

CITATION REPORT

List of articles citing

31p NMR saturation transfer measurements of the steady state rates of creatine kinase and ATP synthetase in the rat brain

DOI: 10.1016/0014-5793(82)80916-2
FEBS Letters, 1982, 140, 289-92.

Source: <https://exaly.com/paper-pdf/15844979/citation-report.pdf>

Version: 2024-04-19

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
180	Regulation of cellular energy metabolism. 1982 , 70, 1-14		375
179	Nuclear magnetic double resonance; the use of difference spectroscopy. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 1982 , 15, 353-400	10.4	235
178	NMR T1 measurements in inhomogeneous B1 with surface coils. 1983 , 53, 52-64		10
177	The temperature dependence of creatine kinase fluxes in the rat heart. 1983 , 763, 140-6		12
176	Energetics of sodium transport in the kidney. Saturation transfer 31P-NMR. 1983 , 762, 325-36		109
175	31P NMR spectroscopy of rat organs, in situ, using chronically implanted radiofrequency coils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1983 , 80, 7491-5	11.5	110
174	Cerebral metabolic studies in vivo by 31P NMR. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1983 , 80, 2748-51	11.5	162
173	31P-n.m.r. studies on cerebral energy metabolism under conditions of hypoglycaemia and hypoxia in vitro. 1983 , 212, 365-70		71
172	Techniques to study metabolic changes at the cellular and organ level. 1983 , 83, 27-62		2
171	Nuclear magnetic resonance spectroscopy in diagnostic and investigative medicine. 1984 , 74, 1127-31		20
170	Measurement of longitudinal relaxation times using surface coils. 1984 , 56, 200-206		3
169	Selective suppression of the cranial bone resonance from 31P NMR experiments with rat brain in vivo. 1984 , 56, 318-322		5
168	Comparison of 31P NMR spectra of in Vivo rat brain using convolution difference and saturation with a surface coil. Source of the broad component in the brain spectrum. 1984 , 57, 526-533		7
167	A comparison of 31P-NMR saturation transfer and isotope-exchange measurements of creatine kinase kinetics in vitro. 1984 , 786, 18-24		26
166	In vivo phosphorus nuclear magnetic resonance spectroscopy in status epilepticus. 1984 , 16, 169-77		108
165	A 31P-nuclear magnetic resonance study of skeletal muscle metabolism in rats depleted of creatine with the analogue beta-guanidinopropionic acid. 1984 , 805, 79-88		95
164	Regulation of creatine kinase during steady-state isometric twitch contraction in rat skeletal muscle. 1984 , 805, 72-8		83

163	Estrogen-induced changes in high-energy phosphate metabolism in rat uterus: 31P NMR studies. 1984 , 23, 2572-7		42
162	Analysis of brain metabolism changes induced by acute potassium cyanide intoxication by 31P NMR in vivo using chronically implanted surface coils. <i>FEBS Letters</i> , 1984 , 168, 1-6	3.8	47
161	Phosphorus-31 NMR of rat brain in vivo with bloodless perfluorocarbon perfused rat. 1984 , 119, 913-9		23
160	NMR studies of enzymatic rates in vitro and in vivo by magnetization transfer. 1984 , 17, 83-124		179
159	The energy equivalents of ATP and the energy values of food proteins and fats. 1984 , 51, 15-28		66
158	31P-saturation-transfer nuclear-magnetic-resonance measurements of phosphocreatine turnover in guinea-pig brain slices. 1985 , 227, 777-82		23
157	Multiple Resonance. <i>Annual Reports on NMR Spectroscopy</i> , 1985 , 16, 293-364	1.7	11
156	In vivo solvent-suppressed localized hydrogen nuclear magnetic resonance spectroscopy: a window to metabolism?. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1985 , 82, 2148-52	11.5	113
155	Changes in brain phosphorus metabolites during the post-natal development of the rat. 1985 , 359, 417-29		79
154	A concentric surface-coil probe for the production of homogeneous B1 fields. 1985 , 62, 397-405		
153	Measurements of exchange in the reaction catalysed by creatine kinase using 14C and 15N isotope labels and the NMR technique of saturation transfer. 1985 , 829, 188-201		25
152	31P nuclear magnetic resonance studies of crayfish (<i>Orconectes virilis</i>). The use of inversion spin transfer to monitor enzyme kinetics in vivo. 1985 , 149, 79-83		21
151	Shielded solenoidal probe for in vivo NMR studies of solid tumors. <i>Magnetic Resonance in Medicine</i> , 1985 , 2, 169-75	4.4	39
150	Detection of exchange reactions involving small metabolite pools using NMR magnetization transfer techniques: relevance to subcellular compartmentation of creatine kinase. <i>Magnetic Resonance in Medicine</i> , 1985 , 2, 586-94	4.4	43
149	A comparison of in vivo catalysis by creatine kinase in avian skeletal muscles with different fibre composition. 1985 , 846, 174-8		2
148	31P-NMR saturation transfer study of the in vivo kinetics of arginine kinase in <i>Carcinus</i> crab leg muscle. 1985 , 845, 343-348		17
147	31P-NMR studies of metabolite compartmentation in <i>Fasciola hepatica</i> . 1985 , 845, 178-88		11
146	Creatine kinase kinetics, ATP turnover, and cardiac performance in hearts depleted of creatine with the substrate analogue beta-guanidinopropionic acid. 1985 , 847, 25-32		65

