Joseph J Pancrazio

List of Publications by Year in Descending Order

124 papers	3,620 citations	34 h-index	55 g-index
135 ext. papers	4,092 ext. citations	6.1 avg, IF	5.03 L-index

#	Paper	IF	Citations
124	Liquid Crystalline Polymers: Opportunities to Shape Neural Interfaces. *Neuromodulation*, **2021**,	3.1	1
123	A peptide encoded within a 5Suntranslated region promotes pain sensitization in mice. *Pain*, **2021**, 162, 1864-1875	8	2
122	Intracortical Microelectrode Array Unit Yield under Chronic Conditions: A Comparative Evaluation. *Micromachines*, **2021**, 12,	3.3	4
121	Influence of Implantation Depth on the Performance of Intracortical Probe Recording Sites. *Micromachines*, **2021**, 12,	3.3	2
120	A role for translational regulation by S6 kinase and a downstream target in inflammatory pain. *British Journal of Pharmacology*, **2021**, 178, 4675-4690	8.6	0
119	Stable softening bioelectronics: A paradigm for chronically viable ester-free neural interfaces such as spinal cord stimulation implants. *Biomaterials*, **2021**, 277, 121073	15.6	1
118	Conserved Expression of Nav1.7 and Nav1.8 Contribute to the Spontaneous and Thermally Evoked Excitability in IL-6 and NGF-Sensitized Adult Dorsal Root Ganglion Neurons In Vitro. *Bioengineering*, **2020**, 7,	5.3	3
117	Adaptation of robust ZSfactor for assay quality assessment in microelectrode array based screening using adult dorsal root ganglion neurons. *Journal of Neuroscience Methods*, **2020**, 339, 108699	3	3
116	Deployable, liquid crystal elastomer-based intracortical probes. *Acta Biomaterialia*, **2020**, 111, 54-64	10.8	5
115	Ruthenium oxide based microelectrode arrays for in vitro and in vivo neural recording and stimulation. *Acta Biomaterialia*, **2020**, 101, 565-574	10.8	15
114	Mechanically Robust, Softening Shape Memory Polymer Probes for Intracortical Recording. *Micromachines*, **2020**, 11,	3.3	7
113	Reversal of peripheral nerve injury-induced neuropathic pain and cognitive dysfunction via genetic and tomivosertib targeting of MNK. *Neuropsychopharmacology*, **2020**, 45, 524-533	8.7	25
112	Liquid crystal elastomers as substrates for 3D, robust, implantable electronics. *Journal of Materials Chemistry B*, **2020**, 8, 6286-6295	7.3	9
111	Responsive, 3D Electronics Enabled by Liquid Crystal Elastomer Substrates. *ACS Applied Materials & Interfaces*, **2019**, 11, 19506-19513	9.5	24
110	Electrical Properties of Thiol-ene-based Shape Memory Polymers Intended for Flexible Electronics. *Polymers*, **2019**, 11,	4.5	15
109	Gold nanostructure microelectrode arrays for in vitro recording and stimulation from neuronal networks. *Nanotechnology*, **2019**, 30, 235501	3.4	7
108	The Effect of Microfluidic Geometry on Myoblast Migration. *Micromachines*, **2019**, 10,	3.3	1

