Dieter Suter

List of Publications by Year
in descending order

92 papers	3,412 citations	201674 27 h-index	149698 56 g-index
94 all docs	94 docs citations	94 times ranked	3288 citing authors

#	Article	IF	Citations
1	High-Precision Nanoscale Temperature Sensing Using Single Defects in Diamond. Nano Letters, 2013, 13, 2738-2742.	9.1	572
2	Measuring the Spectrum of Colored Noise by Dynamical Decoupling. Physical Review Letters, 2011, 107, 230501.	7.8	196
3	Colloquium: Protecting quantum information against environmental noise. Reviews of Modern Physics, 2016, 88, .	45.6	196
4	Robust Dynamical Decoupling for Quantum Computing and Quantum Memory. Physical Review Letters, 2011, 106, 240501.	7.8	191
5	Hole-burning techniques for isolation and study of individual hyperfine transitions in inhomogeneously broadened solids demonstrated inPr3+:Y2SiO5. Physical Review B, 2004, 70, .	3.2	172
6	Experimental Implementation of Assisted Quantum Adiabatic Passage in a Single Spin. Physical Review Letters, 2013, 110, 240501.	7.8	166
7	Robust dynamical decoupling. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 4748-4769.	3.4	137
8	Functional magnetic resonance imaging in real time (FIRE): Sliding-window correlation analysis and reference-vector optimization. Magnetic Resonance in Medicine, 2000, 43, 259-268.	3.0	103
9	Planar microresonators for EPR experiments. Journal of Magnetic Resonance, 2005, 175, 275-284.	2.1	91
10	Orientation-independent room temperature optical ¹³ C hyperpolarization in powdered diamond. Science Advances, 2018, 4, eaar5492.	10.3	91
11	Optimal pulse spacing for dynamical decoupling in the presence of a purely dephasing spin bath. Physical Review A, 2011, 83, .	2.5	86
12	Protected Quantum Computing: Interleaving Gate Operations with Dynamical Decoupling Sequences. Physical Review Letters, 2014, 112, 050502.	7.8	79
13	Scaling of sensitivity and efficiency in planar microresonators for electron spin resonance. Review of Scientific Instruments, 2008, 79, 084702.	1.3	76
14	Single-spin magnetic resonance in the nitrogen-vacancy center of diamond. Progress in Nuclear Magnetic Resonance Spectroscopy, 2017, 98-99, 50-62.	7.5	75
15	Enhanced dynamic nuclear polarization via swept microwave frequency combs. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10576-10581.	7.1	45
16	Faithful Solid State Optical Memory with Dynamically Decoupled Spin Wave Storage. Physical Review Letters, 2013, 111, 020503.	7.8	44
17	Room-temperature high-speed nuclear-spin quantum memory in diamond. Physical Review A, 2013, 87, .	2.5	38
18	Mapping of strain and electric fields inGaAs/AlxGa1â^'xAsquantum-well samples by laser-assisted NMR. Physical Review B, 2003, 67, .	3.2	34

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19	Efficient Quantum Gates for Individual Nuclear Spin Qubits by Indirect Control. Physical Review Letters, 2020, 124, 220501.	7.8	34
20	Hyperpolarized relaxometry based nuclear T1 noise spectroscopy in diamond. Nature Communications, 2019, 10, 5160.	12.8	31
21	Experimental protection of quantum gates against decoherence and control errors. Physical Review A, 2012, 86, .	2.5	30
22	Efficient Implementation of a Quantum Algorithm in a Single Nitrogen-Vacancy Center of Diamond. Physical Review Letters, 2020, 125, 030501.	7.8	29
23	Experimental Protection of Two-Qubit Quantum Gates against Environmental Noise by Dynamical Decoupling. Physical Review Letters, 2015, 115, 110502.	7.8	28
24	Characterization of hyperfine interaction between an NV electron spin and a first-shell<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">C</mml:mi><mml:mprescripts /><mml:none /><mml:mn>13</mml:mn></mml:mmultiscripts></mml:math>nuclear spin in diamond. Physical Review B, 2016, 94, .	3.2	28
25	Polarizing the electronic and nuclear spin of the NV-center in diamond in arbitrary magnetic fields: analysis of the optical pumping process. New Journal of Physics, 2017, 19, 073030.	2.9	28
26	Dynamics of frequency-swept nuclear spin optical pumping in powdered diamond at low magnetic fields. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2512-2520.	7.1	28
27	Robust dynamical decoupling for arbitrary quantum states of a single NV center in diamond. Europhysics Letters, 2012, 99, 40004.	2.0	27
28	Laser Excitation and Detection of Magnetic Resonance. Advances in Magnetic and Optical Resonance, 1991, 16, 1-83.	1.7	27
29	Coupling mechanisms for optically induced NMR in GaAs quantum wells. Physical Review B, 2002, 65, .	3.2	26
30	Evolution of Athletic Records: Statistical Effects versus Real Improvements. Journal of Applied Statistics, 2007, 34, 529-545.	1.3	26
31	Probing Liquidâ€“Liquid Interfaces with Spatially Resolved NMR Spectroscopy. Angewandte Chemie - International Edition, 2009, 48, 6343-6345.	13.8	26
32	Optically excited Zeeman coherences in atomic ground states: Nuclear-spin effects. Physical Review A, 1992, 46, 344-350.	2.5	25
33	Floquet Prethermalization with Lifetime Exceeding 90Âs in a Bulk Hyperpolarized Solid. Physical Review Letters, 2021, 127, 170603.	7.8	25
34	Room temperature â€œoptical nanodiamond hyperpolarizerâ€• Physics, design, and operation. Review of Scientific Instruments, 2020, 91, 023106.	1.3	24
35	Pulsed optically detected NMR of single GaAs/AlGaAs quantum wells. Journal of Magnetic Resonance, 2004, 166, 69-75.	2.1	23
36	Extending electron paramagnetic resonance to nanoliter volume protein single crystals using a self-resonant microhelix. Science Advances, 2019, 5, eaay1394.	10.3	21

