

# Wei Chen

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6992806/publications.pdf>

Version: 2024-02-01

100  
papers

5,504  
citations

76196

40  
h-index

85405

71  
g-index

102  
all docs

102  
docs citations

102  
times ranked

4587  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative and simultaneous measurement of oxygen consumption rates in rat brain and skeletal muscle using $^{17}\text{O}$ MRS imaging at 16.4T. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 2232-2246.	1.9	7
2	Machine Learning-Enabled High-Resolution Dynamic Deuterium MR Spectroscopic Imaging. <i>IEEE Transactions on Medical Imaging</i> , 2021, 40, 3879-3890.	5.4	11
3	Quantitative Assessment of Occipital Metabolic and Energetic Changes in Parkinson's Patients, Using In Vivo $^{31}\text{P}$ MRS-Based Metabolic Imaging at 7T. <i>Metabolites</i> , 2021, 11, 145.	1.3	11
4	Noninvasive assessment of myocardial energy metabolism and dynamics using in vivo deuterium MRS imaging. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 2899-2909.	1.9	13
5	Tunable Ultrahigh Dielectric Constant (tuHDC) Ceramic Technique to Largely Improve RF Coil Efficiency and MR Imaging Performance. <i>IEEE Transactions on Medical Imaging</i> , 2020, 39, 3187-3197.	5.4	7
6	Pharmacokinetics, Safety, and Tolerability of Orally Administered Ursodeoxycholic Acid in Patients With Parkinson's Disease—A Pilot Study. <i>Journal of Clinical Pharmacology</i> , 2020, 60, 744-750.	1.0	25
7	Quantitative analysis of spatial averaging effect on chemical shift imaging SNR and noise coherence with $k$ -space sampling schemes. <i>Magnetic Resonance Imaging</i> , 2019, 60, 85-92.	1.0	3
8	Advanced Multinuclear Magnetic Resonance Spectroscopy (MRS) Imaging Approaches for Studying Brain Metabolism, Neuroenergetics, and Function. , 2019, , 463-491.		1
9	High-resolution imaging of distinct human corpus callosum microstructure and topography of structural connectivity to cortices at high field. <i>Brain Structure and Function</i> , 2019, 224, 949-960.	1.2	11
10	Functional energetic responses and individual variance of the human brain revealed by quantitative imaging of adenosine triphosphate production rates. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2018, 38, 959-972.	2.4	17
11	Rapid and simultaneous measurement of phosphorus metabolite pool size ratio and reaction kinetics of enzymes in vivo. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 47, 210-221.	1.9	7
12	Interleaved $^{31}\text{P}$ MRS imaging of human frontal and occipital lobes using dual RF coils in combination with single-channel transmitter-receiver and dynamic $B_0$ shimming. <i>NMR in Biomedicine</i> , 2018, 31, e3842.	1.6	4
13	Improvements of transmit efficiency and receive sensitivity with ultrahigh dielectric constant (uHDC) ceramics at 1.5 T and 3 T. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 2842-2851.	1.9	24
14	In vivo X-Nuclear MRS Imaging Methods for Quantitative Assessment of Neuroenergetic Biomarkers in Studying Brain Function and Aging. <i>Frontiers in Aging Neuroscience</i> , 2018, 10, 394.	1.7	11
15	Quantitative imaging of brain energy metabolisms and neuroenergetics using in vivo X-nuclear $^2\text{H}$ , $^{17}\text{O}$ and $^{31}\text{P}$ MRS at ultra-high field. <i>Journal of Magnetic Resonance</i> , 2018, 292, 155-170.	1.2	27
16	Quantitative assessment of brain glucose metabolic rates using in vivo deuterium magnetic resonance spectroscopy. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017, 37, 3518-3530.	2.4	99
17	A comparison study between the saturation-recovery- $T_1$ and CASL MRI methods for quantitative CBF imaging. <i>Magnetic Resonance Imaging</i> , 2017, 37, 179-186.	1.0	1
18	Large improvement of RF transmission efficiency and reception sensitivity for human in vivo $^{31}\text{P}$ MRS imaging using ultrahigh dielectric constant materials at 7 T. <i>Magnetic Resonance Imaging</i> , 2017, 42, 158-163.	1.0	12

