SiNAPS: An implantable active pixel sensor CMOS-prob neural recordings

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Citation Report

#	Article	IF	CITATIONS
1	The rise of flexible electronics in neuroscience, from materials selection to in vitro and in vivo applications. Advances in Physics: X, 2019, 4, 1664319.	1.5	12
2	A Compact Quad-Shank CMOS Neural Probe With 5,120 Addressable Recording Sites and 384 Fully Differential Parallel Channels. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 1625-1634.	2.7	46
3	Neuropixels Data-Acquisition System: A Scalable Platform for Parallel Recording of 10 000+ Electrophysiological Signals. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 1635-1644.	2.7	43
4	A 0.34 mm ² 1 Gb/s Non-Coherent UWB Receiver Architecture With Pulse Enhancement and Double PLL Clock/Data Packet Recovery. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 2735-2748.	3.5	5
5	\$mu ext{Radio}\$: First Characterization Results Towards a \$100 mumathrm{m}imes 100 mu mathrm{m}\$ Monolithic Radio with Bio-Electrical Interface. , 2019, , .		2
6	Distributed processing of movement signaling. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26266-26273.	3.3	5
7	Classifying Intracortical Brain-Machine Interface Signal Disruptions Based on System Performance and Applicable Compensatory Strategies: A Review. Frontiers in Neurorobotics, 2020, 14, 558987.	1.6	14
8	Power-saving design opportunities for wireless intracortical brain–computer interfaces. Nature Biomedical Engineering, 2020, 4, 984-996.	11.6	66
9	Challenges in Scaling Down of Free-Floating Implantable Neural Interfaces to Millimeter Scale. IEEE Access, 2020, 8, 133295-133320.	2.6	25
10	Challenges for Large-Scale Cortical Interfaces. Neuron, 2020, 108, 259-269.	3.8	51
11	Surfaceâ€Functionalized Selfâ€Standing Microdevices Exhibit Predictive Localization and Seamless Integration in 3D Neural Spheroids. Advanced Biology, 2020, 4, 2000114.	3.0	7
12	Axonal Tree Morphology and Signal Propagation Dynamics Improve Interneuron Classification. Neuroinformatics, 2020, 18, 581-590.	1.5	6
13	Multimaterial and multifunctional neural interfaces: from surface-type and implantable electrodes to fiber-based devices. Journal of Materials Chemistry B, 2020, 8, 6624-6666.	2.9	41
14	A 300 Mbps 37 pJ/bit UWB-Based Transcutaneous Optical Biotelemetry Link. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 1-1.	2.7	9
15	64-Channel Carbon Fiber Electrode Arrays for Chronic Electrophysiology. Scientific Reports, 2020, 10, 3830.	1.6	34
16	Multiplexed neural sensor array of graphene solution-gated field-effect transistors. 2D Materials, 2020, 7, 025046.	2.0	23
17	From Lithographically Patternable to Genetically Patternable Electronic Materials for Miniaturized, Scalable, and Soft Implantable Bioelectronics to Interface with Nervous and Cardiac Systems. ACS Applied Electronic Materials, 2021, 3, 101-118.	2.0	21
18	Flexible, Multi-Shank Stacked Array for High-Density Omini-Directional Intracortical Recording. , 2021, , .		1

