Robert S Balaban

List of Publications by Year
in descending order

179 papers	20,828 citations	17405 63 h-index	10127 140 g-index
185 all docs	185 docs citations	185 times ranked	22634 citing authors

#	Article	IF	Citations
1	Mitochondria, Oxidants, and Aging. Cell, 2005, 120, 483-495.	13.5	3,710
2	Magnetization transfer contrast (MTC) and tissue water proton relaxationin vivo. Magnetic Resonance in Medicine, 1989, 10, 135-144.	1.9	1,333
3	Correction for geometric distortion in echo planar images from B0 field variations. Magnetic Resonance in Medicine, 1995, 34, 65-73.	1.9	1,311
4	The physiological role of mitochondrial calcium revealed by mice lacking the mitochondrial calcium uniporter. Nature Cell Biology, 2013, 15, 1464-1472.	4.6	571
5	The Mammalian Target of Rapamycin (mTOR) Pathway Regulates Mitochondrial Oxygen Consumption and Oxidative Capacity. Journal of Biological Chemistry, 2006, 281, 27643-27652.	1.6	524
6	Role of Mitochondrial Ca²⁺ in the Regulation of Cellular Energetics. Biochemistry, 2012, 51, 2959-2973.	1.2	519
7	DENSE: Displacement Encoding with Stimulated Echoes in Cardiac Functional MRI. Journal of Magnetic Resonance, 1999, 137, 247-252.	1.2	453
8	Functional mapping of the human visual cortex at 4 and 1.5 tesla using deoxygenation contrast EPI. Magnetic Resonance in Medicine, 1993, 29, 277-279.	1.9	437
9	Highly efficient endosomal labeling of progenitor and stem cells with large magnetic particles allows magnetic resonance imaging of single cells. Blood, 2003, 102, 867-872.	0.6	404
10	Ca²⁺activation of heart mitochondrial oxidative phosphorylation: role of the F₀/F₁-ATPase. American Journal of Physiology - Cell Physiology, 2000, 278, C423-C435.	2.1	378
11	Relation between work and phosphate metabolite in the in vivo paced mammalian heart. Science, 1986, 232, 1121-1123.	6.0	377
12	Determination of pH using water protons and chemical exchange dependent saturation transfer (CEST). Magnetic Resonance in Medicine, 2000, 44, 799-802.	1.9	372
13	Mitochondrial reticulum for cellular energy distribution in muscle. Nature, 2015, 523, 617-620.	13.7	355
14	Mitochondrial Function, Biology, and Role in Disease. Circulation Research, 2016, 118, 1960-1991.	2.0	330
15	Detecting Acute Coronary Syndrome in the Emergency Department With Cardiac Magnetic Resonance Imaging. Circulation, 2003, 107, 531-537.	1.6	328
16	Cardiac Energy Metabolism Homeostasis: Role of Cytosolic Calcium. Journal of Molecular and Cellular Cardiology, 2002, 34, 1259-1271.	0.9	320
17	Carotid Artery Atherosclerosis: In Vivo Morphologic Characterization with Gadolinium-enhanced Double-oblique MR Imagingâ€"Initial Results. Radiology, 2002, 223, 566-573.	3.6	313
18	Absolute Myocardial Perfusion in Canines Measured by Using Dual-Bolus First-Pass MR Imaging. Radiology, 2004, 232, 677-684.	3.6	271

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19	Magnetization transfer imaging: practical aspects and clinical applications.. Radiology, 1994, 192, 593-599.	3.6	263
20	Effect of Calcium on the Oxidative Phosphorylation Cascade in Skeletal Muscle Mitochondria. Biochemistry, 2013, 52, 2793-2809.	1.2	245
21	Mitochondrial Matrix Phosphoproteome:â€‰ Effect of Extra Mitochondrial Calcium. Biochemistry, 2006, 45, 2524-2536.	1.2	228
22	Opportunities in Interventional and Diagnostic Imaging by Using High-Performance Low-Field-Strength MRI. Radiology, 2019, 293, 384-393.	3.6	224
23	Quantitative1H magnetization transfer imagingin vivo. Magnetic Resonance in Medicine, 1991, 17, 304-314.	1.9	215