#	ARTICLE	IF	CITATIONS
19	A proof-of-concept study for developing integrated two-photon microscopic and magnetic resonance imaging modality at ultrahigh field of 16.4 tesla. Scientific Reports, 2017, 7, 2733.	1.6	18
20	In vivo <sup>17</sup> O MRS imaging – Quantitative assessment of regional oxygen consumption and perfusion rates in living brain. Analytical Biochemistry, 2017, 529, 171-178.	1.1	21
21	<i>In vivo</i> <sup>31</sup> P MRS assessment of intracellular NAD metabolites and NAD <sup>+</sup> /NADH redox state in human brain at 4 T. NMR in Biomedicine, 2016, 29, 1010-1017.	1.6	33
22	<sup>17</sup> O relaxation times in the rat brain at 16.4 tesla. Magnetic Resonance in Medicine, 2016, 75, 1886-1893.	1.9	6
23	Focal middle cerebral artery ischemia in rats via a transfemoral approach using a custom designed microwire. Journal of NeuroInterventional Surgery, 2016, 8, 608-614.	2.0	5
24	Dynamic correlations between hemodynamic, metabolic, and neuronal responses to acute whole-brain ischemia. NMR in Biomedicine, 2015, 28, 1357-1365.	1.6	15
25	In vivo NAD assay reveals the intracellular NAD contents and redox state in healthy human brain and their age dependences. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2876-2881.	3.3	337
26	Study of Brain Bioenergetics and Function Using In Vivo MRS. Biological Magnetic Resonance, 2015, , 819-864.	0.4	1
27	Simultaneous Imaging of CBF Change and BOLD with Saturation-Recovery-T1 Method. PLoS ONE, 2015, 10, e0122563.	1.1	3
28	Field dependence study of <i>in vivo</i> brain <sup>31</sup> P MRS up to 16.4 T. NMR in Biomedicine, 2014, 27, 1135-1141.	1.6	36
29	Intracellular redox state revealed by <i>in vivo</i> <sup>31</sup> P MRS measurement of NAD <sup>+</sup> and NADH contents in brains. Magnetic Resonance in Medicine, 2014, 71, 1959-1972.	1.9	54
30	In vitro and in vivo studies of <sup>17</sup> O NMR sensitivity at 9.4 and 16.4 T. Magnetic Resonance in Medicine, 2013, 69, 1523-1527.	1.9	26
31	The Change of Functional Connectivity Specificity in Rats Under Various Anesthesia Levels and its Neural Origin. Brain Topography, 2013, 26, 363-377.	0.8	99
32	In vivo measurement of CBF using <sup>17</sup> O NMR signal of metabolically produced H <sub>2</sub> <sup>17</sup> O as a perfusion tracer. Magnetic Resonance in Medicine, 2013, 70, 309-314.	1.9	16
33	Simultaneous and noninvasive imaging of cerebral oxygen metabolic rate, blood flow and oxygen extraction fraction in stroke mice. NeuroImage, 2013, 64, 437-447.	2.1	54
34	Image homogenization using pre-emphasis method for high field MRI. Quantitative Imaging in Medicine and Surgery, 2013, 3, 217-23.	1.1	8
35	Simultaneous Measurement of Glucose Blood-Brain Transport Constants and Metabolic Rate in Rat Brain using <i>in-vivo</i> <sup>1</sup> H MRS. Journal of Cerebral Blood Flow and Metabolism, 2012, 32, 1778-1787.	2.4	11
36	Large Enhancement of Perfusion Contribution on fMRI Signal. Journal of Cerebral Blood Flow and Metabolism, 2012, 32, 907-918.	2.4	5