145	Energy metabolism in rat brain in vivo studied by ³¹ P nuclear magnetic resonance: changes during postnatal development. 1986 , 248, 43-52		13
144	Effects of nimodipine on EEG and ³¹ P-NMR spectra during and after incomplete forebrain ischemia in the rat. 1986 , 125, 429-35		7
143	The use of NMR spectroscopy for the understanding of disease. 1986 , 233, 640-5		243
142	³¹ P NMR saturation transfer measurements of phosphorus exchange reactions in rat heart and kidney in situ. 1986 , 25, 77-84		56
141	The metabolic state of the rat liver in vivo measured by ³¹ P-NMR spectroscopy. 1986 , 885, 1-11		122
140	Direct in vivo measurement of absolute metabolite concentrations using ³¹ P nuclear magnetic resonance spectroscopy. 1986 , 886, 399-405		38
139	The role of glial cells in regulation of neurotransmitter amino acids in the external environment. I. Transmembrane electrical and ion gradients and energy parameters in cultured glial-derived cell lines. 1986 , 369, 193-202		27
138	Oxygen-Bioenergetics and ³¹ P NMR in vivo. 1986 , 29-35		
137	Cerebral intracellular ADP concentrations during hypercarbia: an in vivo ³¹ P nuclear magnetic resonance study in rats. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1986 , 6, 389-92	7.3	7
136	³¹ P-NMR studies of phosphate transfer rates in T47D human breast cancer cells. 1987 , 930, 179-92		31
135	¹ H- and ³¹ P-NMR studies on smooth muscle of bullfrog stomach. 1987 , 928, 36-44		21
134	³¹ P-NMR saturation transfer measurements of exchange between Pi and ATP in the reactions catalysed by glyceraldehyde-3-phosphate dehydrogenase and phosphoglycerate kinase in vitro. 1987 , 928, 45-55		49
133	³¹ P and ¹ H NMR spectroscopy to study the effects of gallopamil on brain ischemia. <i>Magnetic Resonance in Medicine</i> , 1987 , 4, 441-51	4.4	18
132	³¹ P magnetization transfer studies of creatine kinase kinetics in living rabbit brain. <i>Magnetic Resonance in Medicine</i> , 1987 , 5, 1-12	4.4	62
131	N.m.r. spectroscopy: A non-invasive tool for studying intracellular processes. 1987 , 9, 259-271		32
130	Measurement of in Vivo ³¹ P relaxation rates and spectral editing in human organs using rotating-frame depth selection. 1987 , 71, 331-336		0
129	³¹ P imaging of in Vivo creatine kinase reaction rates. 1987 , 74, 574-579		5
128	Simultaneous ³¹ P- and ¹ H-nuclear magnetic resonance studies of hypoxia and ischemia in the cat brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1987 , 7, 543-51	7.3	60

