Laurence O Trussell

List of Publications by Year
in descending order

60 papers	5,503 citations	101543 36 h-index	128289 60 g-index
69 all docs	69 docs citations	69 times ranked	3593 citing authors

#	Article	IF	Citations
1	Glutamate receptor desensitization and its role in synaptic transmission. Neuron, 1989, 3, 209-218.	8.1	462
2	Desensitization of AMPA receptors upon multiquantal neurotransmitter release. Neuron, 1993, 10, 1185-1196.	8.1	443
3	SYNAPTIC MECHANISMS FOR CODING TIMING IN AUDITORY NEURONS. Annual Review of Physiology, 1999, 61, 477-496.	13.1	379
4	Presynaptic glycine receptors enhance transmitter release at a mammalian central synapse. Nature, 2001, 411, 587-590.	27.8	280
5	Cell-specific, spike timingâ€“dependent plasticities in the dorsal cochlear nucleus. Nature Neuroscience, 2004, 7, 719-725.	14.8	277
6	Modulation of Transmitter Release by Presynaptic Resting Potential and Background Calcium Levels. Neuron, 2005, 48, 109-121.	8.1	236
7	The kinetics of the response to glutamate and kainate in neurons of the avian cochlear nucleus. Neuron, 1992, 9, 173-186.	8.1	232
8	Inhibitory Transmission Mediated by Asynchronous Transmitter Release. Neuron, 2000, 26, 683-694.	8.1	203
9	Coactivation of Pre- and Postsynaptic Signaling Mechanisms Determines Cell-Specific Spike-Timing-Dependent Plasticity. Neuron, 2007, 54, 291-301.	8.1	202
10	The Physiology of the Axon Initial Segment. Annual Review of Neuroscience, 2012, 35, 249-265.	10.7	189
11	Time Course and Permeation of Synaptic AMPA Receptors in Cochlear Nuclear Neurons Correlate with Input. Journal of Neuroscience, 1999, 19, 8721-8729.	3.6	143
12	Axon Initial Segment Ca2+ Channels Influence Action Potential Generation and Timing. Neuron, 2009, 61, 259-271.	8.1	142
13	Staggered Development of GABAergic and Glycinergic Transmission in the MNTB. Journal of Neurophysiology, 2005, 93, 819-828.	1.8	126
14	Estimate of the Chloride Concentration in a Central Glutamatergic Terminal: A Gramicidin Perforated-Patch Study on the Calyx of Held. Journal of Neuroscience, 2006, 26, 11432-11436.	3.6	121
15	Correlation of AMPA Receptor Subunit Composition with Synaptic Input in the Mammalian Cochlear Nuclei. Journal of Neuroscience, 2001, 21, 7428-7437.	3.6	116
16	Glycinergic Transmission Shaped by the Corelease of GABA in a Mammalian Auditory Synapse. Neuron, 2008, 57, 524-535.	8.1	114
17	Maturation of Synaptic Transmission at End-Bulb Synapses of the Cochlear Nucleus. Journal of Neuroscience, 2001, 21, 9487-9498.	3.6	112
18	Minimizing Synaptic Depression by Control of Release Probability. Journal of Neuroscience, 2001, 21, 1857-1867.	3.6	112

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19	Dopaminergic Modulation of Axon Initial Segment Calcium Channels Regulates Action Potential Initiation. Neuron, 2010, 68, 500-511.	8.1	104
20	Inhibitory Control at a Synaptic Relay. Journal of Neuroscience, 2004, 24, 2643-2647.	3.6	74
21	KCNQ5 channels control resting properties and release probability of a synapse. Nature Neuroscience, 2011, 14, 840-847.	14.8	73
22	Rapid, Activity-Independent Turnover of Vesicular Transmitter Content at a Mixed Glycine/GABA Synapse. Journal of Neuroscience, 2013, 33, 4768-4781.	3.6	73
23	Spontaneous Spiking and Synaptic Depression Underlie Noradrenergic Control of Feed-Forward Inhibition. Neuron, 2011, 71, 306-318.	8.1	70
24	Ion Channels Generating Complex Spikes in Cartwheel Cells of the Dorsal Cochlear Nucleus. Journal of Neurophysiology, 2007, 97, 1705-1725.	1.8	66
25	Presynaptic regulation of quantal size: K+/H+ exchange stimulates vesicular glutamate transport. Nature Neuroscience, 2011, 14, 1285-1292.	14.8	66
26	Control of Presynaptic Function by a Persistent Na+ Current. Neuron, 2008, 60, 975-979.	8.1	57
27	Serotonergic Regulation of Excitability of Principal Cells of the Dorsal Cochlear Nucleus. Journal of Neuroscience, 2015, 35, 4540-4551.	3.6	56
28	Heterogeneous Kinetics and Pharmacology of Synaptic Inhibition in the Chick Auditory Brainstem. Journal of Neuroscience, 2009, 29, 9625-9634.	3.6	51
29	Control of firing patterns through modulation of axon initial segment Tâ€type calcium channels. Journal of Physiology, 2012, 590, 109-118.	2.9	51
30	ON and OFF Unipolar Brush Cells Transform Multisensory Inputs to the Auditory System. Neuron, 2015, 85, 1029-1042.	8.1	51
31	Regulation of interneuron excitability by gap junction coupling with principal cells. Nature Neuroscience, 2013, 16, 1764-1772.	14.8	49
32	Double-Nanodomain Coupling of Calcium Channels, Ryanodine Receptors, and BK Channels Controls the Generation of Burst Firing. Neuron, 2017, 96, 856-870.e4.	8.1	48
33	Presynaptic HCN Channels Regulate Vesicular Glutamate Transport. Neuron, 2014, 84, 340-346.	8.1	47
34	Molecular Layer Inhibitory Interneurons Provide Feedforward and Lateral Inhibition in the Dorsal Cochlear Nucleus. Journal of Neurophysiology, 2010, 104, 2462-2473.	1.8	45
35	Serotonergic Modulation of Sensory Representation in a Central Multisensory Circuit Is Pathway Specific. Cell Reports, 2017, 20, 1844-1854.	6.4	45
36	Corelease of Inhibitory Neurotransmitters in the Mouse Auditory Midbrain. Journal of Neuroscience, 2017, 37, 9453-9464.	3.6	45

