

Gregor Schiwietz

List of Publications by Year in descending order

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134
papers

3,204
citations

136885

32
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189801

50
g-index

137
all docs

137
docs citations

137
times ranked

1342
citing authors

#	ARTICLE	IF	CITATIONS
1	Bunch-resolved diagnostics for a future electron-storage ring. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 990, 164992.	0.7	7
2	Beam halo measurements for special bunches in a storage ring by using a coronagraph. Review of Scientific Instruments, 2021, 92, 123302.	0.6	0
3	Generation of intense and coherent sub-femtosecond X-ray pulses in electron storage rings. Scientific Reports, 2020, 10, 10093.	1.6	5
4	Development of the Electron-Beam Diagnostics for the Future BESSY-VSR Storage Ring. Journal of Physics: Conference Series, 2018, 1067, 072005.	0.3	3
5	Stopping power of cluster ions in a free-electron gas from partial-wave analysis. Physical Review A, 2018, 98, .	1.0	11
6	Frustrated Coulomb explosion of small helium clusters. Physical Review A, 2018, 98, .	1.0	12
7	Resonant interatomic Coulombic decay in HeNe: Electron angular emission distributions. Physical Review A, 2018, 97, .	1.0	20
8	Born in weak fields: below-threshold photoelectron dynamics. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 034002.	0.6	4
9	Dynamics of space-charge acceleration of X-ray generated electrons emitted from a metal surface. Journal of Electron Spectroscopy and Related Phenomena, 2017, 220, 40-45.	0.8	4
10	Ground- and excited-state scattering potentials for the stopping of protons in an electron gas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 185201.	0.6	12
11	Electron Localization in Dissociating H_2 . Retroaction of a Photoelectron onto Its Source. Physical Review Letters, 2016, 116, 043001.	2.9	16
12	Laser-pump/X-ray-probe experiments with electrons ejected from a Cu(111) target: space-charge acceleration. Journal of Synchrotron Radiation, 2016, 23, 1158-1170.	1.0	7
13	The retarding Bessel "Box" An electron-spectrometer designed for pump/probe experiments. Journal of Electron Spectroscopy and Related Phenomena, 2015, 203, 51-59.	0.8	12
14	The angular- and crystal-momentum transfer through electron-phonon coupling in silicon and silicon-carbide: similarities and differences. New Journal of Physics, 2014, 16, 093056.	1.2	5
15	Interatomic-Coulombic-decay-induced recapture of photoelectrons in helium dimers. Physical Review A, 2014, 90, .	1.0	11
16	Thermal evolution of the band edges of 6H-SiC: X-ray methods compared to the optical band gap. Journal of Electron Spectroscopy and Related Phenomena, 2014, 197, 37-42.	0.8	11
17	Ultrafast electronic processes in an insulator: The Be and O sites in BeO. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 48-55.	0.6	6
18	Skimming-trajectory effect for energy loss of medium-energy He ions passing along major crystal axes of KI(001) and RbI(001). Physical Review A, 2013, 87, .	1.0	2

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19	Stopping of protons – Improved accuracy of the UCA model. Nuclear Instruments & Methods in Physics Research B, 2012, 273, 1-5.	0.6	23
20	Correlation between X-ray yield and electron spectra in laser-cluster interaction. Journal of Physics: Conference Series, 2012, 388, 032081.	0.3	0
21	Ultrafast band-structure variations induced by fast Au ions in BeO. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 959-963.	0.6	1
22	Introducing electron capture into the unitary-convolution-approximation energy-loss theory at low velocities. Physical Review A, 2011, 84, .	1.0	47
23	Al-K-Auger energy spectra: Probing the electron dynamics in ion-solid interactions. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 192-200.	0.1	0
24	Energy loss of argon in a laser-generated carbon plasma. Physical Review E, 2010, 81, 026401.	0.8	40
25	Evidence for an Ultrafast Breakdown of the BeO Band Structure Due to Swift Argon and Xenon Ions. Physical Review Letters, 2010, 105, 187603.	2.9	11
26	Direct Observation and Theory of Trajectory-Dependent Electronic Energy Losses in Medium-Energy Ion Scattering. Physical Review Letters, 2009, 102, 096103.	2.9	14
27	Convolution approximation for the energy loss, ionization probability and straggling of fast ions. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 859-865.	0.6	60
28	High-energy ion beam irradiation of Co/NiFe/Co/Cu multilayers: Effects on the structural, transport and magnetic properties. Thin Solid Films, 2008, 516, 2087-2093.	0.8	4
29	Search for short-time phase effects in the electronic damage evolution – A case study with silicon. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 1287-1293.	0.6	10
30	Direct Evidence for Projectile Charge-State Dependent Crater Formation Due to Fast Ions. Physical Review Letters, 2008, 101, 167601.	2.9	32
31	Analytical energy loss distribution for accurate high resolution depth profiling using medium energy ion scattering. Applied Physics Letters, 2008, 92, 164102.	1.5	9
32	Impact-parameter dependence of the energy loss of fast molecular clusters in hydrogen. Physical Review A, 2008, 77, .	1.0	3
33	Asymmetric line shapes for medium energy H and He ions undergoing a large-angle collision. Physical Review B, 2008, 78, .	1.1	16
34	Indications for Enhanced Auger-Electron Absorption in a Hot-Electron Gas. Physical Review Letters, 2007, 99, 197602.	2.9	5
35	Advanced ion energy loss models: Applications to subnanometric resolution elemental depth profiling. Surface Science, 2007, 601, 5559-5570.	0.8	16
36	An analytical energy-loss line shape for high depth resolution in ion-beam analysis. Nuclear Instruments & Methods in Physics Research B, 2007, 256, 92-96.	0.6	38

