Petrik Galvosas

List of Publications by Year
in descending order

97 papers	2,290 citations	236925 25 h-index	243625 44 g-index

103 all docs	103 docs citations	103 times ranked	2079 citing authors

#	Article	IF	Citations
1	Exploration of molecular dynamics during transient sorption of fluids in mesoporous materials. Nature, 2006, 443, 965-968.	27.8	218
2	Generation and Application of Ultra-High-Intensity Magnetic Field Gradient Pulses for NMR Spectroscopy. Journal of Magnetic Resonance, 2001, 151, 260-268.	2.1	154
3	Electrical conductivity and translational diffusion in the 1-butyl-3-methylimidazolium tetrafluoroborate ionic liquid. Journal of Chemical Physics, 2008, 128, 214509.	3.0	115
4	PFG NMR Study of Diffusion in MFI-Type Zeolites:â€‰ Evidence of the Existence of Intracrystalline Transport Barriers. Journal of Physical Chemistry B, 2001, 105, 5922-5927.	2.6	108
5	Spin Echo NMR Diffusion Studies. Annual Reports on NMR Spectroscopy, 2007, , 51-131.	1.5	108
6	Intracrystalline Transport Resistances in Nanoporous Zeolite X. ChemPhysChem, 2009, 10, 2429-2433.	2.1	85
7	Diffusion exchange NMR spectroscopic study of dextran exchange through polyelectrolyte multilayer capsules. Journal of Chemical Physics, 2005, 122, 214912.	3.0	73
8	The local free volume, glass transition, and ionic conductivity in a polymer electrolyte: A positron lifetime study. Journal of Chemical Physics, 2001, 115, 7260-7270.	3.0	62
9	Recent Fourier and Laplace perspectives for multidimensional NMR in porous media. Magnetic Resonance Imaging, 2007, 25, 441-444.	1.8	60
10	Diffusion Correlation NMR Spectroscopic Study of Anisotropic Diffusion of Water in Plant Tissues. Biophysical Journal, 2005, 89, 2899-2905.	0.5	58
11	Multi-dimensional inverse Laplace spectroscopy in the NMR of porous media. Comptes Rendus Physique, 2010, 11, 172-180.	0.9	55
12	Background gradient suppression in stimulated echo NMR diffusion studies using magic pulsed field gradient ratios. Journal of Magnetic Resonance, 2004, 166, 164-173.	2.1	52
13	Determining pore length scales and pore surface relaxivity of rock cores by internal magnetic fields modulation at 2MHz NMR. Journal of Magnetic Resonance, 2014, 246, 110-118.	2.1	44
14	Liquid-phase self-diffusion in hydrating cement pastes â€" results from NMR studies and perspectives for further research. Cement and Concrete Research, 2007, 37, 398-413.	11.0	43
15	Nanoporous Glass as a Model System for a Consistency Check of the Different Techniques of Diffusion Measurement. ChemPhysChem, 2011, 12, 1130-1134.	2.1	41
16	Determination of Genuine Diffusivities in Heterogeneous Media Using Stimulated Echo Pulsed Field Gradient NMR. Journal of Magnetic Resonance, 2001, 149, 228-233.	2.1	39
17	Investigation of flow through triply periodic minimal surface-structured porous media using MRI and CFD. Chemical Engineering Science, 2021, 231, 116264.	3.8	39
18	Self-diffusion studies of pore fluids in unconsolidated sediments by PFG NMR. Journal of Applied Geophysics, 2002, 50, 455-467.	2.1	36

