Christian LÃ¼scher

List of Publications by Year
in descending order

116 papers	16,557 citations	23500 58 h-index	19690 117 g-index
130 all docs	130 docs citations	130 times ranked	15589 citing authors

#	Article	IF	Citations
1	Drug-Evoked Synaptic Plasticity in Addiction: From Molecular Changes to Circuit Remodeling. Neuron, 2011, 69, 650-663.	3.8	896
2	NMDA Receptor-Dependent Long-Term Potentiation and Long-Term Depression (LTP/LTD). Cold Spring Harbor Perspectives in Biology, 2012, 4, a005710-a005710.	2.3	720
3	G Protein-Coupled Inwardly Rectifying K+ Channels (GIRKs) Mediate Postsynaptic but Not Presynaptic Transmitter Actions in Hippocampal Neurons. Neuron, 1997, 19, 687-695.	3.8	667
4	Role of AMPA Receptor Cycling in Synaptic Transmission and Plasticity. Neuron, 1999, 24, 649-658.	3.8	641
5	Cocaine triggered AMPA receptor redistribution is reversed in vivo by mGluR-dependent long-term depression. Nature Neuroscience, 2006, 9, 636-641.	7.1	638
6	Synaptic plasticity and dynamic modulation of the postsynaptic membrane. Nature Neuroscience, 2000, 3, 545-550.	7.1	589
7	Cocaine-evoked synaptic plasticity: persistence in the VTA triggers adaptations in the NAc. Nature Neuroscience, 2009, 12, 1036-1041.	7.1	559
8	Group 1 mGluR-Dependent Synaptic Long-Term Depression: Mechanisms and Implications for Circuitry and Disease. Neuron, 2010, 65, 445-459.	3.8	529
9	Emerging roles for G protein-gated inwardly rectifying potassium (GIRK) channels in health and disease. Nature Reviews Neuroscience, 2010, 11, 301-315.	4.9	525
10	GABA Neurons of the VTA Drive Conditioned Place Aversion. Neuron, 2012, 73, 1173-1183.	3.8	514
11	Epilepsy, Hyperalgesia, Impaired Memory, and Loss of Pre- and Postsynaptic GABAB Responses in Mice Lacking GABAB(1). Neuron, 2001, 31, 47-58.	3.8	489
12	Dynamin-dependent endocytosis of ionotropic glutamate receptors. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 14112-14117.	3.3	388
13	Reversal of cocaine-evoked synaptic potentiation resets drug-induced adaptive behaviour. Nature, 2012, 481, 71-75.	13.7	380
14	Contrasting forms of cocaine-evoked plasticity control components of relapse. Nature, 2014, 509, 459-464.	13.7	342
15	Bi-directional effects of GABAB receptor agonists on the mesolimbic dopamine system. Nature Neuroscience, 2004, 7, 153-159.	7.1	316
16	Neural bases for addictive properties of benzodiazepines. Nature, 2010, 463, 769-774.	13.7	310
17	Ventral tegmental area GABA projections pause accumbal cholinergic interneurons to enhance associative learning. Nature, 2012, 492, 452-456.	13.7	300
18	Hooked on benzodiazepines: GABAA receptor subtypes and addiction. Trends in Neurosciences, 2011, 34, 188-197.	4.2	284

