

Sheng-Kwei Song

List of Publications by Year in descending order

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89
papers

11,879
citations

81900
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docs citations

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times ranked

11046
citing authors

#	ARTICLE	IF	CITATIONS
1	Dysmyelination Revealed through MRI as Increased Radial (but Unchanged Axial) Diffusion of Water. <i>NeuroImage</i> , 2002, 17, 1429-1436.	4.2	2,301
2	Diffusion tensor imaging detects and differentiates axon and myelin degeneration in mouse optic nerve after retinal ischemia. <i>NeuroImage</i> , 2003, 20, 1714-1722.	4.2	1,593
3	Demyelination increases radial diffusivity in corpus callosum of mouse brain. <i>NeuroImage</i> , 2005, 26, 132-140.	4.2	1,482
4	Axial Diffusivity Is the Primary Correlate of Axonal Injury in the Experimental Autoimmune Encephalomyelitis Spinal Cord: A Quantitative Pixelwise Analysis. <i>Journal of Neuroscience</i> , 2009, 29, 2805-2813.	3.6	430
5	Noninvasive detection of cuprizone induced axonal damage and demyelination in the mouse corpus callosum. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 302-308.	3.0	413
6	Toward accurate diagnosis of white matter pathology using diffusion tensor imaging. <i>Magnetic Resonance in Medicine</i> , 2007, 57, 688-695.	3.0	355
7	Quantification of increased cellularity during inflammatory demyelination. <i>Brain</i> , 2011, 134, 3590-3601.	7.6	317
8	Radial diffusivity predicts demyelination in ex vivo multiple sclerosis spinal cords. <i>NeuroImage</i> , 2011, 55, 1454-1460.	4.2	317
9	Detecting axon damage in spinal cord from a mouse model of multiple sclerosis. <i>Neurobiology of Disease</i> , 2006, 21, 626-632.	4.4	220
10	Relative indices of water diffusion anisotropy are equivalent in live and formalin-fixed mouse brains. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 743-748.	3.0	218
11	Differential sensitivity of in vivo and ex vivo diffusion tensor imaging to evolving optic nerve injury in mice with retinal ischemia. <i>NeuroImage</i> , 2006, 32, 1195-1204.	4.2	205
12	Formalin fixation alters water diffusion coefficient magnitude but not anisotropy in infarcted brain. <i>Magnetic Resonance in Medicine</i> , 2005, 53, 1447-1451.	3.0	188
13	Developmental Changes in Diffusion Anisotropy Coincide with Immature Oligodendrocyte Progression and Maturation of Compound Action Potential. <i>Journal of Neuroscience</i> , 2005, 25, 5988-5997.	3.6	181
14	Evolving Wallerian degeneration after transient retinal ischemia in mice characterized by diffusion tensor imaging. <i>NeuroImage</i> , 2008, 40, 1-10.	4.2	181
15	Axonal injury detected by in vivo diffusion tensor imaging correlates with neurological disability in a mouse model of multiple sclerosis. <i>NMR in Biomedicine</i> , 2008, 21, 589-597.	2.8	172
16	Diffusion tensor imaging detects age-dependent white matter changes in a transgenic mouse model with amyloid deposition. <i>Neurobiology of Disease</i> , 2004, 15, 640-647.	4.4	164
17	Impaired prostate tumorigenesis in Egr1-deficient mice. <i>Nature Medicine</i> , 2001, 7, 101-107.	30.7	153
18	Noninvasive diffusion tensor imaging of evolving white matter pathology in a mouse model of acute spinal cord injury. <i>Magnetic Resonance in Medicine</i> , 2007, 58, 253-260.	3.0	151