107	Neuron-like neural probes. *Nature Materials*, **2019**, 18, 429-431	27	7
106	High-Performance Graphene-Fiber-Based Neural Recording Microelectrodes. *Advanced Materials*, **2019**, 31, e1805867	24	72
105	Mechanical considerations for design and implementation of peripheral intraneural devices. *Journal of Neural Engineering*, **2019**, 16, 064001	5	4
104	Chronic stability of local field potentials from standard and modified Blackrock microelectrode arrays implanted in the rat motor cortex. *Biomedical Physics and Engineering Express*, **2019**, 5, 065017	1.5	3
103	Elastrographic assessment of micromotion-induced strain in tissue adjacent to intracortical implants in rat **2019**,		1
102	From softening polymers to multimaterial based bioelectronic devices. *Multifunctional Materials*, **2019**, 2, 012001	5.2	21
101	Emerging neurotechnology for antinoceptive mechanisms and therapeutics discovery. *Biosensors and Bioelectronics*, **2019**, 126, 679-689	11.8	6
100	A Mosquito Inspired Strategy to Implant Microprobes into the Brain. *Scientific Reports*, **2018**, 8, 122	4.9	42
99	Chronic recording and electrochemical performance of Utah microelectrode arrays implanted in rat motor cortex. *Journal of Neurophysiology*, **2018**, 120, 2083-2090	3.2	23
98	Adult mouse sensory neurons on microelectrode arrays exhibit increased spontaneous and stimulus-evoked activity in the presence of interleukin-6. *Journal of Neurophysiology*, **2018**, 120, 1374-1385	3.2	19
97	Softening Shape Memory Polymer Substrates for Bioelectronic Devices With Improved Hydrolytic Stability. *Frontiers in Materials*, **2018**, 5,	4	11
96	A Meta-Analysis of Intracortical Device Stiffness and Its Correlation with Histological Outcomes. *Micromachines*, **2018**, 9,	3.3	26
95	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	5.1	5
94	Amorphous Silicon Carbide Platform for Next Generation Penetrating Neural Interface Designs. *Micromachines*, **2018**, 9,	3.3	14
93	Chronic Intracortical Recording and Electrochemical Stability of Thiol-ene/Acrylate Shape Memory Polymer Electrode Arrays. *Micromachines*, **2018**, 9,	3.3	31
92	Characterization of the Neuroinflammatory Response to Thiol-ene Shape Memory Polymer Coated Intracortical Microelectrodes. *Micromachines*, **2018**, 9,	3.3	18
91	In vitro compatibility testing of thiol-ene/acrylate-based shape memory polymers for use in implantable neural interfaces. *Journal of Biomedical Materials Research - Part A*, **2018**, 106, 2891-2898	5.4	17
90	Liquid Crystal Elastomer-Based Microelectrode Array for In Vitro Neuronal Recordings. *Micromachines*, **2018**, 9,	3.3	20

89	A patterned polystyrene-based microelectrode array for in vitro neuronal recordings. *Biomedical Microdevices*, **2018**, 20, 48	3.7	7
88	Quantum Dot-Peptide-Fullerene Bioconjugates for Visualization of in Vitro and in Vivo Cellular Membrane Potential. *ACS Nano*, **2017**, 11, 5598-5613	16.7	53
87	Thinking Small: Progress on Microscale Neurostimulation Technology. *Neuromodulation*, **2017**, 20, 745-752	3.1	37
86	The MNK-eIF4E Signaling Axis Contributes to Injury-Induced Nociceptive Plasticity and the Development of Chronic Pain. *Journal of Neuroscience*, **2017**, 37, 7481-7499	6.6	70
85	Sterilization of Thiol-ene/Acrylate Based Shape Memory Polymers for Biomedical Applications. *Macromolecular Materials and Engineering*, **2017**, 302, 1600331	3.9	21
84	Design and demonstration of an intracortical probe technology with tunable modulus. *Journal of Biomedical Materials Research - Part A*, **2017**, 105, 159-168	5.4	42
83	Spontaneous and Evoked Activity from Murine Ventral Horn Cultures on Microelectrode Arrays. *Frontiers in Cellular Neuroscience*, **2017**, 11, 304	6.1	12
82	Real-Time Classification of Hand Motions Using Ultrasound Imaging of Forearm Muscles. *IEEE Transactions on Biomedical Engineering*, **2016**, 63, 1687-98	5	67
81	Novel disposable microelectrode array for cultured neuronal network recording exhibiting equivalent performance to commercially available arrays. *Sensors and Actuators B: Chemical*, **2016**, 226, 232-238	8.5	7
80	Chronic intracortical neural recordings using microelectrode arrays coated with PEDOT-TFB. *Acta Biomaterialia*, **2016**, 32, 57-67	10.8	41
79	Amorphous Silicon Carbide for Neural Interface Applications **2016**, 249-260		7
78	In vivo Characterization of Amorphous Silicon Carbide As a Biomaterial for Chronic Neural Interfaces. *Frontiers in Neuroscience*, **2016**, 10, 301	5.1	29
77	Amyloid beta modulation of neuronal network activity in vitro. *Brain Research*, **2015**, 1629, 1-9	3.7	25
76	Freeze Drying Improves the Shelf-Life of Conductive Polymer Modified Neural Electrodes. *Bioengineering*, **2015**, 2, 176-183	5.3	2
75	Improving the performance of poly(3,4-ethylenedioxythiophene) for brain-machine interface applications. *Acta Biomaterialia*, **2014**, 10, 2446-54	10.8	57
74	Novel Method for Predicting Dexterous Individual Finger Movements by Imaging Muscle Activity Using a Wearable Ultrasonic System. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2014**, 22, 69-76	4.8	74
73	Lifetime assessment of atomic-layer-deposited Al2O3-Parylene C bilayer coating for neural interfaces using accelerated age testing and electrochemical characterization. *Acta Biomaterialia*, **2014**, 10, 960-7	10.8	62
72	Botulinum toxin suppression of CNS network activity in vitro. *Journal of Toxicology*, **2014**, 2014, 732913	3.1	11

