Shingo Matsumoto

List of Publications by Year
in descending order

67 papers	3,036 citations	186265 28 h-index	161849 54 g-index
68 all docs	68 docs citations	68 times ranked	3797 citing authors

#	Article	IF	Citations
1	RF/Microwave Resonators for Preclinical and Clinical EPR Applications: Current Status and Challenges. Applied Magnetic Resonance, 2022, 53, 167-191.	1.2	4
2	Hyperpolarized 13 C Magnetic Resonance Imaging of Fumarate Metabolism by Parahydrogenâ€induced Polarization: A Proofâ€ofâ€Concept inâ€...vivo Study. ChemPhysChem, 2021, 22, 905-905.	2.1	0
3	High fidelity triangular sweep of the magnetic field for millisecond scan EPR imaging. Journal of Magnetic Resonance, 2021, 329, 107024.	2.1	8
4	Simultaneous T2* mapping of 14N- and 15N-labeled dicarboxy-PROXYLs using CW-EPR-based single-point imaging. Journal of Magnetic Resonance, 2019, 305, 122-130.	2.1	6
5	Macrophage derived TNFÎ± promotes hepatic reprogramming to Warburg-like metabolism. Journal of Molecular Medicine, 2019, 97, 1231-1243.	3.9	9
6	Proteasome inhibition disrupts the metabolism of fumarate hydratase- deficient tumors by downregulating p62 and c-Myc. Scientific Reports, 2019, 9, 18409.	3.3	10
7	Synthesis and evaluation of 13C-labeled 5-5-dimethyl-1-pyrroline-N-oxide aimed at in vivo detection of reactive oxygen species using hyperpolarized 13C-MRI. Free Radical Biology and Medicine, 2019, 131, 18-26.	2.9	9
8	Imaging of glucose metabolism by 13C-MRI distinguishes pancreatic cancer subtypes in mice. ELife, 2019, 8, .	6.0	19
9	Impact of the Characteristic Impedance of Coaxial Lines on the Sensitivity of a 750-MHz Electronically Tunable EPR Resonator. Applied Magnetic Resonance, 2018, 49, 853-867.	1.2	7
10	<scp>EPR</scp>â€based oximetric imaging: a combination of single pointâ€based spatial encoding and <scp>T</scp>₁ weighting. Magnetic Resonance in Medicine, 2018, 80, 2275-2287.	3.0	12
11	Radiotherapy Synergizes with the Hypoxia-Activated Prodrug Evofosfamide: In Vitro and In Vivo Studies. Antioxidants and Redox Signaling, 2018, 28, 131-140.	5.4	27
12	Pulsed Electron Paramagnetic Resonance Imaging: Applications in the Studies of Tumor Physiology. Antioxidants and Redox Signaling, 2018, 28, 1378-1393.	5.4	33
13	In Vivo Extracellular pH Mapping of Tumors Using Electron Paramagnetic Resonance. Analytical Chemistry, 2018, 90, 13938-13945.	6.5	29
14	Long-range heteronuclear J-coupling constants in esters: Implications for 13C metabolic MRI by side-arm parahydrogen-induced polarization. Journal of Magnetic Resonance, 2018, 296, 85-92.	2.1	12
15	Metabolic and Physiologic Imaging Biomarkers of the Tumor Microenvironment Predict Treatment Outcome with Radiation or a Hypoxia-Activated Prodrug in Mice. Cancer Research, 2018, 78, 3783-3792.	0.9	42
16	Feasibility of in vivo three-dimensional T*2 mapping using dicarboxy-PROXYL and CW-EPR-based single-point imaging. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2017, 30, 291-298.	2.0	13
17	Fast backprojection-based reconstruction of spectral-spatial EPR images from projections with the constant sweep of a magnetic field. Journal of Magnetic Resonance, 2017, 281, 44-50.	2.1	19
18	Quantitative imaging of pO₂ in orthotopic murine gliomas: hypoxia correlates with resistance to radiation. Free Radical Research, 2017, 51, 861-871.	3.3	16