24	The role of Ca2+ signaling in the coordination of mitochondrial ATP production with cardiac work. Biochimica Et Biophysica Acta - Bioenergetics, 2009, 1787, 1334-1341.	0.5	195
25	Metabolic Network Control of Oxidative Phosphorylation. Journal of Biological Chemistry, 2003, 278, 39155-39165.	1.6	186
26	Tissue heterogeneity of the mammalian mitochondrial proteome. American Journal of Physiology - Cell Physiology, 2007, 292, C689-C697.	2.1	186
27	Analysis of water-macromolecule proton magnetization transfer in articular cartilage. Magnetic Resonance in Medicine, 1993, 29, 211-215.	1.9	170
28	p53 Improves Aerobic Exercise Capacity and Augments Skeletal Muscle Mitochondrial DNA Content. Circulation Research, 2009, 105, 705-712.	2.0	164
29	Low-flow hypothermic cardiopulmonary bypass protects the brain. Journal of Thoracic and Cardiovascular Surgery, 1991, 102, 76-84.	0.4	163
30	Power Grid Protection of the Muscle Mitochondrial Reticulum. Cell Reports, 2017, 19, 487-496.	2.9	155
31	Calcium Activation of Heart Mitochondrial Oxidative Phosphorylation. Journal of Biological Chemistry, 2001, 276, 2586-2599.	1.6	148
32	The interactome of intact mitochondria by cross-linking mass spectrometry provides evidence for coexisting respiratory supercomplexes. Molecular and Cellular Proteomics, 2018, 17, 216-232.	2.5	142
33	Respiratory control in the glucose perfused heart. FEBS Letters, 1987, 221, 270-276.	1.3	137
34	The Mammalian Longevity-associated Gene Product p66 Regulates Mitochondrial Metabolism. Journal of Biological Chemistry, 2006, 281, 10555-10560.	1.6	137
35	Distribution of Mitochondrial NADH Fluorescence Lifetimes:Â Steady-State Kinetics of Matrix NADH Interactions. Biochemistry, 2005, 44, 2585-2594.	1.2	133
36	Cytochrome c Oxidase Activity Is a Metabolic Checkpoint that Regulates Cell Fate Decisions During T Cell Activation and Differentiation. Cell Metabolism, 2017, 25, 1254-1268.e7.	7.2	125

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37	Human arterial surface fluorescence: Atherosclerotic plaque identification and effects of laser atheroma ablation. Journal of the American College of Cardiology, 1988, 12, 94-102.	1.2	111
38	High-Resolution Strain Analysis of the Human Heart with Fast-DENSE. Journal of Magnetic Resonance, 1999, 140, 41-57.	1.2	111
39	Lipid bilayer and water proton magnetization transfer: Effect of cholesterol. Magnetic Resonance in Medicine, 1991, 18, 214-223.	1.9	104
40	A functional genomic screen for cardiogenic genes using RNA interference in developing Drosophila embryos. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 159-164.	3.3	104
41	Living Without Creatine. Circulation Research, 2013, 112, 945-955.	2.0	104
42	Quantification of Oxygen Consumption in Retina Ex Vivo Demonstrates Limited Reserve Capacity of Photoreceptor Mitochondria. , 2015, 56, 8428.		104
43	Functional consequences of mitochondrial proteome heterogeneity. American Journal of Physiology - Cell Physiology, 2007, 292, C698-C707.	2.1	98
44	Contribution of Macromolecular Structure to the Retention of Low-Density Lipoprotein at Arterial Branch Points. Circulation, 2008, 117, 2919-2927.	1.6	95
45	Quantitative Mitochondrial Phosphoproteomics Using iTRAQ on an LTQ-Orbitrap with High Energy Collision Dissociation. Journal of Proteome Research, 2009, 8, 4665-4675.	1.8	95
46	Mitochondrial NADH Fluorescence Is Enhanced by Complex I Binding. Biochemistry, 2008, 47, 9636-9645.	1.2	90
