

# Vladyslav V Vyazovskiy

## List of Publications by Year in descending order

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Version: 2024-02-01

92  
papers

7,927  
citations

76294

40  
h-index

54882

84  
g-index

106  
all docs

106  
docs citations

106  
times ranked

6252  
citing authors

#	ARTICLE	IF	CITATIONS
1	Regional Slow Waves and Spindles in Human Sleep. <i>Neuron</i> , 2011, 70, 153-169.	3.8	794
2	Local sleep in awake rats. <i>Nature</i> , 2011, 472, 443-447.	13.7	708
3	Molecular and electrophysiological evidence for net synaptic potentiation in wake and depression in sleep. <i>Nature Neuroscience</i> , 2008, 11, 200-208.	7.1	693
4	Cortical Firing and Sleep Homeostasis. <i>Neuron</i> , 2009, 63, 865-878.	3.8	623
5	Sleep Homeostasis and Cortical Synchronization: III. A High-Density EEG Study of Sleep Slow Waves in Humans. <i>Sleep</i> , 2007, 30, 1643-1657.	0.6	364
6	A Causal Role for Brain-Derived Neurotrophic Factor in the Homeostatic Regulation of Sleep. <i>Journal of Neuroscience</i> , 2008, 28, 4088-4095.	1.7	250
7	Sleep and the single neuron: the role of global slow oscillations in individual cell rest. <i>Nature Reviews Neuroscience</i> , 2013, 14, 443-451.	4.9	244
8	Long-Term Homeostasis of Extracellular Glutamate in the Rat Cerebral Cortex across Sleep and Waking States. <i>Journal of Neuroscience</i> , 2009, 29, 620-629.	1.7	229
9	Sleep Homeostasis and Cortical Synchronization: II. A Local Field Potential Study of Sleep Slow Waves in the Rat. <i>Sleep</i> , 2007, 30, 1631-1642.	0.6	201
10	Fast track: Unilateral vibrissae stimulation during waking induces interhemispheric EEG asymmetry during subsequent sleep in the rat. <i>Journal of Sleep Research</i> , 2000, 9, 367-371.	1.7	195
11	Light and Cognition: Roles for Circadian Rhythms, Sleep, and Arousal. <i>Frontiers in Neurology</i> , 2018, 9, 56.	1.1	189
12	Theta activity in the waking EEG is a marker of sleep propensity in the rat. <i>Brain Research</i> , 2005, 1050, 64-71.	1.1	172
13	Effects of Skilled Training on Sleep Slow Wave Activity and Cortical Gene Expression in the Rat. <i>Sleep</i> , 2009, 32, 719-729.	0.6	139
14	Learning by Association in Plants. <i>Scientific Reports</i> , 2016, 6, 38427.	1.6	137
15	Sleep homeostasis in the rat is preserved during chronic sleep restriction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 15939-15944.	3.3	134
16	Melanopsin Regulates Both Sleep-Promoting and Arousal-Promoting Responses to Light. <i>PLoS Biology</i> , 2016, 14, e1002482.	2.6	129
17	NREM and REM Sleep. <i>Neuroscientist</i> , 2014, 20, 203-219.	2.6	125
18	Triggering Slow Waves During NREM Sleep in the Rat by Intracortical Electrical Stimulation: Effects of Sleep/Wake History and Background Activity. <i>Journal of Neurophysiology</i> , 2009, 101, 1921-1931.	0.9	114

