

# Peter J Basser

## List of Publications by Citations

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71  
papers

10,019  
citations

27  
h-index

80  
g-index

80  
ext. papers

11,075  
ext. citations

4.4  
avg, IF

6.32  
L-index

#	Paper	IF	Citations
71	Microstructural and physiological features of tissues elucidated by quantitative-diffusion-tensor MRI. <i>Journal of Magnetic Resonance Series B</i> , <b>1996</b> , 111, 209-19		3242
70	In vivo fiber tractography using DT-MRI data. <i>Magnetic Resonance in Medicine</i> , <b>2000</b> , 44, 625-32	4.4	2386
69	Diffusion-tensor MRI: theory, experimental design and data analysis - a technical review. <i>NMR in Biomedicine</i> , <b>2002</b> , 15, 456-67	4.4	1114
68	AxCaliber: a method for measuring axon diameter distribution from diffusion MRI. <i>Magnetic Resonance in Medicine</i> , <b>2008</b> , 59, 1347-54	4.4	654
67	A simplified method to measure the diffusion tensor from seven MR images. <i>Magnetic Resonance in Medicine</i> , <b>1998</b> , 39, 928-34	4.4	505
66	Osmotic swelling of polyacrylate hydrogels in physiological salt solutions. <i>Biomacromolecules</i> , <b>2000</b> , 1, 84-90	6.9	324
65	Statistical artifacts in diffusion tensor MRI (DT-MRI) caused by background noise. <i>Magnetic Resonance in Medicine</i> , <b>2000</b> , 44, 41-50	4.4	266
64	Effect of monovalent-divalent cation exchange on the swelling of polyacrylate hydrogels in physiological salt solutions. <i>Biomacromolecules</i> , <b>2001</b> , 2, 195-9	6.9	146
63	New currents in electrical stimulation of excitable tissues. <i>Annual Review of Biomedical Engineering</i> , <b>2000</b> , 2, 377-97	12	112
62	Relationships between diffusion tensor and q-space MRI. <i>Magnetic Resonance in Medicine</i> , <b>2002</b> , 47, 392-7	4.4	111
61	Glial Regulation of the Neuronal Connectome through Local and Long-Distant Communication. <i>Neuron</i> , <b>2015</b> , 86, 374-86	13.9	84
60	The electric field distribution in the brain during TTFIELDS therapy and its dependence on tissue dielectric properties and anatomy: a computational study. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 7339-57	3.8	66
59	Use of marginal distributions constrained optimization (MADCO) for accelerated 2D MRI relaxometry and diffusometry. <i>Journal of Magnetic Resonance</i> , <b>2016</b> , 271, 40-5	3	65
58	Osmotic observations on chemically cross-linked DNA gels in physiological salt solutions. <i>Biomacromolecules</i> , <b>2004</b> , 5, 232-7	6.9	63
57	Clinical feasibility of using mean apparent propagator (MAP) MRI to characterize brain tissue microstructure. <i>NeuroImage</i> , <b>2016</b> , 127, 422-434	7.9	60
56	In vivo detection of microscopic anisotropy using quadruple pulsed-field gradient (qPFG) diffusion MRI on a clinical scanner. <i>NeuroImage</i> , <b>2013</b> , 64, 229-39	7.9	51
55	White matter microstructure from nonparametric axon diameter distribution mapping. <i>NeuroImage</i> , <b>2016</b> , 135, 333-44	7.9	51