47	Changes in pyridine nucleotide levels alter oxygen consumption and extra-mitochondrial phosphates in isolated mitochondria: A 31P-NMR and NAD(P)H fluorescence study. Biochimica Et Biophysica Acta - Bioenergetics, 1987, 893, 398-408.	0.5	89
48	In vivo study of microcirculation in canine myocardium using the IVIM method. Magnetic Resonance in Medicine, 2003, 50, 531-540.	1.9	88
49	Stoichiometry of STAT3 and Mitochondrial Proteins. Journal of Biological Chemistry, 2010, 285, 23532-23536.	1.6	87
50	Cardiac mitochondrial matrix and respiratory complex protein phosphorylation. American Journal of Physiology - Heart and Circulatory Physiology, 2012, 303, H940-H966.	1.5	86
51	Comparison of EPI gradient-echo contrast changes in cat brain caused by respiratory challenges with direct simultaneous evaluation of cerebral oxygenation via a cranial window. NMR in Biomedicine, 1994, 7, 35-44.	1.6	84
52	Anomalous Transverse Relaxation in1H Spectroscopy in Human Brain at 4 Tesla. Magnetic Resonance in Medicine, 1995, 33, 246-252.	1.9	81
53	Succinyl-CoA Synthetase Is a Phosphate Target for the Activation of Mitochondrial Metabolism. Biochemistry, 2009, 48, 7140-7149.	1.2	81
54	Phosphorus nuclear magnetic resonance study of the rat kidney in vivo. Kidney International, 1981, 20, 575-579.	2.6	77

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55	Skeletal Muscle NAD(P)H Two-Photon Fluorescence Microscopy In Vivo: Topology and Optical Inner Filters. Biophysical Journal, 2005, 88, 2165-2176.	0.2	77
56	Domestication of the cardiac mitochondrion for energy conversion. Journal of Molecular and Cellular Cardiology, 2009, 46, 832-841.	0.9	77
57	Identifying Patients at High Risk of a Cardiovascular Event in the Near Future. Circulation, 2010, 121, 1447-1454.	1.6	76
58	Spectroscopic Determination of Cytochrome c Oxidase Content in Tissues Containing Myoglobin or Hemoglobin. Analytical Biochemistry, 1996, 237, 274-278.	1.1	74
59	Myocardial velocity gradient imaging by phase contrast MRI with application to regional function in myocardial ischemia. Magnetic Resonance in Medicine, 1999, 42, 98-109.	1.9	73
60	Multislice first-pass cardiac perfusion MRI: Validation in a model of myocardial infarction. Magnetic Resonance in Medicine, 2002, 47, 482-491.	1.9	72
61	NMR imaging of labile proton exchange. Journal of Magnetic Resonance, 1990, 86, 164-169.	0.5	71
62	Protein composition and function of red and white skeletal muscle mitochondria. American Journal of Physiology - Cell Physiology, 2011, 300, C1280-C1290.	2.1	68
63	Studies on the relationship between glycolysis and (Na++K+)-ATPase in cultured cells. Biochimica Et Biophysica Acta - Molecular Cell Research, 1984, 804, 419-426.	1.9	66
64	Intermittent hypothermic asanguineous cerebral perfusion (cerebroplegia) protects the brain during prolonged circulatory arrest. Journal of Thoracic and Cardiovascular Surgery, 1990, 99, 878-884.	0.4	65
65	Osmotically active organic solutes in the renal inner medulla. Kidney International, 1987, 31, 562-564.	2.6	64
66	The design and test of a new volume coil for high field imaging. Magnetic Resonance in Medicine, 1994, 32, 492-498.	1.9	61
67	Function, Metabolic, and Flow Heterogeneity of the Heart. Circulation Research, 2001, 88, 265-267.	2.0	61
68	Usingcardiacphasetoorderreconstruction (CAPTOR): A method to improve diastolic images. Journal of Magnetic Resonance Imaging, 1997, 7, 794-798.	1.9	60
69	Multi-photon excitation microscopy in intact animals. Journal of Microscopy, 2006, 222, 58-64.	0.8	60
