

Alberto L Vazquez

List of Publications by Year in descending order

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56
papers

3,644
citations

185998

28
h-index

161609

54
g-index

60
all docs

60
docs citations

60
times ranked

4027
citing authors

#	ARTICLE	IF	CITATIONS
1	Brain Tissue Responses to Neural Implants Impact Signal Sensitivity and Intervention Strategies. ACS Chemical Neuroscience, 2015, 6, 48-67.	1.7	429
2	Nonlinear Aspects of the BOLD Response in Functional MRI. NeuroImage, 1998, 7, 108-118.	2.1	325
3	A Materials Roadmap to Functional Neural Interface Design. Advanced Functional Materials, 2018, 28, 1701269.	7.8	266
4	<i>In vivo</i> two-photon microscopy reveals immediate microglial reaction to implantation of microelectrode through extension of processes. Journal of Neural Engineering, 2012, 9, 066001.	1.8	177
5	Mechanical failure modes of chronically implanted planar silicon-based neural probes for laminar recording. Biomaterials, 2015, 37, 25-39.	5.7	176
6	Dose-dependent effect of isoflurane on neurovascular coupling in rat cerebral cortex. European Journal of Neuroscience, 2009, 30, 242-250.	1.2	144
7	Photoelectric artefact from optogenetics and imaging on microelectrodes and bioelectronics: new challenges and opportunities. Journal of Materials Chemistry B, 2015, 3, 4965-4978.	2.9	127
8	Multi-scale, multi-modal analysis uncovers complex relationship at the brain tissue-implant neural interface: new emphasis on the biological interface. Journal of Neural Engineering, 2018, 15, 033001.	1.8	111
9	Effects of the α_2 -adrenergic receptor agonist dexmedetomidine on neural, vascular and BOLD fMRI responses in the somatosensory cortex. European Journal of Neuroscience, 2013, 37, 80-95.	1.2	109
10	Estimating test-retest reliability in functional MR imaging II: Application to motor and cognitive activation studies. Magnetic Resonance in Medicine, 1997, 38, 508-517.	1.9	108
11	Accounting for nonlinear BOLD effects in fMRI: parameter estimates and a model for prediction in rapid event-related studies. NeuroImage, 2005, 25, 206-218.	2.1	106
12	Neuroadhesive L1 coating attenuates acute microglial attachment to neural electrodes as revealed by live two-photon microscopy. Biomaterials, 2017, 113, 279-292.	5.7	99
13	Dexamethasone retrodialysis attenuates microglial response to implanted probes <i>in vivo</i> . Biomaterials, 2016, 87, 157-169.	5.7	91
14	Two-photon imaging of chronically implanted neural electrodes: Sealing methods and new insights. Journal of Neuroscience Methods, 2016, 258, 46-55.	1.3	83
15	Neural and Hemodynamic Responses Elicited by Forelimb- and Photo-stimulation in Channelrhodopsin-2 Mice: Insights into the Hemodynamic Point Spread Function. Cerebral Cortex, 2014, 24, 2908-2919.	1.6	82
16	Changes in Cerebral Arterial, Tissue and Venous Oxygenation with Evoked Neural Stimulation: Implications for Hemoglobin-Based Functional Neuroimaging. Journal of Cerebral Blood Flow and Metabolism, 2010, 30, 428-439.	2.4	78
17	<i>In vivo</i> imaging of neuronal calcium during electrode implantation: Spatial and temporal mapping of damage and recovery. Biomaterials, 2018, 174, 79-94.	5.7	76
18	Inhibitory Neuron Activity Contributions to Hemodynamic Responses and Metabolic Load Examined Using an Inhibitory Optogenetic Mouse Model. Cerebral Cortex, 2018, 28, 4105-4119.	1.6	71