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19	Auditory Responses and Stimulus-Specific Adaptation in Rat Auditory Cortex are Preserved Across NREM and REM Sleep. <i>Cerebral Cortex</i> , 2015, 25, 1362-1378.	1.6	102
20	Sleep in <i>Kcna2</i> knockout mice. <i>BMC Biology</i> , 2007, 5, 42.	1.7	101
21	Electrophysiological correlates of sleep homeostasis in freely behaving rats. <i>Progress in Brain Research</i> , 2011, 193, 17-38.	0.9	97
22	Lempel-Ziv complexity of cortical activity during sleep and waking in rats. <i>Journal of Neurophysiology</i> , 2015, 113, 2742-2752.	0.9	94
23	Sleep homeostasis in the rat in the light and dark period. <i>Brain Research Bulletin</i> , 2007, 74, 37-44.	1.4	84
24	The EEG effects of THIP (Gaboxadol) on sleep and waking are mediated by the GABA $\hat{A}$ -subunit-containing receptors. <i>European Journal of Neuroscience</i> , 2007, 25, 1893-1899.	1.2	75
25	Sleep, recovery, and metaregulation: explaining the benefits of sleep. <i>Nature and Science of Sleep</i> , 2015, 7, 171.	1.4	73
26	A role for the cortex in sleep-wake regulation. <i>Nature Neuroscience</i> , 2021, 24, 1210-1215.	7.1	73
27	Interhemispheric Sleep EEG Asymmetry in the Rat is Enhanced by Sleep Deprivation. <i>Journal of Neurophysiology</i> , 2002, 88, 2280-2286.	0.9	69
28	Homeostatic regulation of sleep in the white-crowned sparrow ( <i>Zonotrichia leucophrys gambelii</i> ). <i>BMC Neuroscience</i> , 2008, 9, 47.	0.8	66
29	Handedness Leads to Interhemispheric EEG Asymmetry During Sleep in the Rat. <i>Journal of Neurophysiology</i> , 2008, 99, 969-975.	0.9	65
30	Environment shapes sleep patterns in a wild nocturnal primate. <i>Scientific Reports</i> , 2019, 9, 9939.	1.6	65
31	Effects of Aging on Cortical Neural Dynamics and Local Sleep Homeostasis in Mice. <i>Journal of Neuroscience</i> , 2018, 38, 3911-3928.	1.7	63
32	Running Wheel Accessibility Affects the Regional Electroencephalogram during Sleep in Mice. <i>Cerebral Cortex</i> , 2006, 16, 328-336.	1.6	61
33	Why Does Sleep Slow-Wave Activity Increase After Extended Wake? Assessing the Effects of Increased Cortical Firing During Wake and Sleep. <i>Journal of Neuroscience</i> , 2016, 36, 12436-12447.	1.7	60
34	Stereotypic wheel running decreases cortical activity in mice. <i>Nature Communications</i> , 2016, 7, 13138.	5.8	60
35	Responses in Rat Core Auditory Cortex are Preserved during Sleep Spindle Oscillations. <i>Sleep</i> , 2016, 39, 1069-1082.	0.6	56
36	Differences in electroencephalographic non-rapid-eye movement sleep slow-wave characteristics between young and old mice. <i>Scientific Reports</i> , 2017, 7, 43656.	1.6	55

