

Peter L Carlen

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

198 papers	6,633 citations	46 h-index	74 g-index
207 ext. papers	7,479 ext. citations	4.7 avg, IF	5.57 L-index

#	Paper	IF	Citations
198	Enhanced LTP in mice deficient in the AMPA receptor GluR2. <i>Neuron</i> , 1996 , 17, 945-56	13.9	433
197	Reduced cortical synaptic plasticity and GluR1 expression associated with fragile X mental retardation protein deficiency. <i>Molecular and Cellular Neurosciences</i> , 2002 , 19, 138-51	4.8	221
196	Cell-permeant Ca ²⁺ chelators reduce early excitotoxic and ischemic neuronal injury in vitro and in vivo. <i>Neuron</i> , 1993 , 11, 221-35	13.9	208
195	Gap junctions, synchrony and seizures. <i>Trends in Neurosciences</i> , 2000 , 23, 68-74	13.3	204
194	Modulation of high-voltage-activated calcium channels in dentate granule cells by topiramate. <i>Epilepsia</i> , 2000 , 41, 52-60	6.4	186
193	The 128-channel fully differential digital integrated neural recording and stimulation interface. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2010 , 4, 149-61	5.1	185
192	Specific gap junctions enhance the neuronal vulnerability to brain traumatic injury. <i>Journal of Neuroscience</i> , 2002 , 22, 644-53	6.6	184
191	Prevalence and significance of neurocognitive dysfunction in hepatitis C in the absence of correlated risk factors. <i>Hepatology</i> , 2005 , 41, 801-8	11.2	157
190	Morphological alterations in rat CA1 hippocampal pyramidal cell dendrites resulting from chronic ethanol consumption and withdrawal. <i>Journal of Comparative Neurology</i> , 1984 , 225, 111-8	3.4	154
189	The role of gap junctions in seizures. <i>Brain Research Reviews</i> , 2000 , 32, 235-41		133
188	Secondary Ca ²⁺ overload indicates early neuronal injury which precedes staining with viability indicators. <i>Brain Research</i> , 1993 , 607, 319-23	3.7	129
187	256-Channel Neural Recording and Delta Compression Microsystem With 3D Electrodes. <i>IEEE Journal of Solid-State Circuits</i> , 2009 , 44, 995-1005	5.5	123
186	In vitro ischemia promotes glutamate-mediated free radical generation and intracellular calcium accumulation in hippocampal pyramidal neurons. <i>Journal of Neuroscience</i> , 1997 , 17, 9085-94	6.6	117
185	Anticonvulsant actions of gap junctional blockers in an in vitro seizure model. <i>Journal of Neurophysiology</i> , 2002 , 88, 1893-902	3.2	109
184	Dynamics of epileptic phenomena determined from statistics of ictal transitions. <i>IEEE Transactions on Biomedical Engineering</i> , 2006 , 53, 524-32	5	100
183	Free radical production correlates with cell death in an in vitro model of epilepsy. <i>European Journal of Neuroscience</i> , 2000 , 12, 1431-9	3.5	97
182	Changes in neuronal migration in neocortex of connexin43 null mutant mice. <i>Journal of Neuropathology and Experimental Neurology</i> , 2003 , 62, 304-14	3.1	90