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19	Sufficiency of Mesolimbic Dopamine Neuron Stimulation for the Progression to Addiction. Neuron, 2015, 88, 1054-1066.	3.8	257
20	Cocaine Disinhibits Dopamine Neurons by Potentiation of GABA Transmission in the Ventral Tegmental Area. Science, 2013, 341, 1521-1525.	6.0	256
21	The transition to compulsion in addiction. Nature Reviews Neuroscience, 2020, 21, 247-263.	4.9	256
22	Refining deep brain stimulation to emulate optogenetic treatment of synaptic pathology. Science, 2015, 347, 659-664.	6.0	240
23	Rapid Synthesis and Synaptic Insertion of GluR2 for mGluR-LTD in the Ventral Tegmental Area. Science, 2007, 317, 530-533.	6.0	235
24	Accumbal D1R Neurons Projecting to Lateral Hypothalamus Authorize Feeding. Neuron, 2015, 88, 553-564.	3.8	233
25	Glutamate Receptors on Dopamine Neurons Control the Persistence of Cocaine Seeking. Neuron, 2008, 59, 497-508.	3.8	224
26	The Molecular Basis of Drug Addiction: Linking Epigenetic to Synaptic and Circuit Mechanisms. Neuron, 2019, 102, 48-59.	3.8	223
27	Pheromone detection mediated by a V1r vomeronasal receptor. Nature Neuroscience, 2002, 5, 1261-1262.	7.1	208
28	Hippocampal Somatostatin Interneurons Control the Size of Neuronal Memory Ensembles. Neuron, 2016, 89, 1074-1085.	3.8	201
29	The Emergence of a Circuit Model for Addiction. Annual Review of Neuroscience, 2016, 39, 257-276.	5.0	200
30	RGS2 modulates coupling between GABAB receptors and GIRK channels in dopamine neurons of the ventral tegmental area. Nature Neuroscience, 2007, 10, 1559-1568.	7.1	185
31	The Mechanistic Classification of Addictive Drugs. PLoS Medicine, 2006, 3, e437.	3.9	179
32	The mesoSPIM initiative: open-source light-sheet microscopes for imaging cleared tissue. Nature Methods, 2019, 16, 1105-1108.	9.0	174
33	Pathological circuit function underlying addiction and anxiety disorders. Nature Neuroscience, 2014, 17, 1635-1643.	7.1	170
34	In vivo reprogramming of circuit connectivity in postmitotic neocortical neurons. Nature Neuroscience, 2013, 16, 193-200.	7.1	167
35	Cocaine inverts rules for synaptic plasticity of glutamate transmission in the ventral tegmental area. Nature Neuroscience, 2011, 14, 414-416.	7.1	152
36	Convergence of Reinforcing and Anhedonic Cocaine Effects in the Ventral Pallidum. Neuron, 2016, 92, 214-226.	3.8	151

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37	SHANK3 controls maturation of social reward circuits in the VTA. Nature Neuroscience, 2016, 19, 926-934.	7.1	146
38	Stochastic synaptic plasticity underlying compulsion in a model of addiction. Nature, 2018, 564, 366-371.	13.7	134
39	Biomarkers for closed-loop deep brain stimulation in Parkinson disease and beyond. Nature Reviews Neurology, 2019, 15, 343-352.	4.9	132
40	Mechanisms of synaptic depression triggered by metabotropic glutamate receptors. Cellular and Molecular Life Sciences, 2008, 65, 2913-2923.	2.4	126
41	Dopamine neurons projecting to medial shell of the nucleus accumbens drive heroin reinforcement. ELife, 2018, 7, .	2.8	125
42	Monitoring Glutamate Release during LTP with Glial Transporter Currents. Neuron, 1998, 21, 435-441.	3.8	124
43	Temporally precise labeling and control of neuromodulatory circuits in the mammalian brain. Nature Methods, 2017, 14, 495-503.	9.0	123
44	Optogenetics: 10 years after ChR2 in neuronsâ€"views from the community. Nature Neuroscience, 2015, 18, 1202-1212.	7.1	122
45	Methamphetamine-Evoked Depression of GABAB Receptor Signaling in GABA Neurons of the VTA. Neuron, 2012, 73, 978-989.	3.8	116
46	Modality-specific thalamocortical inputs instruct the identity of postsynaptic L4 neurons. Nature, 2014, 511, 471-474.	13.7	116
47	mGluRs induce a long-term depression in the ventral tegmental area that involves a switch of the subunit composition of AMPA receptors. European Journal of Neuroscience, 2005, 21, 1280-1288.	1.2	107
48	Drug-Driven AMPA Receptor Redistribution Mimicked by Selective Dopamine Neuron Stimulation. PLoS ONE, 2010, 5, e15870.	1.1	98
49	Expression of Cocaine-Evoked Synaptic Plasticity by GluN3A-Containing NMDA Receptors. Neuron, 2013, 80, 1025-1038.	3.8	97
50	Cell-Type Specific Insertion of GluA2-Lacking AMPARs with Cocaine Exposure Leading to Sensitization, Cue-Induced Seeking, and Incubation of Craving. Neuropsychopharmacology, 2016, 41, 1779-1789.	2.8	97
51	Restless AMPA receptors: implications for synaptic transmission and plasticity. Trends in Neurosciences, 2001, 24, 665-670.	4.2	77
52	Synaptic plasticity and addiction: Learning mechanisms gone awry. Neuropharmacology, 2011, 61, 1052-1059.	2.0	77
53	D1R/GluN1 complexes in the striatum integrate dopamine and glutamate signalling to control synaptic plasticity and cocaine-induced responses. Molecular Psychiatry, 2014, 19, 1295-1304.	4.1	74
54	Desensitization of Â-opioid receptor-evoked potassium currents: Initiation at the receptor, expression at the effector. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4674-4679.	3.3	70

