Yi-Qiao Song

List of Publications by Year in descending order

152 papers	5,608 citations	117571 34 h-index	91828 69 g-index
160 all docs	160 docs citations	160 times ranked	3231 citing authors

#	Article	IF	Citations
1	T1â€“T2 Correlation Spectra Obtained Using a Fast Two-Dimensional Laplace Inversion. Journal of Magnetic Resonance, 2002, 154, 261-268.	1.2	631
2	Solving Fredholm integrals of the first kind with tensor product structure in 2 and 2.5 dimensions. IEEE Transactions on Signal Processing, 2002, 50, 1017-1026.	3.2	538
3	Enhancement of Solution NMR and MRI with Laser-Polarized Xenon. Science, 1996, 271, 1848-1851.	6.0	319
4	Determining multiple length scales in rocks. Nature, 2000, 406, 178-181.	13.7	229
5	Application of spin-spin relaxation to measurement of surface area and pore size distributions in a hydrating cement paste. Magnetic Resonance Imaging, 1994, 12, 169-173.	1.0	174
6	Study of Asphaltene Nanoaggregation by Nuclear Magnetic Resonance (NMR). Energy & Fuels, 2009, 23, 1189-1193.	2.5	165
7	Magnetic Resonance of Porous Media (MRPM): A perspective. Journal of Magnetic Resonance, 2013, 229, 12-24.	1.2	143
8	NMR application in unconventional shale reservoirs â€“ A new porous media research frontier. Progress in Nuclear Magnetic Resonance Spectroscopy, 2019, 112-113, 17-33.	3.9	115
9	Critical Nanoaggregate Concentration of Asphaltenes by Direct-Current (DC) Electrical Conductivity. Energy & Fuels, 2009, 23, 1201-1208.	2.5	113
10	Quantitative characterization of food products by two-dimensional Dâ€“ and â€“ distribution functions in a static gradient. Journal of Colloid and Interface Science, 2006, 297, 303-311.	5.0	112
11	Scalable NMR spectroscopy with semiconductor chips. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11955-11960.	3.3	102
12	Study of Xenon Binding in Cryptophane-A Using Laser-Induced NMR Polarization Enhancement. Journal of the American Chemical Society, 1999, 121, 3502-3512.	6.6	89
13	Using internal magnetic fields to obtain pore size distributions of porous media. Concepts in Magnetic Resonance, 2003, 18A, 97-110.	1.3	83
14	Quantifying uncertainty in NMR spectra using Monte Carlo inversion. Journal of Magnetic Resonance, 2009, 196, 54-60.	1.2	83
15	Time-of-Flight Flow Imaging Using NMR Remote Detection. Physical Review Letters, 2005, 95, 075503.	2.9	68
16	Use of NMR logging to obtain estimates of hydraulic conductivity in the High Plains aquifer, Nebraska, USA. Water Resources Research, 2013, 49, 1871-1886.	1.7	68
17	Selective Enhancement of NMR Signals forÎ±-Cyclodextrin with Laser-Polarized Xenon. Angewandte Chemie International Edition in English, 1997, 36, 2368-2370.	4.4	67
18	Categories of Coherence Pathways for the CPMG Sequence. Journal of Magnetic Resonance, 2002, 157, 82-91.	1.2	66

