Mark D Does

List of Publications by Year
in descending order

103 papers	4,654 citations	71061 41 h-index	114418 63 g-index
103 all docs	103 docs citations	103 times ranked	4936 citing authors

#	Article	IF	Citations
1	Multi-compartment microscopic diffusion imaging. NeuroImage, 2016, 139, 346-359.	2.1	280
2	Changes in water diffusion due to Wallerian degeneration in peripheral nerve. Magnetic Resonance in Medicine, 1996, 36, 627-631.	1.9	248
3	The Role of Water Compartments in the Material Properties of Cortical Bone. Calcified Tissue International, 2015, 97, 292-307.	1.5	180
4	Characterization of ¹H NMR signal in human cortical bone for magnetic resonance imaging. Magnetic Resonance in Medicine, 2010, 64, 680-687.	1.9	135
5	Characterization of tissue structure at varying length scales using temporal diffusion spectroscopy. NMR in Biomedicine, 2010, 23, 745-756.	1.6	131
6	Iron, Myelin, and the Brain: Neuroimaging Meets Neurobiology. Trends in Neurosciences, 2019, 42, 384-401.	4.2	123
7	Mapping mean axon diameter and axonal volume fraction by MRI using temporal diffusion spectroscopy. NeuroImage, 2014, 103, 10-19.	2.1	109
8	Clinically compatible MRI strategies for discriminating bound and pore water in cortical bone. Magnetic Resonance in Medicine, 2012, 68, 1774-1784.	1.9	107
9	Optimizing pulsedâ€chemical exchange saturation transfer imaging sequences. Magnetic Resonance in Medicine, 2011, 66, 1100-1108.	1.9	105
10	A new method for detecting exchanging amide protons using chemical exchange rotation transfer. Magnetic Resonance in Medicine, 2013, 69, 637-647.	1.9	105
11	The radial diffusivity and magnetization transfer pool size ratio are sensitive markers for demyelination in a rat model of type III multiple sclerosis (MS) lesions. NeuroImage, 2013, 74, 298-305.	2.1	104
12	Non-invasive Predictors of Human Cortical Bone Mechanical Properties: T2-Discriminated 1H NMR Compared with High Resolution X-ray. PLoS ONE, 2011, 6, e16359.	1.1	104
13	Origins of the ultrashortâ€T₂¹H NMR signals in myelinated nerve: A direct measure of myelin content?. Magnetic Resonance in Medicine, 2011, 66, 24-31.	1.9	99
14	Identifying Novel Clinical Surrogates to Assess Human Bone Fracture Toughness. Journal of Bone and Mineral Research, 2015, 30, 1290-1300.	3.1	94
15	MultiexponentialT2 relaxation in degenerating peripheral nerve. Magnetic Resonance in Medicine, 1996, 35, 207-213.	1.9	91
16	Inferring brain tissue composition and microstructure via MR relaxometry. NeuroImage, 2018, 182, 136-148.	2.1	87
17	Effect of intercompartmental water exchange on the apparent myelin water fraction in multiexponential T₂ measurements of rat spinal cord. Magnetic Resonance in Medicine, 2012, 67, 793-800.	1.9	84
18	Multiâ€angle ratiometric approach to measure chemical exchange in amide proton transfer imaging. Magnetic Resonance in Medicine, 2012, 68, 711-719.	1.9	79

