Kenneth J Smith

List of Publications by Year
in descending order

103 papers	8,521 citations	57758 44 h-index	45317 90 g-index
108 all docs	108 docs citations	108 times ranked	7830 citing authors

#	Article	IF	Citations
1	Demyelination: The Role of Reactive Oxygen and Nitrogen Species. Brain Pathology, 1999, 9, 69-92.	4.1	502
2	The role of nitric oxide in multiple sclerosis. Lancet Neurology, The, 2002, 1, 232-241.	10.2	491
3	Perivascular spaces in the brain: anatomy, physiology and pathology. Nature Reviews Neurology, 2020, 16, 137-153.	10.1	405
4	Pathogenesis of Guillainâ€"BarrÃ© syndrome. Journal of Neuroimmunology, 1999, 100, 74-97.	2.3	390
5	Electrically active axons degenerate when exposed to nitric oxide. Annals of Neurology, 2001, 49, 470-476.	5.3	309
6	Central remyelination restores secure conduction. Nature, 1979, 280, 395-396.	27.8	292
7	The pathophysiology of multiple sclerosisâ‹® the mechanisms underlying the production of symptoms and the natural history of the disease. Philosophical Transactions of the Royal Society B: Biological Sciences, 1999, 354, 1649-1673.	4.0	281
8	Lesion genesis in a subset of patients with multiple sclerosis: a role for innate immunity?. Brain, 2007, 130, 2800-2815.	7.6	272
9	Blockers of sodium and calcium entry protect axons from nitric oxideâ€mediated degeneration. Annals of Neurology, 2003, 53, 174-180.	5.3	254
10	A Genome-wide Gene-Expression Analysis and Database in Transgenic Mice during Development of Amyloid or Tau Pathology. Cell Reports, 2015, 10, 633-644.	6.4	247
11	Lamotrigine for neuroprotection in secondary progressive multiple sclerosis: a randomised, double-blind, placebo-controlled, parallel-group trial. Lancet Neurology, The, 2010, 9, 681-688.	10.2	239
12	Neuroprotection and repair in multiple sclerosis. Nature Reviews Neurology, 2012, 8, 624-634.	10.1	235
13	Understanding the role of the perivascular space in cerebral small vessel disease. Cardiovascular Research, 2018, 114, 1462-1473.	3.8	211
14	Axonal protection using flecainide in experimental autoimmune encephalomyelitis. Annals of Neurology, 2004, 55, 607-616.	5.3	188
15	Conduction in Segmentally Demyelinated Mammalian Central Axons. Journal of Neuroscience, 1997, 17, 7267-7277.	3.6	185
16	THE RESTORATION OF CONDUCTION BY CENTRAL REMYELINATION. Brain, 1981, 104, 383-404.	7.6	183
17	Saltatory conduction precedes remyelination in axons demyelinated with lysophosphatidyl choline. Journal of the Neurological Sciences, 1982, 54, 13-31.	0.6	157
18	Inflammation and primary demyelination induced by the intraspinal injection of lipopolysaccharide. Brain, 2005, 128, 1649-1666.	7.6	150