127	Effects of traumatic brain injury on cerebral high-energy phosphates and pH: a ³¹ P magnetic resonance spectroscopy study. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1987 , 7, 563-71	7.3	102
126	Acute cerebral ischaemia: concurrent changes in cerebral blood flow, energy metabolites, pH, and lactate measured with hydrogen clearance and ³¹ P and ¹ H nuclear magnetic resonance spectroscopy. II. Changes during ischaemia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1987 , 7, 394-402	7.3	133
125	³¹ P nuclear magnetic resonance in vivo spectroscopy of the metabolic changes induced in the awake rat brain during KCN intoxication and its reversal by hydroxocobalamin. <i>Journal of Neurochemistry</i> , 1987 , 48, 804-8	6	7
124	Applications of NMR spectroscopy to biological systems. 1988 , 8, 57-76		6
123	³¹ P NMR characterization of graded traumatic brain injury in rats. <i>Magnetic Resonance in Medicine</i> , 1988 , 6, 37-48	4.4	44
122	Saturation and inversion transfer studies of creatine kinase kinetics in rabbit skeletal muscle in vivo. <i>Magnetic Resonance in Medicine</i> , 1988 , 7, 56-64	4.4	47
121	Rapid ³¹ P spectroscopy on a 4-T whole-body system. <i>Magnetic Resonance in Medicine</i> , 1988 , 8, 104-9	4.4	38
120	In vivo ³¹ P NMR spectroscopy of the rat cerebral cortex during acute hepatic encephalopathy. <i>NMR in Biomedicine</i> , 1988 , 1, 101-6	4.4	35
119	NMR methods for measuring enzyme kinetics in vivo. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 1988 , 20, 257-293	10.4	82
118	Considerations for brain pH assessment by ³¹ P NMR. <i>Magnetic Resonance Imaging</i> , 1988 , 6, 135-42	3.3	53
117	B 1 inhomogeneity effects on spin density and T 1 contrast in MRI. 1988 , 10, 31-41		2
116	³¹ P-NMR saturation transfer studies of aerobic Escherichia coli cells. 1988 , 969, 185-93		17
115	Brain energy metabolism in two kinds of total asphyxia: an in vivo phosphorus nuclear magnetic resonance spectroscopic study. 1988 , 10, 88-91		10
114	Biological ¹ H NMR spectroscopy. 1988 , 90, 249-60		23
113	Changes in cellular bioenergetic state following graded traumatic brain injury in rats: determination by phosphorus ³¹ magnetic resonance spectroscopy. 1988 , 5, 315-30		83
112	Metabolic changes during experimental cerebral ischemia in hyperglycemic rats, observed by ³¹ P and ¹ H magnetic resonance spectroscopy. 1988 , 19, 608-14		49
111	NMR Spectroscopy in Living Systems. <i>Annual Reports on NMR Spectroscopy</i> , 1988 , 20, 1-60	1.7	24
110	An in vivo examination of rat brain during sepsis with ³¹ P-NMR spectroscopy. <i>American Journal of Physiology - Cell Physiology</i> , 1989 , 257, C1055-61	5.4	18

