

Shingo Matsumoto

List of Publications by Year in descending order

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67
papers

3,036
citations

186265

28
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161849

54
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68
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68
docs citations

68
times ranked

3797
citing authors

#	ARTICLE	IF	CITATIONS
1	Cannabidiol Attenuates Cardiac Dysfunction, Oxidative Stress, Fibrosis, and Inflammatory and Cell Death Signaling Pathways in Diabetic Cardiomyopathy. <i>Journal of the American College of Cardiology</i> , 2010, 56, 2115-2125.	2.8	389
2	Imaging Cycling Tumor Hypoxia. <i>Cancer Research</i> , 2010, 70, 10019-10023.	0.9	183
3	Evidence for contribution of vascular NAD(P)H oxidase to increased oxidative stress in animal models of diabetes and obesity. <i>Free Radical Biology and Medicine</i> , 2004, 37, 115-123.	2.9	163
4	Detecting response of rat C6 glioma tumors to radiotherapy using hyperpolarized [¹³ C]pyruvate and ¹³ C magnetic resonance spectroscopic imaging. <i>Magnetic Resonance in Medicine</i> , 2011, 65, 557-563.	3.0	152
5	Simultaneous molecular imaging of redox reactions monitored by Overhauser-enhanced MRI with ¹⁴ N- and ¹⁵ N-labeled nitroxyl radicals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 1463-1468.	7.1	146
6	Low-Field Magnetic Resonance Imaging to Visualize Chronic and Cycling Hypoxia in Tumor-Bearing Mice. <i>Cancer Research</i> , 2010, 70, 6427-6436.	0.9	120
7	Antiangiogenic Agent Sunitinib Transiently Increases Tumor Oxygenation and Suppresses Cycling Hypoxia. <i>Cancer Research</i> , 2011, 71, 6350-6359.	0.9	120
8	Confirmation of Superoxide Generation via Xanthine Oxidase in Streptozotocin-induced Diabetic Mice. <i>Free Radical Research</i> , 2003, 37, 767-772.	3.3	99
9	Low-field paramagnetic resonance imaging of tumor oxygenation and glycolytic activity in mice. <i>Journal of Clinical Investigation</i> , 2008, 118, 1965-73.	8.2	98
10	Simultaneous imaging of tumor oxygenation and microvascular permeability using Overhauser enhanced MRI. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 17898-17903.	7.1	87
11	Targeting ABL1-Mediated Oxidative Stress Adaptation in Fumarate Hydratase-Deficient Cancer. <i>Cancer Cell</i> , 2014, 26, 840-850.	16.8	87
12	Absolute oxygen tension (pO ₂) in murine fatty and muscle tissue as determined by EPR. <i>Magnetic Resonance in Medicine</i> , 2005, 54, 1530-1535.	3.0	78
13	Fatty acid amide hydrolase is a key regulator of endocannabinoid-induced myocardial tissue injury. <i>Free Radical Biology and Medicine</i> , 2011, 50, 179-195.	2.9	73
14	Magnetic resonance imaging of organic contrast agents in mice: capturing the whole-body redox landscape. <i>Free Radical Biology and Medicine</i> , 2011, 50, 459-468.	2.9	73
15	In vivo imaging of oxidative stress in the kidney of diabetic mice and its normalization by angiotensin II type 1 receptor blocker. <i>Biochemical and Biophysical Research Communications</i> , 2005, 330, 415-422.	2.1	61
16	Electron Paramagnetic Resonance Imaging of Tumor pO ₂ . <i>Radiation Research</i> , 2012, 177, 376-386.	1.5	61
17	Magnetic Resonance Imaging of the Tumor Microenvironment in Radiotherapy: Perfusion, Hypoxia, and Metabolism. <i>Seminars in Radiation Oncology</i> , 2014, 24, 210-217.	2.2	61
18	¹³ C-MR Spectroscopic Imaging with Hyperpolarized [¹³ C]pyruvate Detects Early Response to Radiotherapy in SCC Tumors and HT-29 Tumors. <i>Clinical Cancer Research</i> , 2015, 21, 5073-5081.	7.0	54

