

Rolf Gruetter

List of Publications by Year in descending order

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319
papers

22,848
citations

7551

77
h-index

11899

134
g-index

331
all docs

331
docs citations

331
times ranked

15666
citing authors

#	ARTICLE	IF	CITATIONS
1	MP2RAGE, a self bias-field corrected sequence for improved segmentation and T1-mapping at high field. <i>NeuroImage</i> , 2010, 49, 1271-1281.	2.1	1,075
2	In vivo ¹ H NMR spectroscopy of rat brain at 1 ms echo time. <i>Magnetic Resonance in Medicine</i> , 1999, 41, 649-656.	1.9	870
3	Automatic, localized in Vivo adjustment of all first-and second-order shim coils. <i>Magnetic Resonance in Medicine</i> , 1993, 29, 804-811.	1.9	826
4	Clinical Proton MR Spectroscopy in Central Nervous System Disorders. <i>Radiology</i> , 2014, 270, 658-679.	3.6	524
5	Field mapping without reference scan using asymmetric echo-planar techniques. <i>Magnetic Resonance in Medicine</i> , 2000, 43, 319-323.	1.9	521
6	Toward an in Vivo Neurochemical Profile: Quantification of 18 Metabolites in Short-Echo-Time ¹ H NMR Spectra of the Rat Brain. <i>Journal of Magnetic Resonance</i> , 1999, 141, 104-120.	1.2	457
7	Echo-planar magnetic resonance imaging studies of frontal cortex activation during word generation in humans.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1993, 90, 4952-4956.	3.3	424
8	In vivo ¹ H NMR spectroscopy of the human brain at 7 T. <i>Magnetic Resonance in Medicine</i> , 2001, 46, 451-456.	1.9	353
9	In vivo ¹ H NMR spectroscopy of the human brain at high magnetic fields: Metabolite quantification at 4T vs. 7T. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 868-879.	1.9	316
10	Simultaneous Determination of the Rates of the TCA Cycle, Glucose Utilization, \pm -Ketoglutarate/Glutamate Exchange, and Glutamine Synthesis in Human Brain by NMR. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1995, 15, 12-25.	2.4	307
11	MR spectroscopy of the human brain with enhanced signal intensity at ultrashort echo times on a clinical platform at 3T and 7T. <i>Magnetic Resonance in Medicine</i> , 2009, 61, 1279-1285.	1.9	291
12	A mathematical model of compartmentalized neurotransmitter metabolism in the human brain. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2001, 281, E100-E112.	1.8	290
13	Methodological consensus on clinical proton MRS of the brain: Review and recommendations. <i>Magnetic Resonance in Medicine</i> , 2019, 82, 527-550.	1.9	280
14	Localized short-echo-time proton MR spectroscopy with full signal-intensity acquisition. <i>Magnetic Resonance in Medicine</i> , 2006, 56, 965-970.	1.9	260
15	Sustained Neuronal Activation Raises Oxidative Metabolism to a New Steady-State Level: Evidence from ¹ H NMR Spectroscopy in the Human Visual Cortex. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2007, 27, 1055-1063.	2.4	253
16	Temperature and SAR calculations for a human head within volume and surface coils at 64 and 300 MHz. <i>Journal of Magnetic Resonance Imaging</i> , 2004, 19, 650-656.	1.9	248
17	Localized ¹³ C NMR Spectroscopy in the Human Brain of Amino Acid Labeling from ¹³ C]Glucose. <i>Journal of Neurochemistry</i> , 1994, 63, 1377-1385.	2.1	229
18	Ultrahigh field magnetic resonance imaging and spectroscopy. <i>Magnetic Resonance Imaging</i> , 2003, 21, 1263-1281.	1.0	218