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55	In utero exposure to cocaine delays postnatal synaptic maturation of glutamatergic transmission in the VTA. Nature Neuroscience, 2011, 14, 1439-1446.	7.1	70
56	A cross-modal genetic framework for the development and plasticity of sensory pathways. Nature, 2016, 538, 96-98.	13.7	67
57	Projection of the GrÃ¼neberg ganglion to the mouse olfactory bulb. European Journal of Neuroscience, 2006, 23, 2887-2894.	1.2	66
58	Retinal Input Directs the Recruitment of Inhibitory Interneurons into Thalamic Visual Circuits. Neuron, 2014, 81, 1057-1069.	3.8	63
59	Absence and Rescue of Morphine Withdrawal in GIRK/Kir3 Knock-out Mice. Journal of Neuroscience, 2008, 28, 4069-4077.	1.7	62
60	Drug-Evoked Synaptic Plasticity Causing Addictive Behavior. Journal of Neuroscience, 2013, 33, 17641-17646.	1.7	62
61	Psychostimulant effect of dopaminergic treatment and addictions in Parkinson's disease. Movement Disorders, 2017, 32, 1566-1573.	2.2	61
62	VTA Projection Neurons Releasing GABA and Glutamate in the Dentate Gyrus. ENeuro, 2016, 3, ENEURO.0137-16.2016.	0.9	57
63	Photolysis of caged compounds characterized by ratiometric confocal microscopy: a new approach to homogeneously control and measure the calcium concentration in cardiac myocytes. Cell Calcium, 1996, 19, 255-266.	1.1	55
64	Gene cluster lock after pheromone receptor gene choice. EMBO Journal, 2007, 26, 3423-3430.	3.5	54
65	A Comparison of Striatal-Dependent Behaviors in Wild-Type and Hemizygous Drd1a and Drd2 BAC Transgenic Mice. Journal of Neuroscience, 2012, 32, 9119-9123.	1.7	52
66	Synaptic mechanism underlying serotonin modulation of transition to cocaine addiction. Science, 2021, 373, 1252-1256.	6.0	51
67	Drug-evoked synaptic plasticity: beyond metaplasticity. Current Opinion in Neurobiology, 2013, 23, 553-558.	2.0	48
68	Endogenous RGS proteins enhance acute desensitization of GABAB receptor-activated GIRK currents in HEK-293T cells. Pflugers Archiv European Journal of Physiology, 2005, 450, 61-73.	1.3	46
69	Homeostatic Plasticity in the Hippocampus Facilitates Memory Extinction. Cell Reports, 2018, 22, 1451-1461.	2.9	46
70	Context-Dependent Multiplexing by Individual VTA Dopamine Neurons. Journal of Neuroscience, 2020, 40, 7489-7509.	1.7	43
71	Cocaine-evoked synaptic plasticity: a key to addiction?. Nature Neuroscience, 2008, 11, 737-738.	7.1	41
72	Cocaine Exposure Enhances the Activity of Ventral Tegmental Area Dopamine Neurons via Calcium-Impermeable NMDARs. Journal of Neuroscience, 2016, 36, 10759-10768.	1.7	41