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37	Evidence for enhanced desorption of hydrogen atoms from a Si(100) surface induced by slow highly-charged ions. Nuclear Instruments & Methods in Physics Research B, 2006, 248, 253-258.	0.6	3
38	Inelastic energy loss in 100 eV scattering from single atoms: Theory and experiment for K, Rb, and Cs. Physical Review B, 2006, 74, .	1.1	6
39	Interplay between the Coulomb explosion and vicinage effects studied using H ₂ +molecules under channeling conditions. Physical Review B, 2006, 73, .	1.1	5
40	INNER-SHELL COLLECTIVE EFFECTS FOR PROTONS BACKSCATTERED FROM THE AL(110) SURFACE. , 2006, , .		0
41	Impact-parameter dependence of the electronic energy loss of fast cluster projectiles. Nuclear Instruments & Methods in Physics Research B, 2005, 230, 17-23. The influence of the Coulomb explosion on the energy loss of Si^5 ions overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:co="http://www.elsevier.com/xml/co"	0.6	2
42	Electronic energy-density effects in ion tracks of metals. Nuclear Instruments & Methods in Physics Research B, 2005, 230, 426-430.	0.6	5
43	Electronic energy-density effects in ion tracks of metals. Nuclear Instruments & Methods in Physics Research B, 2005, 230, 426-430.	0.6	12
44	Energy loss in medium-energy ion scattering: A combined theoretical and experimental study of the model system Y on Si(111). Physical Review B, 2005, 72, .	1.1	11
45	Observation of collective inner-shell effects for protons backscattered from the Al(110) surface. Physical Review A, 2005, 72, .	1.0	2
46	Electronic energy loss of channeled ions: The giant Barkas effect. Physical Review A, 2004, 70, .	1.0	9
47	Nonperturbative treatment of medium-energy proton scattering under shadowing-blocking conditions in Al(110). Physical Review B, 2004, 69, .	1.1	13
48	Coulomb heating of channeled H ₂ and H ₃ molecules in Si. Physical Review B, 2004, 69, .	1.1	14
49	Fast Processes in Ion Tracks. AIP Conference Proceedings, 2004, , .	0.3	0
50	Non-equilibrium emission of secondary ions from BeO films sputtered by swift gold ions. Nuclear Instruments & Methods in Physics Research B, 2004, 225, 72-77.	0.6	13
51	Ionization and Energy Loss Beyond Perturbation Theory. Advances in Quantum Chemistry, 2004, 45, 7-46.	0.4	26
52	Femtosecond dynamics "snapshots" of the early ion-track evolution. Nuclear Instruments & Methods in Physics Research B, 2004, 225, 4-26.	0.6	39
53	Femtosecond dynamics "snapshots" of the early ion-track evolution. Nuclear Instruments & Methods in Physics Research B, 2004, 225, 4-26.	0.6	34
54	Spectroscopy of Si-Auger electrons from the center of heavy-ion tracks. Nuclear Instruments & Methods in Physics Research B, 2003, 209, 26-31.	0.6	5

