Thomas Schenkel

List of Publications by Year
in descending order

85 papers	3,171 citations	159585 30 h-index	155660 55 g-index
86 all docs	86 docs citations	86 times ranked	2934 citing authors

#	Article	IF	Citations
1	Solid-state quantum memory using the 31P nuclear spin. Nature, 2008, 455, 1085-1088.	27.8	351
2	Chip-Scale Nanofabrication of Single Spins and Spin Arrays in Diamond. Nano Letters, 2010, 10, 3168-3172.	9.1	248
3	Interaction of slow, very highly charged ions with surfaces. Progress in Surface Science, 1999, 61, 23-84.	8.3	202
4	Excited-State Spectroscopy Using Single Spin Manipulation in Diamond. Physical Review Letters, 2008, 101, 117601.	7.8	160
5	Reaching the quantum limit of sensitivity in electron spin resonance. Nature Nanotechnology, 2016, 11, 253-257.	31.5	141
6	Controlling spin relaxation with a cavity. Nature, 2016, 531, 74-77.	27.8	123
7	Solid state quantum computer development in silicon with single ion implantation. Journal of Applied Physics, 2003, 94, 7017-7024.	2.5	97
8	Fundamentals of Focused Ion Beam Nanostructural Processing: Below, At, and Above the Surface. MRS Bulletin, 2007, 32, 424-432.	3.5	87
9	Excited-state spin coherence of a single nitrogenâ€"vacancy centre in diamond. Nature Physics, 2010, 6, 668-672.	16.7	80
10	Ablation of GaAs by Intense, Ultrafast Electronic Excitation from Highly Charged Ions. Physical Review Letters, 1998, 81, 2590-2593.	7.8	77
11	Stark Tuning of Donor Electron Spins in Silicon. Physical Review Letters, 2006, 97, 176404.	7.8	73
12	Charge Equilibration Time of Slow, Highly Charged Ions in Solids. Physical Review Letters, 1999, 82, 4795-4798.	7.8	72
13	Electrical activation and electron spin coherence of ultralow dose antimony implants in silicon. Applied Physics Letters, 2006, 88, 112101.	3.3	69
14	Inductive-detection electron-spin resonance spectroscopy with 65 spins/Hz sensitivity. Applied Physics Letters, 2017, 111, .	3.3	69
15	Charge State Dependent Energy Loss of Slow Heavy Ions in Solids. Physical Review Letters, 1997, 79, 2030-2033.	7.8	68
16	Synergy of Electronic Excitations and Elastic Collision Spikes in Sputtering of Heavy Metal Oxides. Physical Review Letters, 1998, 80, 4325-4328.	7.8	54
17	Magnetic Resonance with Squeezed Microwaves. Physical Review X, 2017, 7, .	8.9	50
18	Electronic Sputtering of Thin Conductors by Neutralization of Slow Highly Charged Ions. Physical Review Letters, 1997, 78, 2481-2484.	7.8	48

#	Article	IF	Citations
19	Revisiting the cold case of cold fusion. Nature, 2019, 570, 45-51.	27.8	48
20	Electrical activation and electron spin resonance measurements of implanted bismuth in isotopically enriched silicon-28. Applied Physics Letters, 2012, 100, .	3.3	47
21	All-electric control of donor nuclear spin qubits in silicon. Nature Nanotechnology, 2017, 12, 958-962.	31.5	47
22	Electron transport through single carbon nanotubes. Applied Physics Letters, 2007, 91, .	3.3	46
23	Integration of Scanning Probes and Ion Beams. Nano Letters, 2005, 5, 1087-1091.	9.1	43
24	Deposition of Potential Energy in Solids by Slow, Highly Charged Ions. Physical Review Letters, 1999, 83, 4273-4276.	7.8	42
25	Spin-dependent scattering off neutral antimony donors in Si28 field-effect transistors. Applied Physics Letters, 2007, 91, .	3.3	39
26	Electron spin resonance spectroscopy with femtoliter detection volume. Applied Physics Letters, 2020, 116, .	3.3	39
27	Effects of low-energy electron irradiation on formation of nitrogenâ€“vacancy centers in single-crystal diamond. New Journal of Physics, 2012, 14, 043024.	2.9	37
28	Strain-Induced Spin-Resonance Shifts in Silicon Devices. Physical Review Applied, 2018, 9, .	3.8	34
29	Detection of low energy single ion impacts in micron scale transistors at room temperature. Applied Physics Letters, 2007, 91, .	3.3	32
30	Ion acceleration in laser generated megatesla magnetic vortex. Physics of Plasmas, 2019, 26, .	1.9	32
31	Extraction of highly charged ions from the electron beam ion trap at LBNL for applications in surface analysis and materials science. Review of Scientific Instruments, 2002, 73, 663-666.	1.3	28
32	Ion source antenna development for the Spallation Neutron Source. Review of Scientific Instruments, 2002, 73, 1008-1012.	1.3	28
33	Electrically Detected Magnetic Resonance of Neutral Donors Interacting with a Two-Dimensional Electron Gas. Physical Review Letters, 2011, 106, 207601.	7.8	25
34	Electron spin coherence in Si. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 35, 257-263.	2.7	24
35	A new platform for ultra-high dose rate radiobiological research using the BELLA PW laser proton beamline. Scientific Reports, 2022, 12, 1484.	3.3	23
36	Energy loss of slow, highly charged ions in solids. Physical Review A, 1997, 56, R1701-R1704.	2.5	21

