

Phillip Zhe Sun

List of Publications by Year in descending order

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89
papers

4,298
citations

100601

38
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124990

64
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89
all docs

89
docs citations

89
times ranked

2348
citing authors

#	ARTICLE	IF	CITATIONS
1	Detection of the Ischemic Penumbra Using pH-Weighted MRI. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2007, 27, 1129-1136.	2.4	296
2	Quantifying exchange rates in chemical exchange saturation transfer agents using the saturation time and saturation power dependencies of the magnetization transfer effect on the magnetic resonance imaging signal (QUEST and QUESP): Ph calibration for poly-L-lysine and a starburst dendrimer. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 836-847.	1.9	288
3	Quantitative description of proton exchange processes between water and endogenous and exogenous agents for WEX, CEST, and APT experiments. <i>Magnetic Resonance in Medicine</i> , 2004, 51, 945-952.	1.9	258
4	Correction for artifacts induced by B_0 and B_1 field inhomogeneities in pH-sensitive chemical exchange saturation transfer (CEST) imaging. <i>Magnetic Resonance in Medicine</i> , 2007, 58, 1207-1215.	1.9	156
5	A General MRI-CEST Ratiometric Approach for pH Imaging: Demonstration of <i>in Vivo</i> pH Mapping with lobitridol. <i>Journal of the American Chemical Society</i> , 2014, 136, 14333-14336.	6.6	155
6	Optimization of the irradiation power in chemical exchange dependent saturation transfer experiments. <i>Journal of Magnetic Resonance</i> , 2005, 175, 193-200.	1.2	149
7	Investigation of optimizing and translating pH-sensitive pulsed chemical exchange saturation transfer (CEST) imaging to a 3T clinical scanner. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 834-841.	1.9	136
8	Imaging pH using the chemical exchange saturation transfer (CEST) MRI: Correction of concomitant RF irradiation effects to quantify CEST MRI for chemical exchange rate and pH. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 390-397.	1.9	131
9	Association between pH-Weighted Endogenous Amide Proton Chemical Exchange Saturation Transfer MRI and Tissue Lactic Acidosis during Acute Ischemic Stroke. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2011, 31, 1743-1750.	2.4	129
10	Simplified quantitative description of amide proton transfer (APT) imaging during acute ischemia. <i>Magnetic Resonance in Medicine</i> , 2007, 57, 405-410.	1.9	122
11	Imaging acute ischemic tissue acidosis with pH-sensitive endogenous amide proton transfer (APT) MRI—Correction of tissue relaxation and concomitant RF irradiation effects toward mapping quantitative cerebral tissue pH. <i>NeuroImage</i> , 2012, 60, 1-6.	2.1	105
12	A review of optimization and quantification techniques for chemical exchange saturation transfer MRI toward sensitive <i>in vivo</i> imaging. <i>Contrast Media and Molecular Imaging</i> , 2015, 10, 163-178.	0.4	95
13	Stratification of Heterogeneous Diffusion MRI Ischemic Lesion With Kurtosis Imaging. <i>Stroke</i> , 2012, 43, 2252-2254.	1.0	94
14	Amide proton transfer imaging of 9L gliosarcoma and human glioblastoma xenografts. <i>NMR in Biomedicine</i> , 2008, 21, 489-497.	1.6	92
15	Relaxation-compensated fast multislice amide proton transfer (APT) imaging of acute ischemic stroke. <i>Magnetic Resonance in Medicine</i> , 2008, 59, 1175-1182.	1.9	89
16	Review and consensus recommendations on clinical APT-weighted imaging approaches at 3T: Application to brain tumors. <i>Magnetic Resonance in Medicine</i> , 2022, 88, 546-574.	1.9	79
17	Simulation and optimization of pulsed radio frequency irradiation scheme for chemical exchange saturation transfer (CEST) MRI—demonstration of pH-weighted pulsed amide proton CEST MRI in an animal model of acute cerebral ischemia. <i>Magnetic Resonance in Medicine</i> , 2011, 66, 1042-1048.	1.9	75
18	Early Experience of Translating pH-Weighted MRI to Image Human Subjects at 3 Tesla. <i>Stroke</i> , 2010, 41, S147-51.	1.0	73