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19	Magnetic resonance in porous media: Recent progress. Journal of Chemical Physics, 2008, 128, 052212.	1.2	64
20	Determining the resolution of Laplace inversion spectrum. Journal of Chemical Physics, 2005, 122, 104104.	1.2	60
21	Two-Dimensional NMR of Diffusion Systems. Physical Review Letters, 2008, 100, 248002.	2.9	56
22	Correlation functions for inhomogeneous magnetic field in random media with application to a dense random pack of spheres. Journal of Magnetic Resonance, 2003, 164, 154-159.	1.2	55
23	Field experiment provides ground truth for surface nuclear magnetic resonance measurement. Geophysical Research Letters, 2012, 39, .	1.5	55
24	Scaling Laws for Diffusion Coefficients in Mixtures of Alkanes. Physical Review Letters, 2005, 94, 067602.	2.9	54
25	Stability of Superparamagnetic Iron Oxide Nanoparticles at Different pH Values: Experimental and Theoretical Analysis. Langmuir, 2012, 28, 6246-6255.	1.6	51
26	A one-shot method for measurement of diffusion. Journal of Magnetic Resonance, 2004, 170, 136-148.	1.2	50
27	An NMR study of porous rock and biochar containing organic material. Microporous and Mesoporous Materials, 2013, 178, 94-98.	2.2	50
28	A 2D NMR method to characterize granular structure of dairy products. Progress in Nuclear Magnetic Resonance Spectroscopy, 2009, 55, 324-334.	3.9	49
29	Low temperature fluctuations of vortices in layered superconductors. Physical Review Letters, 1993, 70, 3127-3130.	2.9	43
30	Determining Pore Sizes Using an Internal Magnetic Field. Journal of Magnetic Resonance, 2000, 143, 397-401.	1.2	39
31	An ultra-broadband low-frequency magnetic resonance system. Journal of Magnetic Resonance, 2014, 242, 113-125.	1.2	39
32	Spin susceptibility in theLa2â^'xSrxCuO4system from underdoped to overdoped regimes. Physical Review Letters, 1993, 70, 3131-3134.	2.9	37
33	Zinc oxide nanoparticles catalyze rapid hydrolysis of poly(lactic acid) at low temperatures. Journal of Applied Polymer Science, 2014, 131, .	1.3	37
34	Understanding NMR spectral uncertainty. Journal of Magnetic Resonance, 2010, 204, 118-123.	1.2	36
35	Effects of diffusion on magnetic resonance imaging of laser-polarized xenon gas. Journal of Chemical Physics, 1998, 108, 6233-6239.	1.2	35
36	Detection of the High Eigenmodes of Spin Diffusion in Porous Media. Physical Review Letters, 2000, 85, 3878-3881.	2.9	35

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37	What is the shape of pores in natural rocks?. Journal of Chemical Physics, 2002, 116, 8247.	1.2	35
38	Fully-Automated High-Throughput NMR System for Screening of Haploid Kernels of Maize (Corn) by Measurement of Oil Content. PLoS ONE, 2016, 11, e0159444.	1.1	35
39	Pore sizes and pore connectivity in rocks using the effect of internal field. Magnetic Resonance Imaging, 2001, 19, 417-421.	1.0	34
40	Robust determination of surface relaxivity from nuclear magnetic resonance DT2 measurements. Journal of Magnetic Resonance, 2015, 259, 146-152.	1.2	34
41	Spin polarization-induced nuclear Overhauser effect: An application of spin-polarized xenon and helium. Concepts in Magnetic Resonance, 2000, 12, 6-20.	1.3	33
42	Pt195spin dynamics and Knight shift in single crystals ofUPt3. Physical Review B, 1993, 48, 7392-7398.	1.1	32
43	The behavior of diffusion eigenmodes in the presence of internal magnetic field in porous media. Journal of Chemical Physics, 2001, 114, 9120-9124.	1.2	32
44	Novel NMR techniques for porous media research. Cement and Concrete Research, 2007, 37, 325-328.	4.6	30
45	Portable NMR with Parallelism. Analytical Chemistry, 2020, 92, 2112-2120.	3.2	28
46	Highâ€resolution MRI of internal field diffusionâ€weighting in trabecular bone. NMR in Biomedicine, 2009, 22, 436-448.	1.6	27
47	Chirped CPMG for well-logging NMR applications. Journal of Magnetic Resonance, 2014, 242, 197-202.	1.2	27
48	The robust identification of exchange from T2â€“T2 time-domain features. Journal of Magnetic Resonance, 2016, 265, 164-171.	1.2	27
49	An NMR technique for rapid measurement of flow. Journal of Magnetic Resonance, 2005, 172, 31-35.	1.2	26
50	Visualization of inhomogeneous local magnetic field gradient due to susceptibility contrast. Journal of Magnetic Resonance, 2009, 198, 88-93.	1.2	26
51	SQUID detected NMR of laser-polarized xenon at 4.2 K and at frequencies down to 200 Hz. Chemical Physics Letters, 1997, 272, 245-249.	1.2	25
52	Characterization of coupled pore systems from the diffusion eigenspectrum. Journal of Chemical Physics, 2002, 117, 5361-5365.	1.2	25
53	Broadband CPMG sequence with short composite refocusing pulses. Journal of Magnetic Resonance, 2013, 230, 64-75.	1.2	25
54	Pressure-Driven Suspension Flow near Jamming. Physical Review Letters, 2015, 114, 088301.	2.9	25