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19	Planar lamellae and onions: a spatially resolved rheoâ€“NMR approach to the shear-induced structural transformations in a surfactant model system. Soft Matter, 2011, 7, 4938.	2.7	33
20	Fast magnetic resonance imaging and velocimetry for liquids under high flow rates. Journal of Magnetic Resonance, 2006, 181, 119-125.	2.1	30
21	Guest Diffusion in Interpenetrating Networks of Micro- and Mesopores. Journal of the American Chemical Society, 2011, 133, 2437-2443.	13.7	30
22	On the use of 2D correlation and exchange NMR spectroscopy in organic porous materials. Magnetic Resonance Imaging, 2007, 25, 497-500.	1.8	28
23	Selective multi-component diffusion measurement in zeolites by pulsed field gradient NMR. Microporous and Mesoporous Materials, 2006, 90, 271-277.	4.4	27
24	Nuclear magnetic resonance study of diffusion and relaxation in hydrating white cement pastes of different water content. Journal of Applied Physics, 2001, 89, 8061-8065.	2.5	26
25	Effects of Self-Assembly on Diffusion Mechanisms of Triblock Copolymers in Aqueous Solution. Physical Review Letters, 2009, 102, 037801.	7.8	26
26	Magnetic resonance pore imaging, a tool for porous media research. Physical Review E, 2013, 87, .	2.1	25
27	Multidimensional NMR diffusion studies in microporous materials. Microporous and Mesoporous Materials, 2009, 125, 30-34.	4.4	24
28	Aging evaluation of asphalt samples with Low Field Nuclear Magnetic Resonance. Materials Characterization, 2017, 128, 165-175.	4.4	24
29	Self-Assembly and Diffusion of Block Copolymer Templates in SBA-15 Nanochannels. Journal of Physical Chemistry B, 2010, 114, 4223-4229.	2.6	21
30	Characterization of carbon materials with the help of NMR methods. Microporous and Mesoporous Materials, 2009, 120, 91-97.	4.4	19
31	Robust spatially resolved pressure measurements using MRI with novel buoyant advection-free preparations of stable microbubbles in polysaccharide gels. Journal of Magnetic Resonance, 2008, 193, 159-167.	2.1	18
32	Stability of polyelectrolyte-coated iron nanoparticles for T 2 -weighted magnetic resonance imaging. Journal of Magnetism and Magnetic Materials, 2017, 439, 251-258.	2.3	18
33	Bone volumeâ€“toâ€“total volume ratio measured in trabecular bone by singleâ€sided NMR devices. Magnetic Resonance in Medicine, 2018, 79, 501-510.	3.0	18
34	Quantifying silo flow using MRI velocimetry for testing granular flow models. Physical Review Fluids, 2019, 4, .	2.5	18
35	Scaling Law of Poly(ethylene oxide) Chain Permeation through a Nanoporous Wall. Journal of Physical Chemistry B, 2008, 112, 13245-13251.	2.6	17
36	Transient and Steady-State Shear Banding in a Lamellar Phase as Studied by Rheo-NMR. Zeitschrift Fur Physikalische Chemie, 2012, 226, 1293-1314.	2.8	17

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37	Observations of the influence of Taylor-Couette geometry on the onset of shear-banding in surfactant wormlike micelles. Journal of Rheology, 2016, 60, 973-982.	2.6	17
38	Magnetic-resonance pore imaging of nonsymmetric microscopic pore shapes. Physical Review E, 2015, 92, 012808.	2.1	16
39	Influence of contact parameters on Discrete Element method (DEM) simulations of flow from a hopper: Comparison with magnetic resonance imaging (MRI) measurements. Powder Technology, 2020, 372, 671-684.	4.2	16
40	In situ determination of surface relaxivities for unconsolidated sediments. Water Resources Research, 2015, 51, 6549-6563.	4.2	15
41	Multilamellar Vesicle Formation Probed by Rheo-NMR and Rheo-SALS under Large Amplitude Oscillatory Shear. Langmuir, 2018, 34, 8314-8325.	3.5	15
42	Evaluation of benchtop NMR Diffusion Ordered Spectroscopy for small molecule mixture analysis. Magnetic Resonance Imaging, 2019, 56, 103-109.	1.8	15
43	Anisotropic Diffusion in a Nematic Liquid Crystalâ€" An Electric Field PFG NMR Approach. Journal of Magnetic Resonance, 2000, 143, 427-430.	2.1	14
44	PFG NMR and internal magnetic field gradients in plant-based materials. Magnetic Resonance Imaging, 2002, 20, 567-573.	1.8	14
45	NMR velocimetry with 13-interval stimulated echo multi-slice imaging in natural porous media under low flow rates. Journal of Magnetic Resonance, 2011, 212, 216-223.	2.1	14
46	Mixture diffusion of adsorbed organic compounds in metal-organic frameworks as studied by magic-angle spinning pulsed-field gradient nuclear magnetic resonance. New Journal of Physics, 2011, 13, 045016.	2.9	14
47	Obtaining T 1 - T 2 distribution functions from 1-dimensional T 1 and T 2 measurements: The pseudo 2-D relaxation model. Journal of Magnetic Resonance, 2016, 269, 186-195.	2.1	14
48	Application of Pulsed Field Gradient NMR with High Gradient Strength for Studies of Self-Diffusion in Lipid Membranes on the Nanoscale. Langmuir, 2008, 24, 7365-7370.	3.5	13
49	Diffusion of aromatic guest molecules in zeolite NaX studied by pulsed field gradient NMR. Microporous and Mesoporous Materials, 2009, 120, 98-103.	4.4	13
50	Diffusion of pentane isomers in faujasite-type zeolites : NMR and molecular dynamics study. Microporous and Mesoporous Materials, 2013, 171, 58-64.	4.4	13
51	Determining mean fractional anisotropy using DDCOSY: preliminary results in biological tissues. Magnetic Resonance in Chemistry, 2017, 55, 498-507.	1.9	13
52	Dynamical aspects of the adsorption hysteresis phenomenon. Magnetic Resonance Imaging, 2007, 25, 481-484.	1.8	11
53	The evidence of NMR diffusometry on pore space heterogeneity in activated carbon. Microporous and Mesoporous Materials, 2011, 141, 184-191.	4.4	11
54	Parallel acquisition of q-space using second order magnetic fields for single-shot diffusion measurements. Journal of Magnetic Resonance, 2014, 244, 46-52.	2.1	11