109	Brain oxygenation: monitoring techniques and insights into brain function and survival. 1989 , 3, 647-674		1
108	In vivo functioning of creatine phosphokinase in human forearm muscle, studied by ³¹ P NMR saturation transfer. <i>Magnetic Resonance in Medicine</i> , 1989 , 9, 39-52	4.4	56
107	ATP and brain function. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1989 , 9, 2-19	7.3	683
106	Brain creatine phosphate and creatine kinase in mice fed an analogue of creatine. 1989 , 483, 68-77		39
105	In vivo [³¹ P]NMR studies on the influence of age on rat brain hypoxia. 1989 , 482, 1-11		12
104	³¹ P NMR magnetization-transfer measurements of ATP turnover during steady-state isometric muscle contraction in the rat hind limb in vivo. 1989 , 28, 4887-93		116
103	Contributions of nuclear magnetic resonance to study of acute renal failure. 1989 , 11, 79-89		7
102	Cerebral energy metabolism in experimental canine hydrocephalus. 1990 , 6, 172-8		16
101	Spin-exchange NMR spectroscopy in studies of the kinetics of enzymes and membrane transport. <i>NMR in Biomedicine</i> , 1990 , 3, 102-19	4.4	37
100	Metabolic heterogeneity in brain tissue during incomplete ischemia and reperfusion. <i>NMR in Biomedicine</i> , 1990 , 3, 239-47	4.4	6
99	Nuclear magnetic resonance studies of cellular metabolism. 1990 , 191, 193-222		97
98	High Resolution ¹ H and ¹³ C NMR Resonance Assignments, Conformation and Solution Behavior of N-Phenyl (N-Phenyl- ¹³ C-Glucopyranosylamine) Uronamide in DMSO. 1990 , 9, 269-286		1
97	Maturational increase in mouse brain creatine kinase reaction rates shown by phosphorus magnetic resonance. 1991 , 58, 181-8		39
96	Effect of anaerobic metabolic changes on the creatine kinase reaction in frog muscle studied by ³¹ P saturation transfer NMR. <i>NMR in Biomedicine</i> , 1991 , 4, 25-30	4.4	5
95	Determination of Absolute Concentrations of Metabolites from NMR Spectra. 1992 , 249-281		2
94	Measurement of Reaction Rates In Vivo Using Magnetization Transfer Techniques. 1992 , 257-293		8
93	Surface Coil Spectroscopy. 1992 , 3-44		11
92	Mitochondrial creatine kinase: a key enzyme of aerobic energy metabolism. 1992 , 1102, 119-66		295

91	The role of the mitochondrial creatine kinase system for myocardial function during ischemia and reperfusion. 1992 , 1100, 27-32		24
90	Magnetic Resonance Spectroscopy In Cerebral Ischemia. 1992 , 10, 1-29		28
89	Kinetic studies of ATP synthase: the case for the positional change mechanism. 1992 , 24, 499-506		9
88	Mapping creatine kinase reaction rates in human brain and heart with 4 tesla saturation transfer 31P NMR. 1992 , 99, 443-448		7
87	Mitochondrial creatine kinase: a key enzyme of aerobic energy metabolism. 1992 , 1102, 119-166		104
86	Radial scanning technique for volume selective 31P spectroscopy. <i>Magnetic Resonance in Medicine</i> , 1992 , 24, 100-8	4.4	3
85	31P magnetization transfer studies in the monkey brain. <i>Magnetic Resonance in Medicine</i> , 1992 , 26, 100-154	4.4	28
84	Creatine kinase-catalyzed reaction rate in the cyanide-poisoned mouse brain. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1993 , 13, 153-61	7.3	18
83	The effect of nimodipine on high-energy phosphates and intracellular pH during cerebral ischemia. 1993 , 10, 73-81		10
82	NMR Studies of H ₂ O: N-Phenyl (N-Phenyl-ED-Glucopyranosylamine) Urokamide Interactions in Dimethyl Sulfoxide at two Fields. 1993 , 12, 63-79		1
81	NMR and the study of pathological state in cells and tissues. 1993 , 145, 1-63		8
80	Magnetization transfer affects the proton creatine/phosphocreatine signal intensity: in vivo demonstration in the rat brain. <i>Magnetic Resonance in Medicine</i> , 1994 , 31, 81-4	4.4	55
79	Age-related changes in swine brain creatine kinase-catalyzed 31P exchange measured in vivo using 31P NMR magnetization transfer. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 1994 , 14, 1070-7	7.3	22
78	Ions and energy in mammalian brain. <i>Progress in Neurobiology</i> , 1994 , 43, 37-71	10.9	379
77	Nuclear magnetic resonance spectroscopy studies of the brain. <i>Progress in Neurobiology</i> , 1994 , 44, 87-118	10.9	55
76	Studies of Physiological Control of ATP Synthesis. <i>Advances in Molecular and Cell Biology</i> , 1995 , 207-232		4
75	Bioenergetic scaling: metabolic design and body-size constraints in mammals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1995 , 92, 7317-21	11.5	50
74	?REVIEW : The Nuclear Magnetic Resonance Revolution in Basic and Clinical Neuroscience. <i>Neuroscientist</i> , 1995 , 1, 84-94	7.6	2