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19	Rostrocaudal Analysis of Corpus Callosum Demyelination and Axon Damage Across Disease Stages Refines Diffusion Tensor Imaging Correlations With Pathological Features. <i>Journal of Neuropathology and Experimental Neurology</i> , 2010, 69, 704-716.	1.7	150
20	Tumor Necrosis Factor Receptor Deletion Reduces Nuclear Factor- κ B Activation, Cellular Inhibitor of Apoptosis Protein 2 Expression, and Functional Recovery after Traumatic Spinal Cord Injury. <i>Journal of Neuroscience</i> , 2001, 21, 6617-6625.	3.6	145
21	Differentiation and quantification of inflammation, demyelination and axon injury or loss in multiple sclerosis. <i>Brain</i> , 2015, 138, 1223-1238.	7.6	133
22	Diffusion Tensor Imaging Predicts Hyperacute Spinal Cord Injury Severity. <i>Journal of Neurotrauma</i> , 2007, 24, 979-990.	3.4	122
23	Detection of age-dependent brain injury in a mouse model of brain amyloidosis associated with Alzheimer's disease using magnetic resonance diffusion tensor imaging. <i>Experimental Neurology</i> , 2005, 191, 77-85.	4.1	111
24	Quantifying white matter tract diffusion parameters in the presence of increased extra-fiber cellularity and vasogenic edema. <i>NeuroImage</i> , 2014, 101, 310-319.	4.2	108
25	Diffusion Tensor Imaging at 3 Hours after Traumatic Spinal Cord Injury Predicts Long-Term Locomotor Recovery. <i>Journal of Neurotrauma</i> , 2010, 27, 587-598.	3.4	102
26	Diffusion basis spectrum imaging detects and distinguishes coexisting subclinical inflammation, demyelination and axonal injury in experimental autoimmune encephalomyelitis mice. <i>NMR in Biomedicine</i> , 2014, 27, 843-852.	2.8	100
27	Selective vulnerability of cerebral white matter in a murine model of multiple sclerosis detected using diffusion tensor imaging. <i>Neurobiology of Disease</i> , 2007, 28, 30-38.	4.4	94
28	Assessing optic nerve pathology with diffusion MRI: from mouse to human. <i>NMR in Biomedicine</i> , 2008, 21, 928-940.	2.8	85
29	The MT pool size ratio and the DTI radial diffusivity may reflect the myelination in shiverer and control mice. <i>NMR in Biomedicine</i> , 2009, 22, 480-487.	2.8	76
30	Oligodendrocyte Lineage and Subventricular Zone Response to Traumatic Axonal Injury in the Corpus Callosum. <i>Journal of Neuropathology and Experimental Neurology</i> , 2013, 72, 1106-1125.	1.7	76
31	Improved in vivo diffusion tensor imaging of human cervical spinal cord. <i>NeuroImage</i> , 2013, 67, 64-76.	4.2	72
32	Quantitative magnetization transfer measured pool size ratio reflects optic nerve myelin content in ex vivo mice. <i>Magnetic Resonance in Medicine</i> , 2009, 61, 364-371.	3.0	69
33	Spinal cord tract diffusion tensor imaging reveals disability substrate in demyelinating disease. <i>Neurology</i> , 2013, 80, 2201-2209.	1.1	63
34	Neuroinflammation and White Matter Alterations in Obesity Assessed by Diffusion Basis Spectrum Imaging. <i>Frontiers in Human Neuroscience</i> , 2019, 13, 464.	2.0	56
35	Improved magnetic resonance imaging detection of prostate cancer in a transgenic mouse model. <i>Cancer Research</i> , 2002, 62, 1555-8.	0.9	53
36	Spinal Cord Injury Disrupts Resting-State Networks in the Human Brain. <i>Journal of Neurotrauma</i> , 2018, 35, 864-873.	3.4	51