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55	Quantifying NMR relaxation correlation and exchange in articular cartilage with time domain analysis. Journal of Magnetic Resonance, 2018, 287, 82-90.	2.1	11
56	Enhanced Ca2+ influx in mechanically distorted erythrocytes measured with 19F nuclear magnetic resonance spectroscopy. Scientific Reports, 2021, 11, 3749.	3.3	11
57	Measuring diffusionâ€“relaxation correlation maps using non-uniform field gradients of single-sided NMR devices. Journal of Magnetic Resonance, 2014, 248, 137-145.	2.1	10
58	Pulsed second order field NMR for real time PGSE and single-shot surface to volume ratio measurements. Journal of Magnetic Resonance, 2014, 247, 42-49.	2.1	10
59	Symmetry of the gradient profile as second experimental dimension in the short-time expansion of the apparent diffusion coefficient as measured with NMR diffusometry. Journal of Magnetic Resonance, 2015, 259, 10-19.	2.1	10
60	Permeability Profiling of Rock Cores Using a Novel Spatially Resolved NMR Relaxometry Method: Preliminary Results From Sandstone and Limestone. Journal of Geophysical Research: Solid Earth, 2019, 124, 4601-4616.	3.4	10
61	Rheoâ€NMR in food scienceâ€”Recent opportunities. Magnetic Resonance in Chemistry, 2019, 57, 757-765.	1.9	10
62	NMR studies of water diffusion and relaxation in hydrating slag-based construction materials. Magnetic Resonance Imaging, 2001, 19, 547-548.	1.8	9
63	New Option for Characterizing the Mobility of Organic Compounds in Humic Acids. Environmental Science & Technology, 2009, 43, 8264-8269.	10.0	9
64	Anomalous shear banding revisited with Rheo-NMR and Rheo-USV. Rheologica Acta, 2015, 54, 619-636.	2.4	9
65	Emerging NMR approaches for characterizing rock heterogeneity. Microporous and Mesoporous Materials, 2018, 269, 118-121.	4.4	9
66	Single-sided NMR for the diagnosis of osteoporosis: Diffusion weighted pulse sequences for the estimation of trabecular bone volume fraction in the presence of muscle tissue. Microporous and Mesoporous Materials, 2018, 269, 166-170.	4.4	9
67	Mobile Aliphatic Domains in Humic Substances and Their Impact on Contaminant Mobility within the Matrix. Environmental Science & Technology, 2011, 45, 5164-5169.	10.0	8
68	Paramagnetic Relaxation Enhancement (PRE) as a Tool for Probing Diffusion in Environmentally Relevant Porous Media. Environmental Science & Technology, 2011, 45, 8866-8872.	10.0	8
69	Advances and artefact suppression in RARE-velocimetry for flow with curved streamlines. Journal of Magnetic Resonance, 2015, 259, 135-145.	2.1	8
70	Quantitative measurements of flow dynamics in 3D hoppers using MRI. Powder Technology, 2021, 392, 69-80.	4.2	8
71	â€œPore-Likeâ€•Effects of Super-Molecular Self-Assembly on Molecular Diffusion of Poly(Ethylene) Tj ETQq1 1 0.784314 rgBT /Overlo	2.9	7
72	Effect of magnetic pore surface coating on the NMR relaxation and diffusion signal in quartz sand. Magnetic Resonance in Chemistry, 2016, 54, 975-984.	1.9	7

