

Sylvain Crochet

List of Publications by Year in descending order

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46
papers

3,638
citations

218677

26
h-index

233421

45
g-index

48
all docs

48
docs citations

48
times ranked

3875
citing authors

#	ARTICLE	IF	CITATIONS
1	Correlating whisker behavior with membrane potential in barrel cortex of awake mice. <i>Nature Neuroscience</i> , 2006, 9, 608-610.	14.8	488
2	Thalamic control of cortical states. <i>Nature Neuroscience</i> , 2012, 15, 370-372.	14.8	278
3	Synaptic Mechanisms Underlying Sparse Coding of Active Touch. <i>Neuron</i> , 2011, 69, 1160-1175.	8.1	234
4	Synaptic Computation and Sensory Processing in Neocortical Layer 2/3. <i>Neuron</i> , 2013, 78, 28-48.	8.1	222
5	The histamine H3 receptor as a novel therapeutic target for cognitive and sleep disorders. <i>Trends in Pharmacological Sciences</i> , 2004, 25, 618-625.	8.7	212
6	Properties of Slow Oscillation during Slow-Wave Sleep and Anesthesia in Cats. <i>Journal of Neuroscience</i> , 2011, 31, 14998-15008.	3.6	201
7	Cholinergic Signals in Mouse Barrel Cortex during Active Whisker Sensing. <i>Cell Reports</i> , 2014, 9, 1654-1660.	6.4	194
8	Cell-Type-Specific Sensorimotor Processing in Striatal Projection Neurons during Goal-Directed Behavior. <i>Neuron</i> , 2015, 88, 298-305.	8.1	165
9	Combined Voltage and Calcium Epifluorescence Imaging In Vitro and In Vivo Reveals Subthreshold and Suprathreshold Dynamics of Mouse Barrel Cortex. <i>Journal of Neurophysiology</i> , 2007, 97, 3751-3762.	1.8	162
10	Protean agonism at histamine H3 receptors in vitro and in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 11086-11091.	7.1	136
11	Reward-Based Learning Drives Rapid Sensory Signals in Medial Prefrontal Cortex and Dorsal Hippocampus Necessary for Goal-Directed Behavior. <i>Neuron</i> , 2018, 97, 83-91.e5.	8.1	123
12	Movement Initiation Signals in Mouse Whisker Motor Cortex. <i>Neuron</i> , 2016, 92, 1368-1382.	8.1	97
13	Modulation of synaptic transmission in neocortex by network activities. <i>European Journal of Neuroscience</i> , 2005, 21, 1030-1044.	2.6	91
14	The Cortical States of Wakefulness. <i>Frontiers in Systems Neuroscience</i> , 2018, 12, 64.	2.5	85
15	Effects of microdialysis application of monoamines on the EEG and behavioural states in the cat mesopontine tegmentum. <i>European Journal of Neuroscience</i> , 1999, 11, 3738-3752.	2.6	82
16	Serotonergic dorsal raphe neurons cease firing by disfacilitation during paradoxical sleep. <i>NeuroReport</i> , 2000, 11, 3237-3241.	1.2	78
17	Diverse Long-Range Axonal Projections of Excitatory Layer 2/3 Neurons in Mouse Barrel Cortex. <i>Frontiers in Neuroanatomy</i> , 2018, 12, 33.	1.7	65
18	Dopaminergic Modulation of Behavioral States in Mesopontine Tegmentum: A Reverse Microdialysis Study in Freely Moving Cats. <i>Sleep</i> , 2003, 26, 801-806.	1.1	64