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19	Inflammation induced by innate immunity in the central nervous system leads to primary astrocyte dysfunction followed by demyelination. Acta Neuropathologica, 2010, 120, 223-236.	7.7	150
20	Remyelination in the spinal cord of the cat following intraspinal injections of lysolecithin. Journal of the Neurological Sciences, 1977, 33, 31-43.	0.6	141
21	Effects of 4-aminopyridine on demyelinated axons, synapses and muscle tension. Brain, 2000, 123, 171-184.	7.6	136
22	Conduction properties of central nerve fibers remyelinated by Schwann cells. Brain Research, 1992, 574, 178-192.	2.2	135
23	Nerve conduction during peripheral demyelination and remyelination. Journal of the Neurological Sciences, 1980, 48, 201-219.	0.6	121
24	Axonal protection achieved in a model of multiple sclerosis using lamotrigine. Journal of Neurology, 2006, 253, 1542-1551.	3.6	119
25	Immunological investigation of chronic inflammatory demyelinating polyradiculoneuropathy. Journal of Neuroimmunology, 1997, 73, 124-134.	2.3	118
26	Spontaneous and mechanically evoked activity due to central demyelinating lesion. Nature, 1980, 286, 154-155.	27.8	115
27	Neurological deficits caused by tissue hypoxia in neuroinflammatory disease. Annals of Neurology, 2013, 74, 815-825.	5.3	114
28	Sodium Channels and Multiple Sclerosis: Roles in Symptom Production, Damage and Therapy. Brain Pathology, 2007, 17, 230-242.	4.1	106
29	Spontaneous and evoked electrical discharges from a central demyelinating lesion. Journal of the Neurological Sciences, 1982, 55, 39-48.	0.6	97
30	Mitochondrial dysfunction is an important cause of neurological deficits in an inflammatory model of multiple sclerosis. Scientific Reports, 2016, 6, 33249.	3.3	89
31	Remyelination of dorsal column axons by endogenous Schwann cells restores the normal pattern of Nav1.6 and Kv1.2 at nodes of Ranvier. Brain, 2006, 129, 1319-1329.	7.6	79
32	Distribution of sodium channels in chronically demyelinated spinal cord axons: immuno-ultrastructural localization and electrophysiological observations. Brain Research, 1991, 544, 59-70.	2.2	76
33	Understanding a role for hypoxia in lesion formation and location in the deep and periventricular white matter in small vessel disease and multiple sclerosis. Clinical Science, 2017, 131, 2503-2524.	4.3	74
34	Impulse Conduction Increases Mitochondrial Transport in Adult Mammalian Peripheral Nerves In Vivo. PLoS Biology, 2013, 11, e1001754.	5.6	72
35	Sodium-mediated axonal degeneration in inflammatory demyelinating disease. Journal of the Neurological Sciences, 2005, 233, 27-35.	0.6	71
36	Magnetic resonance imaging measures of brain and spinal cord atrophy correlate with clinical impairment in secondary progressive multiple sclerosis. Multiple Sclerosis Journal, 2008, 14, 1068-1075.	3.0	69

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37	A mechanism for ectopic firing in central demyelinated axons. Brain, 1995, 118, 1225-1231.	7.6	67
38	Safinamide and flecainide protect axons and reduce microglial activation in models of multiple sclerosis. Brain, 2013, 136, 1067-1082.	7.6	67
39	Cause and prevention of demyelination in a model multiple sclerosis lesion. Annals of Neurology, 2016, 79, 591-604.	5.3	66
40	Axonal protection in experimental autoimmune neuritis by the sodium channel blocking agent flecainide. Brain, 2004, 128, 18-28.	7.6	65
41	Peripheral demyelination and remyelination initiated by the calcium-selective ionophore ionomycin: In vivo observations. Journal of the Neurological Sciences, 1988, 83, 37-53.	0.6	64
42	Internodal myelin volume and axon surface area. Journal of the Neurological Sciences, 1982, 55, 231-246.	0.6	57
43	Conduction properties of central demyelinated and remyelinated axons, and their relation to symptom production in demyelinating disorders. Eye, 1994, 8, 224-237.	2.1	54
44	Vesicular demyelination induced by raised intracellular calcium. Journal of the Neurological Sciences, 1985, 71, 19-37.	0.6	48
45	Enhanced axonal response of mitochondria to demyelination offers neuroprotection: implications for multiple sclerosis. Acta Neuropathologica, 2020, 140, 143-167.	7.7	48
46	Factors directly affecting impulse transmission in inflammatory demyelinating disease: recent advances in our understanding. Current Opinion in Neurology, 2001, 14, 289-298.	3.6	44
47	Characterisation of matrix metalloproteinases and the effects of a broad-spectrum inhibitor (BB-1101) in peripheral nerve regeneration. Neuroscience, 2004, 124, 767-779.	2.3	44
48	Node-like axonal specialisations along demyelinated central nerve fibres: Ultrastructural observations. Acta Neuropathologica, 1983, 60, 291-296.	7.7	43
49	Axonal protection in multiple sclerosis--a particular need during remyelination?. Brain, 2006, 129, 3147-3149.	7.6	42
50	A longitudinal study of MRI-detected atrophy in secondary progressive multiple sclerosis. Journal of Neurology, 2010, 257, 1508-1516.	3.6	42
51	Internodal potassium currents can generate ectopic impulses in mammalian myelinated axons. Brain Research, 1993, 611, 165-169.	2.2	40
52	Temporary Axonal Conduction Block and Axonal Loss in Inflammatory Neurological Disease: A Potential Role for Nitric Oxide?. Annals of the New York Academy of Sciences, 1999, 893, 304-308.	3.8	38
53	Repair of severed peripheral nerves: Comparison of the â€œde Medinaceliâ€• and standard microsuture methods. Experimental Neurology, 1987, 96, 672-680.	4.1	37
54	Neuroprotection by safinamide in the 6â€hydroxydopamine model of <scp>P</scp>arkinson's disease. Neuropathology and Applied Neurobiology, 2016, 42, 423-435.	3.2	36