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19	Pulsed EPR imaging of nitroxides in mice. <i>Journal of Magnetic Resonance</i> , 2009, 197, 181-185.	2.1	51
20	EPR oxygen imaging and hyperpolarized ¹³ C MRI of pyruvate metabolism as noninvasive biomarkers of tumor treatment response to a glycolysis inhibitor 3-bromopyruvate. <i>Magnetic Resonance in Medicine</i> , 2013, 69, 1443-1450.	3.0	44
21	Half-Life Mapping of Nitroxyl Radicals with Three-Dimensional Electron Paramagnetic Resonance Imaging at an Interval of 3.6 Seconds. <i>Analytical Chemistry</i> , 2009, 81, 7501-7506.	6.5	42
22	Metabolic and Physiologic Imaging Biomarkers of the Tumor Microenvironment Predict Treatment Outcome with Radiation or a Hypoxia-Activated Prodrug in Mice. <i>Cancer Research</i> , 2018, 78, 3783-3792.	0.9	42
23	<i>In Vivo</i> Imaging of Tumor Physiological, Metabolic, and Redox Changes in Response to the Anti-Angiogenic Agent Sunitinib: Longitudinal Assessment to Identify Transient Vascular Renormalization. <i>Antioxidants and Redox Signaling</i> , 2014, 21, 1145-1155.	5.4	41
24	Advantageous application of a surface coil to EPR irradiation in overhauser-enhanced MRI. <i>Magnetic Resonance in Medicine</i> , 2007, 57, 806-811.	3.0	37
25	Use of multi-coil parallel-gap resonators for co-registration EPR/NMR imaging. <i>Journal of Magnetic Resonance</i> , 2007, 184, 29-38.	2.1	36
26	Improvement of temporal resolution for three-dimensional continuous-wave electron paramagnetic resonance imaging. <i>Review of Scientific Instruments</i> , 2008, 79, 123701.	1.3	36
27	Pyruvate Induces Transient Tumor Hypoxia by Enhancing Mitochondrial Oxygen Consumption and Potentiates the Anti-Tumor Effect of a Hypoxia-Activated Prodrug TH-302. <i>PLoS ONE</i> , 2014, 9, e107995.	2.5	35
28	Pulsed Electron Paramagnetic Resonance Imaging: Applications in the Studies of Tumor Physiology. <i>Antioxidants and Redox Signaling</i> , 2018, 28, 1378-1393.	5.4	33
29	<i>In Vivo</i> Extracellular pH Mapping of Tumors Using Electron Paramagnetic Resonance. <i>Analytical Chemistry</i> , 2018, 90, 13938-13945.	6.5	29
30	Radiotherapy Synergizes with the Hypoxia-Activated Prodrug Evofosfamide: <i>In Vitro</i> and <i>In Vivo</i> Studies. <i>Antioxidants and Redox Signaling</i> , 2018, 28, 131-140.	5.4	27
31	Intracellular Hypoxia of Tumor Tissue Estimated by Noninvasive Electron Paramagnetic Resonance Oximetry Technique Using Paramagnetic Probes. <i>Biological and Pharmaceutical Bulletin</i> , 2011, 34, 142-145.	1.4	24
32	Transient decrease in tumor oxygenation after intravenous administration of pyruvate. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 801-807.	3.0	24
33	Synthesis of Nitroxyl Radicals for Overhauser-enhanced Magnetic Resonance Imaging. <i>Archiv Der Pharmazie</i> , 2008, 341, 548-553.	4.1	23
34	Influence of proton T1 on oxymetry using Overhauser enhanced magnetic resonance imaging. <i>Magnetic Resonance in Medicine</i> , 2005, 54, 213-217.	3.0	22
35	Longitudinal Imaging Studies of Tumor Microenvironment in Mice Treated with the mTOR Inhibitor Rapamycin. <i>PLoS ONE</i> , 2012, 7, e49456.	2.5	22
36	Reporting of quantitative oxygen mapping in EPR imaging. <i>Journal of Magnetic Resonance</i> , 2012, 214, 244-251.	2.1	20