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37	Regional pattern of metabolic activation is reflected in the sleep EEG after sleep deprivation combined with unilateral whisker stimulation in mice. <i>European Journal of Neuroscience</i> , 2004, 20, 1363-1370.	1.2	54
38	Cortical metabolic rates as measured by 2-deoxyglucose-uptake are increased after waking and decreased after sleep in mice. <i>Brain Research Bulletin</i> , 2008, 75, 591-597.	1.4	50
39	Sleep EEG in mice that are deficient in the potassium channel subunit K.v.3.2. <i>Brain Research</i> , 2002, 947, 204-211.	1.1	48
40	Synaptic Potentiation and Sleep Need: Clues from Molecular and Electrophysiological Studies. <i>Current Topics in Medicinal Chemistry</i> , 2011, 11, 2472-2482.	1.0	47
41	Unilateral Cortical Spreading Depression Affects Sleep Need and Induces Molecular and Electrophysiological Signs of Synaptic Potentiation In Vivo. <i>Cerebral Cortex</i> , 2010, 20, 2939-2947.	1.6	46
42	The Dynamics of Cortical Neuronal Activity in the First Minutes after Spontaneous Awakening in Rats and Mice. <i>Sleep</i> , 2014, 37, 1337-1347.	0.6	44
43	Prolonged wakefulness alters neuronal responsiveness to local electrical stimulation of the neocortex in awake rats. <i>Journal of Sleep Research</i> , 2013, 22, 239-250.	1.7	42
44	The Interplay between Long- and Short-Range Temporal Correlations Shapes Cortex Dynamics across Vigilance States. <i>Journal of Neuroscience</i> , 2017, 37, 10114-10124.	1.7	39
45	Cortical region-specific sleep homeostasis in mice: effects of time of day and waking experience. <i>Sleep</i> , 2018, 41, .	0.6	39
46	The GABAA receptor agonist THIP alters the EEG in waking and sleep of mice. <i>Neuropharmacology</i> , 2005, 48, 617-626.	2.0	37
47	The continued need for animals to advance brain research. <i>Neuron</i> , 2021, 109, 2374-2379.	3.8	36
48	Normal sleep homeostasis and lack of epilepsy phenotype in GABAA receptor $\beta 3$ subunit-knockout mice. <i>Neuroscience</i> , 2008, 154, 595-605.	1.1	34
49	Interhemispheric coherence of the sleep electroencephalogram in mice with congenital callosal dysgenesis. <i>Neuroscience</i> , 2004, 124, 481-488.	1.1	33
50	Regional differences in NREM sleep slow-wave activity in mice with congenital callosal dysgenesis. <i>Journal of Sleep Research</i> , 2005, 14, 299-304.	1.7	32
51	Global sleep homeostasis reflects temporally and spatially integrated local cortical neuronal activity. <i>ELife</i> , 2020, 9, .	2.8	31
52	Absent sleep EEG spindle activity in GluA1 (Gria1) knockout mice: relevance to neuropsychiatric disorders. <i>Translational Psychiatry</i> , 2018, 8, 154.	2.4	29
53	The Temporal Structure of Behaviour and Sleep Homeostasis. <i>PLoS ONE</i> , 2012, 7, e50677.	1.1	28
54	Sleep homeostasis, habits and habituation. <i>Current Opinion in Neurobiology</i> , 2017, 44, 202-211.	2.0	27

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55	Sleep and Rest Regulation in Young and Old Oestrogen-Deficient Female Mice. <i>Journal of Neuroendocrinology</i> , 2006, 18, 567-576.	1.2	25
56	Eat, sleep, repeat: the role of the circadian system in balancing sleep-wake control with metabolic need. <i>Current Opinion in Physiology</i> , 2020, 15, 183-191.	0.9	25
57	Long Photoperiod Restores the 24-h Rhythm of Sleep and EEG Slow-Wave Activity in the Djungarian Hamster ( <i>Phodopus sungorus</i> ). <i>Journal of Biological Rhythms</i> , 2000, 15, 429-436.	1.4	21
58	Waking experience modulates sleep need in mice. <i>BMC Biology</i> , 2021, 19, 65.	1.7	21
59	Alteration of behavior in mice by muscimol is associated with regional electroencephalogram synchronization. <i>Neuroscience</i> , 2007, 147, 833-841.	1.1	20
60	Dim light in the evening causes coordinated realignment of circadian rhythms, sleep, and short-term memory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	20
61	Reduction of EEG Theta Power and Changes in Motor Activity in Rats Treated with Ceftriaxone. <i>PLoS ONE</i> , 2012, 7, e34139.	1.1	19
62	Sleep homeostasis during daytime food entrainment in mice. <i>Sleep</i> , 2019, 42, .	0.6	19
63	The hypothalamic link between arousal and sleep homeostasis in mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	19
64	Sleep and Synaptic Homeostasis. <i>Current Topics in Behavioral Neurosciences</i> , 2014, 25, 91-121.	0.8	18
65	Diazepam effects on local cortical neural activity during sleep in mice. <i>Biochemical Pharmacology</i> , 2021, 191, 114515.	2.0	18
66	Continuous and non-invasive thermography of mouse skin accurately describes core body temperature patterns, but not absolute core temperature. <i>Scientific Reports</i> , 2020, 10, 20680.	1.6	16
67	Effects of circadian misalignment on sleep in mice. <i>Scientific Reports</i> , 2018, 8, 15343.	1.6	15
68	Forward genetics identifies a novel sleep mutant with sleep state inertia and REM sleep deficits. <i>Science Advances</i> , 2020, 6, eabb3567.	4.7	15
69	Human lesions and animal studies link the claustrum to perception, salience, sleep and pain. <i>Brain</i> , 2022, 145, 1610-1623.	3.7	15
70	Banking Sleep and Biological Sleep Need. <i>Sleep</i> , 2015, 38, 1843-1845.	0.6	14
71	Constant Light Desynchronizes Olfactory versus Object and Visuospatial Recognition Memory Performance. <i>Journal of Neuroscience</i> , 2017, 37, 3555-3567.	1.7	13
72	Sleep and ageing: from human studies to rodent models. <i>Current Opinion in Physiology</i> , 2020, 15, 210-216.	0.9	13

