

Kayvan R Keshari

List of Publications by Year in descending order

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75
papers

4,313
citations

117625

34
h-index

110387

64
g-index

77
all docs

77
docs citations

77
times ranked

4791
citing authors

#	ARTICLE	IF	CITATIONS
1	Hyperpolarized ¹³ C MRI: Path to Clinical Translation in Oncology. <i>Neoplasia</i> , 2019, 21, 1-16.	5.3	316
2	Chemistry and biochemistry of ¹³ C hyperpolarized magnetic resonance using dynamic nuclear polarization. <i>Chemical Society Reviews</i> , 2014, 43, 1627-1659.	38.1	308
3	Quantitative analysis of prostate metabolites using ¹ H HR-MAS spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 1257-1264.	3.0	242
4	OCT1 is a high-capacity thiamine transporter that regulates hepatic steatosis and is a target of metformin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 9983-9988.	7.1	203
5	Evaluation of lactate and alanine as metabolic biomarkers of prostate cancer using ¹ H HR-MAS spectroscopy of biopsy tissues. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 510-516.	3.0	189
6	Metabolic Imaging of the Human Brain with Hyperpolarized ¹³ C Pyruvate Demonstrates ¹³ C Lactate Production in Brain Tumor Patients. <i>Cancer Research</i> , 2018, 78, 3755-3760.	0.9	179
7	Multi-compound polarization by DNP allows simultaneous assessment of multiple enzymatic activities in vivo. <i>Journal of Magnetic Resonance</i> , 2010, 205, 141-147.	2.1	154
8	Limited Environmental Serine and Glycine Confer Brain Metastasis Sensitivity to PHGDH Inhibition. <i>Cancer Discovery</i> , 2020, 10, 1352-1373.	9.4	145
9	Hyperpolarized ¹³ C dehydroascorbate as an endogenous redox sensor for in vivo metabolic imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 18606-18611.	7.1	143
10	A Boronate-Caged [¹⁸ F]FLT Probe for Hydrogen Peroxide Detection Using Positron Emission Tomography. <i>Journal of the American Chemical Society</i> , 2014, 136, 14742-14745.	13.7	113
11	Quantification of choline- and ethanolamine-containing metabolites in human prostate tissues using ¹ H HR-MAS total correlation spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 33-40.	3.0	110
12	Hyperpolarized [2- ¹³ C]-Fructose: A Hemiketal DNP Substrate for In Vivo Metabolic Imaging. <i>Journal of the American Chemical Society</i> , 2009, 131, 17591-17596.	13.7	106
13	Imaging of blood flow using hyperpolarized [¹³ C]Urea in preclinical cancer models. <i>Journal of Magnetic Resonance Imaging</i> , 2011, 33, 692-697.	3.4	105
14	Hyperpolarized MRI of Human Prostate Cancer Reveals Increased Lactate with Tumor Grade Driven by Monocarboxylate Transporter 1. <i>Cell Metabolism</i> , 2020, 31, 105-114.e3.	16.2	100
15	A Hydrogen Peroxide-Responsive Hyperpolarized ¹³ C MRI Contrast Agent. <i>Journal of the American Chemical Society</i> , 2011, 133, 3776-3779.	13.7	97
16	Hyperpolarized ¹³ C-Pyruvate Magnetic Resonance Reveals Rapid Lactate Export in Metastatic Renal Cell Carcinomas. <i>Cancer Research</i> , 2013, 73, 529-538.	0.9	95
17	Metabolic Reprogramming and Validation of Hyperpolarized ¹³ C Lactate as a Prostate Cancer Biomarker Using a Human Prostate Tissue Slice Culture Bioreactor. <i>Prostate</i> , 2013, 73, 1171-1181.	2.3	93
18	In Vivo Imaging of Glutamine Metabolism to the Oncometabolite 2-Hydroxyglutarate in IDH1/2 Mutant Tumors. <i>Cell Metabolism</i> , 2017, 26, 830-841.e3.	16.2	82