70	Regulation of oxidative phosphorylation complex activity: effects of tissue-specific metabolic stress within an allometric series and acute changes in workload. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2012, 302, R1034-R1048.	0.9	59
71	Imaging of urea using chemical exchange-dependent saturation transfer at 1.5T. Journal of Magnetic Resonance Imaging, 2000, 12, 745-748.	1.9	58
72	Arterial wall MRI characteristics are associated with elevated serum markers of inflammation in humans. Journal of Magnetic Resonance Imaging, 2001, 14, 698-704.	1.9	58

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73	Measurement of skeletal muscle perfusion during postischemic reactive hyperemia using contrast-enhanced MRI with a step-input function. Magnetic Resonance in Medicine, 2005, 54, 289-298.	1.9	57
74	Correction for inner filter effects in turbid samples: fluorescence assays of mitochondrial NADH. American Journal of Physiology - Cell Physiology, 1998, 275, C900-C909.	2.1	56
75	Role of calcium in metabolic signaling between cardiac sarcoplasmic reticulum and mitochondria in vitro. American Journal of Physiology - Cell Physiology, 2003, 284, C285-C293.	2.1	55
76	Comparison of 3D BOLD Functional MRI with Spiral Acquisition at 1.5 and 4.0 T. NeuroImage, 1999, 9, 446-451.	2.1	53
77	Mice over-expressing the myocardial creatine transporter develop progressive heart failure and show decreased glycolytic capacity. Journal of Molecular and Cellular Cardiology, 2010, 48, 582-590.	0.9	53
78	Saturation and inversion transfer studies of creatine kinase kinetics in rabbit skeletal musclein vivo. Magnetic Resonance in Medicine, 1988, 7, 56-64.	1.9	50
79	Metabolism of the heart and brain during hypothermic cardiopulmonary bypass. Annals of Thoracic Surgery, 1991, 51, 105-109.	0.7	50
80	The Evaluation of Dielectric Resonators Containing H2O or D2O as RF Coils for High-Field MR Imaging and Spectroscopy. Journal of Magnetic Resonance Series B, 1996, 110, 117-123.	1.6	50
81	Myocardial oxygenation in vivo: optical spectroscopy of cytoplasmic myoglobin and mitochondrial cytochromes. American Journal of Physiology - Heart and Circulatory Physiology, 1999, 277, H683-H697.	1.5	50
82	Energy Requirements of the Developing Mammalian Blastocyst for Active Ion Transport. Biology of Reproduction, 1980, 23, 941-947.	1.2	49
83	Dynamic and chemical factors affecting water proton relaxation by macromolecules. Journal of Magnetic Resonance, 1992, 98, 637-645.	0.5	45
84	Chapter 4 32P Labeling of Protein Phosphorylation and Metabolite Association in the Mitochondria Matrix. Methods in Enzymology, 2009, 457, 63-80.	0.4	41
85	Magnetization transfer characterization of hypertensive cardiomyopathy: Significance of tissue water content. Magnetic Resonance in Medicine, 1993, 29, 352-357.	1.9	40
86	In Vivo Microscopy Reveals Extensive Embedding of Capillaries within the Sarcolemma of Skeletal Muscle Fibers. Microcirculation, 2014, 21, 131-147.	1.0	40
87	Stunned, Infarcted, and Normal Myocardium in Dogs: Simultaneous Differentiation by Using Gadolinium-enhanced Cine MR Imaging with Magnetization Transfer Contrast. Radiology, 2003, 226, 723-730.	3.6	39
88	Use of ³²P To Study Dynamics of the Mitochondrial Phosphoproteome. Journal of Proteome Research, 2009, 8, 2679-2695.	1.8	39
89	Modeling mitochondrial function. American Journal of Physiology - Cell Physiology, 2006, 291, C1107-C1113.	2.1	38
90	Metabolic homeostasis of the heart. Journal of General Physiology, 2012, 139, 407-414.	0.9	38