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37	In Vivo Measurement of Redox Status in Streptozotocin-Induced Diabetic Rat Using Targeted Nitroxyl Probes. <i>Antioxidants and Redox Signaling</i> , 2004, 6, 605-611.	5.4	19
38	Fast backprojection-based reconstruction of spectral-spatial EPR images from projections with the constant sweep of a magnetic field. <i>Journal of Magnetic Resonance</i> , 2017, 281, 44-50.	2.1	19
39	Imaging of glucose metabolism by ¹³ C-MRI distinguishes pancreatic cancer subtypes in mice. <i>ELife</i> , 2019, 8, .	6.0	19
40	Dynamic monitoring of localized tumor oxygenation changes using RF pulsed electron paramagnetic resonance in conscious mice. <i>Magnetic Resonance in Medicine</i> , 2008, 59, 619-625.	3.0	18
41	Single Acquisition Quantitative Single-Point Electron Paramagnetic Resonance Imaging. <i>Magnetic Resonance in Medicine</i> , 2013, 70, 1173-1181.	3.0	18
42	The relationship between tissue oxygenation and redox status using magnetic resonance imaging. <i>International Journal of Oncology</i> , 2012, 41, 2103-2108.	3.3	17
43	Magnetic resonance imaging of tumor oxygenation and metabolic profile. <i>Acta Oncologica</i> , 2013, 52, 1248-1256.	1.8	17
44	A composite resonator assembly suitable for EPR/NMR coregistration imaging. <i>Concepts in Magnetic Resonance Part B</i> , 2005, 25B, 1-11.	0.7	16
45	Quantitative imaging of pO ₂ in orthotopic murine gliomas: hypoxia correlates with resistance to radiation. <i>Free Radical Research</i> , 2017, 51, 861-871.	3.3	16
46	Echo-based Single Point Imaging (ESPI): A novel pulsed EPR imaging modality for high spatial resolution and quantitative oximetry. <i>Journal of Magnetic Resonance</i> , 2012, 218, 105-114.	2.1	15
47	Effect of amifostine, a radiation-protecting drug, on oxygen concentration in tissue measured by EPR oximetry and imaging. <i>Journal of Clinical Biochemistry and Nutrition</i> , 2017, 60, 151-155.	1.4	14
48	Feasibility of in vivo three-dimensional T ₂ mapping using dicarboxy-PROXYL and CW-EPR-based single-point imaging. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2017, 30, 291-298.	2.0	13
49	EPR-based oximetric imaging: a combination of single point-based spatial encoding and T ₁ weighting. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 2275-2287.	3.0	12
50	Long-range heteronuclear J-coupling constants in esters: Implications for ¹³ C metabolic MRI by side-arm parahydrogen-induced polarization. <i>Journal of Magnetic Resonance</i> , 2018, 296, 85-92.	2.1	12
51	Are Free Radical Reactions Increased in the Diabetic Eye?. <i>Antioxidants and Redox Signaling</i> , 2007, 9, 367-373.	5.4	11
52	Simultaneous molecular imaging based on electron paramagnetic resonance of ¹⁴ N- and ¹⁵ N-labelled nitroxyl radicals. <i>Chemical Communications</i> , 2011, 47, 3245.	4.1	10
53	Proteasome inhibition disrupts the metabolism of fumarate hydratase- deficient tumors by downregulating p62 and c-Myc. <i>Scientific Reports</i> , 2019, 9, 18409.	3.3	10
54	Evaluation of partial k-space strategies to speed up time-domain EPR imaging. <i>Magnetic Resonance in Medicine</i> , 2013, 70, 745-753.	3.0	9

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55	Macrophage derived TNF α promotes hepatic reprogramming to Warburg-like metabolism. <i>Journal of Molecular Medicine</i> , 2019, 97, 1231-1243.	3.9	9
56	Synthesis and evaluation of ^{13}C -labeled 5-5-dimethyl-1-pyrroline-N-oxide aimed at in vivo detection of reactive oxygen species using hyperpolarized ^{13}C -MRI. <i>Free Radical Biology and Medicine</i> , 2019, 131, 18-26.	2.9	9
57	Four-channel surface coil array for 300-MHz pulsed EPR imaging: Proof-of-concept experiments. <i>Magnetic Resonance in Medicine</i> , 2014, 71, 853-858.	3.0	8
58	Accelerated 4D quantitative single point EPR imaging using model-based reconstruction. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 1692-1701.	3.0	8
59	High fidelity triangular sweep of the magnetic field for millisecond scan EPR imaging. <i>Journal of Magnetic Resonance</i> , 2021, 329, 107024.	2.1	8
60	Impact of the Characteristic Impedance of Coaxial Lines on the Sensitivity of a 750-MHz Electronically Tunable EPR Resonator. <i>Applied Magnetic Resonance</i> , 2018, 49, 853-867.	1.2	7
61	Reconstruction for Time-Domain In Vivo EPR 3D Multigradient Oximetric Imaging—A Parallel Processing Perspective. <i>International Journal of Biomedical Imaging</i> , 2009, 2009, 1-12.	3.9	6
62	Simultaneous T2* mapping of ^{14}N - and ^{15}N -labeled dicarboxy-PROXYLs using CW-EPR-based single-point imaging. <i>Journal of Magnetic Resonance</i> , 2019, 305, 122-130.	2.1	6
63	A 750-MHz electronically tunable resonator using microstrip line couplers for electron paramagnetic resonance imaging of a mouse tumor-bearing leg. <i>IEEE Transactions on Biomedical Engineering</i> , 2017, 65, 1-1.	4.2	5
64	Evaluation of oxidative stress in diabetic animals by in vivo electron spin resonance measurement—role of protein kinase C. <i>Diabetes Research and Clinical Practice</i> , 2004, 66, S109-S113.	2.8	4
65	RF/Microwave Resonators for Preclinical and Clinical EPR Applications: Current Status and Challenges. <i>Applied Magnetic Resonance</i> , 2022, 53, 167-191.	1.2	4
66	Artifact suppression in electron paramagnetic resonance imaging of ^{14}N - and ^{15}N -labeled nitroxyl radicals with asymmetric absorption spectra. <i>Journal of Magnetic Resonance</i> , 2014, 247, 31-37.	2.1	3
67	Hyperpolarized ^{13}C Magnetic Resonance Imaging of Fumarate Metabolism by Parahydrogen-induced Polarization: A Proof-of-Concept in a <i>in vivo</i> Study. <i>ChemPhysChem</i> , 2021, 22, 905-905.	2.1	0