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	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
2	Exploration of Defect Dynamics and Color Center Qubit Synthesis with Pulsed Ion Beams. Quantum Beam Science, 2022, 6, 13.	1.2	4
3	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
4	Spatially Resolved Decoherence of Donor Spins in Silicon Strained by a Metallic Electrode. Physical Review X, 2021, 11, .	8.9	6
5	Beam power scale-up in micro-electromechanical systems based multi-beam ion accelerators. Review of Scientific Instruments, 2021, 92, 103301.	1.3	7
6	Detecting spins by their fluorescence with a microwave photon counter. Nature, 2021, 600, 434-438.	27.8	21
7	A 27.12-MHz 10-kV Power Amplifier for Compact Particle Accelerators Utilizing an Optimized. , 2020, , .		3
8	Multimode Storage of Quantum Microwave Fields in Electron Spins over 100Âms. Physical Review Letters, 2020, 125, 210505.	7.8	21
9	Electron spin resonance spectroscopy with femtoliter detection volume. Applied Physics Letters, 2020, 116, .	3.3	39
10	High-energy-density-science capabilities at the Facility for Antiproton and Ion Research. Physics of Plasmas, 2020, 27, .	1.9	16
11	Target normal sheath acceleration with a large laser focal diameter. Physics of Plasmas, 2020, 27, .	1.9	1
12	Acceleration of high charge ion beams with achromatic divergence by petawatt laser pulses. Physical Review Accelerators and Beams, 2020, 23, .	1.6	21
13	Absolute calibration of GafChromic film for very high flux laser driven ion beams. Review of Scientific Instruments, 2019, 90, 053301.	1.3	17
14	Ion acceleration in laser generated megatesla magnetic vortex. Physics of Plasmas, 2019, 26, .	1.9	32
15	Demonstration of waferscale voltage amplifier and electrostatic quadrupole focusing array for compact linear accelerators. Journal of Applied Physics, 2019, 125, 194901.	2.5	6
16	Revisiting the cold case of cold fusion. Nature, 2019, 570, 45-51.	27.8	48
17	Investigation of light ion fusion reactions with plasma discharges. Journal of Applied Physics, 2019, 126, .	2.5	7
18	Strain-Induced Spin-Resonance Shifts in Silicon Devices. Physical Review Applied, 2018, 9, .	3.8	34

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19	Waferscale electrostatic quadrupole array for multiple ION beam manipulation. , 2018, , .		2
20	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
21	Source-to-accelerator quadrupole matching section for a compact linear accelerator. Review of Scientific Instruments, 2018, 89, 053302.	1.3	4
22	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
23	Note: Coincidence measurements of 3He and neutrons from a compact D-D neutron generator. Review of Scientific Instruments, 2017, 88, 056105.	1.3	3
24	Irradiation of materials with short, intense ion pulses at NDCX-II. Laser and Particle Beams, 2017, 35, 373-378.	1.0	14
25	A compact linear accelerator based on a scalable microelectromechanical-system RF-structure. Review of Scientific Instruments, 2017, 88, 063304.	1.3	11
26	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
27	Magnetic Resonance with Squeezed Microwaves. Physical Review X, 2017, 7, .	8.9	50
28	All-electric control of donor nuclear spin qubits in silicon. Nature Nanotechnology, 2017, 12, 958-962.	31.5	47
29	Modeling of intense pulsed ion beam heated masked targets for extreme materials characterization. Journal of Applied Physics, 2017, 122, .	2.5	3
30	Inductive-detection electron-spin resonance spectroscopy with 65 spins/Hz sensitivity. Applied Physics Letters, 2017, 111, .	3.3	69
31	Staging of RF-accelerating Units in a MEMS-based Ion Accelerator. Physics Procedia, 2017, 90, 136-142.	1.2	5
32	Multi-frequency spin manipulation using rapidly tunable superconducting coplanar waveguide microresonators. Applied Physics Letters, 2017, 111, .	3.3	17
33	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
34	Reaching the quantum limit of sensitivity in electron spin resonance. Nature Nanotechnology, 2016, 11, 253-257.	31.5	141
35	Controlling spin relaxation with a cavity. Nature, 2016, 531, 74-77.	27.8	123
36	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