73	31P NMR magnetization transfer study of the control of ATP turnover in <i>Saccharomyces cerevisiae</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1996 , 93, 6399-404	11.5	29
72	New aspects of brain physiology. <i>NMR in Biomedicine</i> , 1996 , 9, 279-96	4.4	24
71	Chapter 8 alternatives to mass spectrometry for quantitating stable isotopes: Application of nuclear magnetic resonance in brain metabolic research. <i>Pharmacochimistry Library</i> , 1997 , 141-168		1
70	Brain creatine kinase with aging in F-344 rats: analysis by saturation transfer magnetic resonance spectroscopy. <i>Neurobiology of Aging</i> , 1997 , 18, 617-22	5.6	16
69	Toroids in NMR spectroscopy ¹ Work supported by the U.S. Department of Energy, Division of Chemical Sciences, Office of Basic Energy Sciences, under Contract W-31-109-ENG-38. ¹² The submitted manuscript has been authored by a contractor of the U.S. Government under contract No. W-31-109-ENG-38. Accordingly, the U.S. Government retains a nonexclusive, royalty-free license	10.4	50
68	Creatine kinase reaction rates in rat brain during chronic ischemia. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 1998 , 7, 162-5 <i>Magnetic Resonance Spectroscopy</i> , 1997 , 30, 209-253	2.8	11
67	Molecular aspects of magnetic resonance imaging and spectroscopy. <i>Molecular Aspects of Medicine</i> , 1999 , 20, 185-318	16.7	23
66	Brain energy stores in C57BL/6 mice after <i>C. parvum</i> injection. <i>NeuroReport</i> , 1999 , 10, 177-81	1.7	1
65	A study of creatine kinase reaction in rat brain under chronic pathological conditions-chronic ischemia and ethanol intoxication. <i>Brain Research Bulletin</i> , 2000 , 53, 431-5	3.9	11
64	Transgenic livers expressing mitochondrial and cytosolic CK: mitochondrial CK modulates free ADP levels. <i>American Journal of Physiology - Cell Physiology</i> , 2002 , 282, C338-46	5.4	31
63	Four-angle saturation transfer (FAST) method for measuring creatine kinase reaction rates in vivo. <i>Magnetic Resonance in Medicine</i> , 2002 , 47, 850-63	4.4	74
62	Optimized pulse parameters for reducing quantitation errors due to saturation factor changes in magnetic resonance spectroscopy. <i>Journal of Magnetic Resonance</i> , 2002 , 156, 161-70	3	6
61	Measurement of unidirectional Pi to ATP flux in human visual cortex at 7 T by using in vivo 31P magnetic resonance spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 14409-14	11.5	90
60	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	0.6	11
59	In vivo carbon-13 magnetization transfer effect. Detection of aspartate aminotransferase reaction. <i>Magnetic Resonance in Medicine</i> , 2005 , 54, 1321-6	4.4	29
58	NMR spectroscopy in neurochemistry. <i>Journal of Neurochemistry</i> , 1993 , 61, 412-29	6	67
57	Theoretical analysis of carbon-13 magnetization transfer for in vivo exchange between alpha-ketoglutarate and glutamate. <i>NMR in Biomedicine</i> , 2006 , 19, 248-54	4.4	15
56	Phosphorus-31 Magnetization Transfer Studies In Vivo. 2007 ,		