181	Synchronization of GABAergic interneuronal networks during seizure-like activity in the rat horizontal hippocampal slice. <i>European Journal of Neuroscience</i> , 1999 , 11, 4110-8	3.5	84
180	NMDA and quisqualate reduce a Ca-dependent K ⁺ current by a protein kinase-mediated mechanism. <i>Neuroscience Letters</i> , 1990 , 112, 76-81	3.3	77
179	Increased high-frequency oscillations precede in vitro low-Mg seizures. <i>Epilepsia</i> , 2005 , 46, 1188-97	6.4	75
178	Connexin 43 mimetic peptides inhibit spontaneous epileptiform activity in organotypic hippocampal slice cultures. <i>Experimental Neurology</i> , 2008 , 210, 762-75	5.7	73
177	Dynamics of intracellular calcium and free radical production during ischemia in pyramidal neurons. <i>Free Radical Biology and Medicine</i> , 2001 , 31, 1216-27	7.8	73
176	The remarkably high prevalence of epilepsy and seizure history in fetal alcohol spectrum disorders. <i>Alcoholism: Clinical and Experimental Research</i> , 2010 , 34, 1084-9	3.7	72
175	Roles of gap junctions, connexins, and pannexins in epilepsy. <i>Frontiers in Physiology</i> , 2014 , 5, 172	4.6	71
174	Rail-to-Rail-Input Dual-Radio 64-Channel Closed-Loop Neurostimulator. <i>IEEE Journal of Solid-State Circuits</i> , 2017 , 1-18	5.5	70
173	Epileptiform activity in hippocampal slice cultures exposed chronically to bicuculline: increased gap junctional function and expression. <i>Journal of Neurochemistry</i> , 2003 , 86, 687-99	6	70
172	Transition to seizure: ictal discharge is preceded by exhausted presynaptic GABA release in the hippocampal CA3 region. <i>Journal of Neuroscience</i> , 2012 , 32, 2499-512	6.6	68
171	Mechanisms of electrical coupling between pyramidal cells. <i>Journal of Neurophysiology</i> , 1997 , 78, 3107-16	5.2	64
170	Mechanism of action and persistence of neuroprotection by cell-permeant Ca ²⁺ chelators. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1994 , 14, 911-23	7.3	64
169	Hippocampal seizures alter the expression of the pannexin and connexin transcriptome. <i>Journal of Neurochemistry</i> , 2010 , 112, 92-102	6	61
168	The control of seizure-like activity in the rat hippocampal slice. <i>Biophysical Journal</i> , 2003 , 84, 687-95	2.9	61
167	Differential modulation of synaptic transmission by calcium chelators in young and aged hippocampal CA1 neurons: evidence for altered calcium homeostasis in aging. <i>Journal of Neuroscience</i> , 1999 , 19, 906-15	6.6	61
166	Low-dose benzodiazepine neuronal inhibition: enhanced Ca ²⁺ -mediated K ⁺ -conductance. <i>Brain Research</i> , 1983 , 271, 358-64	3.7	61
165	Isolated vasculitis of the central nervous system in a patient with celiac disease. <i>American Journal of Medicine</i> , 1986 , 81, 1092-4	2.4	61
164	Mechanisms of morphine enhancement of spontaneous seizure activity. <i>Anesthesia and Analgesia</i> , 2007 , 105, 1729-35, table of contents	3.9	59

163	NMDA depolarizations and long-term potentiation are reduced in the aged rat neocortex. <i>Brain Research</i> , 1990 , 530, 142-6	3.7	58
162	Type III intermittency in human partial epilepsy. <i>European Journal of Neuroscience</i> , 1999 , 11, 2571-6	3.5	57
161	Kindling-induced epilepsy alters calcium currents in granule cells of rat hippocampal slices. <i>Brain Research</i> , 1990 , 531, 88-94	3.7	57
160	Alcohol-related dementia in the institutionalized elderly. <i>Alcoholism: Clinical and Experimental Research</i> , 1994 , 18, 1330-4	3.7	56
159	A submersion method to induce hypoxic damage in organotypic hippocampal cultures. <i>Journal of Neuroscience Methods</i> , 1999 , 89, 25-31	3	53
158	Activation of large-conductance Ca(2+)-activated K(+) channels depresses basal synaptic transmission in the hippocampal CA1 area in APP (swe/ind) TgCRND8 mice. <i>Neurobiology of Aging</i> , 2010 , 31, 591-604	5.6	52
157	Transient ischemia induces an early decrease of synaptic transmission in CA1 neurons of rat hippocampus: electrophysiologic study in brain slices. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1997 , 17, 955-66	7.3	51
156	Vulnerability of glial cells to hydrogen peroxide in cultured hippocampal slices. <i>Brain Research</i> , 2008 , 1198, 1-15	3.7	50
155	General anesthetics inhibit gap junction communication in cultured organotypic hippocampal slices. <i>Anesthesia and Analgesia</i> , 2006 , 102, 1692-8	3.9	50
154	Hypoglycemic seizures during transient hypoglycemia exacerbate hippocampal dysfunction. <i>Neurobiology of Disease</i> , 2007 , 26, 646-60	7.5	46
153	Seizure-induced cell death produced by repeated tetanic stimulation in vitro: possible role of endoplasmic reticulum calcium stores. <i>Journal of Neurophysiology</i> , 1999 , 81, 3054-64	3.2	46
152	Brief activation of GABAergic interneurons initiates the transition to ictal events through post-inhibitory rebound excitation. <i>Neurobiology of Disease</i> , 2018 , 109, 102-116	7.5	45
151	Differential control of three after-hyperpolarizations in rat hippocampal neurones by intracellular calcium buffering. <i>Journal of Physiology</i> , 1999 , 517 (Pt 1), 201-16	3.9	45
150	Defining regions of interest using cross-frequency coupling in extratemporal lobe epilepsy patients. <i>Journal of Neural Engineering</i> , 2015 , 12, 026011	5	44
149	Cognitive effects of long-term benzodiazepine use in older adults. <i>Human Psychopharmacology</i> , 2003 , 18, 51-7	2.3	44
148	Chronic in vitro ketosis is neuroprotective but not anti-convulsant. <i>Journal of Neurochemistry</i> , 2010 , 113, 826-35	6	42
147	Postsynaptic and presynaptic effects of the calcium chelator BAPTA on synaptic transmission in rat hippocampal dentate granule neurons. <i>Brain Research</i> , 1991 , 555, 319-25	3.7	42
146	Changes in membrane and synaptic properties of thalamocortical circuitry caused by hydrogen peroxide. <i>Journal of Neurophysiology</i> , 1998 , 80, 1317-26	3.2	41