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19	Fast multislice pH-weighted chemical exchange saturation transfer (CEST) MRI with Unevenly segmented RF irradiation. <i>Magnetic Resonance in Medicine</i> , 2011, 65, 588-594.	1.9	73
20	pH-sensitive MRI demarcates graded tissue acidification during acute stroke • pH specificity enhancement with magnetization transfer and relaxation-normalized amide proton transfer (APT) MRI. <i>NeuroImage</i> , 2016, 141, 242-249.	2.1	65
21	Quantitative chemical exchange saturation transfer (CEST) MRI of glioma using Image Downsampling Expedited Adaptive Least-squares (IDEAL) fitting. <i>Scientific Reports</i> , 2017, 7, 84.	1.6	65
22	Magnetic resonance in porous media: Recent progress. <i>Journal of Chemical Physics</i> , 2008, 128, 052212.	1.2	64
23	Simultaneous determination of labile proton concentration and exchange rate utilizing optimal RF power: Radio frequency power (RFP) dependence of chemical exchange saturation transfer (CEST) MRI. <i>Journal of Magnetic Resonance</i> , 2010, 202, 155-161.	1.2	60
24	A generalized ratiometric chemical exchange saturation transfer (CEST) MRI approach for mapping renal pH using iopamidol. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 1553-1558.	1.9	57
25	Simplified quantification of labile proton concentration-weighted chemical exchange rate (k_{ws}) with RF saturation time dependent ratiometric analysis (QUESTRA): Normalization of relaxation and RF irradiation spillover effects for improved quantitative chemical exchange saturation transfer (CEST) MRI. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 936-942.	1.9	55
26	Quantification of iopamidol multi-site chemical exchange properties for ratiometric chemical exchange saturation transfer (CEST) imaging of pH. <i>Physics in Medicine and Biology</i> , 2014, 59, 4493-4504.	1.6	55
27	Quantitative chemical exchange saturation transfer (qCEST) MRI • RF spillover effect-corrected omega plot for simultaneous determination of labile proton fraction ratio and exchange rate. <i>Contrast Media and Molecular Imaging</i> , 2014, 9, 268-275.	0.4	55
28	Simplified and scalable numerical solution for describing multi-pool chemical exchange saturation transfer (CEST) MRI contrast. <i>Journal of Magnetic Resonance</i> , 2010, 205, 235-241.	1.2	54
29	Quantitative description of radiofrequency (RF) power-based ratiometric chemical exchange saturation transfer (CEST) pH imaging. <i>NMR in Biomedicine</i> , 2015, 28, 555-565.	1.6	53
30	Diffusion Kurtosis Imaging of Acute Infarction: Comparison with Routine Diffusion and Follow-up MR Imaging. <i>Radiology</i> , 2018, 287, 651-657.	3.6	49
31	Suppression of lipid artifacts in amide proton transfer imaging. <i>Magnetic Resonance in Medicine</i> , 2005, 54, 222-225.	1.9	48
32	Evaluation of the dependence of CEST-EPI measurement on repetition time, RF irradiation duty cycle and imaging flip angle for enhanced pH sensitivity. <i>Physics in Medicine and Biology</i> , 2013, 58, N229-N240.	1.6	48
33	Quantitative chemical exchange saturation transfer (qCEST) MRI • omega plot analysis of RF-spillover-corrected inverse CEST ratio asymmetry for simultaneous determination of labile proton ratio and exchange rate. <i>NMR in Biomedicine</i> , 2015, 28, 376-383.	1.6	48
34	Mapping tissue pH in an experimental model of acute stroke • Determination of graded regional tissue pH changes with non-invasive quantitative amide proton transfer MRI. <i>NeuroImage</i> , 2019, 191, 610-617.	2.1	47
35	Determination of multipool contributions to endogenous amide proton transfer effects in global ischemia with high spectral resolution in vivo chemical exchange saturation transfer MRI. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 645-652.	1.9	45
36	Improved measurement of labile proton concentration-weighted chemical exchange rate (k_{ws}) with experimental factor-compensated and T_1 -normalized quantitative chemical exchange saturation transfer (CEST) MRI. <i>Contrast Media and Molecular Imaging</i> , 2012, 7, 384-389.	0.4	44

