

# Gregory B Furman

## List of Publications by Year in descending order

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97  
papers

651  
citations

686830

13  
h-index

752256

20  
g-index

101  
all docs

101  
docs citations

101  
times ranked

291  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nuclear spin-lattice relaxation via paramagnetic impurities in solids with arbitrary space dimension. <i>Physical Review B</i> , 1995, 52, 10182-10187.	1.1	39
2	Nuclear spin-lattice relaxation and paramagnetic defects in carbon nanomaterials. <i>Diamond and Related Materials</i> , 2012, 23, 157-161.	1.8	30
3	Nuclear spin-lattice relaxation of dipolar order caused by paramagnetic impurities. <i>Physical Review B</i> , 1997, 55, 439-444.	1.1	28
4	Dynamics of entanglement in a one-dimensional Ising chain. <i>Physical Review A</i> , 2008, 77, .	1.0	27
5	Entanglement of dipolar coupling spins. <i>Quantum Information Processing</i> , 2011, 10, 307-315.	1.0	27
6	Multiple quantum NMR and entanglement dynamics in dipolar coupling spin systems. <i>Physical Review A</i> , 2008, 78, .	1.0	23
7	Entanglement in dipolar coupling spin system in equilibrium state. <i>Quantum Information Processing</i> , 2012, 11, 1603-1617.	1.0	23
8	Nuclear polarization and entanglement in spin systems. <i>Quantum Information Processing</i> , 2009, 8, 283-291.	1.0	21
9	NMR multiple-quantum dynamics with various initial conditions. <i>Journal of Physics Condensed Matter</i> , 2005, 17, 4501-4509.	0.7	20
10	Pure NQR Quantum Computing. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 2002, 57, 315-319.	0.7	15
11	Multiple quantum NMR dynamics in dipolar ordered spin systems. <i>Physical Review B</i> , 2007, 76, .	1.1	15
12	Spin locking and spin-lattice relaxation in a liquid entrapped in nanosized cavities. <i>Soft Matter</i> , 2012, 8, 9200.	1.2	15
13	Entanglement and multiple quantum coherence dynamics in spin clusters. <i>Quantum Information Processing</i> , 2009, 8, 379-386.	1.0	14
14	Correlation of transverse relaxation time with structure of biological tissue. <i>Journal of Magnetic Resonance</i> , 2016, 270, 7-11.	1.2	13
15	Fractional power time dependence of the nuclear magnetization in the presence of paramagnetic impurities. <i>Solid State Nuclear Magnetic Resonance</i> , 1995, 4, 255-258.	1.5	12
16	The pseudopure state in homonuclear dipolar coupling spin systems. <i>Journal of Physics A</i> , 2006, 39, 15197-15205.	1.6	12
17	Stimulated wave of polarization in spin chains. <i>Physical Review B</i> , 2006, 74, .	1.1	12
18	Dipolar temperature and multiple-quantum NMR dynamics in dipolar ordered-spin systems. <i>JETP Letters</i> , 2007, 86, 24-27.	0.4	12