145	Neurotransmitter modulation of gap junctional communication in the rat hippocampus. <i>European Journal of Neuroscience</i> , 1997 , 9, 2522-31	3.5	40
144	Brain-Silicon Interface for High-Resolution in vitro Neural Recording. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2007 , 1, 56-62	5.1	40
143	Calcium chelation improves spatial learning and synaptic plasticity in aged rats. <i>Experimental Neurology</i> , 2006 , 197, 291-300	5.7	39
142	Neurovascular unit remodelling in the subacute stage of stroke recovery. <i>NeuroImage</i> , 2017 , 146, 869-882	2.9	33
141	Electrotonic coupling between stratum oriens interneurons in the intact in vitro mouse juvenile hippocampus. <i>Journal of Physiology</i> , 2004 , 558, 825-39	3.9	33
140	Rearrangement of centromeric satellite DNA in hippocampal neurons exhibiting long-term potentiation. <i>Molecular Brain Research</i> , 1992 , 14, 101-8		32
139	Acute postischemic seizures are associated with increased mortality and brain damage in adult mice. <i>Cerebral Cortex</i> , 2011 , 21, 2863-75	5.1	31
138	Effect of the thiol-oxidizing agent, diamide, on acetylcholine release at the frog endplate. <i>Nature: New Biology</i> , 1971 , 233, 120-1		31
137	Classification of Pre-Clinical Seizure States Using Scalp EEG Cross-Frequency Coupling Features. <i>IEEE Transactions on Biomedical Engineering</i> , 2018 , 65, 2440-2449	5	30
136	Development of firing patterns and electrical properties in neurons of the rat ventrobasal thalamus. <i>Developmental Brain Research</i> , 1996 , 91, 164-70		30
135	Early-stage attenuation of phase-amplitude coupling in the hippocampus and medial prefrontal cortex in a transgenic rat model of Alzheimer's disease. <i>Journal of Neurochemistry</i> , 2018 , 144, 669-679	6	30
134	Curious and contradictory roles of glial connexins and pannexins in epilepsy. <i>Brain Research</i> , 2012 , 1487, 54-60	3.7	28
133	Hippocampal excitability is increased in aged mice. <i>Experimental Neurology</i> , 2013 , 247, 710-9	5.7	27
132	Neurotrauma/neurodegeneration and mitochondrial dysfunction. <i>Progress in Brain Research</i> , 2002 , 137, 171-6	2.9	26
131	Severe hypoglycemia in a juvenile diabetic rat model: presence and severity of seizures are associated with mortality. <i>PLoS ONE</i> , 2013 , 8, e83168	3.7	26
130	Patient awareness of seizures as documented in the epilepsy monitoring unit. <i>Canadian Journal of Neuroscience Nursing</i> , 2009 , 31, 22-3		26
129	Transmembrane potential induced in a spherical cell model under low-frequency magnetic stimulation. <i>Journal of Neural Engineering</i> , 2007 , 4, 283-93	5	25
128	Pannexin-1 channels in epilepsy. <i>Neuroscience Letters</i> , 2019 , 695, 71-75	3.3	25

