

Daniel B Polley

List of Publications by Year in descending order

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68
papers

5,734
citations

81900

39
h-index

88630

70
g-index

85
all docs

85
docs citations

85
times ranked

4621
citing authors

#	ARTICLE	IF	CITATIONS
1	Perceptual Learning Directs Auditory Cortical Map Reorganization through Top-Down Influences. <i>Journal of Neuroscience</i> , 2006, 26, 4970-4982.	3.6	505
2	Treatment of autosomal dominant hearing loss by in vivo delivery of genome editing agents. <i>Nature</i> , 2018, 553, 217-221.	27.8	412
3	Multiparametric Auditory Receptive Field Organization Across Five Cortical Fields in the Albino Rat. <i>Journal of Neurophysiology</i> , 2007, 97, 3621-3638.	1.8	289
4	Central Gain Restores Auditory Processing following Near-Complete Cochlear Denervation. <i>Neuron</i> , 2016, 89, 867-879.	8.1	259
5	A critical period for auditory thalamocortical connectivity. <i>Nature Neuroscience</i> , 2011, 14, 1189-1194.	14.8	201
6	Robustness of Cortical Topography across Fields, Laminae, Anesthetic States, and Neurophysiological Signal Types. <i>Journal of Neuroscience</i> , 2012, 32, 9159-9172.	3.6	196
7	Long-term modification of cortical synapses improves sensory perception. <i>Nature Neuroscience</i> , 2013, 16, 79-88.	14.8	193
8	Linking Topography to Tonotopy in the Mouse Auditory Thalamocortical Circuit. <i>Journal of Neuroscience</i> , 2011, 31, 2983-2995.	3.6	188
9	Naturalistic experience transforms sensory maps in the adult cortex of caged animals. <i>Nature</i> , 2004, 429, 67-71.	27.8	186
10	Monaural Deprivation Disrupts Development of Binaural Selectivity in Auditory Midbrain and Cortex. <i>Neuron</i> , 2010, 65, 718-731.	8.1	183
11	A Corticothalamic Circuit for Dynamic Switching between Feature Detection and Discrimination. <i>Neuron</i> , 2017, 95, 180-194.e5.	8.1	158
12	Two Directions of Plasticity in the Sensory-Deprived Adult Cortex. <i>Neuron</i> , 1999, 24, 623-637.	8.1	142
13	Associative learning shapes the neural code for stimulus magnitude in primary auditory cortex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 16351-16356.	7.1	128
14	Fragile X Mental Retardation Protein Is Required for Rapid Experience-Dependent Regulation of the Potassium Channel Kv3.1b. <i>Journal of Neuroscience</i> , 2010, 30, 10263-10271.	3.6	127
15	Fine functional organization of auditory cortex revealed by Fourier optical imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 13325-13330.	7.1	118
16	Evaluating the Perceptual and Pathophysiological Consequences of Auditory Deprivation in Early Postnatal Life: A Comparison of Basic and Clinical Studies. <i>JARO - Journal of the Association for Research in Otolaryngology</i> , 2011, 12, 535-547.	1.8	106
17	Local versus global scales of organization in auditory cortex. <i>Trends in Neurosciences</i> , 2014, 37, 502-510.	8.6	105
18	Improved ATMC1 gene therapy restores hearing and balance in mice with genetic inner ear disorders. <i>Nature Communications</i> , 2019, 10, 236.	12.8	104