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37	pH-sensitive amide proton transfer effect dominates the magnetization transfer asymmetry contrast during acute ischemia—quantification of multipool contribution to in vivo CEST MRI. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 1602-1608.	1.9	43
38	In Vitro and In Vivo Assessment of Nonionic Iodinated Radiographic Molecules as Chemical Exchange Saturation Transfer Magnetic Resonance Imaging Tumor Perfusion Agents. <i>Investigative Radiology</i> , 2016, 51, 155-162.	3.5	41
39	Validation of fast diffusion kurtosis MRI for imaging acute ischemia in a rodent model of stroke. <i>NMR in Biomedicine</i> , 2014, 27, 1413-1418.	1.6	37
40	A method for accurate pH mapping with chemical exchange saturation transfer (CEST) MRI. <i>Contrast Media and Molecular Imaging</i> , 2016, 11, 195-202.	0.4	35
41	A theoretical analysis of chemical exchange saturation transfer echo planar imaging (CEST-EPI) steady state solution and the CEST sensitivity efficiency-based optimization approach. <i>Contrast Media and Molecular Imaging</i> , 2016, 11, 415-423.	0.4	33
42	Pulse-based CEST: Towards multi-site multi-vendor compatibility and reproducibility of CEST experiments using an open-source sequence standard. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 1845-1858.	1.9	33
43	pH imaging reveals worsened tissue acidification in diffusion kurtosis lesion than the kurtosis/diffusion lesion mismatch in an animal model of acute stroke. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017, 37, 3325-3333.	2.4	32
44	Quasi-steady-state CEST (QUASS CEST) solution improves the accuracy of CEST quantification: QUASS CEST MRI-based omega plot analysis. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 765-776.	1.9	28
45	Simultaneous experimental determination of labile proton fraction ratio and exchange rate with irradiation radio frequency power-dependent quantitative CEST MRI analysis. <i>Contrast Media and Molecular Imaging</i> , 2013, 8, 246-251.	0.4	27
46	Quasi-steady state chemical exchange saturation transfer (QUASS CEST) analysis—correction of the finite relaxation delay and saturation time for robust CEST measurement. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 3281-3289.	1.9	27
47	Preliminary demonstration of in vivo quasi-steady-state CEST postprocessing—Correction of saturation time and relaxation delay for robust quantification of tumor MT and APT effects. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 943-953.	1.9	25
48	JOURNAL CLUB: Evaluation of Diffusion Kurtosis Imaging of Stroke Lesion With Hemodynamic and Metabolic MRI in a Rodent Model of Acute Stroke. <i>American Journal of Roentgenology</i> , 2018, 210, 720-727.	1.0	24
49	Fast and equilibrium CEST imaging of brain tumor patients at 3T. <i>NeuroImage: Clinical</i> , 2022, 33, 102890.	1.4	21
50	Demonstration of fast multi-slice quasi-steady-state chemical exchange saturation transfer (QUASS) T ₁ mapping. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 1845-1858.	1.9	20
51	Comparison of image sensitivity between conventional tensor-based and fast diffusion kurtosis imaging protocols in a rodent model of acute ischemic stroke. <i>NMR in Biomedicine</i> , 2016, 29, 625-630.	1.6	19
52	Fast simulation and optimization of pulse-train chemical exchange saturation transfer (CEST) imaging. <i>Physics in Medicine and Biology</i> , 2015, 60, 4719-4730.	1.6	18
53	Direct saturation-corrected chemical exchange saturation transfer MRI of glioma: Simplified decoupling of amide proton transfer and nuclear overhauser effect contrasts. <i>Magnetic Resonance in Medicine</i> , 2017, 78, 2307-2314.	1.9	18
54	Investigating the origin of pH-sensitive magnetization transfer ratio asymmetry MRI contrast during the acute stroke: Correction of T ₁ change reveals the dominant amide proton transfer MRI signal. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 2702-2712.	1.9	18