127	Neurocognitive and Seizure Outcomes of Selective Amygdalohippocampectomy versus Anterior Temporal Lobectomy for Mesial Temporal Lobe Epilepsy. <i>Epilepsy Research & Treatment</i> , 2014 , 2014, 306382		24
126	Increased seizure susceptibility of the hippocampus compared with the neocortex of the immature mouse brain in vitro. <i>Epilepsia</i> , 2005 , 46, 356-66	6.4	24
125	Transmembrane potential induced on the internal organelle by a time-varying magnetic field: a model study. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2010 , 7, 12	5.3	23
124	Formic acid, a novel metabolite of chronic ethanol abuse, causes neurotoxicity, which is prevented by folic acid. <i>Alcoholism: Clinical and Experimental Research</i> , 2007 , 31, 2114-20	3.7	23
123	Antiepileptic efficacy of topiramate: assessment in two in vitro seizure models. <i>Brain Research</i> , 2000 , 872, 20-8	3.7	21
122	Passive neuronal membrane parameters: comparison of optimization and peeling methods. <i>IEEE Transactions on Biomedical Engineering</i> , 1986 , 33, 1188-96	5	21
121	Astrocytic gap junction blockade markedly increases extracellular potassium without causing seizures in the mouse neocortex. <i>Neurobiology of Disease</i> , 2017 , 101, 1-7	7.5	20
120	Epilepsy as a manifestation of a multistate network of oscillatory systems. <i>Neurobiology of Disease</i> , 2019 , 130, 104488	7.5	20
119	Effects of variations in hippocampal slice preparation protocol on the electrophysiological stability, epileptogenicity and graded hypoxia responses of CA1 neurons. <i>Brain Research</i> , 1997 , 775, 134-43	3.7	20
118	Analysis of single K(ATP) channels in mammalian dentate gyrus granule cells. <i>Journal of Neurophysiology</i> , 2000 , 84, 2291-301	3.2	20
117	Hungry Neurons: Metabolic Insights on Seizure Dynamics. <i>International Journal of Molecular Sciences</i> , 2017 , 18,	6.3	19
116	The role of delta-modulated high frequency oscillations in seizure state classification. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 6595-8	0.9	19
115	Transmembrane potential generated by a magnetically induced transverse electric field in a cylindrical axonal model. <i>Medical and Biological Engineering and Computing</i> , 2011 , 49, 107-19	3.1	19
114	Cellular mechanisms of cobalt-induced hippocampal epileptiform discharges. <i>Epilepsia</i> , 2009 , 50, 99-115	6.4	19
113	The effects of high-frequency oscillations in hippocampal electrical activities on the classification of epileptiform events using artificial neural networks. <i>Journal of Neural Engineering</i> , 2006 , 3, 9-20	5	19
112	Magnesium as an effective adjunct therapy for drug resistant seizures. <i>Canadian Journal of Neurological Sciences</i> , 2012 , 39, 323-7	1	18
111	General anesthetics attenuate gap junction coupling in P19 cell line. <i>Journal of Neuroscience Research</i> , 2005 , 81, 746-52	4.4	18
110	Acute, withdrawal, and chronic alcohol effects in man: event-related potential and quantitative EEG techniques. <i>Annals of Medicine</i> , 1990 , 22, 333-9	1.5	18

