

Stephan Appelt

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/495802/publications.pdf>

Version: 2024-02-01

61
papers

2,612
citations

218677

26
h-index

189892

50
g-index

66
all docs

66
docs citations

66
times ranked

1578
citing authors

#	ARTICLE	IF	CITATIONS
1	Theory of spin-exchange optical pumping of ^3He and ^{129}Xe . <i>Physical Review A</i> , 1998, 58, 1412-1439.	2.5	330
2	Enhancement of Solution NMR and MRI with Laser-Polarized Xenon. <i>Science</i> , 1996, 271, 1848-1851.	12.6	319
3	Chemical analysis by ultrahigh-resolution nuclear magnetic resonance in the Earth's magnetic field. <i>Nature Physics</i> , 2006, 2, 105-109.	16.7	132
4	NMR at low magnetic fields. <i>Chemical Physics Letters</i> , 2009, 477, 231-240.	2.6	127
5	Para-hydrogen induced polarization of amino acids, peptides and deuterium-labeled hydrogen gas. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 13759.	2.8	108
6	Light narrowing of rubidium magnetic-resonance lines in high-pressure optical-pumping cells. <i>Physical Review A</i> , 1999, 59, 2078-2084.	2.5	106
7	Polarization of ^3He by Spin Exchange with Optically Pumped Rb and K Vapors. <i>Physical Review Letters</i> , 1998, 80, 2801-2804.	7.8	103
8	Inactivation of bacteriophages in water by means of non-ionizing (uv-253.7nm) and ionizing (gamma) radiation: a comparative approach. <i>Water Research</i> , 2001, 35, 3109-3116.	11.3	100
9	Near-Zero-Field Nuclear Magnetic Resonance. <i>Physical Review Letters</i> , 2011, 107, 107601.	7.8	92
10	Ligand effects of NHC-iridium catalysts for signal amplification by reversible exchange (SABRE). <i>Chemical Communications</i> , 2013, 49, 7388.	4.1	87
11	Para-hydrogen raser delivers sub-millihertz resolution in nuclear magnetic resonance. <i>Nature Physics</i> , 2017, 13, 568-572.	16.7	70
12	Enhancement of surface NMR by laser-polarized noble gases. <i>Physical Review B</i> , 1997, 55, 11604-11610.	3.2	66
13	Deviation from Berry's adiabatic geometric phase in a ^{131}Xe nuclear gyroscope. <i>Physical Review Letters</i> , 1994, 72, 3921-3924.	7.8	57
14	Para-hydrogen perspectives in hyperpolarized NMR. <i>Journal of Magnetic Resonance</i> , 2013, 235, 130-142.	2.1	55
15	Paths from weak to strong coupling in NMR. <i>Physical Review A</i> , 2010, 81, .	2.5	54
16	Mobile High Resolution Xenon Nuclear Magnetic Resonance Spectroscopy in the Earth's Magnetic Field. <i>Physical Review Letters</i> , 2005, 94, 197602.	7.8	52
17	Selective drug trace detection with low-field NMR. <i>Analyst</i> , 2011, 136, 1566.	3.5	48
18	External high-quality-factor resonator tunes up nuclear magnetic resonance. <i>Nature Physics</i> , 2015, 11, 767-771.	16.7	48

#	ARTICLE	IF	CITATIONS
19	Trace Analysis by Low-Field NMR: Breaking the Sensitivity Limit. Analytical Chemistry, 2010, 82, 7078-7082.	6.5	46
20	Proton magnetization enhancement of solvents with hyperpolarized xenon in very low-magnetic fields. Chemical Physics Letters, 2001, 348, 263-269.	2.6	41
21	Alkali-metal-atom polarization imaging in high-pressure optical-pumping cells. Physical Review A, 1998, 58, 2282-2294.	2.5	40
22	Analysis of molecular structures by homo- and hetero-nuclear J-coupled NMR in ultra-low field. Chemical Physics Letters, 2007, 440, 308-312.	2.6	34
23	Fundamental Aspects of Parahydrogen Enhanced Low-Field Nuclear Magnetic Resonance. Physical Review Letters, 2013, 110, 137602.	7.8	32
24	From LASER physics to the para-hydrogen pumped RASER. Progress in Nuclear Magnetic Resonance Spectroscopy, 2019, 114-115, 1-32.	7.5	30
25	Three-dimensional imaging of spin polarization of alkali-metal vapor in optical pumping cells. Applied Physics Letters, 1997, 70, 3081-3083.	3.3	29
26	Phenomena in J -coupled nuclear magnetic resonance spectroscopy in low magnetic fields. Physical Review A, 2007, 76, .	2.5	29
27	Experimental studies of rubidium absolute polarization at high temperatures. Applied Physics Letters, 1999, 75, 427-429.	3.3	27
28	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.	2.6	25
29	Geometric phase in nonadiabatic figure-8 experiments. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 204, 210-216.	2.1	23
30	Simulation of passenger check-in at a medium-sized us airport. , 2007, , .		23
31	Parahydrogen-Induced Radio Amplification by Stimulated Emission of Radiation. Angewandte Chemie - International Edition, 2020, 59, 8654-8660.	13.8	22
32	NMR spectroscopy in the milli-Tesla regime: Measurement of ^1H chemical-shift differences below the line width. Chemical Physics Letters, 2010, 485, 217-220.	2.6	21
33	SABRE and PHIP pumped RASER and the route to chaos. Journal of Magnetic Resonance, 2021, 322, 106815.	2.1	19
34	Transient Oscillations in Phase-Switched Cross-Polarization Experiments. Journal of Magnetic Resonance Series A, 1993, 101, 60-66.	1.6	17
35	A Versatile Compact Parahydrogen Membrane Reactor. ChemPhysChem, 2021, 22, 2526-2534.	2.1	17
36	Magnetic resonance imaging of hyperpolarized ^{129}Xe produced by spin exchange with diode-laser pumped Cs. Applied Physics Letters, 1998, 73, 2666-2668.	3.3	16