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19	Nuclear spin-lattice relaxation and spin diffusion in an inhomogeneous field. <i>Physical Review B</i> , 2003, 68, .	1.1	11
20	Adiabatic demagnetization and generation of entanglement in spin systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012, 376, 925-929.	0.9	10
21	Multiple-pulse spin locking in nanofluids. <i>RSC Advances</i> , 2015, 5, 44247-44257.	1.7	10
22	Dipolar Order and Spin-Lattice Relaxation in a Liquid Entrapped into Nanosize Cavities. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 2011, 66, 779-783.	0.7	10
23	Bloch-Siegert Shift and Berry Phase Effect in Nuclear Magnetic Resonance. <i>Journal of Magnetic Resonance Series A</i> , 1993, 105, 7-9.	1.6	9
24	Two qubits in pure nuclear quadrupole resonance. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 8715-8723.	0.7	9
25	Entanglement in nuclear quadrupole resonance. <i>Hyperfine Interactions</i> , 2010, 198, 153-159.	0.2	9
26	Losses in Coated Conductors Under Nonsinusoidal Currents and Magnetic Fields. <i>Journal of Superconductivity and Novel Magnetism</i> , 2011, 24, 1045-1051.	0.8	9
27	Spin-Lattice Relaxation of Dipolar Energy in Fluid Confined to Nanosize Cavities. <i>Materials Science Forum</i> , 2012, 721, 47-52.	0.3	9
28	Anisotropy of spin-spin and spin-lattice relaxation times in liquids entrapped in nanocavities: Application to MRI study of biological systems. <i>Journal of Magnetic Resonance</i> , 2016, 263, 71-78.	1.2	9
29	Dipole-dipole interactions in liquids entrapped in confined space. <i>Journal of Molecular Liquids</i> , 2018, 272, 468-473.	2.3	9
30	Spin locking in liquid entrapped in nanocavities: Application to study connective tissues. <i>Journal of Magnetic Resonance</i> , 2019, 299, 66-73.	1.2	9
31	Spin-lattice relaxation in liquid entrapped in a nanocavity. <i>Journal of Magnetic Resonance</i> , 2020, 311, 106669.	1.2	9
32	Anisotropy of transverse and longitudinal relaxations in liquids entrapped in nano- and micro-cavities of a plant stem. <i>Journal of Magnetic Resonance</i> , 2021, 331, 107051.	1.2	8
33	NQR multiple-pulse spin-locking as a method of study of molecular motions in solids. <i>Journal of Molecular Structure</i> , 1989, 192, 207-213.	1.8	7
34	The spin-diffusion effect in the dipolar ordering state. <i>Journal of Physics Condensed Matter</i> , 1999, 11, 4045-4052.	0.7	7
35	Nuclear quadrupole resonance of spin 3/2 and entangled two-qubit states. <i>Physica Scripta</i> , 2015, 90, 105301.	1.2	7
36	Relaxation Processes in NQR Multiple-Pulse Spin-Locking. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1986, 41, 366-369.	0.7	6

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37	Spin-locking in one pulse NMR experiment. Solid State Nuclear Magnetic Resonance, 1998, 11, 225-230.	1.5	6
38	Fading entanglement near an equilibrium state. Physical Review A, 2012, 86, .	1.0	6
39	Nuclear spin-lattice relaxation in nanofluids with paramagnetic impurities. Journal of Magnetic Resonance, 2015, 261, 175-180.	1.2	6
40	Nitrogen-14 NQR Multiple-Pulse Spin-locking in the Axial Electric Field Gradient. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1994, 49, 97-102.	0.7	5
41	Multiple-pulse NQR dynamics of spin systems with strong heteronuclear coupling. Journal of Molecular Structure, 1994, 321, 239-244.	1.8	5
42	Spin Diffusion in Pure Multiple-Pulse NQR. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2000, 55, 54-60.	0.7	5
43	Entanglement dynamics of spin systems in pure states. Physical Review A, 2009, 80, .	1.0	5
44	Quantum entanglement at negative temperature. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 135303.	0.7	5
45	Quantum correlations at negative absolute temperatures. Quantum Information Processing, 2014, 13, 2759-2768.	1.0	5
46	Single-spin entanglement. Quantum Information Processing, 2017, 16, 1.	1.0	5
47	Spin diffusion and nuclear spin-lattice relaxation in irradiated solids: a multiple-pulse NQR study. Solid State Nuclear Magnetic Resonance, 1999, 14, 145-155.	1.5	4
48	Nuclear spin-lattice relaxation and spin diffusion in the mixed state of type-II layered superconductors. Physical Review B, 2000, 61, 7021-7027.	1.1	4
49	Nuclear magnetic resonance detection of the nuclear spins near paramagnetic impurities in solids. Journal of Physics Condensed Matter, 2002, 14, 873-881.	0.7	4
50	Multiple quantum NMR dynamics in pseudopure states. Journal of Physics Condensed Matter, 2009, 21, 026008.	0.7	4
51	P50 - A new modality using breath sound analysis in pediatric asthma. Clinical and Translational Allergy, 2014, 4, P105.	1.4	4
52	Fictitious spin-12 operators and correlations in quadrupole nuclear spin system. International Journal of Quantum Information, 2018, 16, 1850008.	0.6	4
53	Spin Diffusion and Spin-Lattice Relaxation in the Zeeman and Dipolar Systems. Applied Magnetic Resonance, 2021, 52, 781-796.	0.6	4
54	The home remote diagnostics of bronchial asthma in children with the using of telemedical system. , 2019, , .		4

