Axel W Blau

List of Publications by Year
in descending order

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	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
2	A multielectrode array microchannel platform reveals both transient and slow changes in axonal conduction velocity. Scientific Reports, 2017, 7, 8558.	1.6	36
3	Optimization of an electro-optical representation of the C. elegans connectome through neural network cluster analysis. , 2016, , .		0
4	Natural lecithin promotes neural network complexity and activity. Scientific Reports, 2016, 6, 25777.	1.6	33
5	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
6	Si elegans: Evaluation of an innovative optical synaptic connectivity method for C. elegans Phototaxis using FPGAs. , 2016, , .		1
7	TheSi elegansproject at the interface of experimental and computationalCaenorhabditis elegansneurobiology and behavior. Journal of Neural Engineering, 2016, 13, 065001.	1.8	14
8	Comparison of Electro-Optical Strategies for Mimicking C. elegans Network Interconnectivity in Hardware. Biosystems and Biorobotics, 2016, , 79-98.	0.2	2
9	Incubator-independent cell-culture perfusion platform for continuous long-term microelectrode array electrophysiology and time-lapse imaging. Royal Society Open Science, 2015, 2, 150031.	1.1	29
10	Microchannel Scaffolds for Neural Signal Acquisition and Analysis. Springer Series in Computational Neuroscience, 2015, , 47-64.	0.3	5
11	A microchannel device tailored to laser axotomy and long-term microelectrode array electrophysiology of functional regeneration. Lab on A Chip, 2015, 15, 4578-4590.	3.1	43
12	The Si elegans Project â€“ The Challenges and Prospects of Emulating Caenorhabditis elegans. Lecture Notes in Computer Science, 2014, , 436-438.	1.0	5
13	Towards an Electro-optical Emulation of the C. elegans Connectome. , 2014, , .		4
14	Exploring Neural Principles with Si elegans, a Neuromimetic Representation of the Nematode Caenorhabditis elegans. , 2014, , .		2
15	Cell adhesion promotion strategies for signal transduction enhancement in microelectrode array in vitro electrophysiology: An introductory overview and critical discussion. Current Opinion in Colloid and Interface Science, 2013, 18, 481-492.	3.4	79
16	Axonal regeneration of cultured mouse hippocampal neurons studied by an optical nano-surgery system. , 2012, , .		0
17	Optical Investigation of Brain Networks Using Structured Illumination. , 2012, , 101-120.		2
18	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

#	Article	IF	Citations
19	Spatial Light Modulators for Complex Spatiotemporal Illumination of Neuronal Networks. Neuromethods, 2011, , 61-81.	0.2	2
20	Prospects for Neuroprosthetics: Flexible Microelectrode Arrays with Polymer Conductors. , 2011, , .		2
21	Flexible, all-polymer microelectrode arrays for the capture of cardiac and neuronal signals. Biomaterials, 2011, 32, 1778-1786.	5.7	138
22	Combined optical tweezers and laser dissector for controlled ablation of functional connections in neural networks. Journal of Biomedical Optics, 2011, 16, 051306.	1.4	24
23	The formation of actin waves during regeneration after axonal lesion is enhanced by BDNF. Scientific Reports, 2011, 1, 183.	1.6	48
24	Spatially controlled cell adhesion on three-dimensional substrates. Biomedical Microdevices, 2010, 12, 787-795.	1.4	18
25	Simultaneous two-photon imaging and photo-stimulation with structured light illumination. Optics Express, 2010, 18, 18720.	1.7	84
26	Replica-moulded polydimethylsiloxane culture vessel lids attenuate osmotic drift in long-term cell cultures. Journal of Biosciences, 2009, 34, 59-69.	0.5	33
27	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
28	A CMOS-based Microelectrode Array for Information Processing with Natural Neurons. , 2007, , .		2
29	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
30	Bio-Microelectronic Information Processing Device Consisting of Natural Neurons on a CMOS Microsystem. , 2007, , .		0
31	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
32	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
33	A CMOS-based microelectrode array for interaction with neuronal cultures. Journal of Neuroscience Methods, 2007, 164, 93-106.	1.3	63
34	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
35	Single-chip microelectronic system to interface with living cells. Biosensors and Bioelectronics, 2007, 22, 2546-2553.	5.3	78
36	CMOS Microelectrode Array for Bidirectional Interaction With Neuronal Networks. IEEE Journal of Solid-State Circuits, 2006, 41, 1620-1629.	3.5	113

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37	CMOS microelectrode array for the monitoring of electrogenic cells. Biosensors and Bioelectronics, 2004, 20, 358-366.	5.3	152
38	Prototype of a novel autonomous perfusion chamber for long-term culturing and in situ investigation of various cell types. Journal of Proteomics, 2001, 50, 15-27.	2.4	27
39	Promotion of neural cell adhesion by electrochemically generated and functionalized polymer films. Journal of Neuroscience Methods, 2001, 112, 65-73.	1.3	39
40	The Neurally Controlled Animat: Biological Brains Acting with Simulated Bodies. Autonomous Robots, 2001, 11, 305-310.	3.2	213
41	Characterization and optimization of microelectrode arrays for in vivo nerve signal recording and stimulation1Paper presented at WPB '96, Bangkok, May 1996.1. Biosensors and Bioelectronics, 1997, 12, 883-892.	5.3	74
42	CMOS microelectrode array for bidirectional interaction with neuronal networks. , 0, , .		15