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19	A 750-MHz electronically tunable resonator using microstrip line couplers for electron paramagnetic resonance imaging of a mouse tumor-bearing leg. IEEE Transactions on Biomedical Engineering, 2017, 65, 1-1.	4.2	5
20	Effect of amifostine, a radiation-protecting drug, on oxygen concentration in tissue measured by EPR oximetry and imaging. Journal of Clinical Biochemistry and Nutrition, 2017, 60, 151-155.	1.4	14
21	Accelerated 4D quantitative single point EPR imaging using modelâ€based reconstruction. Magnetic Resonance in Medicine, 2015, 73, 1692-1701.	3.0	8
22	13C-MR Spectroscopic Imaging with Hyperpolarized [1-13C]pyruvate Detects Early Response to Radiotherapy in SCC Tumors and HT-29 Tumors. Clinical Cancer Research, 2015, 21, 5073-5081.	7.0	54
23	Pyruvate Induces Transient Tumor Hypoxia by Enhancing Mitochondrial Oxygen Consumption and Potentiates the Anti-Tumor Effect of a Hypoxia-Activated Prodrug TH-302. PLoS ONE, 2014, 9, e107995.	2.5	35
24	In VivoImaging of Tumor Physiological, Metabolic, and Redox Changes in Response to the Anti-Angiogenic Agent Sunitinib: Longitudinal Assessment to Identify Transient Vascular Renormalization. Antioxidants and Redox Signaling, 2014, 21, 1145-1155.	5.4	41
25	Targeting ABL1-Mediated Oxidative Stress Adaptation in Fumarate Hydratase-Deficient Cancer. Cancer Cell, 2014, 26, 840-850.	16.8	87
26	Artifact suppression in electron paramagnetic resonance imaging of 14 N- and 15 N-labeled nitroxyl radicals with asymmetric absorption spectra. Journal of Magnetic Resonance, 2014, 247, 31-37.	2.1	3
27	Magnetic Resonance Imaging of the Tumor Microenvironment in Radiotherapy: Perfusion, Hypoxia, and Metabolism. Seminars in Radiation Oncology, 2014, 24, 210-217.	2.2	61
28	Fourâ€channel surface coil array for 300â€MHz pulsed EPR imaging: Proofâ€ofâ€concept experiments. Magnetic Resonance in Medicine, 2014, 71, 853-858.	3.0	8
29	EPR oxygen imaging and hyperpolarized ¹³C MRI of pyruvate metabolism as noninvasive biomarkers of tumor treatment response to a glycolysis inhibitor 3â€bromopyruvate. Magnetic Resonance in Medicine, 2013, 69, 1443-1450.	3.0	44
30	Magnetic resonance imaging of tumor oxygenation and metabolic profile. Acta OncolÃ³gica, 2013, 52, 1248-1256.	1.8	17
31	Single Acquisition Quantitative Singleâ€Point Electron Paramagnetic Resonance Imaging. Magnetic Resonance in Medicine, 2013, 70, 1173-1181.	3.0	18
32	Evaluation of partial k-space strategies to speed up time-domain EPR imaging. Magnetic Resonance in Medicine, 2013, 70, 745-753.	3.0	9
33	Electron Paramagnetic Resonance Imaging of Tumor pO₂. Radiation Research, 2012, 177, 376-386.	1.5	61
34	The relationship between tissue oxygenation and redox status using magnetic resonance imaging. International Journal of Oncology, 2012, 41, 2103-2108.	3.3	17
35	Transient decrease in tumor oxygenation after intravenous administration of pyruvate. Magnetic Resonance in Medicine, 2012, 67, 801-807.	3.0	24
36	Reporting of quantitative oxygen mapping in EPR imaging. Journal of Magnetic Resonance, 2012, 214, 244-251.	2.1	20