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73	Optogenetic dissection of neural circuitry: from synaptic causalities to blue prints for novel treatments of behavioral diseases. Current Opinion in Neurobiology, 2015, 35, 95-100.	2.0	40
74	Depression of Accumbal to Lateral Hypothalamic Synapses Gates Overeating. Neuron, 2020, 107, 158-172.e4.	3.8	39
75	Consolidating the Circuit Model for Addiction. Annual Review of Neuroscience, 2021, 44, 173-195.	5.0	39
76	Ribosomal Protein S6 Phosphorylation Is Involved in Novelty-Induced Locomotion, Synaptic Plasticity and mRNA Translation. Frontiers in Molecular Neuroscience, 2017, 10, 419.	1.4	37
77	Â-Arrestin2, interacting with phosphodiesterase 4, regulates synaptic release probability and presynaptic inhibition by opioids. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3034-3039.	3.3	36
78	Morphine- and CaMKII-Dependent Enhancement of GIRK Channel Signaling in Hippocampal Neurons. Journal of Neuroscience, 2010, 30, 13419-13430.	1.7	36
79	Addictive drugs modulate GIRK-channel signaling by regulating RGS proteins. Trends in Pharmacological Sciences, 2008, 29, 544-549.	4.0	35
80	Firing Modes of Dopamine Neurons Drive Bidirectional GIRK Channel Plasticity. Journal of Neuroscience, 2014, 34, 5107-5114.	1.7	33
81	Periaqueductal efferents to dopamine and GABA neurons of the VTA. PLoS ONE, 2018, 13, e0190297.	1.1	33
82	Two distinct forms of desensitization of G- protein coupled inwardly rectifying potassium currents evoked by alkaloid and peptide Î¼-opioid receptor agonists. Molecular and Cellular Neurosciences, 2003, 24, 517-523.	1.0	32
83	Cocaine-Evoked Synaptic Plasticity of Excitatory Transmission in the Ventral Tegmental Area. Cold Spring Harbor Perspectives in Medicine, 2013, 3, a012013-a012013.	2.9	32
84	Targeting VGLUT2 in Mature Dopamine Neurons Decreases Mesoaccumbal Glutamatergic Transmission and Identifies a Role for Glutamate Co-release in Synaptic Plasticity by Increasing Baseline AMPA/NMDA Ratio. Frontiers in Neural Circuits, 2018, 12, 64.	1.4	32
85	Aberrant habit formation in the Sapap3-knockout mouse model of obsessive-compulsive disorder. Scientific Reports, 2019, 9, 12061.	1.6	32
86	Social transmission of food safety depends on synaptic plasticity in the prefrontal cortex. Science, 2019, 364, 991-995.	6.0	32
87	Short pulse width in subthalamic stimulation in Parkinson's disease: a randomized, doubleâ€blind study. Movement Disorders, 2018, 33, 169-173.	2.2	30
88	Projection-specific deficits in synaptic transmission in adult Sapap3-knockout mice. Neuropsychopharmacology, 2020, 45, 2020-2029.	2.8	27
89	Is there a way to curb benzodiazepine addiction?. Swiss Medical Weekly, 2011, 141, w13277.	0.8	23
90	Drug-evoked plasticity: do addictive drugs reopen a critical period of postnatal synaptic development?. Frontiers in Molecular Neuroscience, 2012, 5, 75.	1.4	22

