Kip A Ludwig

List of Publications by Year
in descending order

47 papers	3,476 citations	361413 20 h-index	233421 45 g-index
71 all docs	71 docs citations	71 times ranked	4361 citing authors

#	Article	IF	Citations
1	Chronic neural recordings using silicon microelectrode arrays electrochemically deposited with a poly(3,4-ethylenedioxythiophene) (PEDOT) film. Journal of Neural Engineering, 2006, 3, 59-70.	3.5	570
2	Glial responses to implanted electrodes in the brain. Nature Biomedical Engineering, 2017, 1, 862-877.	22.5	402
3	Using a Common Average Reference to Improve Cortical Neuron Recordings From Microelectrode Arrays. Journal of Neurophysiology, 2009, 101, 1679-1689.	1.8	359
4	Bioelectronic medicines: a research roadmap. Nature Reviews Drug Discovery, 2014, 13, 399-400.	46.4	283
5	A Materials Roadmap to Functional Neural Interface Design. Advanced Functional Materials, 2018, 28, 1701269.	14.9	266
6	Tissue damage thresholds during therapeutic electrical stimulation. Journal of Neural Engineering, 2016, 13, 021001.	3.5	258
7	Interfacing Conducting Polymer Nanotubes with the Central Nervous System: Chronic Neural Recording using Poly(3,4â€ethylenedioxythiophene) Nanotubes. Advanced Materials, 2009, 21, 3764-3770.	21.0	246
8	Poly(3,4-ethylenedioxythiophene) (PEDOT) polymer coatings facilitate smaller neural recording electrodes. Journal of Neural Engineering, 2011, 8, 014001.	3.5	225
9	NaÃ¯ve coadaptive cortical control. Journal of Neural Engineering, 2005, 2, 52-63.	3.5	94
10	Prioritized research recommendations from the <scp>N</scp>ational <scp>I</scp>nstitute of <scp>N</scp>eurological <scp>D</scp>isorders and <scp>S</scp>troke <scp><i>P</i></scp><i>arkinson's</i><scp><i>D</i></scp><i>isease 2014 conference</i>. Annals of Neurology, 2014, 76, 469-472.	5.3	75
11	Functional vagotopy in the cervical vagus nerve of the domestic pig: implications for the study of vagus nerve stimulation. Journal of Neural Engineering, 2020, 17, 026022.	3.5	72
12	Calcium activation of cortical neurons by continuous electrical stimulation: Frequency dependence, temporal fidelity, and activation density. Journal of Neuroscience Research, 2019, 97, 620-638.	2.9	67
13	Sources of off-target effects of vagus nerve stimulation using the helical clinical lead in domestic pigs. Journal of Neural Engineering, 2020, 17, 046017.	3.5	55
14	Flavopiridol reduces the impedance of neural prostheses in vivo without affecting recording quality. Journal of Neuroscience Methods, 2009, 183, 149-157.	2.5	48
15	An Injectable Neural Stimulation Electrode Made from an Inâ€Body Curing Polymer/Metal Composite. Advanced Healthcare Materials, 2019, 8, e1900892.	7.6	32
16	<i>In vivo</i> microstimulation with cathodic and anodic asymmetric waveforms modulates spatiotemporal calcium dynamics in cortical neuropil and pyramidal neurons of male mice. Journal of Neuroscience Research, 2020, 98, 2072-2095.	2.9	32
17	Non-clinical and Pre-clinical Testing to Demonstrate Safety of the Barostim Neo Electrode for Activation of Carotid Baroreceptors in Chronic Human Implants. Frontiers in Neuroscience, 2017, 11, 438.	2.8	27
18	Clinically-derived vagus nerve stimulation enhances cerebrospinal fluid penetrance. Brain Stimulation, 2020, 13, 1024-1030.	1.6	26