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55	The role of basic energy-loss processes in layer-resolved surface investigations with ions. Current Applied Physics, 2003, 3, 35-37.	1.1	1
56	Random and channeling stopping powers of He and Li ions in Si. Physical Review B, 2002, 65, .	1.1	21
57	The unitary convolution approximation for heavy ions. Nuclear Instruments & Methods in Physics Research B, 2002, 195, 55-63.	0.6	74
58	Channeling energy loss of O ions in Si: The Barkas effect. Nuclear Instruments & Methods in Physics Research B, 2002, 193, 172-177.	0.6	6
59	Solid-state effects in d+d fusion reactions. Nuclear Instruments & Methods in Physics Research B, 2002, 193, 183-187.	0.6	22
60	Si-Auger electrons from the center of nuclear tracks. Nuclear Instruments & Methods in Physics Research B, 2002, 193, 705-712.	0.6	16
61	Ion tracks "quasi one-dimensional nano-structures. Applied Surface Science, 2001, 182, 286-292.	3.1	19
62	Energy dissipation of fast heavy ions in matter. Nuclear Instruments & Methods in Physics Research B, 2001, 175-177, 1-11.	0.6	61
63	Improved charge-state formulas. Nuclear Instruments & Methods in Physics Research B, 2001, 175-177, 125-131.	0.6	241
64	Limitations to depth resolution in ion scattering experiments. Nuclear Instruments & Methods in Physics Research B, 2001, 183, 16-24.	0.6	26
65	Giant Barkas Effect Observed for Light Ions Channeling in Si. Physical Review Letters, 2001, 86, 1482-1485.	2.9	34
66	Auger electrons from ion tracks. Nuclear Instruments & Methods in Physics Research B, 2000, 164-165, 353-364.	0.6	33
67	Impact-parameter dependent energy loss of screened ions. Nuclear Instruments & Methods in Physics Research B, 2000, 164-165, 203-211.	0.6	57
68	Impact-parameter dependence of the electronic energy loss. AIP Conference Proceedings, 2000, , .	0.3	0
69	Determination of the electron temperature in the thermal spike of amorphous carbon. Europhysics Letters, 1999, 47, 384-390.	0.7	36
70	A unitary convolution approximation for the impact-parameter dependent electronic energy loss. Nuclear Instruments & Methods in Physics Research B, 1999, 153, 1-9.	0.6	92
71	Indications for a new electron-ejection mechanism: Nuclear-track guided electrons induced by fast heavy ions in insulators. Nuclear Instruments & Methods in Physics Research B, 1998, 135, 466-470.	0.6	1
72	Improved calculations of the electronic energy loss under channeling conditions. Nuclear Instruments & Methods in Physics Research B, 1998, 136-138, 125-131.	0.6	16

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73	An experimental determination of electron temperatures in the center of nuclear tracks in amorphous carbon. Nuclear Instruments & Methods in Physics Research B, 1998, 146, 131-136.	0.6	27
74	Impact-parameter dependence of the electronic energy loss of fast ions. Physical Review A, 1998, 58, 3796-3801.	1.0	114
75	Angular dependence of the electronic energy loss of 800-keV He ions along the $\hat{S} \approx 100^\circ$ direction. Physical Review B, 1997, 55, 4332-4342.	1.1	33
76	Indications of Nuclear-Track-Guided Electrons Induced by Fast Heavy Ions in Insulators. Physical Review Letters, 1997, 79, 1821-1824.	2.9	48
77	Coupled-channel calculations of the electronic energy loss. Nuclear Instruments & Methods in Physics Research B, 1997, 132, 264-275.	0.6	22
78	Ion beam modification of PMMA \hat{a} changes of the optical properties. Radiation Effects and Defects in Solids, 1996, 140, 63-74.	0.4	14
79	Electron ejection from solids induced by fast highly-charged ions. Nuclear Instruments & Methods in Physics Research B, 1996, 107, 113-127.	0.6	46
80	Evidence for convoy-electron shifts due to induced potentials. Nuclear Instruments & Methods in Physics Research B, 1996, 115, 215-219.	0.6	6
81	Stopping mechanisms of negative heavy particles in gas targets. Nuclear Instruments & Methods in Physics Research B, 1996, 115, 106-110.	0.6	7
82	Characterization of aged latent ion tracks in polyimide. Nuclear Instruments & Methods in Physics Research B, 1996, 116, 66-71.	0.6	7
83	Nonperturbative treatment of the screened-Coulomb contribution of projectile-electron loss. Physical Review A, 1996, 54, 2983-2990.	1.0	31
84	Comprehensive analysis of the stopping power of antiprotons and negative muons in He and gas targets. Journal of Physics B: Atomic, Molecular and Optical Physics, 1996, 29, 307-321.	0.6	65
85	Two-center electron-electron interactions in collisions of fast Ne^{7+} and Ne^{6+} ions with gas atoms. Nuclear Instruments & Methods in Physics Research B, 1995, 98, 262-265.	0.6	2
86	Measurement of negative-ion and -cluster sputtering with highly-charged heavy ions. Nuclear Instruments & Methods in Physics Research B, 1995, 100, 47-54.	0.6	8
87	Dominant two-center electron-electron interactions in collisions of 120-MeV Ne^{6+} ions with gas targets. Physical Review A, 1995, 52, 387-391.	1.0	10
88	On classical calculations of the electronic stopping power at intermediate energies. Journal of Physics B: Atomic, Molecular and Optical Physics, 1995, 28, 425-433.	0.6	22
89	Two-center electron emission in collisions of fast, highly charged ions with He: Experiment and theory. Physical Review A, 1995, 52, 3796-3802.	1.0	69
90	Time-ordering effects in K-shell excitation of 170-MeV Ne^{7+} colliding with gas atoms: Double excitation. Physical Review A, 1995, 51, 350-358.	1.0	12