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37	Echo-based Single Point Imaging (ESPI): A novel pulsed EPR imaging modality for high spatial resolution and quantitative oximetry. Journal of Magnetic Resonance, 2012, 218, 105-114.	2.1	15
38	Longitudinal Imaging Studies of Tumor Microenvironment in Mice Treated with the mTOR Inhibitor Rapamycin. PLoS ONE, 2012, 7, e49456.	2.5	22
39	Simultaneous molecular imaging based on electron paramagnetic resonance of 14N- and 15N-labelled nitroxyl radicals. Chemical Communications, 2011, 47, 3245.	4.1	10
40	Intracellular Hypoxia of Tumor Tissue Estimated by Noninvasive Electron Paramagnetic Resonance Oximetry Technique Using Paramagnetic Probes. Biological and Pharmaceutical Bulletin, 2011, 34, 142-145.	1.4	24
41	Fatty acid amide hydrolase is a key regulator of endocannabinoid-induced myocardial tissue injury. Free Radical Biology and Medicine, 2011, 50, 179-195.	2.9	73
42	Magnetic resonance imaging of organic contrast agents in mice: capturing the whole-body redox landscape. Free Radical Biology and Medicine, 2011, 50, 459-468.	2.9	73
43	Detecting response of rat C6 glioma tumors to radiotherapy using hyperpolarized [1â€‹¹³C]pyruvate and ¹³C magnetic resonance spectroscopic imaging. Magnetic Resonance in Medicine, 2011, 65, 557-563.	3.0	152
44	Antiangiogenic Agent Sunitinib Transiently Increases Tumor Oxygenation and Suppresses Cycling Hypoxia. Cancer Research, 2011, 71, 6350-6359.	0.9	120
45	Low-Field Magnetic Resonance Imaging to Visualize Chronic and Cycling Hypoxia in Tumor-Bearing Mice. Cancer Research, 2010, 70, 6427-6436.	0.9	120
46	Imaging Cycling Tumor Hypoxia. Cancer Research, 2010, 70, 10019-10023.	0.9	183
47	Cannabidiol Attenuates Cardiac Dysfunction, Oxidative Stress, Fibrosis, and Inflammatory and Cell Death Signaling Pathways in Diabetic Cardiomyopathy. Journal of the American College of Cardiology, 2010, 56, 2115-2125.	2.8	389
48	Simultaneous imaging of tumor oxygenation and microvascular permeability using Overhauser enhanced MRI. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17898-17903.	7.1	87
49	Reconstruction for Time-Domain In Vivo EPR 3D Multigradient Oximetric Imagingâ€”A Parallel Processing Perspective. International Journal of Biomedical Imaging, 2009, 2009, 1-12.	3.9	6
50	Pulsed EPR imaging of nitroxides in mice. Journal of Magnetic Resonance, 2009, 197, 181-185.	2.1	51
51	Half-Life Mapping of Nitroxyl Radicals with Three-Dimensional Electron Paramagnetic Resonance Imaging at an Interval of 3.6 Seconds. Analytical Chemistry, 2009, 81, 7501-7506.	6.5	42
52	Dynamic monitoring of localized tumor oxygenation changes using RF pulsed electron paramagnetic resonance in conscious mice. Magnetic Resonance in Medicine, 2008, 59, 619-625.	3.0	18
53	Synthesis of Nitroxyl Radicals for Overhauser-enhanced Magnetic Resonance Imaging. Archiv Der Pharmazie, 2008, 341, 548-553.	4.1	23
54	Improvement of temporal resolution for three-dimensional continuous-wave electron paramagnetic resonance imaging. Review of Scientific Instruments, 2008, 79, 123701.	1.3	36

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55	Low-field paramagnetic resonance imaging of tumor oxygenation and glycolytic activity in mice. Journal of Clinical Investigation, 2008, 118, 1965-73.	8.2	98
56	Are Free Radical Reactions Increased in the Diabetic Eye?. Antioxidants and Redox Signaling, 2007, 9, 367-373.	5.4	11
57	Advantageous application of a surface coil to EPR irradiation in overhauser-enhanced MRI. Magnetic Resonance in Medicine, 2007, 57, 806-811.	3.0	37
58	Use of multi-coil parallel-gap resonators for co-registration EPR/NMR imaging. Journal of Magnetic Resonance, 2007, 184, 29-38.	2.1	36
59	Simultaneous molecular imaging of redox reactions monitored by Overhauser-enhanced MRI with 14N- and 15N-labeled nitroxyl radicals. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1463-1468.	7.1	146
60	A composite resonator assembly suitable for EPR/NMR coregistration imaging. Concepts in Magnetic Resonance Part B, 2005, 25B, 1-11.	0.7	16
61	Influence of protonT1 on oxymetry using Overhauser enhanced magnetic resonance imaging. Magnetic Resonance in Medicine, 2005, 54, 213-217.	3.0	22
62	Absolute oxygen tension (pO2) in murine fatty and muscle tissue as determined by EPR. Magnetic Resonance in Medicine, 2005, 54, 1530-1535.	3.0	78
63	In vivo imaging of oxidative stress in the kidney of diabetic mice and its normalization by angiotensin II type 1 receptor blocker. Biochemical and Biophysical Research Communications, 2005, 330, 415-422.	2.1	61
64	Evidence for contribution of vascular NAD(P)H oxidase to increased oxidative stress in animal models of diabetes and obesity. Free Radical Biology and Medicine, 2004, 37, 115-123.	2.9	163
65	In Vivo Measurement of Redox Status in Streptozotocin-Induced Diabetic Rat Using Targeted Nitroxyl Probes. Antioxidants and Redox Signaling, 2004, 6, 605-611.	5.4	19
66	Evalution of oxidative stress in diabetic animals by in vivo electron spin resonance measurementâ€"role of protein kinase C. Diabetes Research and Clinical Practice, 2004, 66, S109-S113.	2.8	4
67	Confirmation of Superoxide Generation via Xanthine Oxidase in Streptozotocin-induced Diabetic Mice. Free Radical Research, 2003, 37, 767-772.	3.3	99