

Peter J Basser

List of Publications by Year in descending order

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74
papers

11,889
citations

186254

28
h-index

95259

68
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80
all docs

80
docs citations

80
times ranked

11272
citing authors

#	ARTICLE	IF	CITATIONS
1	Microstructural and Physiological Features of Tissues Elucidated by Quantitative-Diffusion-Tensor MRI. <i>Journal of Magnetic Resonance Series B</i> , 1996, 111, 209-219.	1.6	3,801
2	In vivo fiber tractography using DT-MRI data. <i>Magnetic Resonance in Medicine</i> , 2000, 44, 625-632.	3.0	2,778
3	Diffusion-tensor MRI: theory, experimental design and data analysis - a technical review. <i>NMR in Biomedicine</i> , 2002, 15, 456-467.	2.8	1,291
4	Axcaliber: A method for measuring axon diameter distribution from diffusion MRI. <i>Magnetic Resonance in Medicine</i> , 2008, 59, 1347-1354.	3.0	763
5	A simplified method to measure the diffusion tensor from seven MR images. <i>Magnetic Resonance in Medicine</i> , 1998, 39, 928-934.	3.0	558
6	Osmotic Swelling of Polyacrylate Hydrogels in Physiological Salt Solutions. <i>Biomacromolecules</i> , 2000, 1, 84-90.	5.4	375
7	Statistical artifacts in diffusion tensor MRI (DT-MRI) caused by background noise. <i>Magnetic Resonance in Medicine</i> , 2000, 44, 41-50.	3.0	297
8	Effect of Monovalent and Divalent Cation Exchange on the Swelling of Polyacrylate Hydrogels in Physiological Salt Solutions. <i>Biomacromolecules</i> , 2001, 2, 195-199.	5.4	167
9	Relationships between diffusion tensor and q-space MRI. <i>Magnetic Resonance in Medicine</i> , 2002, 47, 392-397.	3.0	134
10	New Currents in Electrical Stimulation of Excitable Tissues. <i>Annual Review of Biomedical Engineering</i> , 2000, 2, 377-397.	12.3	129
11	Glial Regulation of the Neuronal Connectome through Local and Long-Distant Communication. <i>Neuron</i> , 2015, 86, 374-386.	8.1	126
12	Clinical feasibility of using mean apparent propagator (MAP) MRI to characterize brain tissue microstructure. <i>NeuroImage</i> , 2016, 127, 422-434.	4.2	101
13	Use of marginal distributions constrained optimization (MADCO) for accelerated 2D MRI relaxometry and diffusometry. <i>Journal of Magnetic Resonance</i> , 2016, 271, 40-45.	2.1	89
14	The electric field distribution in the brain during TFields therapy and its dependence on tissue dielectric properties and anatomy: a computational study. <i>Physics in Medicine and Biology</i> , 2015, 60, 7339-7357.	3.0	84
15	Osmotic Observations on Chemically Cross-Linked DNA Gels in Physiological Salt Solutions. <i>Biomacromolecules</i> , 2004, 5, 232-237.	5.4	72
16	White matter microstructure from nonparametric axon diameter distribution mapping. <i>NeuroImage</i> , 2016, 135, 333-344.	4.2	64
17	In vivo detection of microscopic anisotropy using quadruple pulsed-field gradient (qPFG) diffusion MRI on a clinical scanner. <i>NeuroImage</i> , 2013, 64, 229-239.	4.2	60
18	Magnetic resonance microdynamic imaging reveals distinct tissue microenvironments. <i>NeuroImage</i> , 2017, 163, 183-196.	4.2	52

