Jit Muthuswamy

List of Publications by Year
in descending order

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52 papers	1,297 citations	430843 18 h-index	361001 35 g-index
54 all docs	54 docs citations	54 times ranked	1652 citing authors

#	Article	IF	Citations
1	Advances in Implantable Microelectrode Array Insertion and Positioning. Neuromodulation, 2022, 25, 789-795.	0.8	5
2	Quantitative Assessment of the Mechanical Properties of the Neural Interface. , 2021, , 1-47.		0
3	Mechanosensitive Ion Channels Contribute to Micromotion Induced Membrane Potential Changes in Cells at the Neural Interface In Vivo. , 2021, , .		0
4	Soft, Conductive, Brain-Like, Coatings at Tips of Microelectrodes Improve Electrical Stability under Chronic, In Vivo Conditions. Micromachines, 2021, 12, 761.	2.9	8
5	Biomechanical micromotion at the neural interface modulates intracellular membrane potentials in vivo. Journal of Neural Engineering, 2021, 18, 045010.	3.5	11
6	Engineering microscale systems for fully autonomous intracellular neural interfaces. Microsystems and Nanoengineering, 2020, 6, 1.	7.0	114
7	Optogenetic modulation of cortical neurons using organic light emitting diodes (OLEDs). Biomedical Physics and Engineering Express, 2020, 6, 025003.	1.2	8
8	Design and Development of Microscale Thickness Shear Mode (TSM) Resonators for Sensing Neuronal Adhesion. Frontiers in Neuroscience, 2019, 13, 518.	2.8	8
9	Penetrating Microindentation of Hyper-soft, Conductive Silicone Neural Interfaces in Vivo Reveals Significantly Lower Mechanical Stresses. MRS Advances, 2019, 4, 2551-2558.	0.9	10
10	Remote Stimulation of Sciatic Nerve Using Cuff Electrodes and Implanted Diodes. Micromachines, 2018, 9, 595.	2.9	5
11	Sustained elevation of activity of developing neurons grown on polyimide microelectrode arrays (MEA) in response to ultrasound exposure. Microsystem Technologies, 2017, 23, 3671-3683.	2.0	19
12	Autonomous control for mechanically stable navigation of microscale implants in brain tissue to record neural activity. Biomedical Microdevices, 2016, 18, 72.	2.8	4
13	MEMS Neural Probes. , 2016, , 1993-2009.		0
14	MEMS Neural Probes. , 2016, , 1-17.		0
15	Compliant intracortical implants reduce strains and strain rates in brain tissue<i>in vivo</i>. Journal of Neural Engineering, 2015, 12, 036002.	3.5	85
16	Long-term changes in the material properties of brain tissue at the implantâ€“tissue interface. Journal of Neural Engineering, 2013, 10, 066001.	3.5	101
17	Voltage Preconditioning Allows Modulated Gene Expression in Neurons Using PEI-complexed siRNA. Molecular Therapy - Nucleic Acids, 2013, 2, e82.	5.1	3
18	BACE1 Silencing Using siRNA Shows Immediate, Dynamic Changes in Spontaneous Electrical Activity of Cultured Neurons. Journal of Neuroscience and Neuroengineering, 2013, 2, 491-503.	0.2	2