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37	Local formation of nitrogen-vacancy centers in diamond by swift heavy ions. Journal of Applied Physics, 2014, 116, .	2.5	15
38	Stark shift and field ionization of arsenic donors in 28Si-silicon-on-insulator structures. Applied Physics Letters, 2014, 104, .	3.3	17
39	Directed Assembly of Nanodiamond Nitrogen-Vacancy Centers on a Chemically Modified Patterned Surface. ACS Applied Materials & Interfaces, 2014, 6, 12893-12900.	8.0	15
40	Single spins in silicon see the light. Nature, 2013, 497, 46-47.	27.8	0
41	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
42	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
43	Electrical activation and electron spin resonance measurements of implanted bismuth in isotopically enriched silicon-28. Applied Physics Letters, 2012, 100, .	3.3	47
44	A compact neutron generator using a field ionization source. Review of Scientific Instruments, 2012, 83, 02B312.	1.3	14
45	Improved single ion implantation with scanning probe alignment. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	12
46	Electrically Detected Magnetic Resonance of Neutral Donors Interacting with a Two-Dimensional Electron Gas. Physical Review Letters, 2011, 106, 207601.	7.8	25
47	Excited-state spin coherence of a single nitrogenâ€“vacancy centre in diamond. Nature Physics, 2010, 6, 668-672.	16.7	80
48	Chip-Scale Nanofabrication of Single Spins and Spin Arrays in Diamond. Nano Letters, 2010, 10, 3168-3172.	9.1	248
49	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
50	Solid-state quantum memory using the 31P nuclear spin. Nature, 2008, 455, 1085-1088.	27.8	351
51	Excited-State Spectroscopy Using Single Spin Manipulation in Diamond. Physical Review Letters, 2008, 101, 117601.	7.8	160
52	Spin-dependent scattering off neutral antimony donors in Si28 field-effect transistors. Applied Physics Letters, 2007, 91, .	3.3	39
53	Detection of low energy single ion impacts in micron scale transistors at room temperature. Applied Physics Letters, 2007, 91, .	3.3	32
54	Fundamentals of Focused Ion Beam Nanostructural Processing: Below, At, and Above the Surface. MRS Bulletin, 2007, 32, 424-432.	3.5	87

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55	Electron transport through single carbon nanotubes. Applied Physics Letters, 2007, 91, .	3.3	46
56	Low-temperature charge transport in Ga-acceptor nanowires implanted by focused-ion beams. Applied Physics Letters, 2007, 91, 122105.	3.3	1
57	Electrical activation and electron spin coherence of ultralow dose antimony implants in silicon. Applied Physics Letters, 2006, 88, 112101.	3.3	69
58	Strategies for integration of donor electron spin qubits in silicon. Microelectronic Engineering, 2006, 83, 1814-1817.	2.4	13
59	Electron spin coherence in Si. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 35, 257-263.	2.7	24
60	Stark Tuning of Donor Electron Spins in Silicon. Physical Review Letters, 2006, 97, 176404.	7.8	73
61	Reliable performance. Nature Materials, 2005, 4, 799-800.	27.5	5
62	Integration of Scanning Probes and Ion Beams. Nano Letters, 2005, 5, 1087-1091.	9.1	43
63	Surface charge compensation for a highly charged ion emission microscope. Ultramicroscopy, 2004, 101, 225-229.	1.9	4
64	Nanoscale Holes Formed by In Situ Thin Film Deposition in a FIB. Microscopy and Microanalysis, 2004, 10, 1118-1119.	0.4	2
65	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
66	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
67	Ion-induced emission microscopies. Current Applied Physics, 2003, 3, 31-34.	2.4	4
68	Solid state quantum computer development in silicon with single ion implantation. Journal of Applied Physics, 2003, 94, 7017-7024.	2.5	97
69	Beam measurements on the Hâ" source and low energy beam transport system for the Spallation Neutron Source. Review of Scientific Instruments, 2002, 73, 2016-2019.	1.3	2
70	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
71	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
72	Plasma ignition schemes for the Spallation Neutron Source radio-frequency driven Hâ" source. Review of Scientific Instruments, 2002, 73, 1017-1019.	1.3	10

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73	Ion source antenna development for the Spallation Neutron Source. Review of Scientific Instruments, 2002, 73, 1008-1012.	1.3	28
74	Light-emitting nanostructures formed by intense, ultrafast electronic excitation in silicon (100). Applied Physics Letters, 2001, 79, 2973-2975.	3.3	19
75	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
76	Highly charged ion based time-of-flight emission microscope. Review of Scientific Instruments, 2000, 71, 2077-2081.	1.3	12
77	Influence of hydrogen on the stability of positively charged silicon dioxide clusters. Journal of Chemical Physics, 2000, 113, 2419-2422.	3.0	19
78	Deposition of Potential Energy in Solids by Slow, Highly Charged Ions. Physical Review Letters, 1999, 83, 4273-4276.	7.8	42
79	Charge Equilibration Time of Slow, Highly Charged Ions in Solids. Physical Review Letters, 1999, 82, 4795-4798.	7.8	72
80	Interaction of slow, very highly charged ions with surfaces. Progress in Surface Science, 1999, 61, 23-84.	8.3	202
81	Synergy of Electronic Excitations and Elastic Collision Spikes in Sputtering of Heavy Metal Oxides. Physical Review Letters, 1998, 80, 4325-4328.	7.8	54
82	Ablation of GaAs by Intense, Ultrafast Electronic Excitation from Highly Charged Ions. Physical Review Letters, 1998, 81, 2590-2593.	7.8	77
83	Electronic Sputtering of Thin Conductors by Neutralization of Slow Highly Charged Ions. Physical Review Letters, 1997, 78, 2481-2484.	7.8	48
84	Energy loss of slow, highly charged ions in solids. Physical Review A, 1997, 56, R1701-R1704.	2.5	21
85	Charge State Dependent Energy Loss of Slow Heavy Ions in Solids. Physical Review Letters, 1997, 79, 2030-2033.	7.8	68