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91	Effects of the cell typeâ€specific ablation of the cAMPâ€responsive transcription factor in noradrenergic neurons on locus coeruleus firing and withdrawal behavior after chronic exposure to morphine. Journal of Neurochemistry, 2010, 115, 563-573.	2.1	20
92	Corticostriatal Activity Driving Compulsive Reward Seeking. Biological Psychiatry, 2021, 90, 808-818.	0.7	17
93	Bi-Directional Effect of Increasing Doses of Baclofen on Reinforcement Learning. Frontiers in Behavioral Neuroscience, 2011, 5, 40.	1.0	15
94	Dyskinesiaâ€inducing lead contacts optimize outcome of subthalamic stimulation in Parkinson's disease. Movement Disorders, 2019, 34, 1728-1734.	2.2	15
95	Dynamic dichotomy of accumbal population activity underlies cocaine sensitization. ELife, 2021, 10, .	2.8	15
96	Drug-Evoked Synaptic Plasticity of Excitatory Transmission in the Ventral Tegmental Area. Cold Spring Harbor Perspectives in Medicine, 2021, 11, a039701.	2.9	13
97	Applications of two-photon microscopy in the neurosciences. Frontiers in Bioscience - Landmark, 2005, 10, 2263.	3.0	12
98	Addiction: The Dark Side of Learning. Pediatric Research, 2008, 63, 1-1.	1.1	11
99	Optogenetically inspired deep brain stimulation: linking basic with clinical research. Swiss Medical Weekly, 2016, 146, w14278.	0.8	11
100	Transitory Alexia without Agraphia in an HIV-Positive Patient Suffering from Toxoplasma Encephalitis: A Case Report. European Neurology, 1992, 32, 26-27.	0.6	8
101	Mimicking synaptic effects of addictive drugs with selective dopamine neuron stimulation. Channels, 2011, 5, 461-463.	1.5	8
102	A deeply superficial brain stimulation. Movement Disorders, 2017, 32, 1326-1326.	2.2	6
103	â€˜Ups, downs, and sidewaysâ€™ of dopamine in drug addiction. Trends in Neurosciences, 2021, 44, 593-594.	4.2	5
104	GABAB Receptor Functions in the Mesolimbic Dopamine System. , 2016, , 129-154.		5
105	Modification of a consumer digital audio tape (DAT) for analog data recording. Journal of Neuroscience Methods, 1992, 45, 155-158.	1.3	3
106	Dominique Muller (1956â€“2015). Neuron, 2015, 87, 12-13.	3.8	3
107	Dark past of deep-brain stimulation. Nature, 2018, 555, 306-307.	13.7	3
108	An unusual suspect in cocaine addiction. EMBO Reports, 2018, 19, .	2.0	2

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109	VTA Dopamine Neurons Multiplex External with Internal Representations of Goal-Directed Action. SSRN Electronic Journal, 0, , .	0.4	2
110	Regulation of GluA1 phosphorylation by d â€amphetamine and methylphenidate in the cerebellum. Addiction Biology, 2021, 26, e12995.	1.4	2
111	The perception of movements elicited by magnetic cortex stimulation depends on the site of stimulation. Experimental Brain Research, 1996, 109, 154-7.	0.7	1
112	Against addiction: light at the end of the tunnel?. Journal of Physiology, 2009, 587, 3757-3757.	1.3	1
113	The synaptic basis of disease. European Journal of Neuroscience, 2014, 39, 1057-1058.	1.2	1
114	Bugs R Us: Restoring sociability with microbiota in autism. Cell Reports Medicine, 2021, 2, 100256.	3.3	1
115	The Synapse. , 2013, , 145-162.		0
116	The future of clinical neuroscience. Clinical and Translational Neuroscience, 2018, 2, 2514183X1878131.	0.4	0