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73	Tracing Pore-Space Heterogeneities in X-Type Zeolites by Diffusion Studies. Langmuir, 2011, 27, 416-419.	3.5	6
74	Direct measurement of water self-diffusion in hardening blast furnace slag cement pastes by means of nuclear magnetic resonance techniques. Journal of Applied Physics, 2001, 90, 518-520.	2.5	5
75	Magnetic Resonance Pore Imaging: Overcoming the resolution limit of MRI for closed pore systems. Microporous and Mesoporous Materials, 2015, 205, 44-47.	4.4	5
76	Fast reconstruction of highly undersampled MR images using one and two dimensional principal component analysis. Magnetic Resonance Imaging, 2016, 34, 227-238.	1.8	5
77	Direct Investigation of the Fate of NAPL Contaminations in a Hydrating Cement Matrix by Means of Magnetic Resonance Techniques. Environmental Science & Technology, 2004, 38, 880-885.	10.0	4
78	On the influence of rotational motion on MRI velocimetry of granular flows â€“ Theoretical predictions and comparison to experimental data. Journal of Magnetic Resonance, 2019, 307, 106569.	2.1	4
79	Quantitative measurement of solid fraction in a silo using SPRITE. Journal of Magnetic Resonance, 2021, 325, 106935.	2.1	4
80	Surface model of the human red blood cell simulating changes in membrane curvature under strain. Scientific Reports, 2021, 11, 13712.	3.3	4
81	Oxygen saturation-dependent effects on blood transverse relaxation at low fields. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2022, 35, 805-815.	2.0	4
82	Real-time fluid transport characterization through direct acquisition of the averaged propagator. Physical Review E, 2015, 92, 023016.	2.1	3
83	Dâ€“T2 correlation using the inhomogeneity of single sided NMR devices. Microporous and Mesoporous Materials, 2015, 205, 40-43.	4.4	3
84	Local and global anisotropy - recent re-implementation of 2D ILT diffusion methods. Microporous and Mesoporous Materials, 2018, 269, 71-74.	4.4	3
85	Threshold Isocontouring on High b-Value Diffusion-Weighted Images in Magnetic Resonance Mammography. Journal of Computer Assisted Tomography, 2019, 43, 434-442.	0.9	3
86	Pulsed second order fields for parallel acquisition of q-space. Microporous and Mesoporous Materials, 2015, 205, 61-64.	4.4	2
87	The pseudo 2-D relaxation model for obtaining T1â€“T2 relationships from 1-D T1 and T2 measurements of fluid in porous media. Microporous and Mesoporous Materials, 2018, 269, 191-194.	4.4	2
88	MAS-NMR of [Pyr13][Tf2N] and [Pyr16][Tf2N] Ionic Liquids Confined to Carbon Black: Insights and Pitfalls. Molecules, 2021, 26, 6690.	3.8	2
89	Nuclear Spin Relaxation and Water Self-diffusion in Hardening Magnesium Oxychloride Cement. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2001, 56, 561-564.	1.5	1
90	MAS PFG NMR Studies of Mixtures in Porous Materials. , 2011, , .		1

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91	Water Flow Investigation on Quartz Sand with 13-interval Stimulated Echo Multi Slice Imaging. , 2011, , .		1
92	Diffusion Anisotropy Identification by Short Diffusion-Diffusion Correlation Spectroscopy. Mathematics and Visualization, 2020, , 49-59.	0.6	1
93	MRI Pressure and Stress Measurement in Novel Homogeneous Soft Solids. , 2008, , .		0
94	Investigation of Molecular Exchange Using DEXSY with Ultra-High Pulsed Field Gradients. , 2008, , .		0
95	Comment on â€œComputer Simulation of Static and Dynamic Properties During Transient Sorption of Fluids in Mesoporous Materialsâ€• Journal of Physical Chemistry C, 2010, 114, 9187-9188.	3.1	0
96	Proceeding of the 13th international Bologna conference on magnetic resonance in porous media (MRPM13). Microporous and Mesoporous Materials, 2018, 269, 1-2.	4.4	0
97	Quantitative measurement of hopper flow using MRI. EPJ Web of Conferences, 2021, 249, 03006.	0.3	0