# Peter K Stys

List of Publications by Year
in descending order



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|---|---|---|---|
| 108 papers | 7,994 citations | 53751 45 h-index | 49868 87 g-index |
| 109 all docs | 109 docs citations | 109 times ranked | 8435 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Diagnosing Alzheimerâ€™s Disease from Circulating Blood Leukocytes Using a Fluorescent Amyloid Probe. Journal of Alzheimer's Disease, 2022, 85, 1721-1734. | 1.2 | 3 |
| 2 | Subcellular localization of hippocampal ryanodine receptor 2 and its role in neuronal excitability and memory. Communications Biology, 2022, 5, 183. | 2.0 | 12 |
| 3 | Autofluorescence spectroscopy as a proxy for chronic white matter pathology. Multiple Sclerosis Journal, 2021, 27, 1046-1056. | 1.4 | 4 |
| 4 | Early detection of prion protein aggregation with a fluorescent pentameric oligothiophene probe using spectral confocal microscopy. Journal of Neurochemistry, 2021, 156, 1033-1048. | 2.1 | 9 |
| 5 | Abnormalities in normal-appearing white matter from which multiple sclerosis lesions arise. Brain Communications, 2021, 3, fcab176. | 1.5 | 13 |
| 6 | Axonâ€Myelin Unit Blistering as Early Event in <scp>MS</scp> Normal Appearing White Matter. Annals of Neurology, 2021, 89, 711-725. | 2.8 | 39 |
| 7 | Nile Red fluorescence spectroscopy reports early physicochemical changes in myelin with high sensitivity. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 36 |
| 8 | Complex Photophysical Properties of K114 Make for a Versatile Fluorescent Probe for Amyloid Detection. ACS Chemical Neuroscience, 2021, 12, 1273-1280. | 1.7 | 9 |
| 9 | Mechanistic underpinning of an insideâ€“out concept for autoimmunity in multiple sclerosis. Annals of Clinical and Translational Neurology, 2021, 8, 1709-1719. | 1.7 | 20 |
| 10 | Label-free assessment of myelin status using birefringence microscopy. Journal of Neuroscience Methods, 2021, 360, 109226. | 1.3 | 7 |
| 11 | Spectral photokinetic conversion of the fluorescent probes BSB and K114 for improved detection of amyloid assemblies. Journal of Biophotonics, 2021, 14, e202100203. | 1.1 | 4 |
| 12 | Quantitative detection of grey and white matter amyloid pathology using a combination of K114 and CRANAD-3 fluorescence. Neurobiology of Disease, 2021, 161, 105540. | 2.1 | 8 |
| 13 | Ferroptosis Mediates Cuprizone-Induced Loss of Oligodendrocytes and Demyelination. Journal of Neuroscience, 2020, 40, 9327-9341. | 1.7 | 95 |
| 14 | Traumatic Injury Reduces Amyloid Plaque Burden in the Transgenic 5xFAD Alzheimerâ€™s Mouse Spinal Cord. Journal of Alzheimer's Disease, 2020, 77, 1315-1330. | 1.2 | 1 |
| 15 | Plasma Neurofilament Light: A Marker of Neurodegeneration in Mild Behavioral Impairment. Journal of Alzheimer's Disease, 2020, 76, 1017-1027. | 1.2 | 68 |
| 16 | Microglia response following acute demyelination is heterogeneous and limits infiltrating macrophage dispersion. Science Advances, 2020, 6, eaay6324. | 4.7 | 130 |
| 17 | Excitation parameters optimized for coherent anti-Stokes Raman scattering imaging of myelinated tissue. Journal of Biomedical Optics, 2019, 24, 1. | 1.4 | 8 |
| 18 | Recent advances in understanding multiple sclerosis. F1000Research, 2019, 8, 2100. | 0.8 | 39 |

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|---|---|---|---|
| 19 | Two steps forward for myelin repair in multiple sclerosis. Lancet Neurology, The, 2018, 17, 297-298. | 4.9 | 2 |
| 20 | We should focus more on finding therapeutic targets for the non-inflammatory damage in MS â€" Commentary. Multiple Sclerosis Journal, 2018, 24, 1276-1277. | 1.4 | 1 |