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19	Improving Tumor Treating Fields Treatment Efficacy in Patients With Glioblastoma Using Personalized Array Layouts. <i>International Journal of Radiation Oncology Biology Physics</i> , 2016, 94, 1137-1143.	0.8	49
20	Osmotic and SANS Observations on Sodium Polyacrylate Hydrogels in Physiological Salt Solutions. <i>Macromolecules</i> , 2000, 33, 8329-8333.	4.8	47
21	Fast, Na^{+}/K^{+} pump driven, steady-state transcytolemmal water exchange in neuronal tissue: A study of rat brain cortical cultures. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 3207-3217.	3.0	47
22	Magnetic resonance measurements of cellular and sub-cellular membrane structures in live and fixed neural tissue. <i>ELife</i> , 2019, 8, .	6.0	40
23	Imaging Local Diffusive Dynamics Using Diffusion Exchange Spectroscopy MRI. <i>Physical Review Letters</i> , 2017, 118, 158003.	7.8	38
24	Anomalous small angle x-ray scattering determination of ion distribution around a polyelectrolyte biopolymer in salt solution. <i>Journal of Chemical Physics</i> , 2006, 125, 234904.	3.0	37
25	Adsorption of Divalent Cations on DNA. <i>Biophysical Journal</i> , 2004, 87, 2897-2904.	0.5	35
26	Efficient 2D MRI relaxometry using compressed sensing. <i>Journal of Magnetic Resonance</i> , 2015, 255, 88-99.	2.1	35
27	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> , 2016, 113, E1728-37.	7.1	35
28	Nonparametric pore size distribution using d-PFG: Comparison to s-PFG and migration to MRI. <i>Journal of Magnetic Resonance</i> , 2014, 246, 36-45.	2.1	34
29	Anisotropically weighted MRI. <i>Magnetic Resonance in Medicine</i> , 1998, 40, 160-165.	3.0	28
30	Modeling Tumor Treating Fields (TTFields) application in single cells during metaphase and telophase. , 2015, 2015, 6892-5.		28
31	Towards clinically feasible relaxation-diffusion correlation MRI using MADCO. <i>Microporous and Mesoporous Materials</i> , 2018, 269, 93-96.	4.4	26
32	Feasibility of filter-exchange imaging (FEXI) in measuring different exchange processes in human brain. <i>NeuroImage</i> , 2020, 219, 117039.	4.2	26
33	A framework for accurate determination of the T2 distribution from multiple echo magnitude MRI images. <i>Journal of Magnetic Resonance</i> , 2014, 244, 53-63.	2.1	25
34	Ionic and pH effects on the osmotic properties and structure of polyelectrolyte gels. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008, 46, 2803-2810.	2.1	24
35	Detecting compartmental non-Gaussian diffusion with symmetrized double-PFG MRI. <i>NMR in Biomedicine</i> , 2015, 28, 1550-1556.	2.8	23
36	Retaining information from multidimensional correlation MRI using a spectral regions of interest generator. <i>Scientific Reports</i> , 2020, 10, 3246.	3.3	22

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37	Brain active transmembrane water cycling measured by MR is associated with neuronal activity. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 1280-1295.	3.0	21
38	In vivo fiber tractography using DT-MRI data. , 2000, 44, 625.		21
39	Rapid detection of the presence of diffusion exchange. <i>Journal of Magnetic Resonance</i> , 2018, 297, 17-22.	2.1	20
40	Fast, accurate 2D-MR relaxation exchange spectroscopy (REXSY): Beyond compressed sensing. <i>Journal of Chemical Physics</i> , 2016, 145, 154202.	3.0	19
41	Water mobility spectral imaging of the spinal cord: Parametrization of model-free Laplace MRI. <i>Magnetic Resonance Imaging</i> , 2019, 56, 187-193.	1.8	19
42	Calcium-induced volume transition in polyacrylate hydrogels swollen in physiological salt solutions. <i>Macromolecular Bioscience</i> , 2002, 2, 207.	4.1	18
43	Solving 2D Fredholm Integral from Incomplete Measurements Using Compressive Sensing. <i>SIAM Journal on Imaging Sciences</i> , 2014, 7, 1775-1798.	2.2	18
44	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> , 2015, 229, 895-904.	1.8	18
45	Effects of mono- and divalent cations on the structure and thermodynamic properties of polyelectrolyte gels. <i>Soft Matter</i> , 2019, 15, 4153-4161.	2.7	18
46	Simultaneous calcium fluorescence imaging and MR of <i>ex vivo</i> organotypic cortical cultures: a new test bed for functional MRI. <i>NMR in Biomedicine</i> , 2015, 28, 1726-1738.	2.8	17
47	Joint radius-length distribution as a measure of anisotropic pore eccentricity: An experimental and analytical framework. <i>Journal of Chemical Physics</i> , 2014, 141, 214202.	3.0	16
48	Direct and specific assessment of axonal injury and spinal cord microenvironments using diffusion correlation imaging. <i>NeuroImage</i> , 2020, 221, 117195.	4.2	16
49	Comparison between Neutral Gels and Neutralized Polyelectrolyte Gels in the Presence of Divalent Cations. <i>Macromolecules</i> , 2001, 34, 4285-4287.	4.8	12
50	Dealing with Uncertainty in Diffusion Tensor MR Data. <i>Israel Journal of Chemistry</i> , 2010, 43, 129-144.	2.3	11
51	Recollections about our 1996 JMR paper on diffusion anisotropy. <i>Journal of Magnetic Resonance</i> , 2011, 213, 571-572.	2.1	11
52	Real-time measurement of diffusion exchange rate in biological tissue. <i>Journal of Magnetic Resonance</i> , 2020, 317, 106782.	2.1	11
53	Ion-Induced Volume Transition in Gels and Its Role in Biology. <i>Gels</i> , 2021, 7, 20.	4.5	11
54	Comparative Study of Scattering and Osmotic Properties of Synthetic and Biopolymer Gels. <i>Macromolecular Symposia</i> , 2007, 256, 80-87.	0.7	10