#	ARTICLE	IF	CITATIONS
37	Quantitative imaging of energy expenditure in human brain. <i>NeuroImage</i> , 2012, 60, 2107-2117.	2.1	206
38	Relayed magnetization transfer from nuclear Overhauser effect and chemical exchange observed by in vivo <sup>31</sup> P MRS in rat brain. <i>Magnetic Resonance Imaging</i> , 2012, 30, 716-721.	1.0	6
39	Baseline BOLD correlation predicts individuals' stimulus-evoked BOLD responses. <i>NeuroImage</i> , 2011, 54, 2278-2286.	2.1	41
40	In vivo oxygen-17 NMR for imaging brain oxygen metabolism at high field. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2011, 59, 319-335.	3.9	44
41	ATP Production Rate via Creatine Kinase or ATP Synthase In Vivo. <i>Circulation Research</i> , 2011, 108, 653-663.	2.0	48
42	Neural Origin of Spontaneous Hemodynamic Fluctuations in Rats under Burst-Suppression Anesthesia Condition. <i>Cerebral Cortex</i> , 2011, 21, 374-384.	1.6	157
43	Functional MRI mapping neuronal inhibition and excitation at columnar level in human visual cortex. <i>Experimental Brain Research</i> , 2010, 204, 515-524.	0.7	14
44	High-resolution fMRI mapping of ocular dominance layers in cat lateral geniculate nucleus. <i>NeuroImage</i> , 2010, 50, 1456-1463.	2.1	19
45	Functional MRI study of brain function under resting and activated states. , 2009, 2009, 4061-3.		3
46	Novel strategy for measuring creatine kinase reaction rate in the in vivo heart. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2009, 297, H1010-H1019.	1.5	17
47	In vivo proton MRS to quantify anesthetic effects of pentobarbital on cerebral metabolism and brain activity in rat. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 1385-1393.	1.9	32
48	New Insights into Central Roles of Cerebral Oxygen Metabolism in the Resting and Stimulus-Evoked Brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2009, 29, 10-18.	2.4	51
49	Brain imaging developments based on in vivo MRS. , 2009, 2009, 50-2.		0
50	Advanced In Vivo Heteronuclear MRS Approaches for Studying Brain Bioenergetics Driven by Mitochondria. <i>Methods in Molecular Biology</i> , 2009, 489, 317-357.	0.4	37
51	New Opportunities for High-Field In Vivo MRS in Studying Brain Bioenergetics and Function. <i>Brain Imaging and Behavior</i> , 2008, 2, 232-241.	1.1	1
52	<sup>1</sup> H MRS in the rat brain under pentobarbital anesthesia: Accurate quantification of in vivo spectra in the presence of propylene glycol. <i>Magnetic Resonance in Medicine</i> , 2008, 59, 631-635.	1.9	6
53	Noninvasive Study of Neurovascular Coupling during Graded Neuronal Suppression. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2008, 28, 280-290.	2.4	31
54	An fMRI study of neural interaction in large-scale cortico-thalamic visual network. <i>NeuroImage</i> , 2008, 42, 1110-1117.	2.1	8