| 21 | Deficient Surveillance and Phagocytic Activity of Myeloid Cells Within Demyelinated Lesions in Aging Mice Visualized by<i>Ex Vivo</i>Live Multiphoton Imaging. Journal of Neuroscience, 2018, 38, 1973-1988. | 1.7 | 40 |
| 22 | A novel approach to 32-channel peripheral nervous system myelin imaging in vivo, with single axon resolution. Journal of Neurosurgery, 2018, 130, 163-171. | 0.9 | 7 |
| 23 | Biochemically altered myelin triggers autoimmune demyelination. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5528-5533. | 3.3 | 83 |
| 24 | The triple monoamine re-uptake inhibitor DOV 216,303 promotes functional recovery after spinal cord contusion injury in mice. Neuroscience Letters, 2018, 675, 1-6. | 1.0 | 6 |
| 25 | Mechanisms of lysophosphatidylcholineâ€induced demyelination: A primary lipid disrupting myelinopathy. Glia, 2018, 66, 327-347. | 2.5 | 124 |
| 26 | Axo-myelinic neurotransmission: a novel mode of cell signalling in the central nervous system. Nature Reviews Neuroscience, 2018, 19, 49-58. | 4.9 | 100 |
| 27 | P1â€275: AMIRASPEC: A BLOODâ€BASED DIAGNOSTIC FOR ALZHEIMER'S DISEASE USING SPECTRAL MICROSCOPY. Alzheimer's and Dementia, 2018, 14, P387. | 0.4 | 0 |
| 28 | Myelocortical multiple sclerosis: a new disease subtype?. Lancet Neurology, The, 2018, 17, 832-834. | 4.9 | 1 |
| 29 | Unique spectral signatures of the nucleic acid dye acridine orange can distinguish cell death by apoptosis and necroptosis. Journal of Cell Biology, 2017, 216, 1163-1181. | 2.3 | 54 |
| 30 | Effects of laser polarization on responses of the fluorescent Ca<sup>2+</sup> indicator X-Rhod-1 in neurons and myelin. Neurophotonics, 2017, 4, 025002. | 1.7 | 7 |
| 31 | Inhibitors of protein arginine deiminases and their efficacy in animal models of multiple sclerosis. Bioorganic and Medicinal Chemistry, 2017, 25, 2643-2656. | 1.4 | 18 |
| 32 | Multi-target-directed phenolâ€"triazole ligands as therapeutic agents for Alzheimer's disease. Chemical Science, 2017, 8, 5636-5643. | 3.7 | 79 |
| 33 | Axonal and myelinic pathology in 5xFAD Alzheimerâ€™s mouse spinal cord. PLoS ONE, 2017, 12, e0188218. | 1.1 | 42 |
| 34 | Functional ionotropic glutamate receptors on peripheral axons and myelin. Muscle and Nerve, 2016, 54, 451-459. | 1.0 | 18 |
| 35 | P3â€178: Development of a Diagnostic Tool for Alzheimerâ€™s Disease: Detecting Toxic AB Species from Blood Using Spectral Microscopy. Alzheimer's and Dementia, 2016, 12, P888. | 0.4 | 0 |
| 36 | O1-05-05: Detection of Early Alzheimerâ€™s Disease From Blood Using Novel Microspectroscopy. , 2016, 12, P184-P185. | | 0 |

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|---|---|---|---|
| 37 | Mechanisms of glutamate toxicity in multiple sclerosis: biomarker and therapeutic opportunities. Lancet Neurology, The, 2016, 15, 1089-1102. | 4.9 | 112 |
| 38 | Ionotropic glutamate receptor expression in human white matter. Neuroscience Letters, 2016, 630, 1-8. | 1.0 | 20 |
| 39 | Immunosenescence of microglia and macrophages: impact on the ageing central nervous system. Brain, 2016, 139, 653-661. | 3.7 | 199 |
| 40 | The molecular physiology of the axo-myelinic synapse. Experimental Neurology, 2016, 276, 41-50. | 2.0 | 106 |
| 41 | Fluorescent Phosphorus Dendrimer as a Spectral Nanosensor for Macrophage Polarization and Fate Tracking in Spinal Cord Injury. Macromolecular Bioscience, 2015, 15, 1523-1534. | 2.1 | 31 |
| 42 | Axoâ€glial communication through neurexinâ€neuroligin signaling regulates myelination and oligodendrocyte differentiation. Glia, 2015, 63, 2023-2039. | 2.5 | 27 |