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37	The Calyx of Held: A Hypothesis on the Need for Reliable Timing in an Intensity-Difference Encoder. Neuron, 2018, 100, 534-549.	8.1	42
38	Selective targeting of unipolar brush cell subtypes by cerebellar mossy fibers. ELife, 2019, 8, .	6.0	41
39	Slow glycinergic transmission mediated by transmitter pooling. Nature Neuroscience, 2009, 12, 286-294.	14.8	40
40	Modulation of transmitter release at giant synapses of the auditory system. Current Opinion in Neurobiology, 2002, 12, 400-404.	4.2	39
41	Negative Shift in the Glycine Reversal Potential Mediated by a Ca²⁺- and pH-Dependent Mechanism in Interneurons. Journal of Neuroscience, 2009, 29, 11495-11510.	3.6	35
42	Fidelity of Complex Spike-Mediated Synaptic Transmission between Inhibitory Interneurons. Journal of Neuroscience, 2008, 28, 9440-9450.	3.6	33
43	Control of Interneuron Firing by Subthreshold Synaptic Potentials in Principal Cells of the Dorsal Cochlear Nucleus. Neuron, 2014, 83, 324-330.	8.1	29
44	Intrinsic and synaptic properties of vertical cells of the mouse dorsal cochlear nucleus. Journal of Neurophysiology, 2012, 108, 1186-1198.	1.8	28
45	Slow AMPAR Synaptic Transmission Is Determined by Stargazin and Glutamate Transporters. Neuron, 2017, 96, 73-80.e4.	8.1	28
46	Spontaneous Activity Defines Effective Convergence Ratios in an Inhibitory Circuit. Journal of Neuroscience, 2016, 36, 3268-3280.	3.6	25
47	Identification of an inhibitory neuron subtype, the L-stellate cell of the cochlear nucleus. ELife, 2020, 9, .	6.0	23
48	Synaptic Inputs to Granule Cells of the Dorsal Cochlear Nucleus. Journal of Neurophysiology, 2008, 99, 208-219.	1.8	21
49	Distinct forms of synaptic plasticity during ascending vs descending control of medial olivocochlear efferent neurons. ELife, 2021, 10, .	6.0	20
50	Synaptic plasticity in inhibitory neurons of the auditory brainstem. Neuropharmacology, 2011, 60, 774-779.	4.1	18
51	Single Granule Cells Excite Golgi Cells and Evoke Feedback Inhibition in the Cochlear Nucleus. Journal of Neuroscience, 2015, 35, 4741-4750.	3.6	17
52	Microcircuits of the Dorsal Cochlear Nucleus. Springer Handbook of Auditory Research, 2018, , 73-99.	0.7	16
53	Chemical synaptic transmission onto superficial stellate cells of the mouse dorsal cochlear nucleus. Journal of Neurophysiology, 2014, 111, 1812-1822.	1.8	15
54	Auditory Golgi cells are interconnected predominantly by electrical synapses. Journal of Neurophysiology, 2016, 116, 540-551.	1.8	15

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55	Superficial stellate cells of the dorsal cochlear nucleus. Frontiers in Neural Circuits, 2014, 8, 63.	2.8	14
56	Incomplete removal of extracellular glutamate controls synaptic transmission and integration at a cerebellar synapse. ELife, 2021, 10, .	6.0	12
57	Descending Axonal Projections from the Inferior Colliculus Target Nearly All Excitatory and Inhibitory Cell Types of the Dorsal Cochlear Nucleus. Journal of Neuroscience, 2022, 42, 3381-3393.	3.6	11
58	Central circuitry and function of the cochlear efferent systems. Hearing Research, 2022, 425, 108516.	2.0	11
59	KCNQ Channels Enable Reliable Presynaptic Spiking and Synaptic Transmission at High Frequency. Journal of Neuroscience, 2022, 42, 3305-3315.	3.6	5
60	Quantum Disentanglement: Electrical Analysis of the Complex Roles of Ions in Filling Vesicles with Glutamate. Neuron, 2016, 90, 667-669.	8.1	2