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55	A method for rapid characterization of diffusion. Journal of Magnetic Resonance, 2003, 161, 222-233.	1.2	24
56	Diffusionâ€based MR methods for bone structure and evolution. Magnetic Resonance in Medicine, 2008, 59, 28-39.	1.9	24
57	Adsorption of Superparamagnetic Iron Oxide Nanoparticles on Silica and Calcium Carbonate Sand. Langmuir, 2014, 30, 784-792.	1.6	24
58	Direct correlation of diffusion and pore size distributions with low field NMR. Journal of Magnetic Resonance, 2016, 269, 196-202.	1.2	24
59	Local symmetry of copper sites inLa2â^'xSrxCuO4. Physical Review B, 1991, 44, 7159-7162.	1.1	23
60	Multiple echo diffusion tensor acquisition technique. Magnetic Resonance Imaging, 2006, 24, 7-18.	1.0	23
61	Resolution and uncertainty of Laplace inversion spectrum. Magnetic Resonance Imaging, 2007, 25, 445-448.	1.0	23
62	Probing Malteneâ€“Asphaltene Interaction in Crude Oil by Means of NMR Relaxation. Energy & Fuels, 2014, 28, 2395-2401.	2.5	23
63	Detecting compartmental nonâ€Gaussian diffusion with symmetrized doubleâ€PFG MRI. NMR in Biomedicine, 2015, 28, 1550-1556.	1.6	23
64	Molecular Composition and Dynamics of Oils from Diffusion Measurements. , 2007, , 279-299.		22
65	Experimental Identification of Diffusive Coupling Using 2D NMR. Physical Review Letters, 2014, 113, 235503.	2.9	22
66	Dispersion of T₁ and T₂ Nuclear Magnetic Resonance Relaxation in Crude Oils. ChemPhysChem, 2014, 15, 2676-2681.	1.0	21
67	Acceleration of multi-dimensional propagator measurements with compressed sensing. Journal of Magnetic Resonance, 2011, 213, 166-170.	1.2	20
68	Surface magnetic relaxation in cement pastes. Magnetic Resonance Imaging, 1994, 12, 207-208.	1.0	19
69	Simultaneous Measurement of Diffusion along Multiple Directions. Journal of the American Chemical Society, 2004, 126, 16336-16337.	6.6	19
70	Mapping the human connectome using diffusion MRI at 300 mT/m gradient strength: Methodological advances and scientific impact. NeuroImage, 2022, 254, 118958.	2.1	18
71	Thallium magnetic resonance in superconductingTl2Ba2Ca2Cu3O10+Î´. Physical Review B, 1989, 40, 817-820.	1.1	17
72	Reduction of Spin Polarization near Landau Filling FactorÎ½=3in GaAs/AlGaAs Quantum Wells. Physical Review Letters, 1999, 82, 2768-2771.	2.9	17