71	Effects of carbon nanotube and conducting polymer coated microelectrodes on single-unit recordings in vitro. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2014**, 2014, 469-73	0.9	3
70	Use of cortical neuronal networks for in vitro material biocompatibility testing. *Biosensors and Bioelectronics*, **2014**, 53, 316-23	11.8	26
69	Differential responses to ω-agatoxin IVA in murine frontal cortex and spinal cord derived neuronal networks. *NeuroToxicology*, **2013**, 37, 19-25	4.4	13
68	Challenges to deep brain stimulation: a pragmatic response to ethical, fiscal, and regulatory concerns. *Annals of the New York Academy of Sciences*, **2012**, 1265, 80-90	6.5	16
67	Development and demonstration of a disposable low-cost microelectrode array for cultured neuronal network recording. *Sensors and Actuators B: Chemical*, **2012**, 161, 655-660	8.5	15
66	Microfluidic based contactless dielectrophoretic device: Modeling and analysis. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 6506-9	0.9	1
65	Neurological effects of blast injury. *Journal of Trauma*, **2010**, 68, 1257-63		107
64	Standard guidelines for publication of deep brain stimulation studies in Parkinson's disease (Guide4DBS-PD). *Movement Disorders*, **2010**, 25, 1530-7	7	17
63	National Institute of Neurological Disorders and Stroke support for brain-machine interface technology. *Neurosurgical Focus*, **2009**, 27, E14	4.2	3
62	Neural interfaces at the nanoscale. *Nanomedicine*, **2008**, 3, 823-30	5.6	51
61	Advances in neural interfaces: report from the 2006 NIH Neural Interfaces Workshop. *Journal of Neural Engineering*, **2007**, 4, S137-42	5	5
60	Broadband Detection of Environmental Neurotoxicants. *Analytical Chemistry*, **2007**, 79, 8838-8845	7.8	15
59	Enabling tools for tissue engineering. *Biosensors and Bioelectronics*, **2007**, 22, 2803-11	11.8	60
58	Methods for characterizing interspike intervals and identifying bursts in neuronal activity. *Journal of Neuroscience Methods*, **2007**, 162, 64-71	3	42
57	Detection of marine toxins, brevetoxin-3 and saxitoxin, in seawater using neuronal networks. *Environmental Science & Technology*, **2006**, 40, 578-83	10.3	33
56	Toward Neurotechnology Innovation: Report from the 2005 Neural Interfaces Workshop. An NIH-Sponsored Event. *Neuromodulation*, **2006**, 9, 1-7	3.1	6
55	Sensitivity of the neuronal network biosensor to environmental threats. *Journal of Toxicology and Environmental Health - Part A: Current Issues*, **2004**, 67, 809-18	3.2	13
54	Measuring synchronization in neuronal networks for biosensor applications. *Biosensors and Bioelectronics*, **2004**, 19, 675-83	11.8	56