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37	Diffusion Tensor Imaging in Acute Optic Neuropathies. Archives of Neurology, 2012, 69, 65.	4.5	50
38	Increased radial diffusivity in spinal cord lesions in neuromyelitis optica compared with multiple sclerosis. Multiple Sclerosis Journal, 2012, 18, 1259-1268.	3.0	48
39	Comprehensive locomotor outcomes correlate to hyperacute diffusion tensor measures after spinal cord injury in the adult rat. Experimental Neurology, 2012, 235, 188-196.	4.1	48
40	â€œA new imaging modality to non-invasively assess multiple sclerosis pathologyâ€• Journal of Neuroimmunology, 2017, 304, 81-85.	2.3	44
41	CXCR7 antagonism prevents axonal injury during experimental autoimmune encephalomyelitis as revealed by in vivo axial diffusivity. Journal of Neuroinflammation, 2011, 8, 170.	7.2	41
42	Diffusion MRI quantifies early axonal loss in the presence of nerve swelling. Journal of Neuroinflammation, 2017, 14, 78.	7.2	39
43	Reduced Axonopathy and Enhanced Remyelination After Chronic Demyelination in Fibroblast Growth Factor 2<i>(Fgf2)</i>-Null Mice: Differential Detection With Diffusion Tensor Imaging. Journal of Neuropathology and Experimental Neurology, 2011, 70, 157-165.	1.7	36
44	Axonal transport rate decreased at the onset of optic neuritis in EAE mice. NeuroImage, 2014, 100, 244-253.	4.2	35
45	Postmortem delay does not change regional diffusion anisotropy characteristics in mouse spinal cord white matter. NMR in Biomedicine, 2007, 20, 352-359.	2.8	33
46	Diffusion tensor imaging detects axonal injury and demyelination in the spinal cord and cranial nerves of a murine model of globoid cell leukodystrophy. NMR in Biomedicine, 2009, 22, 1100-1106.	2.8	33
47	Optic Nerve Diffusion Tensor Imaging Parameters and Their Correlation With Optic Disc Topography and Disease Severity in Adult Glaucoma Patients and Controls. Journal of Glaucoma, 2014, 23, 513-520.	1.6	33
48	Magnetic Resonance Imaging Biomarker of Axon Loss Reflects Cervical Spondylotic Myelopathy Severity. Spine, 2016, 41, 751-756.	2.0	32
49	Diffusion Basis Spectral Imaging Detects Ongoing Brain Inflammation in Virologically Well-Controlled HIV+ Patients. Journal of Acquired Immune Deficiency Syndromes (1999), 2017, 76, 423-430.	2.1	32
50	Deep learning with diffusion basis spectrum imaging for classification of multiple sclerosis lesions. Annals of Clinical and Translational Neurology, 2020, 7, 695-706.	3.7	32
51	Diffusion Tensor Imaging Detects Retinal Ganglion Cell Axon Damage in the Mouse Model of Optic Nerve Crush. , 2011, 52, 7001.		31
52	Diffusion Assessment of Cortical Changes, Induced by Traumatic Spinal Cord Injury. Brain Sciences, 2017, 7, 21.	2.3	28
53	Impact Speed Does Not Determine Severity of Spinal Cord Injury in Mice with Fixed Impact Displacement. Journal of Neurotrauma, 2009, 26, 1395-1404.	3.4	27
54	Non-invasive quantification of inflammation, axonal and myelin injury in multiple sclerosis. Brain, 2021, 144, 213-223.	7.6	27

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55	A simple, robust hardware device for passive or active respiratory gating in MRI and MRS experiments. <i>Concepts in Magnetic Resonance</i> , 2004, 21B, 40-48.	1.3	26
56	Full Tensor Diffusion Imaging Is Not Required To Assess the White-Matter Integrity in Mouse Contusion Spinal Cord Injury. <i>Journal of Neurotrauma</i> , 2010, 27, 253-262.	3.4	26
57	Concurrent quantification of tissue metabolism and blood flow via ² H/ ³¹ P NMR in vivo. Alterations of muscle blood flow and metabolism during sepsis. <i>Magnetic Resonance in Medicine</i> , 1992, 25, 67-77.	3.0	25
58	Diffusion basis spectrum imaging provides insights into MS pathology. <i>Neurology: Neuroimmunology and Neuroinflammation</i> , 2020, 7, .	6.0	25
59	Noninvasive detection of brainstem and spinal cord axonal degeneration in an amyotrophic lateral sclerosis mouse model. <i>NMR in Biomedicine</i> , 2011, 24, 163-169.	2.8	24
60	Diffusion Basis Spectrum and Diffusion Tensor Imaging Detect Hippocampal Inflammation and Dendritic Injury in a Virus-Induced Mouse Model of Epilepsy. <i>Frontiers in Neuroscience</i> , 2018, 12, 77.	2.8	23
61	Diffusion tensor imaging detects treatment effects of FTY720 in experimental autoimmune encephalomyelitis mice. <i>NMR in Biomedicine</i> , 2013, 26, 1742-1750.	2.8	22
62	Diffusion fMRI detects white-matter dysfunction in mice with acute optic neuritis. <i>Neurobiology of Disease</i> , 2014, 67, 1-8.	4.4	20
63	Noninvasive Quantification of Axonal Loss in the Presence of Tissue Swelling in Traumatic Spinal Cord Injury Mice. <i>Journal of Neurotrauma</i> , 2019, 36, 2308-2315.	3.4	19
64	Improving relative anisotropy measurement using directional correlation of diffusion tensors. <i>Magnetic Resonance in Medicine</i> , 2001, 46, 1088-1092.	3.0	18
65	Diffusion tensor imaging of the mouse brainstem and cervical spinal cord. <i>Nature Protocols</i> , 2013, 8, 409-417.	12.0	18
66	The impact of myelination on axon sparing and locomotor function recovery in spinal cord injury assessed using diffusion tensor imaging. <i>NMR in Biomedicine</i> , 2013, 26, 1484-1495.	2.8	18
67	Histopathological correlation of diffusion basis spectrum imaging metrics of a biopsy-proven inflammatory demyelinating brain lesion: A brief report. <i>Multiple Sclerosis Journal</i> , 2019, 25, 1937-1941.	3.0	18
68	Diffusion Histology Imaging Combining Diffusion Basis Spectrum Imaging (DBSI) and Machine Learning Improves Detection and Classification of Glioblastoma Pathology. <i>Clinical Cancer Research</i> , 2020, 26, 5388-5399.	7.0	18
69	Diffusion basis spectrum imaging for identifying pathologies in MS subtypes. <i>Annals of Clinical and Translational Neurology</i> , 2019, 6, 2323-2327.	3.7	17
70	Impact speed does not determine severity of spinal cord injury in mice with fixed impact displacement. <i>Journal of Neurotrauma</i> , 2009, 26, 110306202455053.	3.4	17
71	Diffusion Tensor Imaging Detected Optic Nerve Injury Correlates with Decreased Compound Action Potentials after Murine Retinal Ischemia. , 2012, 53, 136.		16
72	Neuropathologic Correlates for Diffusion Tensor Imaging in Postinfectious Encephalopathy. <i>Pediatric Neurology</i> , 2011, 44, 389-393.	2.1	15