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19	Steady-State Cerebral Glucose Concentrations and Transport in the Human Brain. <i>Journal of Neurochemistry</i> , 1998, 70, 397-408.	2.1	215
20	Direct measurement of brain glucose concentrations in humans by ¹³ C NMR spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1992, 89, 1109-1112.	3.3	212
21	Developmental and regional changes in the neurochemical profile of the rat brain determined by in vivo ¹ H NMR spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 24-32.	1.9	212
22	Perinatal Iron Deficiency Alters the Neurochemical Profile of the Developing Rat Hippocampus. <i>Journal of Nutrition</i> , 2003, 133, 3215-3221.	1.3	205
23	Neuroglial Metabolism in the Awake Rat Brain: CO ₂ Fixation Increases with Brain Activity. <i>Journal of Neuroscience</i> , 2004, 24, 11273-11279.	1.7	204
24	The neurochemical profile quantified by in vivo ¹ H NMR spectroscopy. <i>NeuroImage</i> , 2012, 61, 342-362.	2.1	199
25	Neuroprotective Role of Lactate after Cerebral Ischemia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2009, 29, 1780-1789.	2.4	197
26	Localized in vivo ¹³ C-NMR of Glutamate Metabolism in the Human Brain: Initial Results at 4 Tesla. <i>Developmental Neuroscience</i> , 1998, 20, 380-388.	1.0	188
27	Effect of hypoglycemia on brain glycogen metabolism in vivo. <i>Journal of Neuroscience Research</i> , 2003, 72, 25-32.	1.3	186
28	Human finger somatotopy in areas 3b, 1, and 2: A 7T fMRI study using a natural stimulus. <i>Human Brain Mapping</i> , 2014, 35, 213-226.	1.9	182
29	Glycogen: The forgotten cerebral energy store. <i>Journal of Neuroscience Research</i> , 2003, 74, 179-183.	1.3	178
30	Resolution Improvements in in Vivo ¹ H NMR Spectra with Increased Magnetic Field Strength. <i>Journal of Magnetic Resonance</i> , 1998, 135, 260-264.	1.2	176
31	Design and performance of a DNP prepolarizer coupled to a rodent MRI scanner. <i>Concepts in Magnetic Resonance Part B</i> , 2007, 31B, 255-269.	0.3	172
32	Highly resolved in vivo ¹ H NMR spectroscopy of the mouse brain at 9.4 T. <i>Magnetic Resonance in Medicine</i> , 2004, 52, 478-484.	1.9	171
33	Capturing the spatiotemporal dynamics of self-generated, task-initiated thoughts with EEG and fMRI. <i>NeuroImage</i> , 2019, 194, 82-92.	2.1	171
34	Methodology of ¹ H NMR spectroscopy of the human brain at very high magnetic fields. <i>Applied Magnetic Resonance</i> , 2005, 29, 139-157.	0.6	164
35	A Half-Volume Coil for Efficient Proton Decoupling in Humans at 4 Tesla. <i>Journal of Magnetic Resonance</i> , 1997, 125, 178-184.	1.2	162
36	Measurement of reduced glutathione (GSH) in human brain using LCModel analysis of difference-edited spectra. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 19-23.	1.9	162