53	Cultured neuronal networks as environmental biosensors. *Journal of Applied Toxicology*, **2004**, 24, 379-85	4.1	23
52	Pharmacological effects of the marine toxins, brevetoxin and saxitoxin, on murine frontal cortex neuronal networks. *Toxicon*, **2004**, 44, 669-76	2.8	34
51	Gene expression profiles in the rat central nervous system induced by JP-8 jet fuel vapor exposure. *Neuroscience Letters*, **2004**, 363, 233-8	3.3	7
50	Biological threat detection via host gene expression profiling. *Clinical Chemistry*, **2003**, 49, 1045-9	5.5	6
49	Acute neuropharmacologic action of chloroquine on cortical neurons in vitro. *Brain Research*, **2003**, 959, 280-6	3.7	26
48	A portable microelectrode array recording system incorporating cultured neuronal networks for neurotoxin detection. *Biosensors and Bioelectronics*, **2003**, 18, 1339-47	11.8	100
47	Potential applications of DNA microarrays in biodefense-related diagnostics. *Current Opinion in Biotechnology*, **2002**, 13, 208-12	11.4	35
46	Cholera toxin-induced modulation of gene expression: elucidation via cDNA microarray for rational cell-based sensor design. *Analytica Chimica Acta*, **2002**, 457, 97-108	6.6	12
45	Toluene inhibits muscarinic receptor-mediated cytosolic Ca2+ responses in neural precursor cells. *NeuroToxicology*, **2002**, 23, 61-8	4.4	9
44	Gene modulation in total brain induced by exposure to the bicyclic phosphorus ester trimethylolpropane phosphate (TMPP). *NeuroToxicology*, **2002**, 23, 215-21	4.4	4
43	Acute exposure of toluene transiently potentiates p42/44 mitogen-activated protein kinase (MAPK) activity in cultured rat cortical astrocytes. *Neuroscience Letters*, **2002**, 332, 103-6	3.3	13
42	Dynamic and geometric analysis of short time series: a new comparative approach to cell-based biosensors. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2001**, 286, 217-224	2.3	1
41	Methods for short time series analysis of cell-based biosensor data. *Biosensors and Bioelectronics*, **2001**, 16, 503-12	11.8	1
40	Characterization of acute neurotoxic effects of trimethylolpropane phosphate via neuronal network biosensors. *Biosensors and Bioelectronics*, **2001**, 16, 513-25	11.8	87
39	Design and demonstration of an automated cell-based biosensor. *Biosensors and Bioelectronics*, **2001**, 16, 535-42	11.8	42
38	Identification of differential gene expression profiles in rat cortical cells exposed to the neuroactive agents trimethylolpropane phosphate and bicuculline. *Biosensors and Bioelectronics*, **2001**, 16, 593-601	11.8	4
37	Trimethylolpropane phosphate induces epileptiform discharges in the CA1 region of the rat hippocampus. *Toxicology and Applied Pharmacology*, **2001**, 171, 126-34	4.6	4
36	The use of GABA(A) receptors expressed in neural precursor cells for cell-based assays. *Biosensors and Bioelectronics*, **2001**, 16, 481-9	11.8	5

35	Detection of physiologically active compounds using cell-based biosensors. *Trends in Biotechnology*, **2001**, 19, 304-9	15.1	175
34	Identification of target genes responsive to JP-8 exposure in the rat central nervous system. *Toxicology and Industrial Health*, **2001**, 17, 262-9	1.8	5
33	Ethanol blocks cytosolic Ca2+ responses triggered by activation of GABA(A) receptor/Cl- channels in cultured proliferating rat neuroepithelial cells. *Neuroscience*, **2001**, 104, 913-22	3.9	22
32	Neurophysiologic effects of chemical agent hydrolysis products on cortical neurons in vitro. *NeuroToxicology*, **2001**, 22, 393-400	4.4	25
31	Functional ionotropic glutamate receptors emerge during terminal cell division and early neuronal differentiation of rat neuroepithelial cells. *Journal of Neuroscience Research*, **2000**, 61, 652-62	4.4	61
30	Acetylcholine stimulates cortical precursor cell proliferation in vitro via muscarinic receptor activation and MAP kinase phosphorylation. *European Journal of Neuroscience*, **2000**, 12, 1227-40	3.5	132
29	Immobilization of neural cells in three-dimensional matrices for biosensor applications. *Biosensors and Bioelectronics*, **2000**, 14, 871-81	11.8	79
28	Synaptic connectivity in hippocampal neuronal networks cultured on micropatterned surfaces. *Developmental Brain Research*, **2000**, 120, 223-31		36
27	Stimulation of unitary T-type Ca(2+) channel currents by calmodulin-dependent protein kinase II. *American Journal of Physiology - Cell Physiology*, **2000**, 279, C1694-703	5.4	46
26	Investigation of in vitro toxicity of jet fuels JP-8 and Jet A. *Drug and Chemical Toxicology*, **2000**, 23, 279-91	2.3	34
25	Volatile anesthetic sensitivity of T-type calcium currents in various cell types. *Anesthesia and Analgesia*, **1999**, 88, 168-73	3.9	9
24	Development and application of cell-based biosensors. *Annals of Biomedical Engineering*, **1999**, 27, 697-711	4.7	311
23	Kir 4.1 channel expression in neuroblastomaxglioma hybrid NG108-15 cell line. *Developmental Brain Research*, **1999**, 114, 127-34		6
22	A role for inwardly rectifying K+ channels in differentiation of NG108-15 neuroblastoma glioma cells. *Journal of Neurobiology*, **1999**, 38, 466-474		14
21	Characterization of rat spinal cord neurons cultured in defined media on microelectrode arrays. *Neuroscience Letters*, **1999**, 271, 179-82	3.3	15
20	Volatile Anesthetic Sensitivity of T-Type Calcium Currents in Various Cell Types. *Anesthesia and Analgesia*, **1999**, 88, 168-173	3.9	16
19	Multiple ionic mechanisms mediate inhibition of rat motoneurones by inhalation anaesthetics. *Journal of Physiology*, **1998**, 512 (Pt 3), 851-62	3.9	70
18	Neuronal and glial epitopes and transmitter-synthesizing enzymes appear in parallel with membrane excitability during neuroblastoma x glioma hybrid differentiation. *Developmental Brain Research*, **1998**, 106, 155-63		24