55	Efficient in vivo ³¹ 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, 103-14	4.4	94
54	Detection of ¹⁷ O-tagged phosphate by (³¹ P) MRS: a method with potential for in vivo studies of phosphorus metabolism. <i>Magnetic Resonance in Medicine</i> , 2007 , 57, 1168-72	4.4	3
53	Structure-based profiling of metabolites and isotopomers by NMR. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2008 , 52, 69-117	10.4	184
52	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, 6409-14	11.5	141
51	Multimodal neuroimaging provides a highly consistent picture of energy metabolism, validating ³¹ P MRS for measuring brain ATP synthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 3988-93	11.5	36
50	Studying Enzymes by In Vivo C Magnetic Resonance Spectroscopy. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2009 , 55, 266-283	10.4	5
49	Conversion of brain cytosol profile from fetal to adult type during the perinatal period: taurine-NAA exchange. <i>Proceedings of the Japan Academy Series B: Physical and Biological Sciences</i> , 2010 , 86, 630-42	4	8
48	³¹ P saturation transfer spectroscopy predicts differential intracellular macromolecular association of ATP and ADP in skeletal muscle. <i>Journal of Biological Chemistry</i> , 2010 , 285, 39588-96	5.4	31
47	In vivo oxygen-17 NMR for imaging brain oxygen metabolism at high field. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2011 , 59, 319-35	10.4	38
46	Interleukin-1beta does not affect the energy metabolism of rat organotypic hippocampal-slice cultures. <i>Neuroscience Letters</i> , 2012 , 508, 114-8	3.3	1
45	Quantitative imaging of energy expenditure in human brain. <i>NeuroImage</i> , 2012 , 60, 2107-17	7.9	158
44	In Vivo Studies of Brain Oxygen Metabolism and Oxidative Phosphorylation. <i>Advances in Neurobiology</i> , 2012 , 623-652	2.1	
43	³¹ P-magnetization transfer magnetic resonance spectroscopy measurements of in vivo metabolism. <i>Diabetes</i> , 2012 , 61, 2669-78	0.9	46
42	Relayed magnetization transfer from nuclear Overhauser effect and chemical exchange observed by in vivo ³¹ P MRS in rat brain. <i>Magnetic Resonance Imaging</i> , 2012 , 30, 716-21	3.3	5
41	Reproducibility of creatine kinase reaction kinetics in human heart: a (³¹ P) time-dependent saturation transfer spectroscopy study. <i>NMR in Biomedicine</i> , 2014 , 27, 663-71	4.4	18
40	Field dependence study of in vivo brain (³¹ P) MRS up to 16.4 T. <i>NMR in Biomedicine</i> , 2014 , 27, 1135-41	4.4	29
39	A guide to the metabolic pathways and function of metabolites observed in human brain ¹ H magnetic resonance spectra. <i>Neurochemical Research</i> , 2014 , 39, 1-36	4.6	268
38	Exchange kinetics by inversion transfer: integrated analysis of the phosphorus metabolite kinetic exchanges in resting human skeletal muscle at 7 T. <i>Magnetic Resonance in Medicine</i> , 2015 , 73, 1359-69	4.4	18

37	Amplification of the effects of magnetization exchange by (31) P band inversion for measuring adenosine triphosphate synthesis rates in human skeletal muscle. <i>Magnetic Resonance in Medicine</i> , 2015 , 74, 1505-14	4.4	11
36	Brain high-energy phosphates and creatine kinase synthesis rate under graded isoflurane anesthesia: An in vivo (31) P magnetization transfer study at 11.7 tesla. <i>Magnetic Resonance in Medicine</i> , 2015 , 73, 726-30	4.4	7
35	A simple approach to evaluate the kinetic rate constant for ATP synthesis in resting human skeletal muscle at 7 T. <i>NMR in Biomedicine</i> , 2016 , 29, 1240-8	4.4	8
34	A Flux Balance of Glucose Metabolism Clarifies the Requirements of the Warburg Effect. <i>Biophysical Journal</i> , 2016 , 111, 1088-100	2.9	30
33	Interleukin-1beta-induced reduction of tissue water diffusion in the juvenile rat brain on ADC MRI is not associated with (31)P MRS-detectable energy failure. <i>Journal of Inflammation</i> , 2016 , 13, 9	6.7	0
32	Evidence for a "metabolically inactive" inorganic phosphate pool in adenosine triphosphate synthase reaction using localized 31P saturation transfer magnetic resonance spectroscopy in the rat brain at 11.7 T. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2016 , 36, 1513-8	7.3	13
31	31P MRSI Studies in Patients with Cancer. <i>Annual Reports on NMR Spectroscopy</i> , 2016 , 87, 319-368	1.7	6
30	Imaging and spectroscopic approaches to probe brain energy metabolism dysregulation in neurodegenerative diseases. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017 , 37, 1927-1943	7.3	13
29	P magnetization transfer magnetic resonance spectroscopy: Assessing the activation induced change in cerebral ATP metabolic rates at 3 T. <i>Magnetic Resonance in Medicine</i> , 2018 , 79, 22-30	4.4	13
28	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	5.3	6
27	Quantitative imaging of brain energy metabolisms and neuroenergetics using in vivo X-nuclear H, O and P MRS at ultra-high field. <i>Journal of Magnetic Resonance</i> , 2018 , 292, 155-170	3	14
26	Advanced Multinuclear Magnetic Resonance Spectroscopy (MRS) Imaging Approaches for Studying Brain Metabolism, Neuroenergetics, and Function. 2019 , 463-491		1
25	Good Sense and Good Chemistry. 2021 , 297-324		
24	Neuroimaging Methods and Findings. 2021 , 189-324		
23	NMR Methods for Studying Enzyme Kinetics in Cells and Tissue. 1987 , 81-127		5
22	In Vivo Cerebral 31P Magnetic Resonance Spectroscopy. <i>Advances in Neurobiology</i> , 2012 , 149-179	2.1	2
21	Phosphorus metabolites by NMR. <i>Advances in Experimental Medicine and Biology</i> , 1984 , 178, 455-64	3.6	13
20	Study of Brain Bioenergetics and Function Using In Vivo MRS. <i>Biological Magnetic Resonance</i> , 2015 , 819-864		1