#	Article	IF	CITATIONS
19	FPGA Design Integration of a 32-Microelectrodes Low-Latency Spike Detector in a Commercial System for Intracortical Recordings. Digital, 2021, 1, 34-53.	1.1	7
20	A 1024-Channel 10-Bit 36-\$mu\$W/ch CMOS ROIC for Multiplexed GFET-Only Sensor Arrays in Brain Mapping. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 860-876.	2.7	6
21	Electrophysiology Read-Out Tools for Brain-on-Chip Biotechnology. Micromachines, 2021, 12, 124.	1.4	26
22	Robust point-process Granger causality analysis in presence of exogenous temporal modulations and trial-by-trial variability in spike trains. PLoS Computational Biology, 2021, 17, e1007675.	1.5	6
23	Recording site placement on planar silicon-based probes affects signal quality in acute neuronal recordings. Scientific Reports, 2021, 11, 2028.	1.6	16
24	A 32-Channel Time-Multiplexed Artifact-Aware Neural Recording System. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 960-977.	2.7	11
25	Unprotected sidewalls of implantable silicon-based neural probes and conformal coating as a solution. Npj Materials Degradation, 2021, 5, .	2.6	5
27	Human Body-Related Disease Diagnosis Systems Using CMOS Image Sensors: A Systematic Review. Sensors, 2021, 21, 2098.	2.1	4
29	Adaptive spike detection and hardware optimization towards autonomous, high-channel-count BMIs. Journal of Neuroscience Methods, 2021, 354, 109103.	1.3	26
30	Hybrid Multisite Silicon Neural Probe with Integrated Flexible Connector for Interchangeable Packaging. Sensors, 2021, 21, 2605.	2.1	7
31	A robust and automated algorithm that uses single-channel spike sorting to label multi-channel Neuropixels data. , 2021, , .		3
32	An electronic neuromorphic system for real-time detection of high frequency oscillations (HFO) in in intracranial EEG. Nature Communications, 2021, 12, 3095.	5.8	74
33	Bioelectrodes for high-channel count and small form factor CMOS neural probes. , 2021, , .		4
34	Recent advances in biomedical, biosensor and clinical measurement devices for use in humans and the potential application of these technologies for the study of physiology and disease in wild animals. Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20200228.	1.8	13
35	Classification of Cortical Neurons by Spike Shape and the Identification of Pyramidal Neurons. Cerebral Cortex, 2021, 31, 5131-5138.	1.6	19
36	Recording Strategies for High Channel Count, Densely Spaced Microelectrode Arrays. Frontiers in Neuroscience, 2021, 15, 681085.	1.4	9
37	Dataset of cortical activity recorded with high spatial resolution from anesthetized rats. Scientific Data, 2021, 8, 180.	2.4	5
38	Extracellular Recording of Entire Neural Networks Using a Dual-Mode Microelectrode Array With 19 584 Electrodes and High SNR. IEEE Journal of Solid-State Circuits, 2021, 56, 2466-2475.	3.5	22

#	Article	IF	CITATIONS
45	Track-and-Zoom Neural Analog-to-Digital Converter With Blind Stimulation Artifact Rejection. IEEE Journal of Solid-State Circuits, 2020, 55, 1984-1997.	3.5	40
46	An Integrated Brain-Machine Interface Platform With Thousands of Channels. Journal of Medical Internet Research, 2019, 21, e16194.	2.1	526
47	SpikeInterface, a unified framework for spike sorting. ELife, 2020, 9, .	2.8	127
48	Novel transducers for high-channel-count neuroelectronic recording interfaces. Current Opinion in Biotechnology, 2021, 72, 39-47.	3.3	3
51	Biopotential Measurements and Electrodes. , 2020, , 65-96.		6
53	Implementation of biohybrid olfactory bulb on a high-density CMOS-chip to reveal large-scale spatiotemporal circuit information. Biosensors and Bioelectronics, 2022, 198, 113834.	5.3	14
54	Investigation of Effects of Copper, Zinc, and Strontium Doping on Electrochemical Properties of Titania Nanotube Arrays for Neural Interface Applications. Processes, 2021, 9, 2099.	1.3	1
56	A New Multilevel Pulsed Modulation Technique for Low Power High Data Rate Optical Biotelemetry. , 2021, , .		2
57	Coupling SiNAPS High-density Neural Recording CMOS-Probes with Optogenetic Light Stimulation. , 2021, , .		2
58	Orthogonalization of far-field detection in tapered optical fibers for depth-selective fiber photometry in brain tissue. APL Photonics, 2022, 7, 026106.	3.0	6
59	Electrical cross-sectional imaging of human motor units in vivo. Clinical Neurophysiology, 2022, 136, 82-92.	0.7	4
60	Engineering strategies towards overcoming bleeding and glial scar formation around neural probes. Cell and Tissue Research, 2022, 387, 461-477.	1.5	14
61	Assessing the Feasibility of Developing in vivo Neuroprobes for Parallel Intracellular Recording and Stimulation: A Perspective. Frontiers in Neuroscience, 2021, 15, 807797.	1.4	1
62	jULIEs: nanostructured polytrodes for low traumatic extracellular recordings and stimulation in the mammalian brain. Journal of Neural Engineering, 2022, , .	1.8	2
65	Spike sorting: new trends and challenges of the era of high-density probes. Progress in Biomedical Engineering, 2022, 4, 022005.	2.8	19
66	Integrated Micro-Devices for a Lab-in-Organoid Technology Platform: Current Status and Future Perspectives. Frontiers in Neuroscience, 2022, 16, 842265.	1.4	2
67	High-density neural recording system design. Biomedical Engineering Letters, 2022, 12, 251-261.	2.1	3
68	Advances in construction and modeling of functional neural circuits in vitro. Neurochemical Research, 2022, 47, 2529-2544.	1.6	2