#	ARTICLE	IF	CITATIONS
37	SABRE polarized low field rare-spin spectroscopy. <i>Journal of Chemical Physics</i> , 2020, 152, 184202.	3.0	15
38	Parahydrogen-Induced Radio Amplification by Stimulated Emission of Radiation. <i>Angewandte Chemie</i> , 2020, 132, 8732-8738.	2.0	14
39	Analysis of parahydrogen polarized spin system in low magnetic fields. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 15411-15421.	2.8	12
40	Background-Free Proton NMR Spectroscopy with Radiofrequency Amplification by Stimulated Emission Radiation. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 26298-26302.	13.8	12
41	RASER MRI: Magnetic resonance images formed spontaneously exploiting cooperative nonlinear interaction. <i>Science Advances</i> , 2022, 8, .	10.3	12
42	A magnetic resonance study of non-adiabatic evolution of spin quantum states. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1995, 34, 75-85.	1.0	11
43	Online Monitoring of Intelligent Polymers for Drug Release with Hyperpolarized Xenon. <i>ChemPhysChem</i> , 2012, 13, 4120-4123.	2.1	11
44	Time resolved spectroscopic NMR imaging using hyperpolarized ^{129}Xe . <i>Journal of Magnetic Resonance</i> , 2004, 167, 298-305.	2.1	10
45	NMR Spectroscopy for Chemical Analysis at Low Magnetic Fields. <i>Topics in Current Chemistry</i> , 2011, 335, 1-22.	4.0	10
46	Two-dimensional optical spectroscopy by periodic excitation of sublevel coherence with sub-Doppler resolution. <i>Physical Review A</i> , 1991, 43, 242-250.	2.5	9
47	Imaging of a mixture of hyperpolarized ^3He and ^{129}Xe . <i>Magnetic Resonance Imaging</i> , 2004, 22, 1077-1083.	1.8	9
48	NMR and MRI of Blood-Dissolved Hyperpolarized ^{129}Xe in Different Hollow-Fiber Membranes. <i>ChemPhysChem</i> , 2011, 12, 2941-2947.	2.1	9
49	Direct observation of single- and double-quantum sublevel coherence in rubidium vapor by optical raman beat detection. <i>Optics Communications</i> , 1989, 74, 110-114.	2.1	5
50	Separation of the magnetic quantization axes by lightshift interaction in a Rb/Xe gas mixture. <i>Optics Communications</i> , 1993, 96, 45-51.	2.1	5
51	Spin-polarized noble gases: A playground for geometric quantum-phase studies in magnetic resonance. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1998, 402, 464-472.	1.6	4
52	Polarized nuclear target based on parahydrogen induced polarization. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2012, 694, 246-250.	1.6	4
53	Progress of ^3He spin-exchange for neutron polarization in Jülich . <i>Physica B: Condensed Matter</i> , 2004, 350, E707-E710.	2.7	3
54	Real-time Detection of Polymerization Reactions with Hyperpolarized Xenon at Low Magnetic Fields. , 2011, , .		3

#	ARTICLE	IF	CITATIONS
55	Progress in the production of polarized ^3He in Jülich. Physica B: Condensed Matter, 2003, 335, 278-281.	2.7	2
56	Studies of ^6Li -NMR properties in different salt solutions in low magnetic fields. Journal of Magnetic Resonance, 2012, 214, 10-14.	2.1	2
57	Background-Free Proton NMR Spectroscopy with Radiofrequency Amplification by Stimulated Emission Radiation. Angewandte Chemie, 0, , .	2.0	2
58	The Physics of NMR-Gyroscopes. , 1989, , 556-570.		2
59	Publisher's Note: Phenomena in J -coupled nuclear magnetic resonance spectroscopy in low magnetic fields [Phys. Rev. A 76 , 023420 (2007)]. Physical Review A, 2007, 76, .	2.5	0
60	Innentitelbild: Background-Free Proton NMR Spectroscopy with Radiofrequency Amplification by Stimulated Emission Radiation (Angew. Chem. 50/2021). Angewandte Chemie, 2021, 133, 26206-26206.	2.0	0
61	Measurement of rubidium and xenon absolute polarization at high temperatures as a means of improved production of hyperpolarized ^{129}Xe . NMR in Biomedicine, 2000, 13, 214-219.	2.8	0