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91	Energy metabolism design of the striated muscle cell. Physiological Reviews, 2021, 101, 1561-1607.	13.1	38
92	Effects of tissue absorbance on NAD(P)H and Indo-1 fluorescence from perfused rabbit hearts. FEBS Letters, 1990, 262, 287-292.	1.3	37
93	The visceral pericardium: macromolecular structure and contribution to passive mechanical properties of the left ventricle. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H3379-H3387.	1.5	37
94	Limited utility of acetoxymethyl (AM)â€based intracellular delivery systems, in vivo: interference by extracellular esterases. Journal of Microscopy, 2007, 226, 74-81.	0.8	37
95	Chest Pain in Women with Normal Coronary Angiograms. New England Journal of Medicine, 2000, 342, 885-887.	13.9	36
96	Effect of cardiac flow on gradient recalled echo images of the canine heart. NMR in Biomedicine, 1994, 7, 89-95.	1.6	35
97	NADH Enzyme-Dependent Fluorescence Recovery after Photobleaching (ED-FRAP): Applications to Enzyme and Mitochondrial Reaction Kinetics, In Vitro. Biophysical Journal, 2004, 86, 629-645.	0.2	35
98	Proteomic changes associated with diabetes in the BB-DP rat. American Journal of Physiology - Endocrinology and Metabolism, 2009, 296, E422-E432.	1.8	35
99	A method to improve the BO homogeneity of the heartin vivo. Magnetic Resonance in Medicine, 1996, 36, 375-383.	1.9	34
100	Visible-light photon migration through myocardium in vivo. American Journal of Physiology - Heart and Circulatory Physiology, 1999, 277, H698-H704.	1.5	34
101	Maintenance of the Metabolic Homeostasis of the Heart: Developing a Systems Analysis Approach. Annals of the New York Academy of Sciences, 2006, 1080, 140-153.	1.8	34
102	Cardiac performance is limited by oxygen delivery to the mitochondria in the crystalloid-perfused working heart. American Journal of Physiology - Heart and Circulatory Physiology, 2018, 314, H704-H715.	1.5	33
103	Hyperglycemia increases cerebral intracellular acidosis during circulatory arrest. Annals of Thoracic Surgery, 1992, 54, 1126-1130.	0.7	32
104	Relationship between skeletal muscle intracellular ionized magnesium and measurements of blood magnesium. Translational Research, 1996, 127, 207-213.	2.4	32
105	Optimization of multiphoton excitation microscopy by total emission detection using a parabolic light reflector. Journal of Microscopy, 2007, 228, 330-337.	0.8	32
106	High-resolution imaging reveals a limit in spatial resolution of blood flow measurements by microspheres. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 287, H1132-H1140.	1.5	30
107	The mitochondrial proteome: A dynamic functional program in tissues and disease states. Environmental and Molecular Mutagenesis, 2010, 51, 352-359.	0.9	30
108	Homogenous protein programming in the mammalian left and right ventricle free walls. Physiological Genomics, 2011, 43, 1198-1206.	1.0	30

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109	Intrinsic Protein Kinase Activity in Mitochondrial Oxidative Phosphorylation Complexes. Biochemistry, 2011, 50, 2515-2529.	1.2	29
110	Hypoxia-induced left ventricular dysfunction in myoglobin-deficient mice. American Journal of Physiology - Heart and Circulatory Physiology, 2003, 285, H2132-H2141.	1.5	28
111	Allometry of brain metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3216-3217.	3.3	27
112	Barbiturates impair cerebral metabolism during hypothermic circulatory arrest. Annals of Thoracic Surgery, 1992, 54, 1131-1136.	0.7	26
