggers an acute calcium response and cell injury involving theN-methyl-D-aspartate glutamate receptor. Journal of Neuroscience Research, 1998, 52, 220-229.	1.3	65
59	Dynamic mechanical deformation of neurons triggers an acute calcium response and cell injury involving the N-methyl-D-aspartate glutamate receptor. , 1998, 52, 220.		1
60	Dynamic mechanical deformation of neurons triggers an acute calcium response and cell injury involving the N-methyl-D-aspartate glutamate receptor. , 1998, 52, 220.		10
61	An <i>In Vitro</i> Model of Traumatic Neuronal Injury: Loading Rate-Dependent Changes in Acute Cytosolic Calcium and Lactate Dehydrogenase Release. Journal of Neurotrauma, 1997, 14, 355-368.	1.7	138
62	Anin vitro traumatic injury model to examine the response of neurons to a hydrodynamically-induced deformation. Annals of Biomedical Engineering, 1997, 25, 665-677.	1.3	102
63	Norepinephrine-stimulated phosphatidylinositol metabolism in genetically epilepsy-prone and kindled rats. Brain Research, 1991, 551, 315-318.	1.1	16