#	Article	IF	Citations
19	High efficiency, Site-specific Transfection of Adherent Cells with siRNA Using Microelectrode Arrays (MEA). Journal of Visualized Experiments, 2012, , e4415.	0.3	3
20	Electrothermal Microactuators With Peg Drive Improve Performance for Brain Implant Applications. Journal of Microelectromechanical Systems, 2012, 21, 1172-1186.	2.5	33
21	Multi-modal biochip for simultaneous, real-time measurement of adhesion and electrical activity of neurons in culture. Lab on A Chip, 2012, 12, 2930.	6.0	7
22	Packaging and Non-Hermetic Encapsulation Technology for Flip Chip on Implantable MEMS Devices. Journal of Microelectromechanical Systems, 2012, 21, 882-896.	2.5	9
23	Micrororobotics. , 2012, , 1436-1436.		0
24	Novel First-Level Interconnect Techniques for Flip Chip on MEMS Devices. Journal of Microelectromechanical Systems, 2012, 21, 132-144.	2.5	10
25	Adaptive Movable Neural Interfaces for Monitoring Single Neurons in the Brain. Frontiers in Neuroscience, 2011, 5, 94.	2.8	26
26	Implantable microtechnologies for the brain: Challenges and strategies for reliable operation. , 2011, , .		1
27	Highly Doped Polycrystalline Silicon Microelectrodes Reduce Noise in Neuronal Recordings In Vivo. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2010, 18, 489-497.	4.9	18
28	Long-term neural recordings using MEMS based moveable microelectrodes in the brain. Frontiers in Neuroengineering, 2010, 3, 10.	4.8	29
29	Early onset of electrical activity in developing neurons cultured on carbon nanotube immobilized microelectrodes. , 2009, 2009, 777-80.		12
30	Biohybrid Photoelectrochemical Nanoengineered Interfaces. Materials Research Society Symposia Proceedings, 2009, 1191, 24.	0.1	0
31	Assessment of gliosis around moveable implants in the brain. Journal of Neural Engineering, 2009, 6, 046004.	3.5	27
32	Optoelectronic Energy Transfer at Novel Biohybrid Interfaces Using Light Harvesting Complexes from Chloroflexus aurantiacus. Langmuir, 2009, 25, 6508-6516.	3.5	5
33	Flexible Chip-Scale Package and Interconnect for Implantable MEMS Movable Microelectrodes for the Brain. Journal of Microelectromechanical Systems, 2009, 18, 396-404.	2.5	44
34	Nonhermetic Encapsulation Materials for MEMS-Based Movable Microelectrodes for Long-Term Implantation in the Brain. Journal of Microelectromechanical Systems, 2009, 18, 1234-1245.	2.5	11
35	Microelectrode Array (MEA) Platform for Targeted Neuronal Transfection and Recording. IEEE Transactions on Biomedical Engineering, 2009, , .	4.2	0
36	Artificial dural sealant that allows multiple penetrations of implantable brain probes. Journal of Neuroscience Methods, 2008, 171, 147-152.	2.5	40

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37	Microelectrode Array (MEA) Platform for Targeted Neuronal Transfection and Recording. IEEE Transactions on Biomedical Engineering, 2008, 55, 827-832.	4.2	16
38	Immobilization of Functional Light Antenna Structures Derived from the Filamentous Green Bacterium Chloroflexus aurantiacus. Langmuir, 2008, 24, 8078-8089.	3.5	10
39	Immunosensor for Detection of Inhibitory Neurotransmitter Î³-Aminobutyric Acid Using Quartz Crystal Microbalance. Analytical Chemistry, 2008, 80, 8576-8582.	6.5	26
40	Long-term cortical recordings with microactuated microelectrodes. , 2007, , .		3
41	Thin microelectrodes reduce GFAP expression in the implant site in rodent somatosensory cortex. Journal of Neural Engineering, 2007, 4, 42-53.	3.5	93
42	Spatio-temporally controlled transfection of nucleic acid payloads in cell-culture. , 2007, , .		0
43	Bio-chip for spatially controlled transfection of nucleic acid payloads into cells in a culture. Lab on A Chip, 2007, 7, 1004.	6.0	39
44	Microsystem for transfection of exogenous molecules with spatio-temporal control into adherent cells. Biosensors and Bioelectronics, 2007, 22, 863-870.	10.1	20
45	Structure-property relationships in the optimization of polysilicon thin films for electrical recording/stimulation of single neurons. Biomedical Microdevices, 2007, 9, 345-360.	2.8	8
46	Immobilization and characterization of Î³-aminobutyric acid on gold surface. Journal of Biomedical Materials Research - Part A, 2006, 79A, 201-209.	4.0	3
47	Brain micromotion around implants in the rodent somatosensory cortex. Journal of Neural Engineering, 2006, 3, 189-195.	3.5	241
48	Single neuronal recordings using surface micromachined polysilicon microelectrodes. Journal of Neuroscience Methods, 2005, 142, 45-54.	2.5	19
49	An Array of Microactuated Microelectrodes for Monitoring Single-Neuronal Activity in Rodents. IEEE Transactions on Biomedical Engineering, 2005, 52, 1470-1477.	4.2	60
50	Electrostatic Microactuators for Precise Positioning of Neural Microelectrodes. IEEE Transactions on Biomedical Engineering, 2005, 52, 1748-1755.	4.2	62
51	Acoustic sensor for monitoring adhesion of Neuro-2A cells in real-time. Journal of Neuroscience Methods, 2005, 144, 1-10.	2.5	13
52	Acoustic biosensor for monitoring antibody immobilization and neurotransmitter GABA in real-time. Sensors and Actuators B: Chemical, 2004, 101, 8-19.	7.8	26