#	Article	IF	Citations
19	Computational Modeling of Neurotransmitter Release Evoked by Electrical Stimulation: Nonlinear Approaches to Predicting Stimulation-Evoked Dopamine Release. ACS Chemical Neuroscience, 2017, 8, 394-410.	3.5	25
20	Auricular Vagus Neuromodulationâ€"A Systematic Review on Quality of Evidence and Clinical Effects. Frontiers in Neuroscience, 2021, 15, 664740.	2.8	21
21	Use of a Bayesian maximum-likelihood classifier to generate training data for brainâ€"machine interfaces. Journal of Neural Engineering, 2011, 8, 049801.	3.5	20
22	Calcium imaging in freely moving mice during electrical stimulation of deep brain structures. Journal of Neural Engineering, 2021, 18, 026008.	3.5	19
23	Use of a Bayesian maximum-likelihood classifier to generate training data for brainâ€"machine interfaces. Journal of Neural Engineering, 2011, 8, 046009.	3.5	16
24	Design Choices for Next-Generation Neurotechnology Can Impact Motion Artifact in Electrophysiological and Fast-Scan Cyclic Voltammetry Measurements. Micromachines, 2018, 9, 494.	2.9	15
25	Î¼ECoG Recordings Through a Thinned Skull. Frontiers in Neuroscience, 2019, 13, 1017.	2.8	15
26	Next-Generation Diamond Electrodes for Neurochemical Sensing: Challenges and Opportunities. Micromachines, 2021, 12, 128.	2.9	15
27	Electronic Bone Growth Stimulators for Augmentation of Osteogenesis in In Vitro and In Vivo Models: A Narrative Review of Electrical Stimulation Mechanisms and Device Specifications. Frontiers in Bioengineering and Biotechnology, 2022, 10, 793945.	4.1	12
28	Detection of norepinephrine in whole blood via fast scan cyclic voltammetry. , 2017, 2017, 111-116.		10
29	Stimulation of the dorsal root ganglion using an Injectrode^{Â®}. Journal of Neural Engineering, 2021, 18, 056068.	3.5	9
30	In vivo Visualization of Pig Vagus Nerve â€œVagotopyâ€•Using Ultrasound. Frontiers in Neuroscience, 2021, 15, 676680.	2.8	9
31	Intracortical microstimulation pulse waveform and frequency recruits distinct spatiotemporal patterns of cortical neuron and neuropil activation. Journal of Neural Engineering, 2022, 19, 026024.	3.5	8
32	Flexible, multichannel cuff electrode for selective electrical stimulation of the mouse trigeminal nerve. Biosensors and Bioelectronics, 2019, 142, 111493.	10.1	7
33	Acquiring Brain Signals from within the Brain. , 2012, , 81-103.		5
34	The Safe Delivery of Electrical Currents and Neuromodulation. , 2018, , 83-94.		5
35	The Fourth Bioelectronic Medicine Summit â€œTechnology Targeting Molecular Mechanismsâ€• current progress, challenges, and charting the future. Bioelectronic Medicine, 2021, 7, 7.	2.3	5
36	The Brain Initiativeâ€"Implications for a Revolutionary Change in Clinical Medicine via Neuromodulation Technology. , 2018, , 55-68.		4

#	Article	IF	Citations
37	Augmented Transcutaneous Stimulation Using an Injectable Electrode: A Computational Study. Frontiers in Bioengineering and Biotechnology, 2021, 9, 796042.	4.1	4
38	Electrical Stimulation of Acute Fractures: A Narrative Review of Stimulation Protocols and Device Specifications. Frontiers in Bioengineering and Biotechnology, 2022, 10, .	4.1	3
39	Cleveland neural engineering workshop 2017: strategic evaluation of neural engineering. Bioelectronic Medicine, 2019, 5, 2.	2.3	2
40	Integral methods for automatic quantification of fast-scan-cyclic-voltammetry detected neurotransmitters. PLoS ONE, 2021, 16, e0254594.	2.5	2
41	SPARC: A Road Map for Vagus Nerve Stimulation: Evidence of Vagotopy in a Swine Model. FASEB Journal, 2020, 34, 1-1.	0.5	2
42	8.6 ELECTRICAL CAROTID BARORECEPTOR ACTIVATION LOWERS RENAL ARTERY IMPEDANCE AND STIFFNESS IN AN ACUTE CANINE MODEL. Artery Research, 2009, 3, 160.	0.6	1
43	Electrochemical sensing via selective surface modification of iridium microelectrodes to create a platinum black interface. , 2013, , 961-964.		1
44	Neural Interfaces: An Injectable Neural Stimulation Electrode Made from an Inâ€Body Curing Polymer/Metal Composite (Adv. Healthcare Mater. 23/2019). Advanced Healthcare Materials, 2019, 8, 1970090.	7.6	1
45	SPARC: Neural elements mediating side effects during cervical vagus nerve stimulation in the pig. FASEB Journal, 2020, 34, 1-1.	0.5	1
46	Recruitment of Primary Afferents by Dorsal Root Ganglion Stimulation using the Injectrode. , 2021, 2021, 609-612.		0
47	Characterization of Electrodes to Record Neural Signals in the Periphery. FASEB Journal, 2022, 36, .	0.5	0