109	Video-EEG evidence of lateralized clinical features in primary generalized epilepsy with tonic-clonic seizures. <i>Epileptic Disorders</i> , 2003 , 5, 149-56	1.9	18
108	Prediction of seizure onset in an in-vitro hippocampal slice model of epilepsy using Gaussian-based and wavelet-based artificial neural networks. <i>Annals of Biomedical Engineering</i> , 2005 , 33, 798-810	4.7	17
107	The excitatory effects of the specific benzodiazepine antagonist Ro14-7437, measured intracellularly in hippocampal CA1 cells. <i>Brain Research</i> , 1983 , 271, 115-9	3.7	17
106	3-D flexible nano-textured high-density microelectrode arrays for high-performance neuro-monitoring and neuro-stimulation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2014 , 22, 1072-82	4.8	16
105	Phase synchronization of neuronal noise in mouse hippocampal epileptiform dynamics. <i>International Journal of Neural Systems</i> , 2013 , 23, 1250033	6.2	16
104	Imaging the Effects of D-Hydroxybutyrate on Peri-Infarct Neurovascular Function and Metabolism. <i>Stroke</i> , 2018 , 49, 2173-2181	6.7	16
103	Elevated potassium provides an ionic mechanism for deep brain stimulation in the hemiparkinsonian rat. <i>European Journal of Neuroscience</i> , 2013 , 37, 231-41	3.5	15
102	Mortality with brainstem seizures from focal 4-aminopyridine-induced recurrent hippocampal seizures. <i>Epilepsia</i> , 2017 , 58, 1637-1644	6.4	15
101	Mapping the coherence of ictal high frequency oscillations in human extratemporal lobe epilepsy. <i>Epilepsia</i> , 2015 , 56, 393-402	6.4	15
100	Early ischemia enhances action potential-dependent, spontaneous glutamatergic responses in CA1 neurons. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2010 , 30, 555-65	7.3	15
99	Long-term potentiation of synaptic responses in the rat dentate gyrus is due to increased quantal content. <i>Neuroscience Letters</i> , 1991 , 127, 169-72	3.3	15
98	Epileptogenic Source Imaging Using Cross-Frequency Coupled Signals From Scalp EEG. <i>IEEE Transactions on Biomedical Engineering</i> , 2016 , 63, 2607-2618	5	15
97	22.8 Adaptively Clock-Boosted Auto-Ranging Responsive Neurostimulator for Emerging Neuromodulation Applications 2019 ,		14
96	Reversibility of alcohol-related brain damage: clinical and experimental observations. <i>Acta Medica Scandinavica</i> , 1987 , 717, 19-26		14
95	Late auditory evoked potentials in alcoholics. Identifying those with a history of epileptic seizures during withdrawal. <i>Annals of the New York Academy of Sciences</i> , 1991 , 620, 73-81	6.5	14
94	Artifact-Tolerant Opamp-Less Delta-Modulated Bidirectional Neuro-Interface 2018 ,		14
93	Wide field fluorescent imaging of extracellular spatiotemporal potassium dynamics in vivo. <i>NeuroImage</i> , 2015 , 104, 110-6	7.9	13
92	Imaging brain activity during seizures in freely behaving rats using a miniature multi-modal imaging system. <i>Biomedical Optics Express</i> , 2016 , 7, 3596-3609	3.5	13

91	Isovaline, a rare amino acid, has anticonvulsant properties in two in vitro hippocampal seizure models by increasing interneuronal activity. <i>Epilepsia</i> , 2011 , 52, 2084-93	6.4	13
90	System characterization of neuronal excitability in the hippocampus and its relevance to observed dynamics of spontaneous seizure-like transitions. <i>Journal of Neural Engineering</i> , 2010 , 7, 036002	5	13
89	Complexity and multifractality of neuronal noise in mouse and human hippocampal epileptiform dynamics. <i>Journal of Neural Engineering</i> , 2012 , 9, 056008	5	13
88	256-Channel Neural Recording Microsystem with On-Chip 3D Electrodes. <i>Digest of Technical Papers - IEEE International Solid-State Circuits Conference</i> , 2007 ,	4	13
87	Changes in calcium currents during ethanol withdrawal in a genetic mouse model. <i>Brain Research</i> , 1994 , 649, 305-9	3.7	13
86	Serotonin agonist and antagonist actions in hippocampal CA1 neurons. <i>Canadian Journal of Physiology and Pharmacology</i> , 1990 , 68, 586-95	2.4	12
85	Calcium and sedative-hypnotic drug actions. <i>International Review of Neurobiology</i> , 1988 , 29, 161-89	4.4	12
84	Cardiorespiratory depression from brainstem seizure activity in freely moving rats. <i>Neurobiology of Disease</i> , 2020 , 134, 104628	7.5	12
83	Hippocampal hyperexcitability in fetal alcohol spectrum disorder: Pathological sharp waves and excitatory/inhibitory synaptic imbalance. <i>Experimental Neurology</i> , 2016 , 280, 70-9	5.7	12
82	Deep Brain Stimulation Rescues Memory and Synaptic Activity in a Rat Model of Global Ischemia. <i>Journal of Neuroscience</i> , 2019 , 39, 2430-2440	6.6	11
81	Identification of brain regions of interest for epilepsy surgery planning using support vector machines. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 6590-3	0.9	11
80	A wavelet packet-based algorithm for the extraction of neural rhythms. <i>Annals of Biomedical Engineering</i> , 2009 , 37, 595-613	4.7	11
79	Enhanced isoflurane suppression of excitatory synaptic transmission in the aged rat hippocampus. <i>British Journal of Pharmacology</i> , 1998 , 124, 1075-82	8.6	11
78	Ethanol inhibits gap-junctional coupling between P19 cells. <i>Alcoholism: Clinical and Experimental Research</i> , 2004 , 28, 1284-90	3.7	11
77	Electric Coupling in Epileptogenesis. <i>Neuroscience Intelligence Unit</i> , 1996 , 289-299		11
76	A Potential Compensatory Role of Panx3 in the VNO of a Panx1 Knock Out Mouse Model. <i>Frontiers in Molecular Neuroscience</i> , 2018 , 11, 135	6.1	10
75	Wavelet-based Gaussian-mixture hidden Markov model for the detection of multistage seizure dynamics: a proof-of-concept study. <i>BioMedical Engineering OnLine</i> , 2011 , 10, 29	4.1	10
74	Online prediction of onsets of seizure-like events in hippocampal neural networks using wavelet artificial neural networks. <i>Annals of Biomedical Engineering</i> , 2006 , 34, 282-94	4.7	10