113	NAD(P)H fluorescence imaging of mitochondrial metabolism in contracting Xenopus skeletal muscle fibers: effect of oxygen availability. Journal of Applied Physiology, 2005, 98, 1420-1426.	1.2	26
114	Short Communication: Subcellular Motion Compensation for Minimally Invasive Microscopy, In Vivo. Circulation Research, 2010, 106, 1129-1133.	2.0	26
115	The electrochemical transmission in I-Band segments of the mitochondrial reticulum. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1284-1289.	0.5	26
116	Comparison of the effects of increased intracellular calcium and antidiuretic hormone on active sodium transport in frog skin. A study with the calcium ionophore A23187. Biochimica Et Biophysica Acta - Biomembranes, 1979, 555, 1-12.	1.4	23
117	Nonglucose substrates increase glycogen synthesis in vivo in dog heart. American Journal of Physiology - Heart and Circulatory Physiology, 1994, 267, H217-H223.	1.5	23
118	Radiofrequency shielding of surface coils at 4.0 t. Journal of Magnetic Resonance Imaging, 1995, 5, 773-777.	1.9	23
119	Water-Macromolecular Proton Magnetization Transfer in Infarcted Myocardium: A Method to Enhance Magnetic Resonance Image Contrast. Magnetic Resonance in Medicine, 1995, 33, 178-184.	1.9	23
120	Stimulation of oxidative phosphorylation by calcium in cardiac mitochondria is not influenced by cAMP and PKA activity. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1913-1921.	0.5	22
121	Oxygenâ€enhanced functional lung imaging using a contemporary 0.55â€‰T MRI system. NMR in Biomedicine, 2021, 34, e4562.	1.6	22
122	Current topic: Transport mechanisms in preimplantation mammalian embryos. Placenta, 1990, 11, 373-380.	0.7	21
123	Optical spectroscopy in turbid media using an integrating sphere: Mitochondrial chromophore analysis during metabolic transitions. Analytical Biochemistry, 2013, 439, 161-172.	1.1	21
124	The Effect of Short Chain Fatty Acid Administration on Hepatic Glucose, Phosphate, Magnesium and Calcium Metabolism. Advances in Experimental Medicine and Biology, 1986, 194, 617-646.	0.8	21
125	Monitoring mitochondrial calcium and metabolism in the beating MCU-KO heart. Cell Reports, 2021, 37, 109846.	2.9	20
126	Kinetics of creatine phosphokinase and adenylate kinase. BBA - Proteins and Proteomics, 1984, 789, 128-135.	2.1	18

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127	Renal distribution and metabolism of [2H9]choline. A2H NMR and MRI study. NMR in Biomedicine, 1990, 3, 173-177.	1.6	18
128	Symposium Presentations. Journal of the American College of Cardiology, 2005, 46, A5-A70.	1.2	18
129	Threeâ€dimensional motion tracking for highâ€resolution optical microscopy, in vivo. Journal of Microscopy, 2012, 246, 237-247.	0.8	18
130	A discordance in rosiglitazone mediated insulin sensitization and skeletal muscle mitochondrial content/activity in Type 2 diabetes mellitus. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H2659-H2666.	1.5	17
131	Does binding of Gd-DTPA to myocardial tissue contribute to late enhancement in a model of acute myocardial infarction?. Magnetic Resonance in Medicine, 2003, 49, 168-171.	1.9	16
132	The effect of cardiopulmonary bypass on brain and heart metabolism: A31P NMR study. Magnetic Resonance in Medicine, 1990, 15, 446-455.	1.9	15
133	The effect of off-resonance radio frequency pulse saturation on fMRI contrast. , 1997, 10, 208-215.		15
134	Reduction of field of view in MRI using a surface-spoiling local gradient insert. Journal of Magnetic Resonance Imaging, 1998, 8, 981-988.	1.9	15