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19	Non-invasive PET Imaging of PARP1 Expression in Glioblastoma Models. <i>Molecular Imaging and Biology</i> , 2016, 18, 386-392.	2.6	70
20	Hyperpolarized ¹³ C spectroscopy and an NMR-compatible bioreactor system for the investigation of real-time cellular metabolism. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 322-329.	3.0	67
21	Evaluation of the ERETIC method as an improved quantitative reference for ¹ H HR-MAS spectroscopy of prostate tissue. <i>Magnetic Resonance in Medicine</i> , 2009, 61, 525-532.	3.0	62
22	Lactic Acid and Proteoglycans as Metabolic Markers for Discogenic Back Pain. <i>Spine</i> , 2008, 33, 312-317.	2.0	60
23	Noninvasive In Vivo Imaging of Diabetes-Induced Renal Oxidative Stress and Response to Therapy Using Hyperpolarized ¹³ C Dehydroascorbate. <i>Magnetic Resonance in Medicine</i> , 2015, 64, 344-352.	0.6	59
24	Metabolic analysis as a driver for discovery, diagnosis, and therapy. <i>Cell</i> , 2022, 185, 2678-2689.	28.9	51
25	Hyperpolarized [¹³ C]Dehydroascorbate MR Spectroscopy in a Murine Model of Prostate Cancer: Comparison with ¹⁸ F-FDG PET. <i>Journal of Nuclear Medicine</i> , 2013, 54, 922-928.	5.0	50
26	Real-time quantitative analysis of metabolic flux in live cells using a hyperpolarized micromagnetic resonance spectrometer. <i>Science Advances</i> , 2017, 3, e1700341.	10.3	47
27	Generation of hyperpolarized substrates by secondary labeling with [1,1- ¹³ C] acetic anhydride. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 5503-5507.	7.1	46
28	Hyaluronic acid fuels pancreatic cancer cell growth. <i>ELife</i> , 2021, 10, .	6.0	45
29	Characterization of intervertebral disc degeneration by high-resolution magic angle spinning (HR-MAS) spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2005, 53, 519-527.	3.0	44
30	Real-time measurement of hyperpolarized lactate production and efflux as a biomarker of tumor aggressiveness in an MR compatible 3D cell culture bioreactor. <i>NMR in Biomedicine</i> , 2015, 28, 1141-1149.	2.8	43
31	The Role of Lactate Metabolism in Prostate Cancer Progression and Metastases Revealed by Dual-Agent Hyperpolarized ¹³ C MRSI. <i>Cancers</i> , 2019, 11, 257.	3.7	41
32	Cancer Metabolism and Tumor Heterogeneity: Imaging Perspectives Using MR Imaging and Spectroscopy. <i>Contrast Media and Molecular Imaging</i> , 2017, 2017, 1-18.	0.8	39
33	Caged [¹⁸ F]FDG Glycosylamines for Imaging Acidic Tumor Microenvironments Using Positron Emission Tomography. <i>Bioconjugate Chemistry</i> , 2016, 27, 170-178.	3.6	38
34	¹³ C-labeled biochemical probes for the study of cancer metabolism with dynamic nuclear polarization-enhanced magnetic resonance imaging. <i>Cancer & Metabolism</i> , 2015, 3, 9.	5.0	36
35	In vivo measurement of normal rat intracellular pyruvate and lactate levels after injection of hyperpolarized [¹³ C]alanine. <i>Magnetic Resonance Imaging</i> , 2011, 29, 1035-1040.	1.8	34
36	High Fructose Drives the Serine Synthesis Pathway in Acute Myeloid Leukemic Cells. <i>Cell Metabolism</i> , 2021, 33, 145-159.e6.	16.2	34