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91	Double Ionization of Helium by 40 MeV Protons. <i>Europhysics Letters</i> , 1994, 27, 341-346.	0.7	6
92	Electronic stopping based on atomic and solid-state wavefunctions. <i>Radiation Effects and Defects in Solids</i> , 1994, null, 137-156.	0.4	21
93	Angular dependence of energy loss in proton-helium collisions. <i>Physical Review Letters</i> , 1994, 72, 2159-2162.	2.9	36
94	On the treatment of light-ion electronic stopping in dense matter. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1994, 90, 10-19.	0.6	13
95	Particle emission induced by the interaction of highly charged slow Xe-ions with a SiO ₂ surface. <i>Radiation Effects and Defects in Solids</i> , 1993, 127, 11-14.	0.4	12
96	Time-ordering effects in K-shell excitation of 170-MeV Ne ⁷⁺ colliding with gas atoms: Single excitation. <i>Physical Review A</i> , 1993, 48, 2986-2994.	1.0	16
97	Doubly differential secondary-electron yields following 8-MeV/u U ⁶⁸⁺ and 3.5-MeV/u U ³⁸⁺ ion impact on a thin carbon-foil target. <i>Physical Review A</i> , 1993, 47, 3945-3950.	1.0	34
98	Nonperturbative stopping-power calculation for bare and neutral hydrogen incident on He. <i>Physical Review A</i> , 1993, 47, 1119-1122.	1.0	66
99	Electron Ejection Induced by Fast Projectiles. <i>NATO ASI Series Series B: Physics</i> , 1993, , 197-214.	0.2	4
100	Single and double ionization in 300-keV H ⁺⁺ He collisions at small impact parameters. <i>Physical Review A</i> , 1992, 46, 5687-5695.	1.0	14
101	Influence of nuclear track potentials in insulators on the emission of target Auger electrons. <i>Physical Review Letters</i> , 1992, 69, 628-631.	2.9	72
102	Energy loss of slow ions: one-band calculation for alkaline metals. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1992, 163, 439-446.	0.9	25
103	Electronic stopping of protons at intermediate velocities. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1992, 69, 10-17.	0.6	49
104	High-resolution Auger spectroscopy of Na-like argon and sulfur ions singly excited in high-energy collisions with light target atoms. <i>Physical Review A</i> , 1991, 44, 2900-2912.	1.0	5
105	The excitation of sodium-like argon ions by high energy projectiles. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1991, 56-57, 116-120.	0.6	0
106	Impact-parameter dependence of electronic energy loss and straggling of incident bare ions on H and He atoms by using the coupled-channel method. <i>Physical Review A</i> , 1991, 44, 2984-2992.	1.0	58
107	Accurate Quantum Mechanical Calculation of Stopping Powers for Intermediate Energy Light Ions Penetrating Atomic H and He Targets. <i>NATO ASI Series Series B: Physics</i> , 1991, , 517-528.	0.2	0
108	Population of projectile-ion states during the passage of high energy ne-ions through thin carbon foils. <i>Radiation Effects and Defects in Solids</i> , 1990, 112, 195-200.	0.4	16