#	Article	IF	Citations
37	Multimode Storage of Quantum Microwave Fields in Electron Spins over 100Âms. Physical Review Letters, 2020, 125, 210505.	7.8	21
38	Acceleration of high charge ion beams with achromatic divergence by petawatt laser pulses. Physical Review Accelerators and Beams, 2020, 23, .	1.6	21
39	Detecting spins by their fluorescence with a microwave photon counter. Nature, 2021, 600, 434-438.	27.8	21
40	Influence of hydrogen on the stability of positively charged silicon dioxide clusters. Journal of Chemical Physics, 2000, 113, 2419-2422.	3.0	19
41	Light-emitting nanostructures formed by intense, ultrafast electronic excitation in silicon (100). Applied Physics Letters, 2001, 79, 2973-2975.	3.3	19
42	Short intense ion pulses for materials and warm dense matter research. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 800, 98-103.	1.6	19
43	Ion-source and low-energy beam-transport issues with the front-end systems for the spallation neutron source. Review of Scientific Instruments, 2002, 73, 914-916.	1.3	17
44	Stark shift and field ionization of arsenic donors in 28Si-silicon-on-insulator structures. Applied Physics Letters, 2014, 104, .	3.3	17
45	Absolute calibration of GafChromic film for very high flux laser driven ion beams. Review of Scientific Instruments, 2019, 90, 053301.	1.3	17
46	Multi-frequency spin manipulation using rapidly tunable superconducting coplanar waveguide microresonators. Applied Physics Letters, 2017, 111, .	3.3	17
47	High-energy-density-science capabilities at the Facility for Antiproton and Ion Research. Physics of Plasmas, 2020, 27, .	1.9	16
48	Local formation of nitrogen-vacancy centers in diamond by swift heavy ions. Journal of Applied Physics, 2014, 116, .	2.5	15
49	Directed Assembly of Nanodiamond Nitrogen-Vacancy Centers on a Chemically Modified Patterned Surface. ACS Applied Materials & Interfaces, 2014, 6, 12893-12900.	8.0	15
50	A compact neutron generator using a field ionization source. Review of Scientific Instruments, 2012, 83, 02B312.	1.3	14
51	Irradiation of materials with short, intense ion pulses at NDCX-II. Laser and Particle Beams, 2017, 35, 373-378.	1.0	14
52	Strategies for integration of donor electron spin qubits in silicon. Microelectronic Engineering, 2006, 83, 1814-1817.	2.4	13
53	Highly charged ion based time-of-flight emission microscope. Review of Scientific Instruments, 2000, 71, 2077-2081.	1.3	12
54	The effects of radiation on (1,3,5 - triamino - 2,4,6 - trinitrobenzene) TATB studied by time-of-flight secondary ion mass spectrometry. Journal of Energetic Materials, 2001, 19, 101-118.	2.0	12