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55	Refined Ischemic Penumbra Imaging with Tissue pH and Diffusion Kurtosis Magnetic Resonance Imaging. <i>Translational Stroke Research</i> , 2021, 12, 742-753.	2.3	17
56	Chemokine receptor 4 targeted protein MRI contrast agent for early detection of liver metastases. <i>Science Advances</i> , 2020, 6, eaav7504.	4.7	17
57	Fast correction of B_0 field inhomogeneity for pH-specific magnetization transfer and relaxation normalized amide proton transfer imaging of acute ischemic stroke without Z -spectrum. <i>Magnetic Resonance in Medicine</i> , 2020, 83, 1688-1697.	1.9	16
58	Development of fast multi-slice apparent T_1 mapping for improved arterial spin labeling MRI measurement of cerebral blood flow. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 1571-1580.	1.9	16
59	Improved diffusion measurement in heterogeneous systems using the magic asymmetric gradient stimulated echo (MAGSTE) technique. <i>Journal of Magnetic Resonance</i> , 2007, 187, 177-183.	1.2	15
60	Quasi-steady-state chemical exchange saturation transfer (QUASS CEST) MRI analysis enables T_1 normalized CEST quantification – Insight into T_1 contribution to CEST measurement. <i>Journal of Magnetic Resonance</i> , 2021, 329, 107022.	1.2	15
61	Fast radio-frequency enforced steady state (FRESS) spin echo MRI for quantitative T_2 mapping: minimizing the apparent repetition time (TR) dependence for fast T_2 measurement. <i>NMR in Biomedicine</i> , 2012, 25, 189-194.	1.6	14
62	Sensitivity-enhanced chemical exchange saturation transfer (CEST) MRI with least squares optimization of Carr Purcell Meiboom Gill multi-echo echo planar imaging. <i>Contrast Media and Molecular Imaging</i> , 2014, 9, 177-181.	0.4	14
63	Brain pH Imaging and its Applications. <i>Neuroscience</i> , 2021, 474, 51-62.	1.1	13
64	Detection of tissue pH with quantitative chemical exchange saturation transfer magnetic resonance imaging. <i>NMR in Biomedicine</i> , 2023, 36, e4711.	1.6	13
65	Fast diffusion kurtosis imaging (DKI) with Inherent CORrelation-based Normalization (ICON) enhances automatic segmentation of heterogeneous diffusion MRI lesion in acute stroke. <i>NMR in Biomedicine</i> , 2016, 29, 1670-1677.	1.6	12
66	Progress toward quantitative in vivo chemical exchange saturation transfer (CEST) MRI. <i>Israel Journal of Chemistry</i> , 2017, 57, 809-824.	1.0	12
67	Direct radiofrequency saturation corrected amide proton transfer tumor MRI at 3T. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 2710-2719.	1.9	11
68	Tissue Characterization with Quantitative High-Resolution Magic Angle Spinning Chemical Exchange Saturation Transfer Z-Spectroscopy. <i>Analytical Chemistry</i> , 2016, 88, 10379-10383.	3.2	10
69	Within-subject test-retest reliability of the atlas-based cortical volume measurement in the rat brain: A voxel-based morphometry study. <i>Journal of Neuroscience Methods</i> , 2018, 307, 46-52.	1.3	10
70	In vivo microscopic diffusional kurtosis imaging with symmetrized double diffusion encoding EPI. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 533-541.	1.9	10
71	Demonstration of magnetization transfer and relaxation normalized pH-specific pulse-amide proton transfer imaging in an animal model of acute stroke. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 1526-1533.	1.9	9
72	Consistent depiction of the acidic ischemic lesion with APT MRI – Dual RF power evaluation of pH-sensitive image in acute stroke. <i>Magnetic Resonance in Medicine</i> , 2022, 87, 850-858.	1.9	9