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37	Metabolic, pathologic, and genetic analysis of prostate tissues: quantitative evaluation of histopathologic and mRNA integrity after HR-MAS spectroscopy. <i>NMR in Biomedicine</i> , 2010, 23, 391-398.	2.8	32
38	Correlation of HR-MAS Spectroscopy Derived Metabolite Concentrations With Collagen and Proteoglycan Levels and Thompson Grade in the Degenerative Disc. <i>Spine</i> , 2005, 30, 2683-2688.	2.0	31
39	Diffusion MR of hyperpolarized ¹³ C molecules in solution. <i>Analyst, The</i> , 2013, 138, 1011.	3.5	31
40	The Potential of Metabolic Imaging. <i>Seminars in Nuclear Medicine</i> , 2016, 46, 28-39.	4.6	31
41	Metabolic response of prostate cancer to nicotinamide phosphoribosyltransferase inhibition in a hyperpolarized MR/PET compatible bioreactor. <i>Prostate</i> , 2015, 75, 1601-1609.	2.3	30
42	Novel Approaches to Imaging Tumor Metabolism. <i>Cancer Journal (Sudbury, Mass)</i> , 2015, 21, 165-173.	2.0	27
43	Rapid in vivo apparent diffusion coefficient mapping of hyperpolarized ¹³ C metabolites. <i>Magnetic Resonance in Medicine</i> , 2015, 74, 622-633.	3.0	27
44	Biomarker-Based PET Imaging of Diffuse Intrinsic Pontine Glioma in Mouse Models. <i>Cancer Research</i> , 2017, 77, 2112-2123.	0.9	27
45	Hyperpolarized MRI Visualizes Warburg Effects and Predicts Treatment Response to mTOR Inhibitors in Patient-Derived ccRCC Xenograft Models. <i>Cancer Research</i> , 2019, 79, 242-250.	0.9	27
46	Non-Invasive Differentiation of Benign Renal Tumors from Clear Cell Renal Cell Carcinomas Using Clinically Translatable Hyperpolarized ¹³ C Pyruvate Magnetic Resonance. <i>Tomography</i> , 2016, 2, 35-42.	1.8	26
47	Remodeling the Vascular Microenvironment of Glioblastoma with ¹⁸ F-Particles. <i>Journal of Nuclear Medicine</i> , 2016, 57, 1771-1777.	5.0	25
48	Metabolic assessment of a novel chronic myelogenous leukemic cell line and an imatinib resistant subline by ¹ H NMR spectroscopy. <i>Metabolomics</i> , 2010, 6, 439-450.	3.0	20
49	Generating contrast in hyperpolarized ¹³ C MRI using ligand-receptor interactions. <i>Analyst, The</i> , 2012, 137, 3427.	3.5	20
50	Noninvasive Interrogation of Cancer Metabolism with Hyperpolarized ¹³ C MRI. <i>Journal of Nuclear Medicine</i> , 2017, 58, 1201-1206.	5.0	20
51	Imaging glutathione depletion in the rat brain using ascorbate-derived hyperpolarized MR and PET probes. <i>Scientific Reports</i> , 2018, 8, 7928.	3.3	20
52	Hyperpolarization MRI. <i>Topics in Magnetic Resonance Imaging</i> , 2016, 25, 31-37.	1.2	19
53	Separation of extra- and intracellular metabolites using hyperpolarized ¹³ C diffusion weighted MR. <i>Journal of Magnetic Resonance</i> , 2016, 270, 115-123.	2.1	19
54	¹ H HR-MAS spectroscopy for quantitative measurement of choline concentration in amniotic fluid as a marker of fetal lung maturity: Inter- and intraobserver reproducibility study. <i>Journal of Magnetic Resonance Imaging</i> , 2008, 28, 1540-1545.	3.4	18