73	Benzodiazepine antagonists reduce epileptiform discharges in rat hippocampal slices. <i>Epilepsia</i> , 1996 , 37, 1007-14	6.4	10
72	Raised Intracellular Calcium Contributes to Ischemia-Induced Depression of Evoked Synaptic Transmission. <i>PLoS ONE</i> , 2016 , 11, e0148110	3.7	10
71	27.3 All-wireless 64-channel 0.013mm ² /ch closed-loop neurostimulator with rail-to-rail DC offset removal 2017 ,		9
70	Spatial Coherence Profiles of Ictal High-Frequency Oscillations Correspond to Those of Interictal Low-Frequency Oscillations in the ECoG of Epileptic Patients. <i>IEEE Transactions on Biomedical Engineering</i> , 2016 , 63, 76-85	5	9
69	Complexity in neuronal noise depends on network interconnectivity. <i>Annals of Biomedical Engineering</i> , 2011 , 39, 1768-78	4.7	9
68	Benzodiazepine-induced epileptiform activity in vitro. <i>Brain Research</i> , 1987 , 437, 239-44	3.7	9
67	Phencyclidine ingestion: drug abuse and psychosis. <i>Substance Use and Misuse</i> , 1981 , 16, 749-58		9
66	Delta-gamma phase-amplitude coupling as a biomarker of postictal generalized EEG suppression. <i>Brain Communications</i> , 2020 , 2, fcaa182	4.5	9
65	Pannexin-1 Deficiency Decreases Epileptic Activity in Mice. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	9
64	Opamp-Less Sub- μ /Channel Σ Modulated Neural-ADC With Super-G Ω Input Impedance. <i>IEEE Journal of Solid-State Circuits</i> , 2021 , 56, 1565-1575	5.5	9
63	Changes in gap junction expression and function following ischemic injury of spinal cord white matter. <i>Journal of Neurophysiology</i> , 2014 , 112, 2067-75	3.2	8
62	Development and Characterization of Multisite Three-Dimensional Microprobes for Deep Brain Stimulation and Recording. <i>Journal of Microelectromechanical Systems</i> , 2011 , 20, 1109-1118	2.5	8
61	Biofouling-Resistant Impedimetric Sensor for Array High-Resolution Extracellular Potassium Monitoring in the Brain. <i>Biosensors</i> , 2016 , 6,	5.9	8
60	Extracellular Potassium and Seizures: Excitation, Inhibition and the Role of Ih. <i>International Journal of Neural Systems</i> , 2016 , 26, 1650044	6.2	8
59	Contributions of the Hippocampal CA3 Circuitry to Acute Seizures and Hyperexcitability Responses in Mouse Models of Brain Ischemia. <i>Frontiers in Cellular Neuroscience</i> , 2018 , 12, 278	6.1	8
58	Modulation of the peri-infarct neurogliovascular function by delayed COX-1 inhibition. <i>Journal of Magnetic Resonance Imaging</i> , 2017 , 46, 505-517	5.6	7
57	Ethanol and spinal presynaptic inhibition in man. <i>Annals of Neurology</i> , 1977 , 1, 478-80	9.4	7
56	Oophorectomy Reduces Estradiol Levels and Long-Term Spontaneous Neurovascular Recovery in a Female Rat Model of Focal Ischemic Stroke. <i>Frontiers in Molecular Neuroscience</i> , 2018 , 11, 338	6.1	7