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37	The Effect of Insulin on In Vivo Cerebral Glucose Concentrations and Rates of Glucose Transport/Metabolism in Humans. <i>Diabetes</i> , 2001, 50, 2203-2209.	0.3	161
38	Hierarchical Status Predicts Behavioral Vulnerability and Nucleus Accumbens Metabolic Profile Following Chronic Social Defeat Stress. <i>Current Biology</i> , 2017, 27, 2202-2210.e4.	1.8	161
39	Localized in vivo ¹³ C NMR spectroscopy of the brain. <i>NMR in Biomedicine</i> , 2003, 16, 313-338.	1.6	150
40	In Vivo Measurements of Brain Glucose Transport Using the Reversible Michaelis-Menten Model and Simultaneous Measurements of Cerebral Blood Flow Changes during Hypoglycemia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2001, 21, 653-663.	2.4	140
41	Extracellular and Intracellular Distribution of Glucose and Lactate in the Rat Brain Assessed Noninvasively by Diffusion-Weighted ¹ H Nuclear Magnetic Resonance Spectroscopy In Vivo. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2000, 20, 736-746.	2.4	139
42	New Developments and Applications of the MP2RAGE Sequence - Focusing the Contrast and High Spatial Resolution R1 Mapping. <i>PLoS ONE</i> , 2013, 8, e69294.	1.1	135
43	Caffeine consumption attenuates neurochemical modifications in the hippocampus of streptozotocin-induced diabetic rats. <i>Journal of Neurochemistry</i> , 2009, 111, 368-379.	2.1	133
44	Direct in vivo measurement of human cerebral GABA concentration using MEGA-editing at 7 Tesla. <i>Magnetic Resonance in Medicine</i> , 2002, 47, 1009-1012.	1.9	128
45	Effect of Deep Pentobarbital Anesthesia on Neurotransmitter Metabolism in Vivo: On the Correlation of Total Glucose Consumption with Glutamatergic Action. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2002, 22, 1343-1351.	2.4	122
46	N-acetylcysteine in a Double-Blind Randomized Placebo-Controlled Trial: Toward Biomarker-Guided Treatment in Early Psychosis. <i>Schizophrenia Bulletin</i> , 2018, 44, 317-327.	2.3	121
47	Net increase of lactate and glutamate concentration in activated human visual cortex detected with magnetic resonance spectroscopy at 7 tesla. <i>Journal of Neuroscience Research</i> , 2013, 91, 1076-1083.	1.3	118
48	Hepatic glucose sensing is required to preserve β^2 cell glucose competence. <i>Journal of Clinical Investigation</i> , 2013, 123, 1662-1676.	3.9	118
49	Sensitivity of single-voxel ¹ H-MRS in investigating the metabolism of the activated human visual cortex at 7 T. <i>Magnetic Resonance Imaging</i> , 2006, 24, 343-348.	1.0	115
50	Human brain glycogen content and metabolism: implications on its role in brain energy metabolism. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2007, 292, E946-E951.	1.8	114
51	In vivo ¹³ C NMR studies of compartmentalized cerebral carbohydrate metabolism. <i>Neurochemistry International</i> , 2002, 41, 143-154.	1.9	113
52	Study of tricarboxylic acid cycle flux changes in human visual cortex during hemifield visual stimulation using ¹ H- ¹³ C MRS and fMRI. <i>Magnetic Resonance in Medicine</i> , 2001, 45, 349-355.	1.9	112
53	Retrospective correction of involuntary microscopic head movement using highly accelerated fat image navigators (3D FatNavs) at 7T. <i>Magnetic Resonance in Medicine</i> , 2016, 75, 1030-1039.	1.9	110
54	Temporal and spatial analysis of fields generated by eddy currents in superconducting magnets: Optimization of corrections and quantitative characterization of magnet/gradient systems. <i>Magnetic Resonance in Medicine</i> , 1991, 20, 268-284.	1.9	109