17	Central neuronal synapse formation on micropatterned surfaces. *Developmental Brain Research*, **1998**, 111, 231-43		66
16	Portable cell-based biosensor system for toxin detection. *Sensors and Actuators B: Chemical*, **1998**, 53, 179-185	8.5	62
15	Description and demonstration of a CMOS amplifier-based-system with measurement and stimulation capability for bioelectrical signal transduction. *Biosensors and Bioelectronics*, **1998**, 13, 971-9	11.8	54
14	Microlithographic determination of axonal/dendritic polarity in cultured hippocampal neurons. *Journal of Neuroscience Methods*, **1998**, 82, 167-73	3	139
13	Influence of extracellular matrix proteins on membrane potentials and excitability in NG108-15 cells. *Neuroscience Letters*, **1998**, 246, 9-12	3.3	6
12	Volatile anesthetics reduce low-voltage-activated calcium currents in a thyroid C-cell line. *Anesthesiology*, **1996**, 85, 1167-75	4.3	22
11	Myocardial depressant effects of sevoflurane. Mechanical and electrophysiologic actions in vitro. *Anesthesiology*, **1996**, 84, 1166-76	4.3	87
10	Ion channel events simulated with the program SIMSTATE. *Computer Methods and Programs in Biomedicine*, **1995**, 46, 165-74	6.9	2
9	Differential anesthetic-induced opening of calcium-dependent large conductance channels in isolated ventricular myocytes. *Pflugers Archiv European Journal of Physiology*, **1994**, 429, 134-6	4.6	4
8	A major role for calcium-dependent potassium current in action potential repolarization in adrenal chromaffin cells. *Brain Research*, **1994**, 668, 246-51	3.7	7
7	Mechanical and electrophysiological effects of protamine on isolated ventricular myocardium: evidence for calcium overload. *Cardiovascular Research*, **1994**, 28, 505-14	9.9	13
6	PCS: an IBM-compatible microcomputer program for the analysis and display of voltage-clamp data. *Computer Methods and Programs in Biomedicine*, **1993**, 40, 175-80	6.9	6
5	Effects of enflurane on the voltage-gated membrane currents of bovine adrenal chromaffin cells. *Neuroscience Letters*, **1992**, 146, 147-51	3.3	8
4	Voltage-sensitive calcium channels in a human small-cell lung cancer cell line. *Acta Physiologica Scandinavica*, **1992**, 144, 463-8		11
3	Dopamine enhances a voltage-dependent transient K+ current in the MMQ cell, a clonal pituitary line expressing functional D2 dopamine receptors. *Brain Research*, **1990**, 506, 331-4	3.7	14
2	Effects of Bay K 8644 on spontaneous and evoked transmitter release at the mouse neuromuscular junction. *Neuroscience*, **1989**, 30, 215-21	3.9	12
1	Biomimeticdesign of neural prostheses541-553		