

Axel W Blau

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6669172/publications.pdf>

Version: 2024-02-01

42
papers

1,430
citations

430442

18
h-index

433756

31
g-index

42
all docs

42
docs citations

42
times ranked

1846
citing authors

#	ARTICLE	IF	CITATIONS
1	The Neurally Controlled Animat: Biological Brains Acting with Simulated Bodies. <i>Autonomous Robots</i> , 2001, 11, 305-310.	3.2	213
2	CMOS microelectrode array for the monitoring of electrogenic cells. <i>Biosensors and Bioelectronics</i> , 2004, 20, 358-366.	5.3	152
3	Flexible, all-polymer microelectrode arrays for the capture of cardiac and neuronal signals. <i>Biomaterials</i> , 2011, 32, 1778-1786.	5.7	138
4	CMOS Microelectrode Array for Bidirectional Interaction With Neuronal Networks. <i>IEEE Journal of Solid-State Circuits</i> , 2006, 41, 1620-1629.	3.5	113
5	Simultaneous two-photon imaging and photo-stimulation with structured light illumination. <i>Optics Express</i> , 2010, 18, 18720.	1.7	84
6	Cell adhesion promotion strategies for signal transduction enhancement in microelectrode array in vitro electrophysiology: An introductory overview and critical discussion. <i>Current Opinion in Colloid and Interface Science</i> , 2013, 18, 481-492.	3.4	79
7	Single-chip microelectronic system to interface with living cells. <i>Biosensors and Bioelectronics</i> , 2007, 22, 2546-2553.	5.3	78
8	Characterization and optimization of microelectrode arrays for in vivo nerve signal recording and stimulation1Paper presented at WPB '96, Bangkok, May 1996.1. <i>Biosensors and Bioelectronics</i> , 1997, 12, 883-892.	5.3	74
9	A CMOS-based microelectrode array for interaction with neuronal cultures. <i>Journal of Neuroscience Methods</i> , 2007, 164, 93-106.	1.3	63
10	The formation of actin waves during regeneration after axonal lesion is enhanced by BDNF. <i>Scientific Reports</i> , 2011, 1, 183.	1.6	48
11	A microchannel device tailored to laser axotomy and long-term microelectrode array electrophysiology of functional regeneration. <i>Lab on A Chip</i> , 2015, 15, 4578-4590.	3.1	43
12	Promotion of neural cell adhesion by electrochemically generated and functionalized polymer films. <i>Journal of Neuroscience Methods</i> , 2001, 112, 65-73.	1.3	39
13	A multielectrode array microchannel platform reveals both transient and slow changes in axonal conduction velocity. <i>Scientific Reports</i> , 2017, 7, 8558.	1.6	36
14	Replica-moulded polydimethylsiloxane culture vessel lids attenuate osmotic drift in long-term cell cultures. <i>Journal of Biosciences</i> , 2009, 34, 59-69.	0.5	33
15	Natural lecithin promotes neural network complexity and activity. <i>Scientific Reports</i> , 2016, 6, 25777.	1.6	33
16	Incubator-independent cell-culture perfusion platform for continuous long-term microelectrode array electrophysiology and time-lapse imaging. <i>Royal Society Open Science</i> , 2015, 2, 150031.	1.1	29
17	Prototype of a novel autonomous perfusion chamber for long-term culturing and in situ investigation of various cell types. <i>Journal of Proteomics</i> , 2001, 50, 15-27.	2.4	27
18	Combined optical tweezers and laser dissector for controlled ablation of functional connections in neural networks. <i>Journal of Biomedical Optics</i> , 2011, 16, 051306.	1.4	24

#	ARTICLE	IF	CITATIONS
19	Spatially controlled cell adhesion on three-dimensional substrates. Biomedical Microdevices, 2010, 12, 787-795.	1.4	18
20	CMOS microelectrode array for bidirectional interaction with neuronal networks. , 0, , .		15
21	Multielectrode array recordings reveal physiological diversity of intrinsically photosensitive retinal ganglion cells in the chick embryo. Brain Research, 2008, 1207, 120-127.	1.1	14
22	The <i>Si elegans</i> project at the interface of experimental and computational <i>Caenorhabditis elegans</i> neurobiology and behavior. Journal of Neural Engineering, 2016, 13, 065001.	1.8	14
23	Cell Recordings with a CMOS High-density Microelectrode Array. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 167-70.	0.5	13
24	Integration of Optical Manipulation and Electrophysiological Tools to Modulate and Record Activity in Neural Networks. International Journal of Optomechatronics, 2011, 5, 191-216.	3.3	11
25	Selective comparison of gelling agents as neural cell culture matrices for long-term microelectrode array electrophysiology. OCL - Oilseeds and Fats, Crops and Lipids, 2016, 23, D117.	0.6	6
26	Microchannel Scaffolds for Neural Signal Acquisition and Analysis. Springer Series in Computational Neuroscience, 2015, , 47-64.	0.3	5
27	The <i>Si elegans</i> Project – The Challenges and Prospects of Emulating <i>Caenorhabditis elegans</i> . Lecture Notes in Computer Science, 2014, , 436-438.	1.0	5
28	Induction and analysis of cell adhesion and differentiation on inkjet micropatterned substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 1873-1876.	0.8	4
29	Towards an Electro-optical Emulation of the <i>C. elegans</i> Connectome. , 2014, , .		4
30	A CMOS-based Microelectrode Array for Information Processing with Natural Neurons. , 2007, , .		2
31	Spatial Light Modulators for Complex Spatiotemporal Illumination of Neuronal Networks. Neuromethods, 2011, , 61-81.	0.2	2
32	Prospects for Neuroprosthetics: Flexible Microelectrode Arrays with Polymer Conductors. , 2011, , .		2
33	Optical Investigation of Brain Networks Using Structured Illumination. , 2012, , 101-120.		2
34	Comparison of Electro-Optical Strategies for Mimicking <i>C. elegans</i> Network Interconnectivity in Hardware. Biosystems and Biorobotics, 2016, , 79-98.	0.2	2
35	Exploring Neural Principles with <i>Si elegans</i> , a Neuromimetic Representation of the Nematode <i>Caenorhabditis elegans</i> . , 2014, , .		2
36	Using microelectronics technology to communicate with living cells. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6082-5.	0.5	1

#	ARTICLE	IF	CITATIONS
37	Si elegans: Evaluation of an innovative optical synaptic connectivity method for C. elegans Phototaxis using FPGAs. , 2016, , .		1
38	Web-Based Interfaces for Virtual C. elegans Neuron Model Definition, Network Configuration, Behavioral Experiment Definition and Experiment Results Visualization. Frontiers in Neuroinformatics, 2018, 12, 80.	1.3	1
39	Bio-Microelectronic Information Processing Device Consisting of Natural Neurons on a CMOS Microsystem. , 2007, , .		0
40	Passive Waterâ€”Lipid Peptide Translocators with Conformational Switches:â€” From Single-Molecule Probe to Cellular Assay. Journal of Physical Chemistry B, 2007, 111, 13987-13992.	1.2	0
41	Axonal regeneration of cultured mouse hippocampal neurons studied by an optical nano-surgery system. , 2012, , .		0
42	Optimization of an electro-optical representation of the C. elegans connectome through neural network cluster analysis. , 2016, , .		0