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55	On the origin of the MR image phase contrast: An in vivo MR microscopy study of the rat brain at 14.1T. <i>NeuroImage</i> , 2009, 46, 345-352.	2.1	109
56	Proton NMR of ¹⁵ N-Choline Metabolites Enhanced by Dynamic Nuclear Polarization. <i>Journal of the American Chemical Society</i> , 2009, 131, 16014-16015.	6.6	107
57	Localized in vivo ¹ H NMR detection of neurotransmitter labeling in rat brain during infusion of [1- ¹³ C] D-glucose. <i>Magnetic Resonance in Medicine</i> , 1999, 41, 1077-1083.	1.9	105
58	¹ H NMR spectroscopy of rat brain in vivo at 14.1Tesla: Improvements in quantification of the neurochemical profile. <i>Journal of Magnetic Resonance</i> , 2008, 194, 163-168.	1.2	105
59	Neurochemical changes in Huntington R6/2 mouse striatum detected by in vivo ¹ H NMR spectroscopy. <i>Journal of Neurochemistry</i> , 2007, 100, 1397-1406.	2.1	104
60	Proton MRS of the unilateral substantia nigra in the human brain at 4 tesla: Detection of high GABA concentrations. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 296-301.	1.9	100
61	N-Acetylcysteine Normalizes Neurochemical Changes in the Glutathione-Deficient Schizophrenia Mouse Model During Development. <i>Biological Psychiatry</i> , 2012, 71, 1006-1014.	0.7	100
62	In vivo ¹³ C NMR spectroscopy and metabolic modeling in the brain: a practical perspective. <i>Magnetic Resonance Imaging</i> , 2006, 24, 527-539.	1.0	98
63	Feasibility of in vivo ¹⁵ N MRS detection of hyperpolarized ¹⁵ N labeled choline in rats. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 5818.	1.3	96
64	Glutathione deficit impairs myelin maturation: relevance for white matter integrity in schizophrenia patients. <i>Molecular Psychiatry</i> , 2015, 20, 827-838.	4.1	95
65	Noninvasive Measurements of [1- ¹³ C] Glycogen Concentrations and Metabolism in Rat Brain In Vivo. <i>Journal of Neurochemistry</i> , 2001, 73, 1300-1308.	2.1	92
66	Validation of glutathione quantitation from STEAM spectra against edited ¹ H NMR spectroscopy at 4T: application to schizophrenia. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2005, 18, 276-282.	1.1	92
67	Contribution of macromolecules to brain ¹ H MR spectra: Experts' consensus recommendations. <i>NMR in Biomedicine</i> , 2021, 34, e4393.	1.6	92
68	Are glutamate and lactate increases ubiquitous to physiological activation? A ¹ H functional MR spectroscopy study during motor activation in human brain at 7Tesla. <i>NeuroImage</i> , 2014, 93, 138-145.	2.1	90
69	Longitudinal neurochemical modifications in the aging mouse brain measured in vivo by ¹ H magnetic resonance spectroscopy. <i>Neurobiology of Aging</i> , 2014, 35, 1660-1668.	1.5	90
70	¹ H NMR Studies of Glucose Transport in the Human Brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1996, 16, 427-438.	2.4	89
71	Scavenging Free Radicals To Preserve Enhancement and Extend Relaxation Times in NMR using Dynamic Nuclear Polarization. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 6182-6185.	7.2	89
72	Brain glucose concentrations in patients with type 1 diabetes and hypoglycemia unawareness. <i>Journal of Neuroscience Research</i> , 2005, 79, 42-47.	1.3	88

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73	Observation of resolved glucose signals in ^1H NMR spectra of the human brain at 4 Tesla. <i>Magnetic Resonance in Medicine</i> , 1996, 36, 1-6.	1.9	87
74	Direct, noninvasive measurement of brain glycogen metabolism in humans. <i>Neurochemistry International</i> , 2003, 43, 323-329.	1.9	86
75	Evolution of the Neurochemical Profile after Transient Focal Cerebral Ischemia in the Mouse Brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2009, 29, 811-819.	2.4	86
76	Spread Spectrum Magnetic Resonance Imaging. <i>IEEE Transactions on Medical Imaging</i> , 2012, 31, 586-598.	5.4	86
77	Magnetic Resonance Studies of Brain Function and Neurochemistry. <i>Annual Review of Biomedical Engineering</i> , 2000, 2, 633-660.	5.7	84
78	Genetic Polymorphism Associated Prefrontal Glutathione and Its Coupling With Brain Glutamate and Peripheral Redox Status in Early Psychosis. <i>Schizophrenia Bulletin</i> , 2016, 42, 1185-1196.	2.3	83
79	In vivo ^{13}C NMR assessment of brain glycogen concentration and turnover in the awake rat. <i>Neurochemistry International</i> , 2003, 43, 317-322.	1.9	82
80	Proton T_1 relaxation times of metabolites in human occipital white and gray matter at 7 T. <i>Magnetic Resonance in Medicine</i> , 2013, 69, 931-936.	1.9	82
81	In vivo magnetic resonance spectroscopy of human brain: The biophysical basis of dementia. <i>Biophysical Chemistry</i> , 1997, 68, 161-172.	1.5	80
82	In vivo assessment of myelination by phase imaging at high magnetic field. <i>NeuroImage</i> , 2012, 59, 1979-1987.	2.1	80
83	Studying cyto and myeloarchitecture of the human cortex at ultra-high field with quantitative imaging: R_1 , R_2^* and magnetic susceptibility. <i>NeuroImage</i> , 2017, 147, 152-163.	2.1	80
84	Handling Macromolecule Signals in the Quantification of the Neurochemical Profile. <i>Journal of Alzheimer's Disease</i> , 2012, 31, S101-S115.	1.2	78
85	Detection of an antioxidant profile in the human brain in vivo via double editing with MEGA-PRESS. <i>Magnetic Resonance in Medicine</i> , 2006, 56, 1192-1199.	1.9	76
86	Broadband decoupled, ^1H -localized ^{13}C MRS of the human brain at 4 tesla. <i>Magnetic Resonance in Medicine</i> , 1996, 36, 659-664.	1.9	75
87	Unedited in vivo detection and quantification of $^{\beta}$ -aminobutyric acid in the occipital cortex using short-TE MRS at 3T. <i>NMR in Biomedicine</i> , 2013, 26, 1353-1362.	1.6	75
88	MP2RAGE Multiple Sclerosis Magnetic Resonance Imaging at 3 T. <i>Investigative Radiology</i> , 2012, 47, 346-352.	3.5	72
89	In Vivo Detection of Brain Krebs Cycle Intermediate by Hyperpolarized Magnetic Resonance. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2012, 32, 2108-2113.	2.4	72
90	Toward dynamic isotopomer analysis in the rat brain in vivo: automatic quantitation of ^{13}C NMR spectra using LCModel. <i>NMR in Biomedicine</i> , 2003, 16, 400-412.	1.6	71