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73	Manipulation of the diffusion eigenmodes in porous media. Physical Review B, 2002, 65, .	1.1	17
74	Evidence of Aromaticity-Specific Maltene NMR Relaxation Enhancement Promoted by Semi-immobilized Radicals. Energy & Fuels, 2016, 30, 3886-3893.	2.5	17
75	Recent Progress of Nuclear Magnetic Resonance Applications in Sandstones and Carbonate Rocks. Vadose Zone Journal, 2010, 9, 828-834.	1.3	16
76	Low-frequency NMR with a non-resonant circuit. Journal of Magnetic Resonance, 2011, 210, 69-74.	1.2	16
77	Magnetic Resonance Characterization of Porous Media Using Diffusion through Internal Magnetic Fields. Materials, 2012, 5, 590-616.	1.3	16
78	Investigating internal magnetic field gradients in aquifer sediments. Geophysics, 2015, 80, D281-D294.	1.4	16
79	Saturation-inversion-recovery: A method for T1 measurement. Journal of Magnetic Resonance, 2017, 274, 137-143.	1.2	16
80	Porosity of Drill-Cuttings Using Multinuclear ¹⁹F and ¹H NMR Measurements. Energy & Fuels, 2018, 32, 7467-7470.	2.5	16
81	Two electronically distinct copper sites in lanthanum strontium copper oxide (La2-xSrxCuO4-.delta.) compounds for 0.10 .ltoreq. x .ltoreq. 0.20. Chemistry of Materials, 1991, 3, 672-677.	3.2	15
82	Real-time optimization of nuclear magnetic resonance experiments. Journal of Magnetic Resonance, 2018, 289, 72-78.	1.2	15
83	Low fields but high impact: Ex-situ NMR and MRI. Journal of Magnetic Resonance, 2019, 306, 109-111.	1.2	15
84	Magnetic-flux-lattice anisotropy ofTl2Ba2Ca2Cu3O10+Î´byTl205nuclear magnetic resonance. Physical Review B, 1991, 44, 914-916.	1.1	14
85	Two Dimensional89Y NMR Study of Vortex Dynamics in YBa2Cu3O7âˆ’Î´. Physical Review Letters, 1995, 75, 2008-2010.	2.9	14
86	Axis-matching excitation pulses for CPMG-like sequences in inhomogeneous fields. Journal of Magnetic Resonance, 2013, 237, 1-10.	1.2	14
87	Spatial Heterogeneity Length Scales in Carbonate Rocks. Applied Magnetic Resonance, 2007, 32, 221-231.	0.6	13
88	A miniaturized spectrometer for NMR relaxometry under extreme conditions. Scientific Reports, 2019, 9, 11174.	1.6	13
89	Optimization of multidimensional MR data acquisition for relaxation and diffusion. NMR in Biomedicine, 2020, 33, e4238.	1.6	13
90	Inside-out NMR with two concentric ring magnets. Journal of Magnetic Resonance, 2021, 333, 107082.	1.2	13

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91	Determination of magnetic penetration depth from saddle-point field analysis inTl2Ba2Ca2Cu3O10+Î´. Physical Review B, 1992, 45, 4945-4951.	1.1	12
92	Hardware and Methods. , 2006, , 163-183.		12
93	NMR Measurement of the Magnetic Field Correlation Function in Porous Media. Physical Review Letters, 2008, 100, 025501.	2.9	12
94	Focus on the physics of magnetic resonance on porous media. New Journal of Physics, 2012, 14, 055017.	1.2	12
95	Two-dimensional NQR using ultra-broadband electronics. Journal of Magnetic Resonance, 2014, 240, 16-23.	1.2	12
96	In situ measurement and simulation of nano-magnetite mobility in porous media subject to transient salinity. Nanoscale, 2015, 7, 1047-1057.	2.8	12
97	Relative hydrogen index as a fast method for the simultaneous determination of physicochemical properties of petroleum fractions. Fuel, 2017, 210, 41-48.	3.4	12
98	Magnetic susceptibility anisotropy of grain-aligned oxygen-deficient Y1Ba2Cu3Ox (6.46â‰¤xâ‰¤6.98). Physica C: Superconductivity and Its Applications, 1992, 201, 95-102.	0.6	11
99	Novel NMR techniques for porous media research. Magnetic Resonance Imaging, 2003, 21, 207-211.	1.0	11
100	Fast imaging with the MMME sequence. Journal of Magnetic Resonance, 2006, 180, 18-28.	1.2	11
101	Rapid measurement of three-dimensional diffusion tensor. Journal of Chemical Physics, 2007, 126, 154501.	1.2	11
102	Inverting MRI measurements to heterogeneity spectra. Journal of Magnetic Resonance, 2008, 193, 243-250.	1.2	11
103	Two-dimensional diffusion time correlation experiment using a single direction gradient. Journal of Magnetic Resonance, 2014, 244, 6-11.	1.2	11
104	Fluorescence Methods for Downhole Fluid Analysis of Heavy Oil Emulsions. Journal of Dispersion Science and Technology, 2008, 29, 171-183.	1.3	10
105	An extremely broadband low-frequency MR system. Microporous and Mesoporous Materials, 2013, 178, 53-55.	2.2	10
106	Influence of bone marrow composition on measurements of trabecular microstructure using decay due to diffusion in the internal field MRI: Simulations and clinical studies. Magnetic Resonance in Medicine, 2014, 72, 1499-1508.	1.9	10
107	Restricted diffusion effects on nuclear magnetic resonance DT2 maps. Geophysics, 2015, 80, E41-E47.	1.4	10
108	Heteronuclear J-coupling measurements in grossly inhomogeneous magnetic fields. Journal of Magnetic Resonance, 2015, 255, 15-27.	1.2	10