#	ARTICLE	IF	CITATIONS
55	Investigating the source of BOLD nonlinearity in human visual cortex in response to paired visual stimuli. <i>NeuroImage</i> , 2008, 43, 204-212.	2.1	53
56	Tightly coupled brain activity and cerebral ATP metabolic rate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 6409-6414.	3.3	173
57	Advanced Neuroimaging Approaches of Magnetic Resonance for Brain Function Research. , 2007, , .		0
58	Efficient in vivo <sup>31</sup> P magnetization transfer approach for noninvasively determining multiple kinetic parameters and metabolic fluxes of ATP metabolism in the human brain. <i>Magnetic Resonance in Medicine</i> , 2007, 57, 103-114.	1.9	113
59	Noninvasive and Three-Dimensional Imaging of CMRO <sub>2</sub> in Rats at 9.4 T: Reproducibility Test and Normothermia/Hypothermia Comparison Study. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2007, 27, 1225-1234.	2.4	54
60	In vivo <sup>31</sup> P MRS of human brain at high/ultrahigh fields: a quantitative comparison of NMR detection sensitivity and spectral resolution between 4 T and 7 T. <i>Magnetic Resonance Imaging</i> , 2006, 24, 1281-1286.	1.0	71
61	A dynamic fMRI study of illusory double-flash effect on human visual cortex. <i>Experimental Brain Research</i> , 2006, 172, 57-66.	0.7	18
62	Manipulation of image intensity distribution at 7.0 T: Passive RF shimming and focusing with dielectric materials. <i>Journal of Magnetic Resonance Imaging</i> , 2006, 24, 197-202.	1.9	127
63	Probing Fast Neuronal Interaction using fMRI. , 2006, 2006, 13-6.		0
64	High Magnetic Fields for Imaging Cerebral Morphology, Function, and Biochemistry. <i>Biological Magnetic Resonance</i> , 2006, , 285-342.	0.4	8
65	An Inverted-Microstrip Resonator for Human Head Proton MR Imaging at 7 Tesla. <i>IEEE Transactions on Biomedical Engineering</i> , 2005, 52, 495-504.	2.5	87
66	In vivo <sup>17</sup> O NMR approaches for brain study at high field. <i>NMR in Biomedicine</i> , 2005, 18, 83-103.	1.6	108
67	Dynamic study of cerebral bioenergetics and brain function using in vivo multinuclear MRS approaches. <i>Concepts in Magnetic Resonance Part A: Bridging Education and Research</i> , 2005, 27A, 84-121.	0.2	15
68	Transmit and receive transmission line arrays for 7 Tesla parallel imaging. <i>Magnetic Resonance in Medicine</i> , 2005, 53, 434-445.	1.9	374
69	Higher-order harmonic transmission-line RF coil design for MR applications. <i>Magnetic Resonance in Medicine</i> , 2005, 53, 1234-1239.	1.9	54
70	Influence of gradient acoustic noise on fMRI response in the human visual cortex. <i>Magnetic Resonance in Medicine</i> , 2005, 54, 258-263.	1.9	27
71	Imaging Cerebral Metabolic Rate of Oxygen Consumption (CMRO <sub>2</sub> ) Using <sup>17</sup> O NMR Approach at Ultrahigh Field. , 2005, , 125-146.		2
72	Study of Brain Function and Bioenergetics using fMRI and In Vivo MRS at High Fields. , 2005, 2005, 4174-7.		0

#	ARTICLE	IF	CITATIONS
73	Simplified Methods for Calculating Cerebral Metabolic Rate of Oxygen Based on $^{17}\text{O}$ Magnetic Resonance Spectroscopic Imaging Measurement during a Short $^{17}\text{O}_2$ Inhalation. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2004, 24, 840-848.	2.4	58
74	Phantom design method for high-field MRI human systems. <i>Magnetic Resonance in Medicine</i> , 2004, 52, 1016-1020.	1.9	31
75	Ultrahigh field magnetic resonance imaging and spectroscopy. <i>Magnetic Resonance Imaging</i> , 2003, 21, 1263-1281.	1.0	218
76	Measurement of arterial input function of $^{17}\text{O}$ water tracer in rat carotid artery by using a region-defined (REDE) implanted vascular RF coil. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2003, 16, 77-85.	1.1	15
77	In vivo $^{31}\text{P}$ magnetic resonance spectroscopy of human brain at 7 T: An initial experience. <i>Magnetic Resonance in Medicine</i> , 2003, 49, 199-205.	1.9	157
78	Changes in the proton $T_2$ relaxation times of cerebral water and metabolites during forebrain ischemia in rat at 9.4 T. <i>Magnetic Resonance in Medicine</i> , 2003, 49, 979-984.	1.9	31
79	$^{31}\text{P}$ - $^{31}\text{P}$ coupling and ATP $T_2$ measurement in human brain at 7T. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 656-658.	1.9	2
80	A microstrip transmission line volume coil for human head MR imaging at 4T. <i>Journal of Magnetic Resonance</i> , 2003, 161, 242-251.	1.2	98
81	Measurement of unidirectional Pi to ATP flux in human visual cortex at 7 T by using in vivo $^{31}\text{P}$ magnetic resonance spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 14409-14414.	3.3	98
82	Development of $^{17}\text{O}$ NMR approach for fast imaging of cerebral metabolic rate of oxygen in rat brain at high field. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 13194-13199.	3.3	131
83	In vivo $^1\text{H}$ $T_2$ measurement in the human occipital lobe at 4T and 7T by Carr-Purcell MRI: Detection of microscopic susceptibility contrast. <i>Magnetic Resonance in Medicine</i> , 2002, 47, 742-750.	1.9	109
84	Proton $T_2$ relaxation study of water, N-acetylaspartate, and creatine in human brain using Hahn and Carr-Purcell spin echoes at 4T and 7T. <i>Magnetic Resonance in Medicine</i> , 2002, 47, 629-633.	1.9	191
85	Analysis of wave behavior in lossy dielectric samples at high field. <i>Magnetic Resonance in Medicine</i> , 2002, 47, 982-989.	1.9	225
86	$^{17}\text{O}$ relaxation time and NMR sensitivity of cerebral water and their field dependence. <i>Magnetic Resonance in Medicine</i> , 2001, 45, 543-549.	1.9	82
87	Microstrip RF surface coil design for extremely high-field MRI and spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2001, 46, 443-450.	1.9	186
88	Observed BOLD effects on cerebral metabolite resonances in human visual cortex during visual stimulation: A functional $^1\text{H}$ MRS study at 4 T. <i>Magnetic Resonance in Medicine</i> , 2001, 46, 841-847.	1.9	90
89	Correlation of activation sizes between lateral geniculate nucleus and primary visual cortex in humans. <i>Magnetic Resonance in Medicine</i> , 2001, 45, 202-205.	1.9	21
90	Study of tricarboxylic acid cycle flux changes in human visual cortex during hemifield visual stimulation using $^1\text{H}$ - $\{^{13}\text{C}\}$ MRS and fMRI. <i>Magnetic Resonance in Medicine</i> , 2001, 45, 349-355.	1.9	112