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55	NMR water self-diffusion and relaxation studies on sodium polyacrylate solutions and gels in physiologic ionic solutions. <i>Journal of Applied Polymer Science</i> , 2014, 131, .	2.6	10
56	Light, Small Angle Neutron and X-Ray Scattering from Gels. <i>Macromolecular Symposia</i> , 2005, 227, 27-38.	0.7	7
57	Toward a Constitutive Law of Cartilage: A Polymer Physics Perspective. <i>Macromolecular Symposia</i> , 2005, 227, 53-64.	0.7	5
58	TM-16 * INVESTIGATING THE MECHANISMS OF ACTION OF TUMOR TREATING FIELDS: A COMPUTATIONAL MODELING STUDY. <i>Neuro-Oncology</i> , 2014, 16, v216-v216.	1.2	5
59	A Novel In-Vitro Device to Deliver Induced Electromagnetic Fields to Cell and Tissue Cultures. <i>Biophysical Journal</i> , 2020, 119, 2378-2390.	0.5	5
60	A single-shot measurement of time-dependent diffusion over sub-millisecond timescales using static field gradient NMR. <i>Journal of Chemical Physics</i> , 2021, 154, 111105.	3.0	4
61	Tensorial Spherical Polar Fourier Diffusion MRI with Optimal Dictionary Learning. <i>Lecture Notes in Computer Science</i> , 2015, 9349, 174-182.	1.3	4
62	Ion condensation in a polyelectrolyte gel. <i>Macromolecular Symposia</i> , 2003, 200, 227-234.	0.7	3
63	Tract Orientation and Angular Dispersion Deviation Indicator (TOADDI): A framework for single-subject analysis in diffusion tensor imaging. <i>NeuroImage</i> , 2016, 126, 151-163.	4.2	3
64	Novel Single and Multiple Shell Uniform Sampling Schemes for Diffusion MRI Using Spherical Codes. <i>Lecture Notes in Computer Science</i> , 2015, 9349, 28-36.	1.3	3
65	Disentangling the Effects of Restriction and Exchange With Diffusion Exchange Spectroscopy. <i>Frontiers in Physics</i> , 2022, 10, .	2.1	3
66	Ion-exchange induced change in the structure and osmotic properties of sodium polyacrylate hydrogels. <i>Macromolecular Symposia</i> , 2001, 171, 201-208.	0.7	2
67	Calcium induced volume transition in polyelectrolyte gels. <i>Macromolecular Symposia</i> , 2003, 200, 21-30.	0.7	2
68	Detection of stroke by portable, low-field MRI: A milestone in medical imaging. <i>Science Advances</i> , 2022, 8, eabp9307.	10.3	2
69	Statistical artifacts in diffusion tensor MRI (DT-MRI) caused by background noise. , 2000, 44, 41.		1
70	Dynamic model of monovalent-divalent cation exchange in polyelectrolyte gels. <i>Physical Review Materials</i> , 2022, 6, .	2.4	1
71	Depth dependent osmotic and swelling properties of cartilage. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1418, 33.	0.1	0
72	Assessment of Functional Properties of Cartilage using Double Quantum Filtered MRI. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1622, 41-48.	0.1	0

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73	Cartilage: Biomimetic Study of the Extracellular Matrix. Materials Research Society Symposia Proceedings, 2014, 1622, 61-68.	0.1	0
74	Characterization of Anomalous Diffusion from MR Signal may be a New Probe to Tissue Microstructure. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0