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73	Manganese-enhanced MRI (MEMRI) via topical loading of Mn ²⁺ significantly impairs mouse visual acuity: a comparison with intravitreal injection. <i>NMR in Biomedicine</i> , 2014, 27, 390-398.	2.8	14
74	Fractional anisotropy to quantify cervical spondylotic myelopathy severity. <i>Journal of Neurosurgical Sciences</i> , 2018, 62, 406-412.	0.6	14
75	Concurrent quantification of tissue metabolism and blood flow via ² H/ ³¹ P NMR in Vivo. 11. validation of the deuterium nmr washout method for measuring organ perfusion. <i>Magnetic Resonance in Medicine</i> , 1992, 25, 56-66.	3.0	13
76	Diffusion tensor imaging of mouse brain stem and cervical spinal cord. <i>Journal of Neuroscience Methods</i> , 2009, 176, 186-191.	2.5	13
77	MRI-based assessment of function and dysfunction in myelinated axons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E10225-E10234.	7.1	13
78	Concurrent quantification of tissue metabolism and blood flow via ² H/ ³¹ P NMR in vivo. i. assessment of absolute metabolite quantification. <i>Magnetic Resonance in Medicine</i> , 1992, 25, 45-55.	3.0	12
79	Characterization of multiple sclerosis neuroinflammation and neurodegeneration with relaxation and diffusion basis spectrum imaging. <i>Multiple Sclerosis Journal</i> , 2022, 28, 418-428.	3.0	11
80	Phase-aligned multiple spin-echo averaging: a simple way to improve signal-to-noise ratio of in vivo mouse spinal cord diffusion tensor image. <i>Magnetic Resonance Imaging</i> , 2014, 32, 1335-1343.	1.8	10
81	The impact of edema and fiber crossing on diffusion MRI metrics assessed in an ex vivo nerve phantom: Multi-tensor model vs. diffusion orientation distribution function. <i>NMR in Biomedicine</i> , 2021, 34, e4414.	2.8	10
82	Signal-to-noise ratio-enhancing joint reconstruction for improved diffusion imaging of mouse spinal cord white matter injury. <i>Magnetic Resonance in Medicine</i> , 2016, 75, 852-858.	3.0	9
83	Diffusion histology imaging differentiates distinct pediatric brain tumor histology. <i>Scientific Reports</i> , 2021, 11, 4749.	3.3	9
84	Nucleus accumbens microstructure mediates the relationship between obesity and eating behavior in adults. <i>Obesity</i> , 2021, 29, 1328-1337.	3.0	8
85	Incorporating non-linear alignment and multi-compartmental modeling for improved human optic nerve diffusion imaging. <i>NeuroImage</i> , 2019, 196, 102-113.	4.2	6
86	Diffusion basis spectrum imaging measures anti-inflammatory and neuroprotective effects of fingolimod on murine optic neuritis. <i>NeuroImage: Clinical</i> , 2021, 31, 102732.	2.7	4
87	Diffusion Basis Spectrum Imaging Detects Axonal Loss After Transient Dexamethasone Treatment in Optic Neuritis Mice. <i>Frontiers in Neuroscience</i> , 2020, 14, 592063.	2.8	3
88	Analysis of combined clinical and diffusion basis spectrum imaging metrics to predict the outcome of chronic cervical spondylotic myelopathy following cervical decompression surgery. <i>Journal of Neurosurgery: Spine</i> , 2022, 37, 588-598.	1.7	2
89	Directional diffusivity as a magnetic resonance (MR) biomarker in demyelinating disease. <i>Proceedings of SPIE</i> , 2007, , .	0.8	1