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55	A sensitive method for the detection and quantification of conduction deficits in nerve. Journal of the Neurological Sciences, 1980, 48, 191-199.	0.6	35
56	Size-dependent variation of nodal properties in myelinated nerve. Nature, 1981, 293, 297-299.	27.8	35
57	Accumulation of immunoglobulin across the â€˜bloodâ€“nerve barrierâ€™ in spinal roots in adoptive transfer experimental autoimmune neuritis. Neuropathology and Applied Neurobiology, 2002, 28, 489-497.	3.2	35
58	Multiple sclerosis: more than inflammation and demyelination. Trends in Neurosciences, 2001, 24, 435-437.	8.6	33
59	Detection of cytochrome c oxidase activity and mitochondrial proteins in single cells. Journal of Neuroscience Methods, 2009, 184, 310-319.	2.5	30
60	Grey matter magnetization transfer ratio independently correlates with neurological deficit in secondary progressive multiple sclerosis. Journal of Neurology, 2009, 256, 427-435.	3.6	27
61	Effects on axonal conduction of anti-ganglioside sera and sera from patients with Guillain-BarrÃ© syndrome. Journal of Neuroimmunology, 2003, 139, 133-140.	2.3	25
62	Longitudinal changes in magnetisation transfer ratio in secondary progressive multiple sclerosis: data from a randomised placebo controlled trial of lamotrigine. Journal of Neurology, 2012, 259, 505-514.	3.6	25
63	Tumour necrosis factor-Î± has few morphological effects within the dorsal columns of the spinal cord, in contrast to its effects in the peripheral nervous system. Journal of Neuroimmunology, 2000, 106, 130-136.	2.3	23
64	Newly lesioned tissue in multiple sclerosis--a role for oxidative damage?. Brain, 2011, 134, 1877-1881.	7.6	23
65	Hypothermia protects brain mitochondrial function from hypoxemia in a murine model of sepsis. Journal of Cerebral Blood Flow and Metabolism, 2016, 36, 1955-1964.	4.3	23
66	Gallamine triethiodide (flaxedil): tetraethylammonium- and pancuronium-like effects in myelinated nerve fibers. Science, 1981, 212, 1170-1172.	12.6	22
67	Bloodâ€“brain barrier permeability in astrocyte-free regions of the central nervous system remyelinated by Schwann cells. Neuroscience, 1996, 75, 643-655.	2.3	21
68	Reinnervation of denervated skeletal muscle by central neurons regenerating via ventral roots implanted into the spinal cord. Brain Research, 1991, 551, 221-229.	2.2	20
69	Brain-derived neurotrophic factor in experimental autoimmune neuritis. Journal of Neuroimmunology, 2002, 124, 62-69.	2.3	19
70	Mesenchymal Stem Cells Lack Efficacy in the Treatment of Experimental Autoimmune Neuritis despite In Vitro Inhibition of T-Cell Proliferation. PLoS ONE, 2012, 7, e30708.	2.5	19
71	Nimodipine Reduces Dysfunction and Demyelination in Models of Multiple Sclerosis. Annals of Neurology, 2020, 88, 123-136.	5.3	19
72	Clinical and imaging correlates of the multiple sclerosis impact scale in secondary progressive multiple sclerosis. Journal of Neurology, 2012, 259, 237-245.	3.6	17