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73	Preliminary evaluation of dynamic glucose enhanced MRI of the human placenta during glucose tolerance test. <i>Quantitative Imaging in Medicine and Surgery</i> , 2019, 9, 1619-1627.	1.1	8
74	Demonstration of fast and equilibrium human muscle creatine CEST imaging at $<3\text{ T}>$. <i>Magnetic Resonance in Medicine</i> , 2022, 88, 322-331.	1.9	8
75	Development of intravoxel inhomogeneity correction for chemical exchange saturation transfer spectral imaging: a high-resolution field map-based deconvolution algorithm for magnetic field inhomogeneity correction. <i>Magnetic Resonance in Medicine</i> , 2020, 83, 1348-1355.	1.9	7
76	Preliminary evaluation of accelerated microscopic diffusional kurtosis imaging ($\frac{1}{4}$ DKI) in a rodent model of epilepsy. <i>Magnetic Resonance Imaging</i> , 2019, 56, 90-95.	1.0	5
77	Alkaline brain pH shift in rodent lithium-pilocarpine model of epilepsy with chronic seizures. <i>Brain Research</i> , 2021, 1758, 147345.	1.1	5
78	Magnetic Resonance Characterization of Ischemic Tissue Metabolism. <i>Open Neuroimaging Journal</i> , 2011, 5, 66-73.	0.2	5
79	Improved MR fingerprinting for relaxation measurement in the presence of semisolid magnetization transfer. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 727-737.	1.9	4
80	Analysis Protocol for the Quantification of Renal pH Using Chemical Exchange Saturation Transfer (CEST) MRI. <i>Methods in Molecular Biology</i> , 2021, 2216, 667-688.	0.4	4
81	Fleeting footprints: finding MRI biomarkers of transient ischaemic attack. <i>Brain</i> , 2017, 140, 8-10.	3.7	3
82	Renal pH Imaging Using Chemical Exchange Saturation Transfer (CEST) MRI: Basic Concept. <i>Methods in Molecular Biology</i> , 2021, 2216, 241-256.	0.4	3
83	Metabolic Magnetic Resonance Imaging in Neuroimaging: Magnetic Resonance Spectroscopy, Sodium Magnetic Resonance Imaging and Chemical Exchange Saturation Transfer. <i>Seminars in Ultrasound, CT and MRI</i> , 2021, 42, 452-462.	0.7	2
84	Renal pH Mapping Using Chemical Exchange Saturation Transfer (CEST) MRI: Experimental Protocol. <i>Methods in Molecular Biology</i> , 2021, 2216, 455-471.	0.4	2
85	Chemical Exchange Mapping. <i>Advances in Magnetic Resonance Technology and Applications</i> , 2020, 1, 857-883.	0.0	1
86	Low-density lipoprotein receptor-related protein-1 (LRP1) targeting contrast-enhanced MRI as a novel strategy for epilepsy imaging. <i>EBioMedicine</i> , 2021, 64, 103212.	2.7	1
87	Tissue perfusion of the kurtosis/diffusion mismatch differs from the central core and peripheral regions in acute cerebral infarction patients. <i>Acta Radiologica</i> , 2023, 64, 1155-1165.	0.5	1
88	Examining fMRI time-series entropy as a marker for brain E/I balance with pharmacological neuromodulation in a non-human primate translational model. <i>Neuroscience Letters</i> , 2020, 728, 134984.	1.0	0
89	Fast diffusion kurtosis imaging in acute ischemic stroke shows mean kurtosis-diffusivity mismatch. <i>Journal of Neuroimaging</i> , 2022, , .	1.0	0