| 43 | Inefficient clearance of myelin debris by microglia impairs remyelinating processes. Journal of Experimental Medicine, 2015, 212, 481-495. | 4.2 | 462 |
| 44 | Patrolling monocytes play a critical role in CX3CR1-mediated neuroprotection during excitotoxicity. Brain Structure and Function, 2015, 220, 1759-1776. | 1.2 | 29 |
| 45 | Cellular prion protein and NMDA receptor modulation: protecting against excitotoxicity. Frontiers in Cell and Developmental Biology, 2014, 2, 45. | 1.8 | 54 |
| 46 | Skinâ€derived precursor schwann cell myelination capacity in focal tibial demyelination. Muscle and Nerve, 2014, 50, 262-272. | 1.0 | 19 |
| 47 | High-resolution fluorescence microscopy of myelin without exogenous probes. NeuroImage, 2014, 87, 42-54. | 2.1 | 14 |
| 48 | Remyelination after spinal cord injury: Is it a target for repair?. Progress in Neurobiology, 2014, 117, 54-72. | 2.8 | 155 |
| 49 | Editors' Preface: The Colourful White Matter. Glia, 2014, 62, 1747-1748. | 2.5 | 1 |
| 50 | White matter injury: Ischemic and nonischemic. Glia, 2014, 62, 1780-1789. | 2.5 | 88 |
| 51 | Treatment trials in progressive MSâ€"current challenges and future directions. Nature Reviews Neurology, 2013, 9, 496-503. | 4.9 | 40 |
| 52 | Pathoetiology of multiple sclerosis: are we barking up the wrong tree?. F1000prime Reports, 2013, 5, 20. | 5.9 | 37 |
| 53 | Aβ² neurotoxicity depends on interactions between copper ions, prion protein, and <i>N</i> -methyl- <scp>d</scp> -aspartate receptors. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1737-1742. | 3.3 | 209 |
| 54 | Copperâ€dependent regulation of NMDA receptors by cellular prion protein: implications for neurodegenerative disorders. Journal of Physiology, 2012, 590, 1357-1368. | 1.3 | 91 |

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|---|---|---|---|
| 55 | Will the real multiple sclerosis please stand up?. Nature Reviews Neuroscience, 2012, 13, 507-514. | 4.9 | 406 |
| 56 | The axo-myelinic synapse. Trends in Neurosciences, 2011, 34, 393-400. | 4.2 | 42 |
| 57 | Excitatory Glycine Responses of CNS Myelin Mediated by NR1/NR3 â€œNMDAâ€•Receptor Subunits. Journal of Neuroscience, 2010, 30, 11501-11505. | 1.7 | 86 |
| 58 | Miniaturized multimodal CARS microscope based on MEMS scanning and a single laser source. Optics Express, 2010, 18, 23796. | 1.7 | 41 |
| 59 | Effects of the Noradrenergic System in Rat White Matter Exposed to Oxygenâ€"Glucose Deprivation<i>In Vitro</i>. Journal of Neuroscience, 2009, 29, 1796-1804. | 1.7 | 17 |
| 60 | Role of prions in neuroprotection and neurodegeneration. Prion, 2009, 3, 187-189. | 0.9 | 15 |
| 61 | Virtual hypoxia and chronic necrosis of demyelinated axons in multiple sclerosis. Lancet Neurology, The, 2009, 8, 280-291. | 4.9 | 524 |
| 62 | Gray matter pathology in (chronic) MS: Modern views on an early observation. Journal of the Neurological Sciences, 2009, 282, 12-20. | 0.3 | 105 |
| 63 | Calpain Inhibitors Confer Biochemical, but Not Electrophysiological, Protection Against Anoxia in Rat Optic Nerves. Journal of Neurochemistry, 2008, 74, 2101-2107. | 2.1 | 32 |
| 64 | White matter NMDA receptors: an unexpected new therapeutic target?. Trends in Pharmacological Sciences, 2007, 28, 561-566. | 4.0 | 75 |
| 65 | Coherent anti-Stokes Raman scattering microscopy using photonic crystal fiber with two closely lying zero dispersion wavelengths. Optics Express, 2007, 15, 14028. | 1.7 | 54 |
| 66 | Sodium channel blockers as neuroprotectants in neuroinflammatory disease: a doubleâ€edged sword. Annals of Neurology, 2007, 62, 3-5. | 2.8 | 7 |