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73	Deletion of AMPA receptor GluA1 subunit gene (Gria1) causes circadian rhythm disruption and aberrant responses to environmental cues. <i>Translational Psychiatry</i> , 2021, 11, 588.	2.4	13
74	Sleep and Serotonin Modulate Paracapsular Nitric Oxide Synthase Expressing Neurons of the Amygdala. <i>ENeuro</i> , 2016, 3, ENEURO.0177-16.2016.	0.9	12
75	Local Sleep Taking Care of High-Maintenance Cortical Circuits under Sleep Restriction. <i>Sleep</i> , 2014, 37, 1727-1730.	0.6	11
76	Modulation of recognition memory performance by light and its relationship with cortical EEG theta and gamma activities. <i>Biochemical Pharmacology</i> , 2021, 191, 114404.	2.0	11
77	Long-term history and immediate preceding state affect EEG slow wave characteristics at NREM sleep onset in C57BL/6 mice. <i>Archives Italiennes De Biologie</i> , 2015, 152, 156-68.	0.1	11
78	Psilocin acutely alters sleep-wake architecture and cortical brain activity in laboratory mice. <i>Translational Psychiatry</i> , 2022, 12, 77.	2.4	11
79	The relationship between fasting-induced torpor, sleep, and wakefulness in laboratory mice. <i>Sleep</i> , 2021, 44, .	0.6	10
80	Comment on 'Lack of evidence for associative learning in pea plants'. <i>ELife</i> , 2020, 9, .	2.8	10
81	Sleep: A Biological Stimulus from Our Nearest Celestial Neighbor?. <i>Current Biology</i> , 2014, 24, R557-R560.	1.8	8
82	Neuronal spiking-based closed-loop stimulation during cortical ON and OFF states in freely moving mice. <i>Journal of Sleep Research</i> , 2022, 31, .	1.7	6
83	Re-examining extreme sleep duration in bats: implications for sleep phylogeny, ecology, and function. <i>Sleep</i> , 2022, 45, .	0.6	5
84	Tinnitus: at a crossroad between phantom perception and sleep. <i>Brain Communications</i> , 2022, 4, .	1.5	5
85	Author's reply to "Cerebral metabolism and sleep homeostasis: A comment on Vyazovskiy et al.". <i>Brain Research Bulletin</i> , 2009, 80, 443-445.	1.4	3
86	Rodent models in translational circadian photobiology. <i>Progress in Brain Research</i> , 2022, , 97-116.	0.9	3
87	Mapping the birth of the sleep connectome. <i>Science</i> , 2015, 350, 909-910.	6.0	2
88	Cortical Neuronal Mechanisms of Sleep Homeostasis. <i>Zhurnal Vysshei Nervnoi Deyatelnosti Imeni I P Pavlova</i> , 2013, 63, 13-23.	0.3	2
89	Investigating Sleep Homeostasis with Extracellular Recording of Multiunit Activity from the Neocortex in Freely Behaving Rats. <i>NeuroMethods</i> , 2011, , 237-258.	0.2	1
90	Sleep- and Wake-Like States in Small Networks In Vivo and In Vitro. <i>Handbook of Experimental Pharmacology</i> , 2018, 253, 97-121.	0.9	1

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91	Unresponsive or just asleep? Do local slow waves in the perilesional cortex have a function?. Brain, 2020, 143, 3513-3515.	3.7	1
92	Too sleepy for school: is sleep in teenagers homeostatically regulated under chronic sleep restriction?. Sleep, 2021, 44, .	0.6	0