

Robert C Froemke

List of Publications by Year in descending order

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77
papers

8,522
citations

81900

39
h-index

79698

73
g-index

105
all docs

105
docs citations

105
times ranked

8678
citing authors

#	ARTICLE	IF	CITATIONS
1	Spike-timing-dependent synaptic modification induced by natural spike trains. <i>Nature</i> , 2002, 416, 433-438.	27.8	702
2	Oxytocin enables maternal behaviour by balancing cortical inhibition. <i>Nature</i> , 2015, 520, 499-504.	27.8	585
3	A synaptic memory trace for cortical receptive field plasticity. <i>Nature</i> , 2007, 450, 425-429.	27.8	541
4	Plasticity of Cortical Excitatory-Inhibitory Balance. <i>Annual Review of Neuroscience</i> , 2015, 38, 195-219.	10.7	355
5	Spike-timing-dependent synaptic plasticity depends on dendritic location. <i>Nature</i> , 2005, 434, 221-225.	27.8	354
6	A New Population of Parvocellular Oxytocin Neurons Controlling Magnocellular Neuron Activity and Inflammatory Pain Processing. <i>Neuron</i> , 2016, 89, 1291-1304.	8.1	314
7	Parallel processing by cortical inhibition enables context-dependent behavior. <i>Nature Neuroscience</i> , 2017, 20, 62-71.	14.8	307
8	Intrinsically determined cell death of developing cortical interneurons. <i>Nature</i> , 2012, 491, 109-113.	27.8	293
9	Dynamics of Spontaneous Activity in Neocortical Slices. <i>Neuron</i> , 2001, 32, 883-898.	8.1	287
10	Developmental sensory experience balances cortical excitation and inhibition. <i>Nature</i> , 2010, 465, 932-936.	27.8	273
11	Oxytocin Enhances Social Recognition by Modulating Cortical Control of Early Olfactory Processing. <i>Neuron</i> , 2016, 90, 609-621.	8.1	272
12	Cortical Plasticity Induced by Inhibitory Neuron Transplantation. <i>Science</i> , 2010, 327, 1145-1148.	12.6	256
13	A Distributed Network for Social Cognition Enriched for Oxytocin Receptors. <i>Journal of Neuroscience</i> , 2016, 36, 2517-2535.	3.6	245
14	Activation of Corticostriatal Circuitry Relieves Chronic Neuropathic Pain. <i>Journal of Neuroscience</i> , 2015, 35, 5247-5259.	3.6	224
15	Coordinated forms of noradrenergic plasticity in the locus coeruleus and primary auditory cortex. <i>Nature Neuroscience</i> , 2015, 18, 1483-1492.	14.8	205
16	Long-term modification of cortical synapses improves sensory perception. <i>Nature Neuroscience</i> , 2013, 16, 79-88.	14.8	193
17	Contribution of Individual Spikes in Burst-Induced Long-Term Synaptic Modification. <i>Journal of Neurophysiology</i> , 2006, 95, 1620-1629.	1.8	182
18	Inhibitory and Excitatory Spike-Timing-Dependent Plasticity in the Auditory Cortex. <i>Neuron</i> , 2015, 86, 514-528.	8.1	169