19	Advanced In Vivo Heteronuclear MRS Approaches for Studying Brain Bioenergetics Driven by Mitochondria. <i>Methods in Molecular Biology</i> , 2009 , 489, 317-57	1.4	35
18	In Vivo NMR. <i>Proceedings in Life Sciences</i> , 1986 , 93-103		1
17	Magnetic Resonance Spectroscopy. 1993 , 166-194		2
16	Redox Manipulation of Free Cardiac Adenylates and Purine Nucleoside Release. <i>Developments in Cardiovascular Medicine</i> , 1988 , 67-81		2
15	Phosphorus Nuclear Magnetic Resonance (31P NMR): A Computer Based Instrument for Studying Brain Hypoxia. <i>Developments in Critical Care Medicine and Anesthesiology</i> , 1983 , 387-401		1
14	In vivo flux between phosphocreatine and adenosine triphosphate determined by two-dimensional phosphorous NMR.. <i>Journal of Biological Chemistry</i> , 1983 , 258, 12787-12789	5-4	77
13	Determination of creatine kinase kinetic parameters in rat brain by NMR magnetization transfer. Correlation with brain function. <i>Journal of Biological Chemistry</i> , 1993 , 268, 13166-13171	5-4	83
12	Role of glycolysis in adenylate depletion and repletion during work and recovery in teleost white muscle. <i>Journal of Experimental Biology</i> , 1987 , 129, 125-140	3	111
11	NMR-Spektroskopie intakter biologischer Systeme. 1984 , 31-53		2
10	Grundlagen der NMR-Spektroskopie. 1984 , 5-30		
9	Potentielle Anwendungen der NMR-Technik in der Medizin. 1984 , 1-4		
8	Nuclear magnetic resonance studies of metabolism in vivo. 1985 , 9-13		
7	NMR Spectroscopy: Application to Metabolic Research. 1987 , 61-84		
6	Cellular and Metabolic Significance of Cellular Acid-Base Shifts in Human Stroke. 1992 , 335-357		
5	Patient-specific apparent diffusion maps used to model nutrient availability in degenerated intervertebral discs.. <i>JOR Spine</i> , 2021 , 4, e1179	3-7	1
4	On the potential of Fourier-encoded saturation transfers for sensitizing solid-state magic-angle spinning NMR experiments.. <i>Journal of Chemical Physics</i> , 2022 , 156, 054201	3-9	1
3	Magnetic Micro- and Nanoagents for Monitoring Enzymatic Activity In Vivo. <i>Annual Review of Control, Robotics, and Autonomous Systems</i> , 2022 , 5,	11.8	
2	In-cell NMR: Why and how?. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2022 ,	10.4	0

- 1 Nuclear Magnetic Resonance (NMR) Spectroscopy: Basic Principles and Some Applications to Studies of Cerebral Metabolism. **1988**, 165-183

o