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55	Determining the internal orientation, degree of ordering, and volume of elongated nanocavities by NMR: Application to studies of plant stem. <i>Journal of Magnetic Resonance</i> , 2022, 341, 107258.	1.2	4
56	Berry's phase in the Floquet representation. <i>Journal of Physics A</i> , 1994, 27, 6893-6896.	1.6	3
57	One Pulse Spin-locking in NQR. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1996, 51, 357-362.	0.7	3
58	Nuclear spin-lattice relaxation via thermal vortex motion in superconductors. <i>Physica C: Superconductivity and Its Applications</i> , 1996, 266, 203-209.	0.6	3
59	ZERO FIELD ENTANGLEMENT IN DIPOLAR COUPLING SPIN SYSTEM AT NEGATIVE TEMPERATURE. <i>International Journal of Quantum Information</i> , 2013, 11, 1350050.	0.6	3
60	Dynamics of Zeeman and dipolar states in the spin locking in a liquid entrapped in nano-cavities: Application to study of biological systems. <i>Journal of Magnetic Resonance</i> , 2021, 325, 106933.	1.2	3
61	Spin diffusion of dipolar energy in NQR. <i>Solid State Nuclear Magnetic Resonance</i> , 2000, 16, 199-202.	1.5	2
62	Destruction of the Spin Diffusion Barrier near Paramagnetic Impurities in Pure NQR. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 2002, 57, 307-314.	0.7	2
63	Multifrequency resonances in multiple-pulse NMR on a spin-1/2 system. <i>Physical Review A</i> , 2003, 68, .	1.0	2
64	Generation of quantum correlations at adiabatic demagnetization. <i>Journal of Physics Communications</i> , 2017, 1, 045009.	0.5	2
65	Quantum and classical correlations in three-qubit spin. <i>Quantum Information Processing</i> , 2019, 18, 1.	1.0	2
66	Dipolar nuclear polarization via the spin diffusion of a dipole order. <i>Journal of Magnetic Resonance</i> , 2020, 320, 106847.	1.2	2
67	Capabilities of computer analysis of breath sounds in patients with COVID-19. <i>Perm Medical Journal</i> , 2021, 38, 97-109.	0.0	2
68	A contribution to the theory of multiple-pulse narrowing of NQR lines. <i>Journal of Molecular Structure</i> , 1983, 111, 65-70.	1.8	1
69	Zeeman Effect of Pure NQR in a Rotating Frame (CW and Pulsed Excitation). <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1992, 47, 412-414.	0.7	1
70	NQR Spin Echo in the Effective Fields of Multiple-Pulse Sequences. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1992, 47, 409-411.	0.7	1
71	Spin diffusion and spin-lattice relaxation in pulse spin-locking in solids containing paramagnetic impurities. <i>Journal of Physics Condensed Matter</i> , 1999, 11, 8275-8282.	0.7	1
72	Dynamics of multiple quantum coherences in dipole-coupling spins in solid. <i>Solid State Nuclear Magnetic Resonance</i> , 2005, 28, 44-49.	1.5	1