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109	Chemical analysis using low-field magnetic resonance. TrAC - Trends in Analytical Chemistry, 2016, 83, 84-93.	5.8	10
110	Effect of off-resonance on T1 saturation recovery measurement in inhomogeneous fields. Journal of Magnetic Resonance, 2017, 281, 31-43.	1.2	10
111	In vivo microscopic diffusional kurtosis imaging with symmetrized double diffusion encoding EPI. Magnetic Resonance in Medicine, 2019, 81, 533-541.	1.9	10
112	Selektive NMRâ€šSignalverstÃrkung bei Î±â€Cyclodextrin durch laserpolarisiertes Xenon. Angewandte Chemie, 1997, 109, 2464-2466.	1.6	9
113	Nonresonant Multiple Spin Echoes. Science, 2002, 297, 369-372.	6.0	9
114	Multipleâ€•modulationâ€•multipleâ€•echo magnetic resonance. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2007, 30A, 358-377.	0.2	9
115	A single-scan method for measuring flow along an arbitrary direction. Journal of Magnetic Resonance, 2007, 186, 11-16.	1.2	9
116	Fluorine tracers for the identification of molecular interaction with porous asphaltene aggregates in crude oil. Microporous and Mesoporous Materials, 2015, 205, 56-60.	2.2	9
117	Rapid measurement via decay-recovery decomposition: Applications in fringe field and distributed relaxation experiments. Solid State Nuclear Magnetic Resonance, 2006, 29, 232-241.	1.5	8
118	Study of diffusion in erythrocyte suspension using internal magnetic field inhomogeneity. Journal of Magnetic Resonance, 2007, 187, 146-154.	1.2	8
119	Magnetic field anisotropy based MR tractography. Journal of Magnetic Resonance, 2011, 212, 386-393.	1.2	8
120	63Cu NMR in heavily doped La2CuO4. Journal of Physics and Chemistry of Solids, 1995, 56, 1939-1940.	1.9	7
121	Multiple modulation multiple echoes: A one-shot method. Magnetic Resonance Imaging, 2005, 23, 301-303.	1.0	7
122	MRI of trabecular bone using a decay due to diffusion in the internal field contrast imaging sequence. Journal of Magnetic Resonance Imaging, 2011, 34, 361-371.	1.9	7
123	Adsorption of Polar Species at Crude Oilâ€“Water Interfaces: the Chemoelastic Behavior. Langmuir, 2022, 38, 6523-6530.	1.6	7
124	Electronic spin susceptibility in superconducting YBa2Cu3O7 from nuclear spin-spin coupling. Physica C: Superconductivity and Its Applications, 1992, 191, 131-136.	0.6	6
125	Low-temperature vortex dynamics in a high-temperature superconductor. Physical Review B, 1994, 50, 16570-16573.	1.1	6
126	Transformer-coupled NMR probe. Journal of Magnetic Resonance, 2012, 216, 128-133.	1.2	6