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73	The use of potassium channel blocking agents in the therapy of demyelinating diseases. Annals of Neurology, 1994, 36, 454-454.	5.3	16
74	REVIEW â– : Axonal Hyperexcitability: Mechanisms and Role in Symptom Production in Demyelinating Diseases. Neuroscientist, 1997, 3, 237-246.	3.5	16
75	The Conduction Properties of Demyelinated and Remyelinated Axons. , 2005, , 85-100.		16
76	Systematic approach to selecting licensed drugs for repurposing in the treatment of progressive multiple sclerosis. Journal of Neurology, Neurosurgery and Psychiatry, 2021, 92, 295-302.	1.9	15
77	Axonal morphological changes following impulse activity in mouse peripheral nerve <i>in vivo</i>: the return pathway for sodium ions. Journal of Physiology, 2015, 593, 987-1002.	2.9	14
78	Immunohistochemical evidence of tissue hypoxia and astrogliosis in the rostral ventrolateral medulla of spontaneously hypertensive rats. Brain Research, 2016, 1650, 178-183.	2.2	14
79	High Dietary Fat Consumption Impairs Axonal Mitochondrial Function<i>In Vivo</i>. Journal of Neuroscience, 2021, 41, 4321-4334.	3.6	14
80	Botulinum toxin for detrusor overactivity and symptoms of overactive bladder: where we are now and where we are going. Nature Reviews Urology, 2007, 4, 379-386.	1.4	13
81	Different white matter lesion characteristics correlate with distinct grey matter abnormalities on magnetic resonance imaging in secondary progressive multiple sclerosis. Multiple Sclerosis Journal, 2009, 15, 687-694.	3.0	13
82	Mitochondrial damage and â€œpluggingâ€• of transport selectively in myelinated, small-diameter axons are major early events in peripheral neuroinflammation. Journal of Neuroinflammation, 2018, 15, 61.	7.2	13
83	The pathophysiology of multiple sclerosis. , 2006, , 601-659.		9
84	Origins of Gliogenic Stem Cell Populations Within Adult Skin and Bone Marrow. Stem Cells and Development, 2010, 19, 1055-1065.	2.1	9
85	A multispectral microscope forin vivooximetry of rat dorsal spinal cord vasculature. Physiological Measurement, 2017, 38, 205-218.	2.1	9
86	A Hyperspectral Imaging System for Mapping Haemoglobin and Cytochrome-c-Oxidase Concentration Changes in the Exposed Cerebral Cortex. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-11.	2.9	9
87	Is CNS trauma a prerequisite for the elongation of CNS axons into denervated peripheral nerve?. Brain Research, 1992, 575, 79-85.	2.2	8
88	The diagnosis of multiple sclerosis. , 2006, , 347-388.		8
89	Electrically active axons degenerate when exposed to nitric oxide. Annals of Neurology, 2001, 49, 470-476.	5.3	8
90	Experimental autoimmune encephalomyelitis from a tissue energy perspective. F1000Research, 2017, 6, 1973.	1.6	8

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91	The role of CD8⁺T cells in a model of multiple sclerosis induced with recombinant myelin oligodendrocyte glycoprotein. Multiple Sclerosis Journal, 2012, 18, 286-298.	3.0	7
92	Axonal protection achieved by blockade of sodium/calcium exchange in a new model of ischemia inÂvivo. Neuropharmacology, 2012, 63, 405-414.	4.1	6
93	â€˜Nodeâ€™ formation precedes remyelination. Trends in Neurosciences, 1982, 5, 196-199.	8.6	4
94	Hyperspectral Imaging of the Hemodynamic and Metabolic States of the Exposed Cortex: Investigating a Commercial Snapshot Solution. Advances in Experimental Medicine and Biology, 2018, 1072, 13-20.	1.6	4
95	The neurobiology of multiple sclerosis. , 2006, , 449-490.		2
96	Nitric Oxide and Axonal Pathophysiology. , 2005, , 255-273.		2
97	Chapter 5 Mechanisms of Symptom Production. Blue Books of Practical Neurology, 2003, , 59-74.	0.1	1
98	The pathogenesis of multiple sclerosis: a pandect. , 2006, , 661-668.		1
99	Lamotrigine monotherapy does not provide protection against the loss of optic nerve axons in a rat model of ocular hypertension. Experimental Eye Research, 2012, 104, 1-6.	2.6	1
100	Reply to: Rethink the classical view of cerebrospinal fluid production. Nature Reviews Neurology, 2021, 17, 590-591.	10.1	1
101	Mitochondrial Changes Associated with Demyelination: Consequences for Axonal Integrity. , 2012, , 175-190.		1
102	Axonal Protection with Sodium Channel Blocking Agents in Models of Multiple Sclerosis. , 2013, , 179-201.		0
103	Mitochondrial Function and Dynamics Imaged In Vivo. , 2016, , 329-345.		0