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91	SA2RAGE: A new sequence for fast B_1 mapping. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 1609-1619.	1.9	71
92	Glutamatergic and GABAergic energy metabolism measured in the rat brain by ^{13}C NMR spectroscopy at 14.1 T. <i>Journal of Neurochemistry</i> , 2013, 126, 579-590.	2.1	71
93	1H -localized broadband ^{13}C NMR spectroscopy of the rat brain in vivo at 9.4 T. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 684-692.	1.9	70
94	Compartmentalized Cerebral Metabolism of [1,6- ^{13}C]Glucose Determined by in vivo ^{13}C NMR Spectroscopy at 14.1 T. <i>Frontiers in Neuroenergetics</i> , 2011, 3, 3.	5.3	70
95	Proton T_2 relaxation time of J -coupled cerebral metabolites in rat brain at 9.4 T. <i>NMR in Biomedicine</i> , 2008, 21, 396-401.	1.6	69
96	Validation of ^{13}C NMR measurements of liver glycogen in vivo. <i>Magnetic Resonance in Medicine</i> , 1994, 31, 583-588.	1.9	68
97	Quantitative proton spectroscopic imaging of the neurochemical profile in rat brain with microliter resolution at ultra-short echo times. <i>Magnetic Resonance in Medicine</i> , 2008, 59, 52-58.	1.9	67
98	Single-shot, three-dimensional "non-echo" localization method for in vivo NMR spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2000, 44, 387-394.	1.9	66
99	Cerebellar Cortical Layers: In Vivo Visualization with Structural High-Field-Strength MR Imaging. <i>Radiology</i> , 2010, 254, 942-948.	3.6	66
100	In vivo effect of chronic hypoxia on the neurochemical profile of the developing rat hippocampus. <i>Developmental Brain Research</i> , 2005, 156, 202-209.	2.1	64
101	Temporal SNR characteristics in segmented 3D-EPI at 7T. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 344-352.	1.9	64
102	How Energy Metabolism Supports Cerebral Function: Insights from ^{13}C Magnetic Resonance Studies In vivo. <i>Frontiers in Neuroscience</i> , 2017, 11, 288.	1.4	64
103	Simultaneous EEG-fMRI at ultra-high field: Artifact prevention and safety assessment. <i>NeuroImage</i> , 2015, 105, 132-144.	2.1	63
104	Nutritional Ketosis Increases NAD ⁺ /NADH Ratio in Healthy Human Brain: An in Vivo Study by 31P -MRS. <i>Frontiers in Nutrition</i> , 2018, 5, 62.	1.6	62
105	Prospective and retrospective motion correction in diffusion magnetic resonance imaging of the human brain. <i>NeuroImage</i> , 2012, 59, 389-398.	2.1	61
106	In vivo enzymatic activity of acetylCoA synthetase in skeletal muscle revealed by ^{13}C turnover from hyperpolarized [1- ^{13}C]acetate to [1- ^{13}C]acetylcarnitine. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2013, 1830, 4171-4178.	1.1	61
107	B_0 shimming for in vivo magnetic resonance spectroscopy: Experts' consensus recommendations. <i>NMR in Biomedicine</i> , 2021, 34, e4350.	1.6	60
108	Localized Eddy Current Compensation Using Quantitative Field Mapping. <i>Journal of Magnetic Resonance</i> , 1998, 131, 139-143.	1.2	58