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55	Multinuclear NMR and MRI Reveal an Early Metabolic Response to mTOR Inhibition in Sarcoma. <i>Cancer Research</i> , 2017, 77, 3113-3120.	0.9	18
56	The metabolic adaptation evoked by arginine enhances the effect of radiation in brain metastases. <i>Science Advances</i> , 2021, 7, eabg1964.	10.3	18
57	Targeted AKT Inhibition in Prostate Cancer Cells and Spheroids Reduces Aerobic Glycolysis and Generation of Hyperpolarized [1-13C] Lactate. <i>Molecular Cancer Research</i> , 2018, 16, 453-460.	3.4	16
58	Hyperpolarized 13C Spectroscopic Evaluation of Oxidative Stress in a Rodent Model of Steatohepatitis. <i>Scientific Reports</i> , 2017, 7, 46014.	3.3	15
59	Hyperpolarized [6- ¹³ C, ¹⁵ N ₃]-Arginine as a Probe for <i>in Vivo</i> Arginase Activity. <i>ACS Chemical Biology</i> , 2019, 14, 665-673.	3.4	15
60	Immunometabolism of Tissue-Resident Macrophages – An Appraisal of the Current Knowledge and Cutting-Edge Methods and Technologies. <i>Frontiers in Immunology</i> , 2021, 12, 665782.	4.8	15
61	Sampling Hyperpolarized Molecules Utilizing a 1 Tesla Permanent Magnetic Field. <i>Scientific Reports</i> , 2016, 6, 32846.	3.3	14
62	Elevated Tumor Lactate and Efflux in High-grade Prostate Cancer demonstrated by Hyperpolarized 13C Magnetic Resonance Spectroscopy of Prostate Tissue Slice Cultures. <i>Cancers</i> , 2020, 12, 537.	3.7	14
63	Effect of Oxygen Concentration on Viability and Metabolism in a Fluidized-Bed Bioartificial Liver Using ³¹ P and ¹³ C NMR Spectroscopy. <i>Tissue Engineering - Part C: Methods</i> , 2013, 19, 93-100.	2.1	13
64	High-Throughput Indirect Quantitation of ¹³ C Enriched Metabolites Using ¹ H NMR. <i>Analytical Chemistry</i> , 2016, 88, 11147-11153.	6.5	13
65	A non-synthetic approach to extending the lifetime of hyperpolarized molecules using D2O solvation. <i>Journal of Magnetic Resonance</i> , 2018, 295, 57-62.	2.1	13
66	Hyperpolarized 13 C pyruvate mouse brain metabolism with absorptive-mode EPSI at 1 T. <i>Journal of Magnetic Resonance</i> , 2017, 275, 120-126.	2.1	12
67	Ketohexokinase-mediated fructose metabolism is lost in hepatocellular carcinoma and can be leveraged for metabolic imaging. <i>Science Advances</i> , 2022, 8, eabm7985.	10.3	9
68	Hyperpolarized [5- ¹³ C,4,4- ² H ₂ ,5- ¹⁵ N]-L-glutamine provides a means of annotating <i>in Vivo</i> metabolic utilization of glutamine. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2120595119.	7.1	8
69	Solid phase synthesis of hydroxamate peptides for histone deacetylase inhibition. <i>Tetrahedron Letters</i> , 2013, 54, 151-153.	1.4	6
70	Multi-sample measurement of hyperpolarized pyruvate-to-lactate flux in melanoma cells. <i>NMR in Biomedicine</i> , 2021, 34, e4447.	2.8	6
71	Deuterium Metabolic Imaging of Pancreatic Cancer. <i>NMR in Biomedicine</i> , 2021, 34, e4603.	2.8	4
72	Dynamic volumetric hyperpolarized ¹³ C imaging with multi-echo EPI. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 978-986.	3.0	3

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73	Editorial commentary for the special issue: technological developments in hyperpolarized ¹³ C imaging toward a deeper understanding of tumor metabolism in vivo. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2021, 34, 1-3.	2.0	3
74	Imaging Early Response to Checkpoint Inhibition. <i>Cancer Research</i> , 2021, 81, 3444-3445.	0.9	0
75	Hyperpolarized Micro-NMR Platform for Sensitive Analysis of In Vitro Metabolic Flux in Living Cells. <i>Methods in Molecular Biology</i> , 2022, 2393, 561-569.	0.9	0