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109	Multiply differential ionization probabilities in small impact parameter ion-atom collisions. AIP Conference Proceedings, 1990, , .	0.3	0
110	Evidence for electron correlation in the two-electron continuum during double ionization in 300-keV H ⁺⁺ He collisions. Physical Review Letters, 1990, 65, 3265-3268.	2.9	20
111	Coupled-channel calculation of stopping powers for intermediate-energy light ions penetrating atomic H and He targets. Physical Review A, 1990, 42, 296-306.	1.0	115
112	Origin of cusp electrons in slow ($v \approx 0.4$ a.u.) O ⁶⁺⁺ He collisions. Physical Review A, 1990, 42, 5776-5779.	1.0	7
113	Investigation of $\hat{\Gamma}$ -electron emission in collisions of highly charged fast Ne projectiles with carbon-foil targets. Physical Review B, 1990, 41, 6262-6271.	1.1	34
114	Strong continuum-continuum couplings in the direct ionization of Ar and He atoms by 6-MeV/u U ³⁸⁺ and Th ³⁸⁺ projectiles. Physical Review A, 1989, 40, 2971-2975.	1.0	31
115	High-resolution Ar L-shell Auger spectroscopy in 80-MeV Ar ⁵⁺⁺ He collisions. Physical Review A, 1989, 40, 5633-5640.	1.0	10
116	Evidence for electron correlation during double capture in fast ($v \approx 10$ a.u.) collisions. Physical Review A, 1989, 39, 1571-1574.	1.0	11
117	Dynamic target screening for two-active-electron classical-trajectory Monte Carlo calculations for H ⁺⁺ He collisions. Physical Review A, 1989, 40, 6223-6230.	1.0	46
118	Self-consistent field classical-trajectory Monte Carlo calculations of doubly differential cross sections for bare ions incident on helium. Journal of Physics B: Atomic, Molecular and Optical Physics, 1989, 22, 2555-2565.	0.6	16
119	Ionization and autoionization in small impact parameter H ⁺⁺ He and in high energy Ne ¹⁰⁺ + He collisions. Nuclear Instruments & Methods in Physics Research B, 1989, 40-41, 178-183.	0.6	5
120	Cascade-induced asymmetry in Auger-electron emission following fast ion-solid interactions. Physical Review Letters, 1988, 61, 2677-2680.	2.9	22
121	Investigation of simultaneous inner- and outer-shell ionization and Auger-electron emission in slow Ar ⁺⁺ Ar collisions at intermediate impact parameters. Physical Review A, 1988, 38, 5552-5562.	1.0	12
122	High ionization probabilities in 30-, 100-, and 300-keV proton-helium collisions. Physical Review A, 1988, 37, 370-376.	1.0	24
123	Determination of differential cross sections in classical trajectory Monte Carlo calculations. Journal of Physics B: Atomic and Molecular Physics, 1987, 20, 5463-5474.	1.6	23
124	$\hat{\Gamma}$ -electron spectroscopy of transfer and ionization in proton-rare-gas-atom collisions. Physical Review A, 1987, 35, 485-488.	1.0	7
125	Investigation of the impact-parameter dependence of electrons emitted in 30-, 100-, 350-keV H ⁺ and 100-keV He ²⁺⁺ Ar collisions. Physical Review A, 1987, 35, 598-606.	1.0	13
126	Formation of Rydberg states in fast ions penetrating thin carbon-foil and gas targets. Physical Review Letters, 1987, 59, 1561-1564.	2.9	31

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127	High Rydberg and Auger states in fast ion-atom collisions: Zero-degree observations. Nuclear Instruments & Methods in Physics Research B, 1987, 24-25, 173-179.	0.6	22
128	Effects of external electric fields on high Rydberg states formed in foil and gas interactions of 85-MeVNe ⁶⁺ ions. Physical Review A, 1986, 34, 169-175.	1.0	20
129	Cross sections for K-shell ionization of Si and Ar by 4 keV to 10 keV electron impact. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 107, 83-86.	0.9	30
130	Shape of the electron capture to the continuum cusps for H, H ₂ , and He targets in the velocity range 6.3 Å ⁻¹ –18.0 a.u.. Physical Review A, 1985, 31, 1392-1398.	1.0	30
131	Selective production of Li-, Be-, and B-like Kvacancy states in fast Ne projectiles studied by zero-degree Auger spectroscopy. Physical Review A, 1985, 31, 684-691.	1.0	72
132	Electron Capture to the Continuum at Asymptotically High Velocities. IEEE Transactions on Nuclear Science, 1983, 30, 902-905.	1.2	10
133	Selective production of Auger electrons from fast projectile ions studied by zero-degree Auger spectroscopy. Journal of Physics B: Atomic and Molecular Physics, 1983, 16, 3965-3971.	1.6	83
134	UE112_PGM-1: An open-port low-energy beamline at the BESSY II undulator UE112. Journal of Large-scale Research Facilities JLSRF, 0, 1, A33.	0.0	11