#	Article	IF	Citations
55	Improved single ion implantation with scanning probe alignment. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	12
56	Development and testing of a pulsed helium ion source for probing materials and warm dense matter studies. Review of Scientific Instruments, 2016, 87, 02B707.	1.3	12
57	Effects of palladium coating on field-emission properties of carbon nanofibers in a hydrogen plasma. Thin Solid Films, 2013, 534, 488-491.	1.8	11
58	A compact linear accelerator based on a scalable microelectromechanical-system RF-structure. Review of Scientific Instruments, 2017, 88, 063304.	1.3	11
59	Plasma ignition schemes for the Spallation Neutron Source radio-frequency driven Hâˆ’ source. Review of Scientific Instruments, 2002, 73, 1017-1019.	1.3	10
60	Device fabrication and transport measurements of FinFETs built with²⁸Si SOI wafers toward donor qubits in silicon. Semiconductor Science and Technology, 2009, 24, 105022.	2.0	9
61	Spin coherence and 14 N ESEEM effects of nitrogen-vacancy centers in diamond with X-band pulsed ESR. Diamond and Related Materials, 2017, 72, 32-40.	3.9	9
62	Optimizing beam transport in rapidly compressing beams on the neutralized drift compression experiment-II. Matter and Radiation at Extremes, 2018, 3, 78-84.	3.9	7
63	Investigation of light ion fusion reactions with plasma discharges. Journal of Applied Physics, 2019, 126, .	2.5	7
64	Direct formation of nitrogen-vacancy centers in nitrogen doped diamond along the trajectories of swift heavy ions. Applied Physics Letters, 2021, 118, .	3.3	7
65	Beam power scale-up in micro-electromechanical systems based multi-beam ion accelerators. Review of Scientific Instruments, 2021, 92, 103301.	1.3	7
66	Demonstration of waferscale voltage amplifier and electrostatic quadrupole focusing array for compact linear accelerators. Journal of Applied Physics, 2019, 125, 194901.	2.5	6
67	Spatially Resolved Decoherence of Donor Spins in Silicon Strained by a Metallic Electrode. Physical Review X, 2021, 11, .	8.9	6
68	Reliable performance. Nature Materials, 2005, 4, 799-800.	27.5	5
69	Staging of RF-accelerating Units in a MEMS-based Ion Accelerator. Physics Procedia, 2017, 90, 136-142.	1.2	5
70	Exciton dispersion in silicon nanostructures formed by intense, ultra-fast electronic excitation. Applied Physics A: Materials Science and Processing, 2003, 76, 313-317.	2.3	4
71	Ion-induced emission microscopies. Current Applied Physics, 2003, 3, 31-34.	2.4	4
72	Surface charge compensation for a highly charged ion emission microscope. Ultramicroscopy, 2004, 101, 225-229.	1.9	4

#	ARTICLE	IF	CITATIONS
73	Design and implementation of a Thomson parabola for fluence dependent energy-loss measurements at the Neutralized Drift Compression eXperiment. Review of Scientific Instruments, 2018, 89, 103302.	1.3	4
74	Source-to-accelerator quadrupole matching section for a compact linear accelerator. Review of Scientific Instruments, 2018, 89, 053302.	1.3	4
75	Exploration of Defect Dynamics and Color Center Qubit Synthesis with Pulsed Ion Beams. Quantum Beam Science, 2022, 6, 13.	1.2	4
76	Probing nano-environments of peptide molecules on solid surfaces by highly charged ion secondary ion mass spectrometry. International Journal of Mass Spectrometry, 2003, 229, 47-53.	1.5	3
77	Note: Coincidence measurements of 3He and neutrons from a compact D-D neutron generator. Review of Scientific Instruments, 2017, 88, 056105.	1.3	3
78	Modeling of intense pulsed ion beam heated masked targets for extreme materials characterization. Journal of Applied Physics, 2017, 122, .	2.5	3
79	A 27.12-MHz 10-kV Power Amplifier for Compact Particle Accelerators Utilizing an Optimized. , 2020, , .		3
80	Beam measurements on the Hâˆ’ source and low energy beam transport system for the Spallation Neutron Source. Review of Scientific Instruments, 2002, 73, 2016-2019.	1.3	2
81	Nanoscale Holes Formed by In Situ Thin Film Deposition in a FIB. Microscopy and Microanalysis, 2004, 10, 1118-1119.	0.4	2
82	Waferscale electrostatic quadrupole array for multiple ION beam manipulation. , 2018, , .		2
83	Low-temperature charge transport in Ga-acceptor nanowires implanted by focused-ion beams. Applied Physics Letters, 2007, 91, 122105.	3.3	1
84	Target normal sheath acceleration with a large laser focal diameter. Physics of Plasmas, 2020, 27, .	1.9	1
85	Single spins in silicon see the light. Nature, 2013, 497, 46-47.	27.8	0