#	Article	IF	Citations
19	Multi-component T1 relaxation and magnetisation transfer in peripheral nerve. Magnetic Resonance Imaging, 1998, 16, 1033-1041.	1.0	78
20	The microstructural correlates of T₁ in white matter. Magnetic Resonance in Medicine, 2016, 75, 1341-1345.	1.9	74
21	Multi-parametric MRI characterization of healthy human thigh muscles at 3.0 T - relaxation, magnetization transfer, fat/water, and diffusion tensor imaging. NMR in Biomedicine, 2014, 27, 1070-1084.	1.6	71
22	Evaluation of diffusion kurtosis imaging in ex vivo hypomyelinated mouse brains. NeuroImage, 2016, 124, 612-626.	2.1	71
23	On the inherent precision of mcDESPOT. Magnetic Resonance in Medicine, 2013, 69, 127-136.	1.9	70
24	Evaluating g-ratio weighted changes in the corpus callosum as a function of age and sex. NeuroImage, 2018, 182, 304-313.	2.1	68
25	Imaging amide proton transfer and nuclear overhauser enhancement using chemical exchange rotation transfer (CERT). Magnetic Resonance in Medicine, 2014, 72, 471-476.	1.9	62
26	Compartmental study of diffusion and relaxation measured in vivo in normal and ischemic rat brain and trigeminal nerve. Magnetic Resonance in Medicine, 2000, 43, 837-844.	1.9	58
27	In Vivo Quantitative MR Imaging of Bound and Pore Water in Cortical Bone. Radiology, 2015, 277, 221-229.	3.6	58
28	Myelin volume fraction imaging with MRI. NeuroImage, 2018, 182, 511-521.	2.1	58
29	Optimized inversion recovery sequences for quantitative T₁ and magnetization transfer imaging. Magnetic Resonance in Medicine, 2010, 64, 491-500.	1.9	57
30	Insights into reference point indentation involving human cortical bone: Sensitivity to tissue anisotropy and mechanical behavior. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 37, 174-185.	1.5	57
31	New Insights into Tumor Microstructure Using Temporal Diffusion Spectroscopy. Cancer Research, 2008, 68, 5941-5947.	0.4	56
32	Partial removal of pore and loosely bound water by low-energy drying decreases cortical bone toughness in young and old donors. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 22, 136-145.	1.5	56
33	Characterizing interâ€compartmental water exchange in myelinated tissue using relaxation exchange spectroscopy. Magnetic Resonance in Medicine, 2013, 70, 1450-1459.	1.9	55
34	MRI-derived bound and pore water concentrations as predictors of fracture resistance. Bone, 2016, 87, 1-10.	1.4	54
35	Advances in imaging approaches to fracture risk evaluation. Translational Research, 2017, 181, 1-14.	2.2	54
36	Hypomyelination following deletion of Tsc2 in oligodendrocyte precursors. Annals of Clinical and Translational Neurology, 2015, 2, 1041-1054.	1.7	53

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37	Evaluation of principal component analysis image denoising on multiâ€exponential MRI relaxometry. Magnetic Resonance in Medicine, 2019, 81, 3503-3514.	1.9	53
38	Validation of quantitative boundâ€and poreâ€water imaging in cortical bone. Magnetic Resonance in Medicine, 2014, 71, 2166-2171.	1.9	52
39	A revised model for estimating g-ratio from MRI. NeuroImage, 2016, 125, 1155-1158.	2.1	50
40	Multi-parametric MRI characterization of inflammation in murine skeletal muscle. NMR in Biomedicine, 2014, 27, 716-725.	1.6	49
41	Dipeptidyl peptidase IV deficiency increases susceptibility to angiotensin-converting enzyme inhibitorâ€"induced peritracheal edema. Journal of Allergy and Clinical Immunology, 2007, 120, 403-408.	1.5	48
42	Modified oscillating gradient pulses for direct sampling of the diffusion spectrum suitable for imaging sequences. Magnetic Resonance Imaging, 2003, 21, 279-285.	1.0	47
43	Dependence of temporal diffusion spectra on microstructural properties of biological tissues. Magnetic Resonance Imaging, 2011, 29, 380-390.	1.0	40
44	Earlier detection of tumor treatment response using magnetic resonance diffusion imaging with oscillating gradients. Magnetic Resonance Imaging, 2011, 29, 315-323.	1.0	40
45	Characterizing Tumor Response to Chemotherapy at Various Length Scales Using Temporal Diffusion Spectroscopy. PLoS ONE, 2012, 7, e41714.	1.1	40
46	Transverse relaxation and magnetization transfer in skeletal muscle: Effect of pH. Magnetic Resonance in Medicine, 2009, 61, 560-569.	1.9	39
47	RF coil considerations for shortâ€T₂ MRI. Magnetic Resonance in Medicine, 2010, 64, 1652-1657.	1.9	39
48	Chemical exchange rotation transfer imaging of intermediateâ€exchanging amines at 2Âppm. NMR in Biomedicine, 2017, 30, e3756.	1.6	39
49	Age-related changes in the fracture resistance of male Fischer F344 rat bone. Bone, 2016, 83, 220-232.	1.4	33
50	Influence of cell cycle phase on apparent diffusion coefficient in synchronized cells detected using temporal diffusion spectroscopy. Magnetic Resonance in Medicine, 2011, 65, 920-926.	1.9	32
51	Magnetic nanoparticles for imaging dendritic cells. Magnetic Resonance in Medicine, 2010, 63, 1383-1390.	1.9	29
52	Effects of intracellular organelles on the apparent diffusion coefficient of water molecules in cultured human embryonic kidney cells. Magnetic Resonance in Medicine, 2011, 65, 796-801.	1.9	28
53	Iterative Method for Predistortion of MRI Gradient Waveforms. IEEE Transactions on Medical Imaging, 2014, 33, 1641-1647.	5.4	25
54	The age-related decrease in material properties of BALB/c mouse long bones involves alterations to the extracellular matrix. Bone, 2020, 130, 115126.	1.4	25