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73	Multi-Frequency Resonances in Pure Multiple-Pulse NQR. <i>Hyperfine Interactions</i> , 2005, 159, 157-172.	0.2	1
74	NMR method for amplification of single-spin state. <i>Solid State Nuclear Magnetic Resonance</i> , 2007, 32, 71-77.	1.5	1
75	Spin diffusion in multiple pulse spin-locking in solids containing paramagnetic impurities. <i>Solid State Nuclear Magnetic Resonance</i> , 2010, 38, 84-89.	1.5	1
76	Low temperature MQ NMR dynamics in dipolar ordered state. <i>Solid State Nuclear Magnetic Resonance</i> , 2013, 55-56, 73-78.	1.5	1
77	Entanglement under equilibrium establishing in spin systems subjected to radiofrequency field. <i>Quantum Information Processing</i> , 2014, 13, 309-321.	1.0	1
78	MQ NMR dynamics in dipolar ordered state at negative temperature. <i>Solid State Nuclear Magnetic Resonance</i> , 2014, 61-62, 49-53.	1.5	1
79	Nuclear electric quadrupole interactions in liquids entrapped in cavities. <i>Hyperfine Interactions</i> , 2016, 237, 1.	0.2	1
80	Robust solid-state qubits based on nuclear quadrupole resonance technique. <i>Hyperfine Interactions</i> , 2019, 240, 1.	0.2	1
81	Bloch-Siegert Effect in Pure Nuclear Quadrupole Resonance. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1990, 45, 565-566.	0.7	0
82	NQR in the Effective Fields of a Multiple-Pulse Sequence. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1990, 45, 567-569.	0.7	0
83	Topological phase for spin systems in a linearly polarized RF field. <i>Radiophysics and Quantum Electronics</i> , 1991, 34, 287-289.	0.1	0
84	Zeeman effect in NQR in the rotating coordinate system. <i>Soviet Physics Journal (English Translation)</i> Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.0	0
85	Nuclear Spin-Lattice Relaxation of a Spin System with Strong Heteronuclear Magnetic Interaction. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1996, 51, 710-712.	0.7	0
86	Dipolar coupling spin dynamics: perturbation approach. <i>Journal of Physics A</i> , 2004, 37, 8159-8166.	1.6	0
87	NQR Spin Diffusion in an Inhomogeneous Internal Field. <i>Hyperfine Interactions</i> , 2005, 159, 109-119.	0.2	0
88	NQR Spin Diffusion in an Inhomogeneous Internal Field. , 2005, , 551-561.		0
89	Thermal mixing in multiple-pulse nuclear quadrupole resonance spin-locking. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 436217.	0.7	0
90	NMR Methods of Quantum State Detection. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 2007, 62, 620-626.	0.7	0

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91	Stimulated polarization wave process in spin 3/2 chains. <i>Hyperfine Interactions</i> , 2007, 180, 29-35.	0.2	0
92	Cross-relaxation in multiple pulse NQR spin-locking. <i>Hyperfine Interactions</i> , 2008, 181, 115-125.	0.2	0
93	Quantum coherence dynamics of spin pairs in many-spin cluster. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 373, 4086-4091.	0.9	0
94	Adiabatic demagnetization at absolute negative temperature: Generation of quantum correlations. <i>International Journal of Quantum Information</i> , 2019, 17, 1950023.	0.6	0
95	Entanglement in nuclear quadrupole resonance. , 2010, , 499-505.		0
96	Anisotropy of transverse spin relaxation in H <sub>2</sub> O-D <sub>2</sub> O liquid entrapped in Nanocavities: application to studies of connective tissues. <i>Hyperfine Interactions</i> , 2021, 242, 1.	0.2	0
97	Remote Analysis of Respiratory Sounds in Patients With COVID-19: Development of Fast Fourier Transform-Based Computer-Assisted Diagnostic Methods. <i>JMIR Formative Research</i> , 2022, 6, e31200.	0.7	0