135	Intracardiac light catheter for rapid scanning transmural absorbance spectroscopy of perfused myocardium: measurement of myoglobin oxygenation and mitochondria redox state. American Journal of Physiology - Heart and Circulatory Physiology, 2017, 313, H1199-H1208.	1.5	15
136	Rapid Spectrophotometric Determination of Oxygen Consumption Using Hemoglobin, in Vitro: Light Scatter Correction and Expanded Dynamic Range. Analytical Biochemistry, 2000, 286, 156-163.	1.1	14
137	The efficiency of (Na+ + K+)-ATPase in tumorigenic cells. Biochimica Et Biophysica Acta - Biomembranes, 1983, 730, 271-275.	1.4	13
138	Evaluation of methemoglobin as an autologous intravascular MRI contrast agent. Magnetic Resonance in Medicine, 1996, 35, 787-789.	1.9	13
139	Paradoxical arteriole constriction compromises cytosolic and mitochondrial oxygen delivery in the isolated saline-perfused heart. American Journal of Physiology - Heart and Circulatory Physiology, 2018, 315, H1791-H1804.	1.5	13
140	Device-dependent activity estimation and decay correction of radionuclide mixtures with application to Tc-94m PET studies. Medical Physics, 2001, 28, 36-45.	1.6	12
141	Direct visualization of the arterial wall water permeability barrier using CARS microscopy. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4805-4810.	3.3	12
142	MRS of the Kidney. Investigative Radiology, 1989, 24, 988-992.	3.5	11
143	Assessment of Lung Structure and Regional Function Using 0.55 T MRI in Patients With Lymphangioleiomyomatosis. Investigative Radiology, 2022, 57, 178-186.	3.5	11
144	Simultaneous monitoring of coronary blood flow and31P NMR detected myocardial metabolites. Magnetic Resonance in Medicine, 1988, 7, 243-247.	1.9	10

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145	NMR spectroscopy of the heart, part I. Concepts in Magnetic Resonance, 1989, 1, 15-26.	1.3	10
146	NMR Investigations of Cellular Energy Metabolism. Annals of the New York Academy of Sciences, 1987, 508, 48-53.	1.8	9
147	Detection of metabolites in Vivo using 2D proton homonuclear correlated spectroscopy. Journal of Magnetic Resonance, 1988, 79, 547-553.	0.5	9
148	[16] Two-dimensional nuclear magnetic resonance studies of enzyme kinetics and metabolites in vivo. Methods in Enzymology, 1989, 176, 330-341.	0.4	9
149	Perfused murine heart optical transmission spectroscopy using optical catheter and integrating sphere: Effects of ischemia/reperfusion. Analytical Biochemistry, 2019, 586, 113443.	1.1	9
150	Neutral Carrier-Based â€œCa2+-Selectiveâ€•Microelectrodes for the Measurement of Tetraphenylphosphonium. Analytical Biochemistry, 1996, 236, 327-330.	1.1	8
151	Fluorescence Absorbance Inner-Filter Decomposition: The Role of Emission Shape on Estimates of Free Ca2+ Using Rhod-2. Applied Spectroscopy, 2007, 61, 138-147.	1.2	8
152	Compact nonâ€contact total emission detection for in vivo multiphoton excitation microscopy. Journal of Microscopy, 2014, 253, 83-92.	0.8	8
153	Tritium-proton magnetization transfer as a probe of cross relaxation in aqueous lipid bilayer suspensions. Journal of Magnetic Resonance, 1991, 93, 572-588.	0.5	7
154	Enzyme-Dependent Fluorescence Recovery after Photobleaching of NADH: In Vivo and In Vitro Applications to the Study of Enzyme Kinetics. Methods in Enzymology, 2004, 385, 257-286.	0.4	7
155	How hot are single cells?. Journal of General Physiology, 2020, 152, .	0.9	7
156	Effect of work on intracellular calcium of the intact heart. American Journal of Physiology - Heart and Circulatory Physiology, 1991, 261, 54-59.	1.5	6