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55	Fast and simplified mapping of mean axon diameter using temporal diffusion spectroscopy. NMR in Biomedicine, 2016, 29, 400-410.	1.6	24
56	Compartmentâ€specific enhancement of white matter and nerve ex vivo using chromium. Magnetic Resonance in Medicine, 2010, 64, 688-697.	1.9	23
57	In-vivo multi-exponential T2, magnetization transfer and quantitative histology in a rat model of intramyelinic edema. NeuroImage: Clinical, 2013, 2, 810-817.	1.4	23
58	Loss of mTORC2 signaling in oligodendrocyte precursor cells delays myelination. PLoS ONE, 2017, 12, e0188417.	1.1	23
59	30â€Second bound and pore water concentration mapping of cortical bone using 2D UTE with optimized halfâ€pulses. Magnetic Resonance in Medicine, 2017, 77, 945-950.	1.9	23
60	Quantitative analysis of mouse corpus callosum from electron microscopy images. Data in Brief, 2015, 5, 124-128.	0.5	21
61	Differences in sensitivity to microstructure between cyclic- and impact-based microindentation of human cortical bone. Journal of Orthopaedic Research, 2017, 35, 1442-1452.	1.2	21
62	Manipulating the Amount and Structure of the Organic Matrix Affects the Water Compartments of Human Cortical Bone. JBMR Plus, 2019, 3, e10135.	1.3	21
63	N,N-diethyldithiocarbamate promotes oxidative stress prior to myelin structural changes and increases myelin copper content. Toxicology and Applied Pharmacology, 2009, 239, 71-79.	1.3	19
64	Differential gene expression in the kidney of sickle cell transgenic mice: upregulated genes. Blood Cells, Molecules, and Diseases, 2003, 31, 370-380.	0.6	18
65	Measurement of APT using a combined CERT-AREX approach with varying duty cycles. Magnetic Resonance Imaging, 2017, 42, 22-31.	1.0	18
66	A novel technique using hydrophilic polymers to promote axonal fusion. Neural Regeneration Research, 2016, 11, 525.	1.6	18
67	Fast T₂ mapping with multiple echo, caesar cipher acquisition and model-based reconstruction. Magnetic Resonance in Medicine, 2015, 73, 1065-1074.	1.9	17
68	A simple estimate of axon size with diffusion MRI. NeuroImage, 2021, 227, 117619.	2.1	17
69	Experimental studies of g-ratio MRI in ex vivo mouse brain. NeuroImage, 2018, 167, 366-371.	2.1	16
70	Relayed nuclear Overhauser enhancement sensitivity to membrane Cho phospholipids. Magnetic Resonance in Medicine, 2020, 84, 1961-1976.	1.9	16
71	Multicomponent T2 analysis of dithiocarbamate-mediated peripheral nerve demyelination. NeuroToxicology, 2007, 28, 645-654.	1.4	15
72	Diffusion time dependency along the human corpus callosum and exploration of age and sex differences as assessed by oscillating gradient spin-echo diffusion tensor imaging. NeuroImage, 2020, 210, 116533.	2.1	15