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109	Proton-observed carbon-edited NMR spectroscopy in strongly coupled second-order spin systems. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 250-257.	1.9	58
110	Dynamics of lactate concentration and blood oxygen level-dependent effect in the human visual cortex during repeated identical stimuli. <i>Journal of Neuroscience Research</i> , 2007, 85, 3340-6.	1.3	58
111	Head motion detection using FID navigators. <i>Magnetic Resonance in Medicine</i> , 2011, 66, 135-143.	1.9	58
112	¹ H NMR detection of vitamin C in human brain in vivo. <i>Magnetic Resonance in Medicine</i> , 2004, 51, 225-229.	1.9	57
113	Water diffusion in rat brain in vivo as detected at very large b values is multicompartmental. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 1999, 8, 98-108.	1.1	54
114	Variations in the in vivo P-31 MR spectra of the developing human brain during postnatal life. Work in progress. <i>Radiology</i> , 1989, 172, 197-199.	3.6	53
115	¹³ C NMR visibility of rabbit muscle glycogen in vivo. <i>Magnetic Resonance in Medicine</i> , 1991, 20, 327-332.	1.9	53
116	Detection and assignment of the glucose signal in ¹ H NMR difference spectra of the human brain. <i>Magnetic Resonance in Medicine</i> , 1992, 27, 183-188.	1.9	53
117	Hyperpolarized lithium-6 as a sensor of nanomolar contrast agents. <i>Magnetic Resonance in Medicine</i> , 2009, 61, 1489-1493.	1.9	53
118	Image-Derived Input Function from the Vena Cava for ¹⁸ F-FDG PET Studies in Rats and Mice. <i>Journal of Nuclear Medicine</i> , 2014, 55, 1380-1388.	2.8	53
119	Towards high-quality simultaneous EEG-fMRI at 7 T: Detection and reduction of EEG artifacts due to head motion. <i>NeuroImage</i> , 2015, 120, 143-153.	2.1	53
120	Three-dimensional echo planar imaging with controlled aliasing: A sequence for high temporal resolution functional MRI. <i>Magnetic Resonance in Medicine</i> , 2016, 75, 2350-2361.	1.9	53
121	Metabolic changes in quinolinic acid-lesioned rat striatum detected non-invasively by in vivo ¹ H NMR spectroscopy. <i>Journal of Neuroscience Research</i> , 2001, 66, 891-898.	1.3	52
122	Deletion of glutamate dehydrogenase 1 (<i>GluD1</i>) in the central nervous system affects glutamate handling without altering synaptic transmission. <i>Journal of Neurochemistry</i> , 2012, 123, 342-348.	2.1	52
123	Neurochemical profile of the developing mouse cortex determined by in vivo ¹ H NMR spectroscopy at 14.1 T and the effect of recurrent anaesthesia. <i>Journal of Neurochemistry</i> , 2010, 115, 1466-1477.	2.1	51
124	The C57BL/6J Mouse Exhibits Sporadic Congenital Portosystemic Shunts. <i>PLoS ONE</i> , 2013, 8, e69782.	1.1	51
125	An improved trap design for decoupling multinuclear RF coils. <i>Magnetic Resonance in Medicine</i> , 2014, 72, 584-590.	1.9	51
126	Is the macromolecule signal tissue-specific in healthy human brain? A ¹ H MRS study at 7 tesla in the occipital lobe. <i>Magnetic Resonance in Medicine</i> , 2014, 72, 934-940.	1.9	51