| 67 | Real-time measurement of free Ca2+ changes in CNS myelin by two-photon microscopy. Nature Medicine, 2007, 13, 874-879. | 15.2 | 73 |
| 68 | Acute Anterior Circulation Stroke: Recanalization Using Clot Angioplasty. Canadian Journal of Neurological Sciences, 2006, 33, 217-222. | 0.3 | 25 |
| 69 | Spatiotemporal Distribution of Spectrin Breakdown Products Induced by Anoxia in Adult Rat Optic Nervein Vitro. Journal of Cerebral Blood Flow and Metabolism, 2006, 26, 777-786. | 2.4 | 7 |
| 70 | Complex interplay between glutamate receptors and intracellular Ca2+stores during ischaemia in rat spinal cord white matter. Journal of Physiology, 2006, 577, 191-204. | 1.3 | 46 |
| 71 | Na+-Dependent Sources of Intra-Axonal Ca2+ Release in Rat Optic Nerve during In Vitro Chemical Ischemia. Journal of Neuroscience, 2005, 25, 9960-9967. | 1.7 | 83 |
| 72 | General mechanisms of axonal damage and its prevention. Journal of the Neurological Sciences, 2005, 233, 3-13. | 0.3 | 277 |

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|---|---|---|---|
| 73 | Nicotinic Acetylcholine Receptors in Mouse and Rat Optic Nerves. Journal of Neurophysiology, 2004, 91, 1025-1035. | 0.9 | 26 |
| 74 | White Matter Injury Mechanisms. Current Molecular Medicine, 2004, 4, 113-130. | 0.6 | 238 |
| 75 | Functional Innervation in Tissue Engineered Models for In Vitro Study and Testing Purposes. Toxicological Sciences, 2004, 82, 525-533. | 1.4 | 43 |
| 76 | Innervated human corneal equivalents as in vitro models for nerveâ€target cell interactions. FASEB Journal, 2004, 18, 170-172. | 0.2 | 59 |
| 77 | Traumatic Axonal Injury Induces Proteolytic Cleavage of the Voltage-Gated Sodium Channels Modulated by Tetrodotoxin and Protease Inhibitors. Journal of Neuroscience, 2004, 24, 4605-4613. | 1.7 | 201 |
| 78 | Depolarization-Induced Ca2+ Release in Ischemic Spinal Cord White Matter Involves L-type Ca2+ Channel Activation of Ryanodine Receptors. Neuron, 2003, 40, 53-63. | 3.8 | 188 |
| 79 | Aberrant Chloride Transport Contributes to Anoxic/Ischemic White Matter Injury. Journal of Neuroscience, 2003, 23, 3826-3836. | 1.7 | 45 |
| 80 | Calpain-dependent neurofilament breakdown in anoxic and ischemic rat central axons. Neuroscience Letters, 2002, 328, 150-154. | 1.0 | 88 |
| 81 | Traumatic Axonal Injury Induces Calcium Influx Modulated by Tetrodotoxin-Sensitive Sodium Channels. Journal of Neuroscience, 2001, 21, 1923-1930. | 1.7 | 381 |
| 82 | The use-dependent sodium channel blocker mexiletine is neuroprotective against global ischemic injury. Brain Research, 2001, 898, 281-287. | 1.1 | 38 |
| 83 | Calcium imaging in live rat optic nerve myelinated axons in vitro using confocal laser microscopy. Journal of Neuroscience Methods, 2000, 102, 165-176. | 1.3 | 29 |
| 84 | Mechanisms of Ionotropic Glutamate Receptor-Mediated Excitotoxicity in Isolated Spinal Cord White Matter. Journal of Neuroscience, 2000, 20, 1190-1198. | 1.7 | 283 |
| 85 | Important Role of Reverse Na<sup>+</sup>-Ca<sup>2+</sup>Exchange in Spinal Cord White Matter Injury at Physiological Temperature. Journal of Neurophysiology, 2000, 84, 1116-1119. | 0.9 | 117 |
| 86 | Glutamate-Induced White Matter Injury: Excitotoxicity without Synapses. Neuroscientist, 2000, 6, 230-233. | 2.6 | 3 |
| 87 | Novel Injury Mechanism in Anoxia and Trauma of Spinal Cord White Matter: Glutamate Release via Reverse Na<sup>+</sup>-dependent Glutamate Transport. Journal of Neuroscience, 1999, 19, RC16-RC16. | 1.7 | 215 |