157	Metabolic design in a mammalian model of extreme metabolism, the North American least shrew (Cryptotis parva). Journal of Physiology, 2022, 600, 547-567.	1.3	6
158	NMR spectroscopy of the heart: Part II. Concepts in Magnetic Resonance, 1989, 1, 93-108.	1.3	5
159	Centric ordering is superior to gradient moment nulling for motion artifact reduction in EPI. Journal of Magnetic Resonance Imaging, 1997, 7, 1122-1131.	1.9	5
160	Ultrasonic Imaging of the Electroacoustic Effect in Macromolecular Gels. Ultrasonic Imaging, 1998, 20, 288-297.	1.4	5
161	Study of the Development of the Mouse Thoracic Aorta Three-Dimensional Macromolecular Structure using Two-Photon Microscopy. Journal of Histochemistry and Cytochemistry, 2015, 63, 8-21.	1.3	5
162	Magnetic resonance imaging of the galactosemic dog eye using magnetization transfer contrast. Current Eye Research, 1995, 14, 1035-1040.	0.7	4

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163	A Modelâ€based approach for microvasculature structure distortion correction in twoâ€photon fluorescence microscopy images. Journal of Microscopy, 2015, 260, 180-193.	0.8	4
164	Improving the physiological realism of experimental models. Interface Focus, 2016, 6, 20150076.	1.5	4
165	Robust fluorescent labelling of micropipettes for use in fluorescence microscopy: application to the observation of a mosquito borne parasite infection. Journal of Microscopy, 2018, 269, 78-84.	0.8	4
166	Improvement in31P NMR signal-to-noise for ATP in vivo using homonuclear decoupling. Magnetic Resonance in Medicine, 1989, 12, 249-252.	1.9	3
167	Contribution of mitochondria to cardiac muscle water/macromolecule proton magnetization transfer. Magnetic Resonance in Medicine, 2003, 50, 1312-1316.	1.9	3
168	Automatic assessment of dynamic contrast-enhanced MRI in an ischemic rat hindlimb model: an exploratory study of transplanted multipotent progenitor cells. NMR in Biomedicine, 2008, 21, 111-119.	1.6	3
169	Continuous monitoring of enzymatic activity within native electrophoresis gels: Application to mitochondrial oxidative phosphorylation complexes. Analytical Biochemistry, 2012, 431, 30-39.	1.1	3
170	Energy homeostasis is a conserved process: Evidence from Paracoccus denitrificansâ€™ response to acute changes in energy demand. PLoS ONE, 2021, 16, e0259636.	1.1	3
171	A novel approach for the determination of fast exchange rates. Journal of Magnetic Resonance, 1991, 95, 309-319.	0.5	2
172	Improved field of view-reducing gradient insert: artifacts and application to cardiac imaging. Journal of Magnetic Resonance Imaging, 1999, 10, 209-215.	1.9	2
173	Intra-cardiac Side-Firing Light Catheter for Monitoring Cellular Metabolism using Transmural Absorbance Spectroscopy of Perfused Mammalian Hearts. Journal of Visualized Experiments, 2019, , .	0.2	2
174	Nuclear Magnetic Resonance Studies of Myocardial Metabolic Responses to Alterations in Workload. , 1993, , 93-110.		2
175	A novel global fitting algorithm for decay-associated images from fluorescence lifetime image microscopy data. Proceedings of SPIE, 2009, , .	0.8	1
176	Experimental Models in Cardiac Magnetic Resonance Spectroscopy. , 1993, , 11-23.		1
177	Experimental Preparations and Models for MRS. Investigative Radiology, 1989, 24, 948-950.	3.5	0
178	Nuclear Magnetic Resonance Spectroscopy. Academic Radiology, 1995, 2, S136-S137.	1.3	0
179	Chapter 2 Development of Chemical Exchange Saturation Transfer in Bethesda. , 2017, , 9-16.		0