54	Osmotic and SANS Observations on Sodium Polyacrylate Hydrogels in Physiological Salt Solutions. <i>Macromolecules</i> , <b>2000</b> , 33, 8329-8333	5.5	42
53	Magnetic resonance microdynamic imaging reveals distinct tissue microenvironments. <i>NeuroImage</i> , <b>2017</b> , 163, 183-196	7.9	38
52	Improving Tumor Treating Fields Treatment Efficacy in Patients With Glioblastoma Using Personalized Array Layouts. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2016</b> , 94, 1137-43	4.3	36
51	Anomalous small angle x-ray scattering determination of ion distribution around a polyelectrolyte biopolymer in salt solution. <i>Journal of Chemical Physics</i> , <b>2006</b> , 125, 234904	3.9	33
50	Adsorption of divalent cations on DNA. <i>Biophysical Journal</i> , <b>2004</b> , 87, 2897-904	2.9	32
49	Nonparametric pore size distribution using d-PFG: comparison to s-PFG and migration to MRI. <i>Journal of Magnetic Resonance</i> , <b>2014</b> , 246, 36-45	3	29
48	Imaging Local Diffusive Dynamics Using Diffusion Exchange Spectroscopy MRI. <i>Physical Review Letters</i> , <b>2017</b> , 118, 158003	7.4	29
47	Efficient 2D MRI relaxometry using compressed sensing. <i>Journal of Magnetic Resonance</i> , <b>2015</b> , 255, 88-99	9.3	28
46	Assessing the sensitivity of diffusion MRI to detect neuronal activity directly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E1728-37	11.5	27
45	Fast, Na <sup>+</sup> /K <sup>+</sup> pump driven, steady-state transcytolemmal water exchange in neuronal tissue: A study of rat brain cortical cultures. <i>Magnetic Resonance in Medicine</i> , <b>2018</b> , 79, 3207-3217	4.4	27
44	Anisotropically weighted MRI. <i>Magnetic Resonance in Medicine</i> , <b>1998</b> , 40, 160-5	4.4	24
43	Magnetic resonance measurements of cellular and sub-cellular membrane structures in live and fixed neural tissue. <i>ELife</i> , <b>2019</b> , 8,	8.9	21
42	Towards clinically feasible relaxation-diffusion correlation MRI using MADCO. <i>Microporous and Mesoporous Materials</i> , <b>2018</b> , 269, 93-96	5.3	20
41	Detecting compartmental non-Gaussian diffusion with symmetrized double-PFG MRI. <i>NMR in Biomedicine</i> , <b>2015</b> , 28, 1550-6	4.4	19
40	Modeling Tumor Treating Fields (TTFields) application in single cells during metaphase and telophase. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2015</b> , 2015, 6892-5	0.9	19
39	A framework for accurate determination of the T <sub>2</sub> distribution from multiple echo magnitude MRI images. <i>Journal of Magnetic Resonance</i> , <b>2014</b> , 244, 53-63	3	18
38	Ionic and pH effects on the osmotic properties and structure of polyelectrolyte gels. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2008</b> , 46, 2803-2810	2.6	18
37	In vivo fiber tractography using DT-MRI data <b>2000</b> , 44, 625		17

36	Solving 2D Fredholm Integral from Incomplete Measurements Using Compressive Sensing. <i>SIAM Journal on Imaging Sciences</i> , <b>2014</b> , 7, 1775-1798	1.9	16
35	Calcium-induced volume transition in polyacrylate hydrogels swollen in physiological salt solutions. <i>Macromolecular Bioscience</i> , <b>2002</b> , 2, 207	5.5	16
34	Fast, accurate 2D-MR relaxation exchange spectroscopy (REXSy): Beyond compressed sensing. <i>Journal of Chemical Physics</i> , <b>2016</b> , 145, 154202	3.9	16
33	Joint radius-length distribution as a measure of anisotropic pore eccentricity: an experimental and analytical framework. <i>Journal of Chemical Physics</i> , <b>2014</b> , 141, 214202	3.9	15
32	Effects of mono- and divalent cations on the structure and thermodynamic properties of polyelectrolyte gels. <i>Soft Matter</i> , <b>2019</b> , 15, 4153-4161	3.6	13
31	Retaining information from multidimensional correlation MRI using a spectral regions of interest generator. <i>Scientific Reports</i> , <b>2020</b> , 10, 3246	4.9	13
30	Simultaneous calcium fluorescence imaging and MR of ex vivo organotypic cortical cultures: a new test bed for functional MRI. <i>NMR in Biomedicine</i> , <b>2015</b> , 28, 1726-38	4.4	13
29	Effect of calcium/sodium ion exchange on the osmotic properties and structure of polyelectrolyte gels. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , <b>2015</b> , 229, 895-904	1.7	12
28	Recollections about our 1996 JMR paper on diffusion anisotropy. <i>Journal of Magnetic Resonance</i> , <b>2011</b> , 213, 571-2	3	11
27	Dealing with Uncertainty in Diffusion Tensor MR Data. <i>Israel Journal of Chemistry</i> , <b>2010</b> , 43, 129-144	3.4	11
26	Brain active transmembrane water cycling measured by MR is associated with neuronal activity. <i>Magnetic Resonance in Medicine</i> , <b>2019</b> , 81, 1280-1295	4.4	11
25	Comparative Study of Scattering and Osmotic Properties of Synthetic and Biopolymer Gels. <i>Macromolecular Symposia</i> , <b>2007</b> , 256, 80-87	0.8	10
24	Comparison between Neutral Gels and Neutralized Polyelectrolyte Gels in the Presence of Divalent Cations. <i>Macromolecules</i> , <b>2001</b> , 34, 4285-4287	5.5	10
23	Rapid detection of the presence of diffusion exchange. <i>Journal of Magnetic Resonance</i> , <b>2018</b> , 297, 17-22	3	10
22	Water mobility spectral imaging of the spinal cord: Parametrization of model-free Laplace MRI. <i>Magnetic Resonance Imaging</i> , <b>2019</b> , 56, 187-193	3.3	9
21	NMR Water Self-Diffusion and Relaxation Studies on Sodium Polyacrylate Solutions and Gels in Physiologic Ionic Solutions. <i>Journal of Applied Polymer Science</i> , <b>2014</b> , 131,	2.9	8
20	Feasibility of filter-exchange imaging (FEXI) in measuring different exchange processes in human brain. <i>NeuroImage</i> , <b>2020</b> , 219, 117039	7.9	7
19	Light, Small Angle Neutron and X-Ray Scattering from Gels. <i>Macromolecular Symposia</i> , <b>2005</b> , 227, 27-38	0.8	7