| 88 | Anoxic and Ischemic Injury of Myelinated Axons in CNS White Matter: From Mechanistic Concepts to Therapeutics. Journal of Cerebral Blood Flow and Metabolism, 1998, 18, 2-25. | 2.4 | 267 |
| 89 | Effects of K+ channel blockers on the anoxic response of CNS myelinated axons. NeuroReport, 1998, 9, 447-453. | 0.6 | 17 |
| 90 | Ion Transport and Membrane Potential in CNS Myelinated Axons II. Effects of Metabolic Inhibition. Journal of Neurophysiology, 1997, 78, 2095-2107. | 0.9 | 47 |

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|---|---|---|---|
| 91 | Ion Transport and Membrane Potential in CNS Myelinated Axons I. Normoxic Conditions. Journal of Neurophysiology, 1997, 78, 2086-2094. | 0.9 | 21 |
| 92 | Immunolocalization of the Na+â€"Ca2+ exchanger in mammalian myelinated axons. Brain Research, 1997, 776, 1-9. | 1.1 | 46 |
| 93 | Intracellular Concentrations of Major Ions in Rat Myelinated Axons and Glia: Calculations Based on Electron Probe Xâ€Ray Microanalyses. Journal of Neurochemistry, 1997, 68, 1920-1928. | 2.1 | 44 |
| 94 | Na+-Ca2+ Exchange in Anoxic/Ischemic Injury of CNS Myelinated Axons. Annals of the New York Academy of Sciences, 1996, 779, 366-378. | 1.8 | 15 |
| 95 | Reoxygenation of anoxic peripheral nerve myelinated axons promotes re-establishment of normal elemental composition. Brain Research, 1996, 715, 189-196. | 1.1 | 8 |
| 96 | REVIEW â– : The Na-Ca Exchanger in Neurons and Glial Cells. Neuroscientist, 1996, 2, 162-171. | 2.6 | 8 |
| 97 | Mechanisms of Injuryâ€Induced Calcium Entry into Peripheral Nerve Myelinated Axons: Role of Reverse Sodiumâ€Calcium Exchange. Journal of Neurochemistry, 1996, 66, 493-500. | 2.1 | 72 |
| 98 | Protective Effects of Antiarrhythmic Agents against Anoxic Injury in CNS White Matter. Journal of Cerebral Blood Flow and Metabolism, 1995, 15, 425-432. | 2.4 | 37 |
| 99 | Mechanisms of injury-induced calcium entry into peripheral nerve myelinated axons: in vitro anoxia and ouabain exposure. Brain Research, 1995, 694, 158-166. | 1.1 | 24 |
| 100 | Anoxic injury of rat optic nerve: ultrastructural evidence for coupling between Na+ influx and Ca2+-mediated injury in myelinated CNS axons. Brain Research, 1994, 644, 197-204. | 1.1 | 92 |
| 101 | Protection of the axonal cytoskeleton in anoxic optic nerve by decreased extracellular calcium. Brain Research, 1993, 614, 137-145. | 1.1 | 87 |
| 102 | Ultrastructural concomitants of anoxic injury and early post-anoxic recovery in rat optic nerve. Brain Research, 1992, 574, 105-119. | 1.1 | 123 |
| 103 | Effects of Temperature on Evoked Electrical Activity and Anoxic Injury in CNS White Matter. Journal of Cerebral Blood Flow and Metabolism, 1992, 12, 977-986. | 2.4 | 38 |
| 104 | Non-synaptic mechanisms of Ca2+-mediated injury in CNS white matter. Trends in Neurosciences, 1991, 14, 461-468. | 4.2 | 116 |
| 105 | Compound action potential of nerve recorded by suction electrode: a theoretical and experimental analysis. Brain Research, 1991, 546, 18-32. | 1.1 | 179 |
| 106 | Reverse Operation of the Na+-Ca2+Exchanger Mediates Ca2+Influx during Anoxia in Mammalian CNS White Matter. Annals of the New York Academy of Sciences, 1991, 639, 328-332. | 1.8 | 39 |
| 107 | Neurobase: a general-purpose program for acquisition, storage and digital processing of transient signals using the Apple Macintosh II computer. Journal of Neuroscience Methods, 1991, 37, 47-54. | 1.3 | 5 |
| 108 | Effects of polyvalent cations and dihydropyridine calcium channel blockers on recovery of CNS white matter from anoxia. Neuroscience Letters, 1990, 115, 293-299. | 1.0 | 59 |