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19	Oxytocin, Neural Plasticity, and Social Behavior. <i>Annual Review of Neuroscience</i> , 2021, 44, 359-381.	10.7	168
20	Effective Modulation of Male Aggression through Lateral Septum to Medial Hypothalamus Projection. <i>Current Biology</i> , 2016, 26, 593-604.	3.9	132
21	Calcium-Permeable AMPA Receptors in the Nucleus Accumbens Regulate Depression-Like Behaviors in the Chronic Neuropathic Pain State. <i>Journal of Neuroscience</i> , 2013, 33, 19034-19044.	3.6	120
22	Functions and dysfunctions of neocortical inhibitory neuron subtypes. <i>Nature Neuroscience</i> , 2017, 20, 1199-1208.	14.8	116
23	Oxytocin neurons enable social transmission of maternal behaviour. <i>Nature</i> , 2021, 596, 553-557.	27.8	113
24	Oxytocin Transforms Firing Mode of CA2 Hippocampal Neurons. <i>Neuron</i> , 2018, 100, 593-608.e3.	8.1	102
25	Cortical Plasticity, Excitatoryâ€“Inhibitory Balance, and Sensory Perception. <i>Progress in Brain Research</i> , 2013, 207, 65-90.	1.4	100
26	<sc>O</sc>xytocin modulation of neural circuits for social behavior. <i>Developmental Neurobiology</i> , 2017, 77, 169-189.	3.0	98
27	Phosphorylation and Local Presynaptic Protein Synthesis in Calcium- and Calcineurin-Dependent Induction of Crayfish Long-Term Facilitation. <i>Neuron</i> , 2001, 32, 489-501.	8.1	87
28	Oxytocin Reduces Alcohol Cue-Reactivity in Alcohol-Dependent Rats and Humans. <i>Neuropsychopharmacology</i> , 2018, 43, 1235-1246.	5.4	85
29	Dynamics of auditory cortical activity during behavioural engagement and auditory perception. <i>Nature Communications</i> , 2017, 8, 14412.	12.8	82
30	Excitation-Transcription Coupling in Parvalbumin-Positive Interneurons Employs a Novel CaM Kinase-Dependent Pathway Distinct from Excitatory Neurons. <i>Neuron</i> , 2016, 90, 292-307.	8.1	81
31	Requirement of an Allosteric Kinetics of NMDA Receptors for Spike Timing-Dependent Plasticity. <i>Journal of Neuroscience</i> , 2008, 28, 3310-3323.	3.6	70
32	Temporal Synaptic Tagging by Ih Activation and Actin. <i>Neuron</i> , 2002, 33, 601-613.	8.1	69
33	Dendritic synapse location and neocortical spike-timing-dependent plasticity. <i>Frontiers in Synaptic Neuroscience</i> , 2010, 2, 29.	2.5	67
34	Locus coeruleus activation accelerates perceptual learning. <i>Brain Research</i> , 2019, 1709, 39-49.	2.2	67
35	Innate and plastic mechanisms for maternal behaviour in auditory cortex. <i>Nature</i> , 2020, 587, 426-431.	27.8	64
36	The Temporal Association Cortex Plays a Key Role in Auditory-Driven Maternal Plasticity. <i>Neuron</i> , 2020, 107, 566-579.e7.	8.1	61

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37	Development of auditory cortical synaptic receptive fields. <i>Neuroscience and Biobehavioral Reviews</i> , 2011, 35, 2105-2113.	6.1	59
38	Temporal modulation of spike-timing-dependent plasticity. <i>Frontiers in Synaptic Neuroscience</i> , 2010, 2, 19.	2.5	57
39	Heterosynaptic Plasticity Determines the Set Point for Cortical Excitatory-Inhibitory Balance. <i>Neuron</i> , 2020, 106, 842-854.e4.	8.1	53
40	Diverging roles for Lrp4 and Wnt signaling in neuromuscular synapse development during evolution. <i>Genes and Development</i> , 2016, 30, 1058-1069.	5.9	46
41	Oxytocin Modulation of Neural Circuits. <i>Current Topics in Behavioral Neurosciences</i> , 2017, 35, 31-53.	1.7	45
42	Unified pre- and postsynaptic long-term plasticity enables reliable and flexible learning. <i>ELife</i> , 2015, 4, .	6.0	44
43	Neuromodulation of maternal circuits by oxytocin. <i>Cell and Tissue Research</i> , 2019, 375, 57-68.	2.9	43
44	Auditory cortical plasticity in cochlear implant users. <i>Current Opinion in Neurobiology</i> , 2020, 60, 108-114.	4.2	43
45	Spike-timing-dependent ensemble encoding by non-classically responsive cortical neurons. <i>ELife</i> , 2019, 8, .	6.0	43
46	Synaptic plasticity and cognitive function are disrupted in the absence of Lrp4. <i>ELife</i> , 2014, 3, e04287.	6.0	40
47	A low-cost, multiplexed ECoG system for high-density recordings in freely moving rodents. <i>Journal of Neural Engineering</i> , 2016, 13, 026030.	3.5	39
48	Persistent pain alters AMPA receptor subunit levels in the nucleus accumbens. <i>Molecular Brain</i> , 2015, 8, 46.	2.6	38
49	Synaptic Transmission Optimization Predicts Expression Loci of Long-Term Plasticity. <i>Neuron</i> , 2017, 96, 177-189.e7.	8.1	36
50	Biological mechanisms for observational learning. <i>Current Opinion in Neurobiology</i> , 2019, 54, 178-185.	4.2	35
51	Maturation of cortical circuits requires Semaphorin 7A. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 13978-13983.	7.1	34
52	Spectrotemporal dynamics of auditory cortical synaptic receptive field plasticity. <i>Hearing Research</i> , 2011, 279, 149-161.	2.0	33
53	Sucrose Ingestion Induces Rapid AMPA Receptor Trafficking. <i>Journal of Neuroscience</i> , 2013, 33, 6123-6132.	3.6	31
54	Body language signals for rodent social communication. <i>Current Opinion in Neurobiology</i> , 2021, 68, 91-106.	4.2	30