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37	A cryogenic receiver for EPR. Journal of Magnetic Resonance, 2013, 237, 79-84.	2.1	18
38	Magnetization Dynamics of an Individual Singleâ€Crystalline Feâ€Filled Carbon Nanotube. Small, 2019, 15, 1904315.	10.0	18
39	Experimental characterization of spin- 32 silicon vacancy centers in 6H -SiC. Physical Review B, 2020, 101, .	3.2	18
40	Effect of system level structure and spectral distribution of the environment on the decoherence rate. Physical Review A, 2007, 75, .	2.5	17
41	Time-resolved two-dimensional spectroscopy of optically driven atomic sublevel coherences. Physical Review Letters, 1991, 67, 2001-2004.	7.8	16
42	Interaction of spin-polarized atoms with a surface studied by optical-reflection spectroscopy. Physical Review A, 1996, 54, 2169-2179.	2.5	16
43	Quantum and classical parallelism in parity algorithms for ensemble quantum computers. Physical Review A, 2005, 71, .	2.5	16
44	Comparative analysis of isotropic diffusion weighted imaging sequences. Journal of Magnetic Resonance, 2017, 275, 137-147.	2.1	16
45	Nonlinear dynamics of a two-level system of a single spin driven beyond the rotating-wave approximation. Physical Review A, 2017, 95, .	2.5	16
46	Application of the limited-memory quasi-Newton algorithm for multi-dimensional, large flip-angle RF pulses at 7T. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2017, 30, 29-39.	2.0	16
47	Anisotropic diffusion phantoms based on microcapillaries. Journal of Magnetic Resonance, 2017, 279, 1-10.	2.1	15
48	CVD growth of ultrapure diamond, generation of NV centers by ion implantation, and their spectroscopic characterization for quantum technological applications. Physical Review Materials, 2019, 3, .	2.4	15
49	Optical detection of magnetic resonance. Magnetic Resonance, 2020, 1, 115-139.	1.9	15
50	Phase and amplitude variations of optically induced spin transients. Journal of the Optical Society of America B: Optical Physics, 1990, 7, 1231.	2.1	14
51	Evanescent wave spectroscopy of sublevel resonances near a glass/vapor interface. Optics Communications, 1991, 84, 269-274.	2.1	14
52	Bichromatic excitation of coherent Raman beats in rare-earth solids. Physical Review B, 1995, 51, 6309-6318.	3.2	14
53	The design and sensitivity of microwave frequency optical heterodyne receivers. Review of Scientific Instruments, 1998, 69, 3403-3409.	1.3	14
54	Broadband excitation by chirped pulses: application to single electron spins in diamond. New Journal of Physics, 2013, 15, 033027.	2.9	14