18	Direct and specific assessment of axonal injury and spinal cord microenvironments using diffusion correlation imaging. <i>NeuroImage</i> , <b>2020</b> , 221, 117195	7.9	6
17	Toward a Constitutive Law of Cartilage: A Polymer Physics Perspective. <i>Macromolecular Symposia</i> , <b>2005</b> , 227, 53-64	0.8	5
16	TM-16INVESTIGATING THE MECHANISMS OF ACTION OF TUMOR TREATING FIELDS: A COMPUTATIONAL MODELING STUDY. <i>Neuro-Oncology</i> , <b>2014</b> , 16, v216-v216	1	3
15	Ion condensation in a polyelectrolyte gel. <i>Macromolecular Symposia</i> , <b>2003</b> , 200, 227-234	0.8	3
14	Novel Single and Multiple Shell Uniform Sampling Schemes for Diffusion MRI Using Spherical Codes. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 9349, 28-36	0.9	3
13	Ion-Induced Volume Transition in Gels and Its Role in Biology. <i>Gels</i> , <b>2021</b> , 7,	4.2	3
12	Tract Orientation and Angular Dispersion Deviation Indicator (TOADDI): A framework for single-subject analysis in diffusion tensor imaging. <i>NeuroImage</i> , <b>2016</b> , 126, 151-63	7.9	2
11	Calcium induced volume transition in polyelectrolyte gels. <i>Macromolecular Symposia</i> , <b>2003</b> , 200, 21-30	0.8	2
10	A Novel In Vitro Device to Deliver Induced Electromagnetic Fields to Cell and Tissue Cultures. <i>Biophysical Journal</i> , <b>2020</b> , 119, 2378-2390	2.9	2
9	Ion-exchange induced change in the structure and osmotic properties of sodium polyacrylate hydrogels. <i>Macromolecular Symposia</i> , <b>2001</b> , 171, 201-208	0.8	1
8	Tensorial Spherical Polar Fourier Diffusion MRI with Optimal Dictionary Learning. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 9349, 174-182	0.9	1
7	Real-time measurement of diffusion exchange rate in biological tissue. <i>Journal of Magnetic Resonance</i> , <b>2020</b> , 317, 106782	3	1
6	Statistical artifacts in diffusion tensor MRI (DT-MRI) caused by background noise <b>2000</b> , 44, 41		1
5	A single-shot measurement of time-dependent diffusion over sub-millisecond timescales using static field gradient NMR. <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 111105	3.9	0
4	Detection of stroke by portable, low-field MRI: A milestone in medical imaging.. <i>Science Advances</i> , <b>2022</b> , 8, eabp9307	14.3	0
3	Assessment of Functional Properties of Cartilage using Double Quantum Filtered MRI. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1622, 41-48		
2	Cartilage: Biomimetic Study of the Extracellular Matrix. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1622, 61-68		
1	Depth dependent osmotic and swelling properties of cartilage. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1418, 33		