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19	Brief hearing loss disrupts binaural integration during two early critical periods of auditory cortex development. <i>Nature Communications</i> , 2013, 4, 2547.	12.8	101
20	Auditory map plasticity: diversity in causes and consequences. <i>Current Opinion in Neurobiology</i> , 2014, 24, 143-156.	4.2	95
21	Locomotion and Task Demands Differentially Modulate Thalamic Audiovisual Processing during Active Search. <i>Current Biology</i> , 2015, 25, 1885-1891.	3.9	82
22	Dysregulation of the Norepinephrine Transporter Sustains Cortical Hypodopaminergia and Schizophrenia-Like Behaviors in Neuronal Rictor Null Mice. <i>PLoS Biology</i> , 2010, 8, e1000393.	5.6	81
23	Unbalanced synaptic inhibition can create intensity-tuned auditory cortex neurons. <i>Neuroscience</i> , 2007, 146, 449-462.	2.3	80
24	Ouabain-Induced Cochlear Nerve Degeneration: Synaptic Loss and Plasticity in a Mouse Model of Auditory Neuropathy. <i>JARO - Journal of the Association for Research in Otolaryngology</i> , 2014, 15, 31-43.	1.8	79
25	Sensory overamplification in layer 5 auditory corticofugal projection neurons following cochlear nerve synaptic damage. <i>Nature Communications</i> , 2018, 9, 2468.	12.8	79
26	Fast-spiking GABA circuit dynamics in the auditory cortex predict recovery of sensory processing following peripheral nerve damage. <i>ELife</i> , 2017, 6, .	6.0	77
27	Parallel pathways for sound processing and functional connectivity among layer 5 and 6 auditory corticofugal neurons. <i>ELife</i> , 2019, 8, .	6.0	73
28	Immersive audiomotor game play enhances neural and perceptual salience of weak signals in noise. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E2606-15.	7.1	72
29	Interaural Level Difference-Dependent Gain Control and Synaptic Scaling Underlying Binaural Computation. <i>Neuron</i> , 2013, 79, 738-753.	8.1	71
30	The Cholinergic Basal Forebrain Links Auditory Stimuli with Delayed Reinforcement to Support Learning. <i>Neuron</i> , 2019, 103, 1164-1177.e6.	8.1	71
31	Cochlear neural degeneration disrupts hearing in background noise by increasing auditory cortex internal noise. <i>Neuron</i> , 2021, 109, 984-996.e4.	8.1	71
32	Cellular and Widefield Imaging of Sound Frequency Organization in Primary and Higher Order Fields of the Mouse Auditory Cortex. <i>Cerebral Cortex</i> , 2020, 30, 1603-1622.	2.9	62
33	Opiate Disruption of Maternal Behavior: Morphine Reduces, and Naloxone Restores, c-fos Activity in the Medial Preoptic Area of Lactating Rats. <i>Brain Research Bulletin</i> , 1998, 45, 307-313.	3.0	61
34	Bottom-up and top-down neural signatures of disordered multi-talker speech perception in adults with normal hearing. <i>ELife</i> , 2020, 9, .	6.0	61
35	Sound-Evoked Olivocochlear Activation in Unanesthetized Mice. <i>JARO - Journal of the Association for Research in Otolaryngology</i> , 2012, 13, 209-217.	1.8	54
36	Visualizing and quantifying evoked cortical activity assessed with intrinsic signal imaging. <i>Journal of Neuroscience Methods</i> , 2000, 97, 157-173.	2.5	53