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55	Improved Indirect Control of Nuclear Spins in Diamond N-VCenters. Physical Review Applied, 2019, 12, .	3.8	14
56	Deconvolution and Assignment of Different Optical Transitions of the Blue Copper Protein Azurin from Optically Detected Electron Paramagnetic Resonance Spectroscopy. Journal of the American Chemical Society, 2001, 123, 2334-2339.	13.7	13
57	Magneto-optical and EPR transitions in Raman heterodyne spectroscopy. Physical Review A, 2002, 66, .	2.5	13
58	Reflection spectroscopy of spin-polarized atoms near a dielectric surface. Journal of the Optical Society of America B: Optical Physics, 1996, 13, 3.	2.1	11
59	Optically detected electron paramagnetic resonance by microwave modulated magnetic circular dichroism. Journal of Chemical Physics, 1999, 111, 8565-8568.	3.0	11
60	Probing the electronic structure of transition metal ion centres in proteins by coherent Raman-detected electron paramagnetic resonance spectroscopy. Journal of Biological Inorganic Chemistry, 2000, 5, 30-35.	2.6	11
61	EFFICIENT IMPLEMENTATIONS OF THE QUANTUM FOURIER TRANSFORM: AN EXPERIMENTAL PERSPECTIVE. International Journal of Quantum Information, 2005, 03, 413-424.	1.1	11
62	Magnetic circular dichroism anisotropy from coherent Raman detected electron paramagnetic resonance spectroscopy: Application to spin-1/2 transition metal ion centers in proteins. Journal of Chemical Physics, 2000, 113, 4331-4339.	3.0	10
63	Validation of DWI pre-processing procedures for reliable differentiation between human brain gliomas. Zeitschrift Fur Medizinische Physik, 2018, 28, 14-24.	1.5	10
64	Relaxation processes and high-field coherent spin manipulation in color center ensembles in 6 H -SiC. Physical Review B, 2021, 103, .	3.2	10
65	Excitation of coherent Raman beats in rare earth solids with a bichromatic laser field. Optics Communications, 1994, 109, 133-138.	2.1	9
66	Evolving blackbox quantum algorithms using genetic programming. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2008, 22, 285-297.	1.1	9
67	Optimized selective lactate excitation with a refocused multiple-quantum filter. Journal of Magnetic Resonance, 2015, 255, 34-38.	2.1	9
68	Optically enhanced magnetic resonance for the study of atom-surface interaction. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1996, 38, 119-132.	1.0	8
69	Optical spin initialization of spin- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mfrac><mml:mn>3</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml silicon vacancy centers in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>6</mml:mn><mml:mi>H</mml:mi><mml:mtext>â^'</mml:mtext><mml at room temperature. Physical Review B, 2021, 103, .	3.2	8
70	Pulse sequences for controlled two- and three-qubit gates in a hybrid quantum register. Physical Review A, 2018, 98, .	2.5	7
71	Ultra-deep optical cooling of coupled nuclear spin-spin and quadrupole reservoirs in a GaAs/(Al,Ga)As quantum well. Communications Physics, 2021, 4, .	5.3	7
72	Wall relaxation of spin-polarized sodium measured by reflection spectroscopy. Optics Letters, 1995, 20, 2134.	3.3	6

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73	Breaking the Stokesâ€“anti-Stokes symmetry in Raman heterodyne detection of magnetic-resonance transitions. Physical Review A, 1998, 58, 4961-4966.	2.5	6
74	Optimized multiple-quantum filter for robust selective excitation of metabolite signals. Journal of Magnetic Resonance, 2014, 243, 8-16.	2.1	6
75	Tuner and radiation shield for planar electron paramagnetic resonance microresonators. Review of Scientific Instruments, 2015, 86, 024701.	1.3	6
76	Bloch-Siegert shift in a hybrid quantum register: Quantification and compensation. Physical Review A, 2018, 98, .	2.5	6
77	All-optical quantum thermometry based on spin-level cross-relaxation and multicenter entanglement under ambient conditions in SiC. AIP Advances, 2018, 8, 085304.	1.3	6
78	Precision Limits of Tissue Microstructure Characterization by Magnetic Resonance Imaging. Physical Review Applied, 2020, 14, .	3.8	6
79	Optimal photon energies for initialization of hybrid spin quantum registers of nitrogen-vacancy centers in diamond. Physical Review A, 2020, 101, .	2.5	6
80	Inverted fine structure of a 6H-SiC qubit enabling robust spin-photon interface. Npj Quantum Information, 2022, 8, .	6.7	6
81	Multi-photon multi-quantum transitions in the spin- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mfrac><mml:mn>3</mml:mn><mml:mn>2</mml:mn></mml:mfrac></m silicon-vacancy centers of SiC. Physical Review Research, 2022, 4, .	3.6	6
82	Correlating NQR transitions of ground and excited electronical states. Physical Review B, 2005, 71, .	3.2	5
83	Single-beam resonant spin amplification of electrons interacting with nuclei in a GaAs/(Al,Ga)As quantum well. Physical Review B, 2018, 98, .	3.2	3
84	Level anti-crossings of a nitrogen-vacancy center in diamond: decoherence-free subspaces and 3D sensors of microwave magnetic fields. New Journal of Physics, 2020, 22, 103065.	2.9	3
85	High-efficiency optical pumping of nuclear polarization in a GaAs quantum well. Physical Review B, 2017, 96, .	3.2	2
86	Optimal control pulses for subspectral editing in low field NMR. Journal of Magnetic Resonance, 2021, 328, 106993.	2.1	2
87	Optimization of a quantum control sequence for initializing a nitrogen-vacancy spin register. Physical Review A, 2022, 105, .	2.5	2
88	Toward the Speed Limit of High-Fidelity Two-Qubit Gates. Physical Review Letters, 2022, 128, .	7.8	2
89	Measurement with microscopic MRI and simulation of flow in different aneurysm models. Medical Physics, 2015, 42, 5661-5670.	3.0	1
90	Dielectric Coupler for General Purpose Q-Band EPR Cavity. Applied Magnetic Resonance, 0, , 1.	1.2	1

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91	1P338 Comparative study on the stabilizing effect of cholesterol on lamellar bilayers with FCS and PFG-NMR(12. Membrane dynamics,Poster Session,Abstract,Meeting Program of EABS & BSJ 2006). Seibutsu Butsuri, 2006, 46, S231.	0.1	0
92	10.1063/1.5131655.1. , 2020, , .		0