#	ARTICLE	IF	CITATIONS
91	Mapping Brain Metabolites Using a Double Echo-Filter Metabolite Imaging (DEFMI) Technique. Journal of Magnetic Resonance, 1999, 140, 363-370.	1.2	15
92	In vitro and in vivo studies of $^1\text{H}$ NMR visibility to detect deoxyhemoglobin and deoxymyoglobin signals in myocardium. Magnetic Resonance in Medicine, 1999, 42, 1-5.	1.9	21
93	High Spatial Resolution Functional Magnetic Resonance Imaging at Very-High-Magnetic Field. Topics in Magnetic Resonance Imaging, 1999, 10, 63-78.	0.7	47
94	Mapping of lateral geniculate nucleus activation during visual stimulation in human brain using fMRI. Magnetic Resonance in Medicine, 1998, 39, 89-96.	1.9	72
95	Spatial and temporal differentiation of fMRI BOLD response in primary visual cortex of human brain during sustained visual stimulation. Magnetic Resonance in Medicine, 1998, 39, 520-527.	1.9	42
96	Detecting natural abundance carbon signal of NAA metabolite within 12-cm <sup>3</sup> localized volume of human brain using $^1\text{H}$ - $\{^{13}\text{C}\}$ NMR spectroscopy. Magnetic Resonance in Medicine, 1998, 40, 180-184.	1.9	36
97	Simultaneous oxygenation and perfusion imaging study of functional activity in primary visual cortex at different visual stimulation frequency: Quantitative correlation between BOLD and CBF changes. Magnetic Resonance in Medicine, 1998, 40, 703-711.	1.9	65
98	Human primary visual cortex and lateral geniculate nucleus activation during visual imagery. NeuroReport, 1998, 9, 3669-3674.	0.6	185
99	Determination of deoxymyoglobin changes during graded myocardial ischemia: An in Vivo $^1\text{H}$ NMR spectroscopy study. Magnetic Resonance in Medicine, 1997, 38, 193-197.	1.9	39
100	Increase of creatine kinase activity in the visual cortex of human brain during visual stimulation: A $^31\text{P}$ NMR magnetization transfer study. Magnetic Resonance in Medicine, 1997, 38, 551-557.	1.9	81