CITATION REPORT

	CITATION	CLPORT	
#	Article	IF	CITATIONS
69	Inferring monosynaptic connections from paired dendritic spine Ca ²⁺ imaging and large-scale recording of extracellular spiking. Journal of Neural Engineering, 2022, 19, 046044.	1.8	2
70	Learning populations with hubs govern the initiation and propagation of spontaneous bursts in neuronal networks after learning. Frontiers in Neuroscience, 0, 16, .	1.4	1
71	A 0.0046-mm ² Two-Step Incremental Delta–Sigma Analog-to-Digital Converter Neuronal Recording Front End With 120-mVpp Offset Compensation. IEEE Journal of Solid-State Circuits, 2023, 58, 439-450.	3.5	9
72	A Multilevel Synchronized Optical Pulsed Modulation for High Efficiency Biotelemetry. IEEE Transactions on Biomedical Circuits and Systems, 2022, 16, 1313-1324.	2.7	1
73	Model-based online implementation of spike detection algorithms for neuroengineering applications. , 2022, , .		2
74	How Do Spike Collisions Affect Spike Sorting Performance?. ENeuro, 2022, 9, ENEURO.0105-22.2022.	0.9	5
76	a-IGZO thin-film transistors with transparent ultrathin Al/Ag bilayer source and drain for active neural interfaces. Materials Science in Semiconductor Processing, 2023, 154, 107188.	1.9	2
77	Improvements in the Analysis of Neuronal Interactions. Springer Series in Computational Neuroscience, 2023, , 415-461.	0.3	0
78	Design and Simulation of a Low Power 384-channel Actively Multiplexed Neural Interface. , 2022, , .		0
80	Neuromorphic-Based Neuroprostheses for Brain Rewiring: State-of-the-Art and Perspectives in Neuroengineering. Brain Sciences, 2022, 12, 1578.	1.1	8
81	In Vivo Penetrating Microelectrodes for Brain Electrophysiology. Sensors, 2022, 22, 9085.	2.1	3
82	Channels, Layout and Size Scalability of Implantable CMOS-Based Multielectrode Array Probes. , 2022, ,		1
83	Advances in High-Resolution, Miniaturized Bioelectrical Neural Interface Design. , 2023, , 721-760.		0
85	Impact of Tip Size and Shape on the Insertion Force of Implantable CMOS Neural Probes. , 2023, , .		1
93	Circuits and Architectures for Neural Recording Interfaces. , 2023, , 45-57.		0
100	Wide-Band Shared LNA for Large Scale Neural Recording Applications. , 2023, , .		Ο