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55	Development and characterization of a chronic implant mouse model for vagus nerve stimulation. <i>ELife</i> , 2021, 10, .	6.0	28
56	Synaptic plasticity as a cortical coding scheme. <i>Current Opinion in Neurobiology</i> , 2015, 35, 185-199.	4.2	26
57	Bidirectional control of infant rat social behavior via dopaminergic innervation of the basolateral amygdala. <i>Neuron</i> , 2021, 109, 4018-4035.e7.	8.1	26
58	Food restriction induces synaptic incorporation of calcium-permeable AMPA receptors in nucleus accumbens. <i>European Journal of Neuroscience</i> , 2017, 45, 826-836.	2.6	21
59	Dissociating task acquisition from expression during learning reveals latent knowledge. <i>Nature Communications</i> , 2019, 10, 2151.	12.8	20
60	A physiological and behavioral system for hearing restoration with cochlear implants. <i>Journal of Neurophysiology</i> , 2016, 116, 844-858.	1.8	17
61	A low-cost, scalable, current-sensing digital headstage for high channel count <i>i>ECoG</i> . <i>Journal of Neural Engineering</i> , 2017, 14, 026009.	3.5	17
62	Rodent auditory perception: Critical band limitations and plasticity. <i>Neuroscience</i> , 2015, 296, 55-65.	2.3	16
63	Oxytocin and Brain Plasticity. , 2017, , 161-182.		13
64	Spectral Processing in Auditory Cortex. , 2011, , 275-308.		13
65	Learning complex temporal patterns with resource-dependent spike timing-dependent plasticity. <i>Journal of Neurophysiology</i> , 2012, 108, 551-566.	1.8	10
66	A low-cost, 61-channel <i>ECoG</i> array for use in rodents. , 2015, , .		9
67	Rare missense coding variants in oxytocin receptor (<i>OXTR</i>) in schizophrenia cases are associated with early trauma exposure, cognition and emotional processing. <i>Journal of Psychiatric Research</i> , 2018, 97, 58-64.	3.1	9
68	Automatic mapping of multiplexed social receptive fields by deep learning and GPU-accelerated 3D videography. <i>Nature Communications</i> , 2022, 13, 593.	12.8	9
69	Transactivation of <i>TrkB</i> Receptors by Oxytocin and Its G Protein-Coupled Receptor. <i>Frontiers in Molecular Neuroscience</i> , 2022, 15, .	2.9	8
70	Analysis of Multineuronal Activation Patterns from Calcium-Imaging Experiments in Brain Slices. <i>Trends in Cardiovascular Medicine</i> , 2002, 12, 247-252.	4.9	6
71	Sex-Specific Differences in Oxytocin Receptor Expression and Function for Parental Behavior. , 2017, 1, 1-25.	0.8	6
72	Capacities and neural mechanisms for auditory statistical learning across species. <i>Hearing Research</i> , 2019, 376, 97-110.	2.0	5

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73	Social Feedback During Sensorimotor Synchronization Changes Salivary Oxytocin and Behavioral States. <i>Frontiers in Psychology</i> , 2020, 11, 531046.	2.1	5
74	Anisomorphic cortical reorganization in asymmetric sensorineural hearing loss. <i>Journal of Neurophysiology</i> , 2017, 118, 932-948.	1.8	4
75	A Form of Presynaptic Coincidence Detection. <i>Neuron</i> , 2003, 39, 579-581.	8.1	2
76	Temporal Association Cortex - A Cortical Hub for Processing Infant Vocalizations. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
77	Dementiaâ€linked TDPâ€43 dysregulation in astrocytes impairs memory, antiviral signaling, and chemokineâ€mediated astrocyticâ€neuronal interactions. <i>Alzheimer's and Dementia</i> , 2021, 17, e058562.	0.8	1