#	ARTICLE	IF	CITATIONS
19	Frequency-dependent neural activity, CBF, and BOLD fMRI to somatosensory stimuli in isoflurane-anesthetized rats. <i>NeuroImage</i> , 2010, 52, 224-233.	2.1	68
20	Neural and Hemodynamic Responses to Optogenetic and Sensory Stimulation in the Rat Somatosensory Cortex. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2015, 35, 922-932.	2.4	67
21	Calcium activation of cortical neurons by continuous electrical stimulation: Frequency dependence, temporal fidelity, and activation density. <i>Journal of Neuroscience Research</i> , 2019, 97, 620-638.	1.3	67
22	Chemokine Receptor Type 5 (CCR5)-Mediated Docking of Transferred Tregs Protects Against Early Blood-Brain Barrier Disruption After Stroke. <i>Journal of the American Heart Association</i> , 2017, 6, .	1.6	65
23	Vascular dynamics and BOLD fMRI: CBF level effects and analysis considerations. <i>NeuroImage</i> , 2006, 32, 1642-1655.	2.1	56
24	Optogenetic assessment of VIP, PV, SOM and NOS inhibitory neuron activity and cerebral blood flow regulation in mouse somato-sensory cortex. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2020, 40, 1427-1440.	2.4	56
25	Trial-by-trial relationship between neural activity, oxygen consumption, and blood flow responses. <i>NeuroImage</i> , 2008, 40, 442-450.	2.1	48
26	Contribution of Excitatory and Inhibitory Neuronal Activity to BOLD fMRI. <i>Cerebral Cortex</i> , 2021, 31, 4053-4067.	1.6	38
27	Optogenetic investigation of the variable neurovascular coupling along the interhemispheric circuits. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2018, 38, 627-640.	2.4	37
28	Meningeal inflammatory response and fibrous tissue remodeling around intracortical implants: An in vivo two-photon imaging study. <i>Biomaterials</i> , 2019, 195, 111-123.	5.7	37
29	Fast, pseudo-continuous arterial spin labeling for functional imaging using a two-coil system. <i>Magnetic Resonance in Medicine</i> , 2004, 51, 577-585.	1.9	33
30	Cerebral oxygen delivery and consumption during evoked neural activity. <i>Frontiers in Neuroenergetics</i> , 2010, 2, 11.	5.3	33
31	Macroscale variation in resting-state neuronal activity and connectivity assessed by simultaneous calcium imaging, hemodynamic imaging and electrophysiology. <i>NeuroImage</i> , 2018, 169, 352-362.	2.1	29
32	Mitochondria modulate programmed neuritic retraction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 650-659.	3.3	29
33	Dynamics of oxygen delivery and consumption during evoked neural stimulation using a compartment model and CBF and tissue PO ₂ measurements. <i>NeuroImage</i> , 2008, 42, 49-59.	2.1	27
34	Evolution of the Dynamic Changes in Functional Cerebral Oxidative Metabolism from Tissue Mitochondria to Blood Oxygen. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2012, 32, 745-758.	2.4	27
35	Quantification of perfusion fMRI using a numerical model of arterial spin labeling that accounts for dynamic transit time effects. <i>Magnetic Resonance in Medicine</i> , 2005, 54, 955-964.	1.9	26
36	Zwitterionic Polymer Coating Suppresses Microglial Encapsulation to Neural Implants In Vitro and In Vivo. <i>Advanced Biology</i> , 2020, 4, e1900287.	3.0	23

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37	Evaluation of respiratory artifact correction techniques in multishot spiral functional mri using receiver operator characteristic analyses. <i>Magnetic Resonance in Medicine</i> , 1998, 40, 633-639.	1.9	21
38	Intracortical Neural Stimulation With Untethered, Ultrasmall Carbon Fiber Electrodes Mediated by the Photoelectric Effect. <i>IEEE Transactions on Biomedical Engineering</i> , 2019, 66, 2402-2412.	2.5	19
39	Neuronal and Physiological Correlation to Hemodynamic Resting-State Fluctuations in Health and Disease. <i>Brain Connectivity</i> , 2014, 4, 727-740.	0.8	18
40	Optical imaging and modulation of neurovascular responses. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2018, 38, 2057-2072.	2.4	17
41	Cerebral microcirculatory alterations and the no-reflow phenomenon in vivo after experimental pediatric cardiac arrest. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2019, 39, 913-925.	2.4	16
42	Long-term in vivo two-photon imaging of the neuroinflammatory response to intracortical implants and micro-vessel disruptions in awake mice. <i>Biomaterials</i> , 2021, 276, 121060.	5.7	13
43	Viral-Mediated Optogenetic Stimulation of Peripheral Motor Nerves in Non-human Primates. <i>Frontiers in Neuroscience</i> , 2019, 13, 759.	1.4	11
44	Brain Tissue Oxygen Consumption And Supply Induced By Neural Activation:. <i>Advances in Experimental Medicine and Biology</i> , 2009, 645, 287-292.	0.8	11
45	Imaging the stability of chronic electrical microstimulation using electrodes coated with PEDOT/CNT and iridium oxide. <i>IScience</i> , 2022, 25, 104539.	1.9	10
46	Application of selective saturation to image the dynamics of arterial blood flow during brain activation using magnetic resonance imaging. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 816-825.	1.9	9
47	Apparent wall thickening of cystic renal lesions on MRI. <i>Journal of Magnetic Resonance Imaging</i> , 2008, 28, 103-110.	1.9	9
48	Postsynaptic activity of inhibitory neurons evokes hemodynamic fMRI responses. <i>NeuroImage</i> , 2021, 225, 117457.	2.1	9
49	Imaging the Efficiency of Poly(3,4-ethylenedioxythiophene) Doped with Acid-Functionalized Carbon Nanotube and Iridium Oxide Electrode Coatings for Microstimulation. <i>Advanced NanoBiomed Research</i> , 2021, 1, 2000092.	1.7	9
50	Complex-valued analysis of arterial spin labeling-based functional magnetic resonance imaging signals. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 1597-1608.	1.9	8
51	Functional Connectivity of Resting Hemodynamic Signals in Submillimeter Orientation Columns of the Visual Cortex. <i>Brain Connectivity</i> , 2016, 6, 596-606.	0.8	7
52	Enduring disturbances in regional cerebral blood flow and brain oxygenation at 24h after asphyxial cardiac arrest in developing rats. <i>Pediatric Research</i> , 2017, 81, 94-98.	1.1	7
53	Improved spatial accuracy of functional maps in the rat olfactory bulb using supervised machine learning approach. <i>NeuroImage</i> , 2016, 137, 1-8.	2.1	6
54	Development of a PET radioligand selective for cerebral amyloid angiopathy. <i>Nuclear Medicine and Biology</i> , 2021, 92, 85-96.	0.3	6

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55	Prolonged functional optical sensitivity in non-human primate motor nerves following cyclosporine-based immunosuppression and rAAV2-retro mediated expression of Chr2. , 2019, , .		2
56	Contrast mechanisms and acquisition methods in functional MRI. , 2004, 2004, 5219-22.		0