55	Daily listening to Mozart reduces seizures in individuals with epilepsy: A randomized control study. <i>Epilepsia Open</i> , 2020 , 5, 285-294	4	6
54	Seizure-like activity in the hypoglycemic rat: lack of correlation with the electroencephalogram of free-moving animals. <i>Epilepsy Research</i> , 2009 , 83, 243-8	3	6
53	Transformation of neuronal modes associated with low-Mg ²⁺ /high-K ⁺ conditions in an in vitro model of epilepsy. <i>Journal of Biological Physics</i> , 2010 , 36, 95-107	1.6	6
52	Factors which abolish hypoglycemic seizures do not increase cerebral glycogen content in vitro. <i>Neurobiology of Disease</i> , 2008 , 29, 201-9	7.5	6
51	Molecular mechanisms of free radical production and protective efficacies of antioxidants in in vitro ischemia-reperfusion. <i>Annals of the New York Academy of Sciences</i> , 1999 , 893, 286-9	6.5	6
50	Cellular electrophysiological actions of ethanol on mammalian neurons in brain slices. <i>Annals of the New York Academy of Sciences</i> , 1991 , 625, 17-25	6.5	6
49	Differential expression of astrocytic connexins in a mouse model of prenatal alcohol exposure. <i>Neurobiology of Disease</i> , 2016 , 91, 83-93	7.5	6
48	Generation and On-Demand Initiation of Acute Ictal Activity in Rodent and Human Tissue. <i>Journal of Visualized Experiments</i> , 2019 ,	1.6	5
47	Classification of Multiple Seizure-Like States in Three Different Rodent Models of Epileptogenesis. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2014 , 22, 21-32	4.8	5
46	INFLUENCE OF CELLULAR PROPERTIES ON THE ELECTRIC FIELD DISTRIBUTION AROUND A SINGLE CELL. <i>Progress in Electromagnetics Research B</i> , 2012 , 39, 141-161	0.7	5
45	Cocaine actions on rat prefrontal cortical and hippocampal dentate granule neurons in vitro. <i>Synapse</i> , 1993 , 14, 121-7	2.4	5
44	GABA responses in rat dentate granule neurons are mediated by chloride. <i>Canadian Journal of Physiology and Pharmacology</i> , 1988 , 66, 637-42	2.4	5
43	Intravenous abuse of propylhexedrine (Benzedrex) and the risk of brainstem dysfunction in young adults. <i>Canadian Journal of Neurological Sciences</i> , 1986 , 13, 337-9	1	5
42	Phase Coherent Currents Underlying Neocortical Seizure-Like State Transitions. <i>ENeuro</i> , 2019 , 6,	3.9	5
41	Neurological Disorders Associated with WWOX Germline Mutations-A Comprehensive Overview. <i>Cells</i> , 2021 , 10,	7.9	5
40	Diversity amongst human cortical pyramidal neurons revealed via their sag currents and frequency preferences. <i>Nature Communications</i> , 2021 , 12, 2497	17.4	5
39	Continuous multi-modality brain imaging reveals modified neurovascular seizure response after intervention. <i>Biomedical Optics Express</i> , 2017 , 8, 873-889	3.5	4
38	Three distinct neuronal phenotypes exist in embryonic rat hippocampal neurons cultured in basic fibroblast growth factor. <i>Neuroscience Letters</i> , 1996 , 204, 5-8	3.3	4

37	Modeling genetic epileptic encephalopathies using brain organoids. <i>EMBO Molecular Medicine</i> , 2021 , 13, e13610	12	4
36	Classification of Scalp EEG States Prior to Clinical Seizure Onset. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , 2019 , 7, 2000203	3	3
35	VLSI multivariate phase synchronization epileptic seizure detector 2011 ,		3
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