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127	Brain energy metabolism and neurotransmission at near-freezing temperatures: in vivo ¹ H MRS study of a hibernating mammal. <i>Journal of Neurochemistry</i> , 2007, 101, 1505-1515.	2.1	49
128	GDH-Dependent Glutamate Oxidation in the Brain Dictates Peripheral Energy Substrate Distribution. <i>Cell Reports</i> , 2015, 13, 365-375.	2.9	49
129	Localized ¹³ C NMR spectroscopy of myo-inositol in the human brain in vivo. <i>Magnetic Resonance in Medicine</i> , 1992, 25, 204-210.	1.9	48
130	Metabolic Flux and Compartmentation Analysis in the Brain In vivo. <i>Frontiers in Endocrinology</i> , 2013, 4, 156.	1.5	47
131	A modulated closed form solution for quantitative susceptibility mapping – A thorough evaluation and comparison to iterative methods based on edge prior knowledge. <i>NeuroImage</i> , 2015, 107, 163-174.	2.1	47
132	Dynamic or inert metabolism? Turnover of N-acetyl aspartate and glutathione from d-[1- ¹³ C]glucose in the rat brain in vivo. <i>Journal of Neurochemistry</i> , 2004, 91, 778-787.	2.1	46
133	Biochemical quantification of total brain glycogen concentration in rats under different glycemic states. <i>Neurochemistry International</i> , 2006, 48, 616-622.	1.9	46
134	Compartmentalised energy metabolism supporting glutamatergic neurotransmission in response to increased activity in the rat cerebral cortex: A ¹³ C MRS study in vivo at 14.1 T. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2016, 36, 928-940.	2.4	46
135	Astrocytic and neuronal oxidative metabolism are coupled to the rate of glutamate-glutamine cycle in the tree shrew visual cortex. <i>Glia</i> , 2018, 66, 477-491.	2.5	45
136	Metabolic signature in nucleus accumbens for anti-depressant-like effects of acetyl-L-carnitine. <i>ELife</i> , 2020, 9, .	2.8	45
137	Brain glucose concentrations in poorly controlled diabetes mellitus as measured by high-field magnetic resonance spectroscopy. <i>Metabolism: Clinical and Experimental</i> , 2005, 54, 1008-1013.	1.5	44
138	Digit somatotopy in the human cerebellum: A 7T fMRI study. <i>NeuroImage</i> , 2013, 67, 354-362.	2.1	44
139	N-acetylcysteine add-on treatment leads to an improvement of fornix white matter integrity in early psychosis: a double-blind randomized placebo-controlled trial. <i>Translational Psychiatry</i> , 2018, 8, 220.	2.4	44
140	Developmental and metabolic brain alterations in rats exposed to bisphenol A during gestation and lactation. <i>International Journal of Developmental Neuroscience</i> , 2011, 29, 37-43.	0.7	43
141	Measuring glucose cerebral metabolism in the healthy mouse using hyperpolarized ¹³ C magnetic resonance. <i>Scientific Reports</i> , 2017, 7, 11719.	1.6	43
142	Mitochondrial gene signature in the prefrontal cortex for differential susceptibility to chronic stress. <i>Scientific Reports</i> , 2020, 10, 18308.	1.6	43
143	Identification of a high concentration of scyllo-inositol in the brain of a healthy human subject using ¹ H- and ¹³ C-NMR. <i>Magnetic Resonance in Medicine</i> , 1998, 39, 313-316.	1.9	42
144	Comparison of ¹ T ₁ relaxation times of the neurochemical profile in rat brain at 9.4 tesla and 14.1 tesla. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 862-867.	1.9	42

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145	In vivo measurement of glycine with short echo-time 1H MRS in human brain at 7 T. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2009, 22, 1-4.	1.1	42
146	Quantification of the neurochemical profile using simulated macromolecule resonances at 3 T. <i>NMR in Biomedicine</i> , 2013, 26, 593-599.	1.6	41
147	Brain lactate by magnetic resonance spectroscopy during fulminant hepatic failure in the dog. <i>Liver Transplantation</i> , 1998, 4, 158-165.	1.9	40
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