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73	Chemical exchange rotation transfer imaging of phosphocreatine in muscle. NMR in Biomedicine, 2021, 34, e4437.	1.6	15
74	Towards an analytic solution for pulsed CEST. NMR in Biomedicine, 2018, 31, e3903.	1.6	14
75	Chemical exchange rotation transfer (CERT) on human brain at 3 Tesla. Magnetic Resonance in Medicine, 2018, 80, 2609-2617.	1.9	14
76	A comparison of individual and population-derived vascular input functions for quantitative DCE-MRI in rats. Magnetic Resonance Imaging, 2014, 32, 397-401.	1.0	13
77	Comparison of dynamic contrastâ€enhanced MRI and quantitative SPECT in a rat glioma model. Contrast Media and Molecular Imaging, 2012, 7, 494-500.	0.4	12
78	Initial findings in traumatic peripheral nerve injury and repair with diffusion tensor imaging. Annals of Clinical and Translational Neurology, 2021, 8, 332-347.	1.7	12
79	Immediate Enhancement of Nerve Function Using a Novel Axonal Fusion Device After Neurotmesis. Annals of Plastic Surgery, 2017, 79, 590-599.	0.5	11
80	Optimization of DSC MRI Echo Times for CBV Measurements Using Error Analysis in a Pilot Study of High-Grade Gliomas. American Journal of Neuroradiology, 2017, 38, 1710-1715.	1.2	10
81	Diffusion Magnetic Resonance Imaging Predicts Peripheral Nerve Recovery in a Rat Sciatic Nerve Injury Model. Plastic and Reconstructive Surgery, 2020, 145, 949-956.	0.7	10
82	A GRM7 mutation associated with developmental delay reduces mGlu7 expression and produces neurological phenotypes. JCI Insight, 2021, 6, .	2.3	10
83	Relaxation-selective magnetization preparation based on T1 and T2. Journal of Magnetic Resonance, 2005, 172, 306-311.	1.2	8
84	A comparative assessment of preclinical chemotherapeutic response of tumors using quantitative non-Gaussian diffusion MRI. Magnetic Resonance Imaging, 2017, 37, 195-202.	1.0	8
85	Bridging the Gap. Annals of Plastic Surgery, 2017, 78, S328-S334.	0.5	8
86	Propagation of error from parameter constraints in quantitative MRI: Example application of multiple spin echo T₂ mapping. Magnetic Resonance in Medicine, 2018, 79, 673-682.	1.9	8
87	Noninvasive diffusion MRI to determine the severity of peripheral nerve injury. Magnetic Resonance Imaging, 2021, 83, 96-106.	1.0	8
88	Aqueous urea as a model system for bi-exponential relaxation. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2007, 20, 51-56.	1.1	6
89	Simple and robust saturationâ€based slice selection for ultrashort echo time MRI. Magnetic Resonance in Medicine, 2015, 73, 2204-2211.	1.9	6
90	Assessment of the Effect of Autograft Orientation on Peripheral Nerve Regeneration Using Diffusion Tensor Imaging. Annals of Plastic Surgery, 2018, 80, 384-390.	0.5	6

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91	Microscopic susceptibility anisotropy imaging. Magnetic Resonance in Medicine, 2020, 84, 2739-2753.	1.9	6
92	Sliceâ€selective extended phase graphs in gradientâ€crushed, transientâ€state free precession sequences: An application to MR fingerprinting. Magnetic Resonance in Medicine, 2020, 84, 3409-3422.	1.9	5
93	Quantitative T 2 measurement of a single voxel with arbitrary shape using pinwheel excitation and CPMG acquisition. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2007, 20, 233-240.	1.1	4
94	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si48.gif" overflow="scroll"><mml:mrow><mml:mo stretchy="false">|</mml:mo><mml:msubsup><mml:mrow><mml:mi>B</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn></m stretchy="false">|</mml:mo></mml:mrow></mml:math>-selective excitation pulse design using the Shinnarâ€"Le Roux algorithm. Journal of Magnetic Resonance, 2014, 242, 189-196.	1.2	4
95	Quantitative Magnetic Resonance Imaging of Skeletal Muscle Disease. Journal of Visualized Experiments, 2016, , .	0.2	4
96	Glans inflation morphology and female cloaca copulatory interactions of the male American alligator phallusâ€. Biology of Reproduction, 2021, 104, 374-386.	1.2	4
97	A hybrid numericâ€analytic solution for pulsed CEST. NMR in Biomedicine, 2022, 35, e4610.	1.6	4
98	Temporal Î"B₀ and relaxation in the rat heart. Magnetic Resonance in Medicine, 2007, 58, 939-946.	1.9	3
99	Diffusion Tensor Tractrography Visualizes Partial Nerve Laceration Severity as Early as 1 Week After Surgical Repair in a Rat Model Ex Vivo. Military Medicine, 2020, 185, 35-41.	0.4	3
100	Finite element analysis of bone mechanical properties using MRI-derived bound and pore water concentration maps. Computer Methods in Biomechanics and Biomedical Engineering, 2023, 26, 905-916.	0.9	3
101	Morphological changes associated with Nile crocodile (<scp>Crocodylus niloticus</scp>) phallic glans inflation. Journal of Morphology, 2020, 281, 636-645.	0.6	2
102	HR-pQCT parameters of the distal radius correlate with the bending strength of the radial diaphysis. Bone, 2022, 161, 116429.	1.4	1
103	Mapping pH using stimulated echoes formed via chemical exchange. Magnetic Resonance Imaging, 2022, 92, 100-107.	1.0	1