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127	Realtime optimization of multidimensional NMR spectroscopy on embedded sensing devices. Scientific Reports, 2019, 9, 17486.	1.6	6
128	Vortex fluctuation effects to Î¼SR linewidth in high-temperature superconductor. Physica C: Superconductivity and Its Applications, 1995, 241, 187-190.	0.6	5
129	Imaging of laser-polarized solid xenon. Solid State Nuclear Magnetic Resonance, 1998, 10, 247-250.	1.5	5
130	Comment on â€œTransverse NMR Relaxation as a Probe of Mesoscopic Structureâ€• Physical Review Letters, 2003, 91, 029801; author reply 029802.	2.9	5
131	Dispersion measurements using time-of-flight remote detection MRI. Magnetic Resonance Imaging, 2007, 25, 449-452.	1.0	5
132	Quantifying spatial heterogeneity from images. New Journal of Physics, 2008, 10, 125012.	1.2	5
133	Preliminary evaluation of accelerated microscopic diffusional kurtosis imaging (Î¼DKI) in a rodent model of epilepsy. Magnetic Resonance Imaging, 2019, 56, 90-95.	1.0	5
134	Analytical models of probe dynamics effects on NMR measurements. Journal of Magnetic Resonance, 2021, 327, 106975.	1.2	5
135	Quantitative measurements of injections into porous media with contrast based MRI. Journal of Magnetic Resonance, 2011, 212, 133-138.	1.2	4
136	Integrated CMOS spectrometer for multi-dimensional NMR spectroscopy. , 2017, , .		3
137	Ring Magnet Design Considerations for Obtaining Magnetic Resonance Signals in Low Non-Uniform Fields. IEEE Transactions on Magnetics, 2018, 54, 1-4.	1.2	3
138	Interfacial Viscoelasticity in Crude Oil-Water Systems to Understand Incremental Oil Recovery. , 2020, , .		3
139	Multiphysics NMR correlation spectroscopy. Journal of Magnetic Resonance, 2021, 322, 106887.	1.2	3
140	Generating Heterogeneity Spectra from Spatially Resolved Measurements. Mathematical Geosciences, 2009, 41, 721-735.	1.4	2
141	Real-Time Data Inversion Methods for Low-Field Nuclear Magnetic Resonance (NMR). , 2018, , .		2
142	Ringing cancellation in Carr-Purcell-Meiboom-Gill-type sequences. Magnetic Resonance Letters, 2022, 2, 233-242.	0.7	2
143	Korringa behavior for Cu(2) in YBa2Cu3O6.98. Physica B: Condensed Matter, 1990, 165-166, 1301-1302.	1.3	1
144	Porous Materials. , 2006, , 340-358.		1

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145	Coaxial probe for nuclear magnetic resonance diffusion and relaxation correlation experiments. Journal of Applied Physics, 2014, 115, .	1.1	1
146	Elastic Regression-Tree Learning in a Heterogeneous Computing Environment. IEEE Internet of Things Journal, 2019, 6, 8826-8834.	5.5	1
147	Remote Detection of Earthâ€™s Field Nuclear Magnetic Resonance with a Robust Induction Magnetometer. Physical Review Applied, 2020, 13, .	1.5	1
148	A Compact GaNFET-Based Power Amplifier for ASIC-Based Miniature NMR Spectrometers. , 2021, , .		1
149	Measurement of Full Diffusion Tensor Distribution Using High-Gradient Diffusion MRI and Applications in Diffuse Gliomas. Frontiers in Physics, 2022, 10, .	1.0	1
150	Characterization of Internal Magnetic Fields in Porous Media. , 2008, , .		0
151	The Heterogeneity Spectrum: A Method for Quantifying the Extent of Spatial Heterogeneity as a Function of Length Scale in Complex Materials. , 2008, , .		0
152	Multiple-Echo Magnetic Resonance. , 0, , 31-48.		0