#	ARTICLE	IF	CITATIONS
19	Experimental evidence and modeling studies support a synchronizing role for electrical coupling in the cat thalamic reticular neurons in vivo. <i>European Journal of Neuroscience</i> , 2004, 20, 111-119.	2.6	60
20	Neural Circuits for Goal-Directed Sensorimotor Transformations. <i>Trends in Neurosciences</i> , 2019, 42, 66-77.	8.6	60
21	A potent non-monoaminergic paradoxical sleep inhibitory system: a reverse microdialysis and single-unit recording study. <i>European Journal of Neuroscience</i> , 2006, 24, 1404-1412.	2.6	56
22	Cell-type-specific nicotinic input disinhibits mouse barrel cortex during active sensing. <i>Neuron</i> , 2021, 109, 778-787.e3.	8.1	52
23	Synaptic Interactions Between Thalamic and Cortical Inputs Onto Cortical Neurons In Vivo. <i>Journal of Neurophysiology</i> , 2004, 91, 1990-1998.	1.8	46
24	Synaptic Plasticity in Local Cortical Network In Vivo and Its Modulation by the Level of Neuronal Activity. <i>Cerebral Cortex</i> , 2006, 16, 618-631.	2.9	46
25	Rapid suppression and sustained activation of distinct cortical regions for a delayed sensory-triggered motor response. <i>Neuron</i> , 2021, 109, 2183-2201.e9.	8.1	46
26	A neural mechanism of sleep and wakefulness. <i>Sleep and Biological Rhythms</i> , 2003, 1, 29-42.	1.0	44
27	Alpha-2 adrenoceptor mediated paradoxical (REM) sleep inhibition in the cat. <i>NeuroReport</i> , 1999, 10, 2199-2204.	1.2	34
28	Highly Dynamic Spatiotemporal Organization of Low-Frequency Activities During Behavioral States in the Mouse Cerebral Cortex. <i>Cerebral Cortex</i> , 2017, 27, 5444-5462.	2.9	34
29	Role of dorsal raphe neurons in paradoxical sleep generation in the cat: no evidence for a serotonergic mechanism. <i>European Journal of Neuroscience</i> , 2001, 13, 103-112.	2.6	23
30	Spontaneous field potentials influence the activity of neocortical neurons during paroxysmal activities in vivo. <i>Neuroscience</i> , 2003, 119, 277-291.	2.3	22
31	Role of dorsal raphe neurons in paradoxical sleep generation in the cat: no evidence for a serotonergic mechanism. <i>European Journal of Neuroscience</i> , 2001, 13, 103-112.	2.6	22
32	Synaptic Enhancement Induced Through Callosal Pathways in Cat Association Cortex. <i>Journal of Neurophysiology</i> , 2004, 92, 3221-3232.	1.8	14
33	Cortical Dynamics by Layers. <i>Neuron</i> , 2009, 64, 298-300.	8.1	13
34	Cortical circuits for transforming whisker sensation into goal-directed licking. <i>Current Opinion in Neurobiology</i> , 2020, 65, 38-48.	4.2	13
35	Extracellular Ca ²⁺ fluctuations in vivo affect afterhyperpolarization potential and modify firing patterns of neocortical neurons. <i>Experimental Neurology</i> , 2013, 245, 5-14.	4.1	12
36	Increase in antidromic excitability in presumed serotonergic dorsal raphe neurons during paradoxical sleep in the cat. <i>Brain Research</i> , 2001, 898, 332-341.	2.2	10

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37	Projection-specific Activity of Layer 2/3 Neurons Imaged in Mouse Primary Somatosensory Barrel Cortex During a Whisker Detection Task. <i>Function</i> , 2020, 1, zqaa008.	2.3	10
38	Synaptic responsiveness of neocortical neurons to callosal volleys during paroxysmal depolarizing shifts. <i>Neuroscience</i> , 2004, 124, 231-239.	2.3	8
39	Axonal and Dendritic Morphology of Excitatory Neurons in Layer 2/3 Mouse Barrel Cortex Imaged Through Whole-Brain Two-Photon Tomography and Registered to a Digital Brain Atlas. <i>Frontiers in Neuroanatomy</i> , 2021, 15, 791015.	1.7	7
40	Learning-related congruent and incongruent changes of excitation and inhibition in distinct cortical areas. <i>PLoS Biology</i> , 2022, 20, e3001667.	5.6	6
41	The cortically evoked secondary depolarization affects the integrative properties of thalamic reticular neurons. <i>European Journal of Neuroscience</i> , 2004, 20, 2691-2696.	2.6	5
42	Intracellular Whole-Cell Patch-Clamp Recordings of Cortical Neurons in Awake Head-Restrained Mice. <i>NeuroMethods</i> , 2011, , 219-235.	0.3	5
43	From Perception to Action: A Spatiotemporal Cortical Map. <i>Neuron</i> , 2014, 81, 5-8.	8.1	4
44	Cortical Sensorimotor Reverberations. <i>Neuron</i> , 2015, 86, 1116-1118.	8.1	4
45	Cell type-specific membrane potential changes in dorsolateral striatum accompanying reward-based sensorimotor learning. <i>Function</i> , 2021, 2, zqab049.	2.3	4
46	Match Making in Sensory Cortex. <i>Neuron</i> , 2020, 106, 363-365.	8.1	0