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37	Whisker-based discrimination of object orientation determined with a rapid training paradigm. <i>Neurobiology of Learning and Memory</i> , 2005, 83, 134-142.	1.9	52
38	Audiomotor Perceptual Training Enhances Speech Intelligibility in Background Noise. <i>Current Biology</i> , 2017, 27, 3237-3247.e6.	3.9	52
39	Auditory Corticothalamic Neurons Are Recruited by Motor Preparatory Inputs. <i>Current Biology</i> , 2021, 31, 310-321.e5.	3.9	49
40	Hearing the light: neural and perceptual encoding of optogenetic stimulation in the central auditory pathway. <i>Scientific Reports</i> , 2015, 5, 10319.	3.3	42
41	Specific and rapid effects of acoustic stimulation on the tonotopic distribution of Kv3.1b potassium channels in the adult rat. <i>Neuroscience</i> , 2010, 167, 567-572.	2.3	39
42	Differential maturation of vesicular glutamate and GABA transporter expression in the mouse auditory forebrain during the first weeks of hearing. <i>Brain Structure and Function</i> , 2016, 221, 2619-2673.	2.3	35
43	Synergistic Transcriptional Changes in AMPA and GABAA Receptor Genes Support Compensatory Plasticity Following Unilateral Hearing Loss. <i>Neuroscience</i> , 2019, 407, 108-119.	2.3	35
44	Varying the Degree of Single-Whisker Stimulation Differentially Affects Phases of Intrinsic Signals in Rat Barrel Cortex. <i>Journal of Neurophysiology</i> , 1999, 81, 692-701.	1.8	34
45	Validation of a Self-Administered Audiometry Application: An Equivalence Study. <i>Laryngoscope</i> , 2016, 126, 2382-2388.	2.0	34
46	EphA Signaling Impacts Development of Topographic Connectivity in Auditory Corticofugal Systems. <i>Cerebral Cortex</i> , 2013, 23, 775-785.	2.9	33
47	Amblyaudia. <i>Otolaryngology - Head and Neck Surgery</i> , 2016, 154, 247-255.	1.9	32
48	Online Stimulus Optimization Rapidly Reveals Multidimensional Selectivity in Auditory Cortical Neurons. <i>Journal of Neuroscience</i> , 2014, 34, 8963-8975.	3.6	30
49	Data-driven segmentation of audiometric phenotypes across a large clinical cohort. <i>Scientific Reports</i> , 2020, 10, 6704.	3.3	27
50	A functional topography within the cholinergic basal forebrain for encoding sensory cues and behavioral reinforcement outcomes. <i>ELife</i> , 2021, 10, .	6.0	27
51	Pharmacological modulation of Kv3.1 mitigates auditory midbrain temporal processing deficits following auditory nerve damage. <i>Scientific Reports</i> , 2017, 7, 17496.	3.3	26
52	Transcriptional maturation of the mouse auditory forebrain. <i>BMC Genomics</i> , 2015, 16, 606.	2.8	25
53	Effects of a static magnetic field on audiogenic seizures in black Swiss mice. <i>Epilepsy Research</i> , 2008, 80, 119-131.	1.6	24
54	Optogenetic stimulation of the cochlear nucleus using channelrhodopsin-2 evokes activity in the central auditory pathways. <i>Brain Research</i> , 2015, 1599, 44-56.	2.2	23

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55	Development and Plasticity of Intra- and Intersensory Information Processing. <i>Journal of the American Academy of Audiology</i> , 2008, 19, 780-798.	0.7	20
56	Inverted central auditory hierarchies for encoding local intervals and global temporal patterns. <i>Current Biology</i> , 2021, 31, 1762-1770.e4.	3.9	20
57	Spectral integration plasticity in cat auditory cortex induced by perceptual training. <i>Experimental Brain Research</i> , 2008, 184, 493-509.	1.5	18
58	Persistent Thalamic Sound Processing Despite Profound Cochlear Denervation. <i>Frontiers in Neural Circuits</i> , 2016, 10, 72.	2.8	18
59	Optimizing optogenetic stimulation protocols in auditory corticofugal neurons based on closed-loop spike feedback. <i>Journal of Neural Engineering</i> , 2019, 16, 066023.	3.5	17
60	Predicting neural deficits in sensorineural hearing loss from word recognition scores. <i>Scientific Reports</i> , 2022, 12, .	3.3	16
61	Application of frequency modulated chirp stimuli for rapid and sensitive ABR measurements in the rat. <i>Hearing Research</i> , 2008, 245, 92-97.	2.0	10
62	Severe hearing loss in <i>Dlx1</i> mutant mice. <i>Hearing Research</i> , 2006, 214, 84-88.	2.0	8
63	Fluctuations in Subjective Tinnitus Ratings Over Time: Implications for Clinical Research. <i>Otology and Neurotology</i> , 2020, 41, e1167-e1173.	1.3	8
64	Interactions across Multiple Stimulus Dimensions in Primary Auditory Cortex. <i>ENeuro</i> , 2016, 3, ENEURO.0124-16.2016.	1.9	8
65	The promise of low-tech intervention in a high-tech era: Remodeling pathological brain circuits using behavioral reverse engineering. <i>Neuroscience and Biobehavioral Reviews</i> , 2022, 137, 104652.	6.1	8
66	Behavioral Approaches to Study Top-Down Influences on Active Listening. <i>Frontiers in Neuroscience</i> , 2021, 15, 666627.	2.8	4
67	Estimated cochlear neural degeneration is associated with loudness hypersensitivity in individuals with normal audiograms. <i>JASA Express Letters</i> , 2022, 2, .	1.1	4
68	Multisensory Conflict Resolution: Should I Stay or Should I Go?. <i>Neuron</i> , 2017, 93, 725-727.	8.1	1