

Gerhard Hobler

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

95
papers

1,463
citations

22
h-index

35
g-index

97
ext. papers

1,580
ext. citations

2.1
avg. IF

4.46
L-index

#	Paper	IF	Citations
95	Second order corrections to the sputter yield of a curved surface. <i>Journal of Applied Physics</i> , 2021 , 129, 194301	2.5	1
94	Absence of a Crystal Direction Regime in which Sputtering Corresponds to Amorphous Material. <i>Physical Review Letters</i> , 2020 , 125, 225502	7.4	3
93	Channeling maps for Si ions in Si: Assessing the binary collision approximation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2019 , 449, 17-21	1.2	3
92	Ion bombardment induced atom redistribution in amorphous targets: MD versus BCA. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2019 , 447, 30-33	1.2	2
91	Crater function moments: Role of implanted noble gas atoms. <i>Physical Review B</i> , 2018 , 97,	3.3	7
90	Sputtering of SiGe _{1-x} nanospheres. <i>Physical Review B</i> , 2018 , 97,	3.3	6
89	Dependence of ion channeling on relative atomic number in compounds. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2018 , 435, 61-69	1.2	6
88	Simulation Study of Al Channeling in 4H-SiC 2018 ,		2
87	Channeled MeV B, P and As Profiles in Si(100): Monte-Carlo Models and SIMS 2018 ,		2
86	Simple model of surface roughness for binary collision sputtering simulations. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2017 , 393, 17-21	1.2	3
85	Probing the limitations of Sigmund's model of spatially resolved sputtering using Monte Carlo simulations. <i>Physical Review B</i> , 2016 , 93,	3.3	19
84	Sputtering of silicon membranes with nanoscale thickness. <i>Journal of Applied Physics</i> , 2016 , 119, 245105	2.5	5
83	Large fraction of crystal directions leads to ion channeling. <i>Physical Review B</i> , 2016 , 94,	3.3	58
82	Combined binary collision and continuum mechanics model applied to focused ion beam milling of a silicon membrane. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2015 , 352, 22-26	1.2	2
81	Inverse modeling of FIB milling by dose profile optimization. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014 , 341, 77-83	1.2	5
80	Sputtering of silicon at glancing incidence. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013 , 303, 142-147	1.2	12
79	Assessment of surface potential models by molecular dynamics simulations of atom ejection from (100)-Si surfaces. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013 , 303, 165-169	1.2	1

78	The significance of redeposition and backscattering in nanostructure formation by focused ion beams. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2012 , 282, 12-16	1.2	14
77	Sputter-redeposition method for the fabrication of automatically sealed micro/nanochannel using FIBs. <i>International Journal of Precision Engineering and Manufacturing</i> , 2011 , 12, 893-898	1.7	4
76	Topography simulation of sputtering using an algorithm with second order approximation in space. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011 , 269, 1614-1618	1.2	4
75	Dynamic binary collision simulation of focused ion beam milling of deep trenches. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011 , 269, 1609-1613	1.2	14
74	Quantitative simulation of ion-beam induced deposition of nanostructures. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 011031	1.3	7
73	Modeling of precursor coverage in ion-beam induced etching and verification with experiments using XeF ₂ on SiO ₂ . <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, 946-951	1.3	6
72	Ion multibeam nanopatterning for photonic applications: Experiments and simulations, including study of precursor gas induced etching and deposition. <i>Journal of Vacuum Science & Technology B</i> , 2009 , 27, 2668		8
71	Simulation of Ion-beam Induced Etching and Deposition Using a Non-local Recoil-based Algorithm. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1181, 42		1
70	Amorphous pocket model based on the modified heat transport equation and local lattice collapse. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2009 , 267, 1229-1231	1.2	2
69	Assessment of approximations for efficient topography simulation of ion beam processes: 10keV Ar on Si. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2009 , 267, 2987-2990	1.2	22
68	Ion Beam Devices for Material Processing and Analysis 2008 , 231-263		
67	Level set approach for the simulation of focused ion beam processing on the micro/nano scale. <i>Nanotechnology</i> , 2007 , 18, 265307	3.4	21
66	Amorphous pockets in Si: Comparison of coupled molecular dynamics and TEM image contrast simulations with experimental results. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007 , 255, 105-109	1.2	3
65	Monte Carlo simulations of defect recovery within a 10 keV collision cascade in 3CβiC. <i>Journal of Applied Physics</i> , 2007 , 102, 103508	2.5	34
64	Simulation-based approach for the accurate fabrication of blazed grating structures by FIB. <i>Optics Express</i> , 2007 , 15, 9444-9	3.3	18
63	Fundamentals of Focused Ion Beam Nanostructural Processing: Below, At, and Above the Surface. <i>MRS Bulletin</i> , 2007 , 32, 424-432	3.2	79
62	Full three-dimensional simulation of focused ion beam micro/nanofabrication. <i>Nanotechnology</i> , 2007 , 18, 245303	3.4	52
61	Simulation of ion beam induced micro/nano fabrication. <i>Journal of Micromechanics and Microengineering</i> , 2007 , 17, 1178-1183	2	42

60	Random and channeling stopping power of H in Si below 100 keV. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006 , 242, 617-619	1.2	12
59	Investigation of the impact of defect models on Monte Carlo simulations of RBS/C spectra. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006 , 249, 776-779	1.2	2
58	Is there an influence of ion-beam-induced interfacial amorphization on the a/c-interface depth in silicon at common implantation energies?. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006 , 253, 227-231	1.2	
57	Dose-rate dependence of damage formation in Si by N implantation as determined from channeling profile measurements. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006 , 242, 667-669	1.2	1
56	Hydrogen/Deuterium-defect complexes involved in the ion cutting of Si (001) at the sub-100nm scale. <i>Physica B: Condensed Matter</i> , 2006 , 376-377, 36-40	2.8	4
55	Range evaluation in SIMS depth profiles of Er-implantations in silicon. <i>Applied Surface Science</i> , 2005 , 252, 271-277	6.7	12
54	Ab initio calculations of the interaction between native point defects in silicon. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2005 , 124-125, 368-371	3.1	6
53	Modeling of amorphous pocket formation in silicon by numerical solution of the heat transport equation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005 , 228, 226-229	1.2	8
52	Coupled BC/kLMC simulations of the temperature dependence of implant damage formation in silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005 , 228, 256-259	1.2	3
51	Multiscale approach for the analysis of channeling profile measurements of ion implantation damage. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005 , 228, 360-363	1.2	7
50	Defect characterization of low-energy recoil events in silicon using classical molecular dynamics simulation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003 , 202, 114-119	1.2	20
49	Amorphous pocket model for silicon based on molecular dynamics simulations. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003 , 206, 81-84	1.2	19
48	Status and open problems in modeling of as-implanted damage in silicon. <i>Materials Science in Semiconductor Processing</i> , 2003 , 6, 1-14	4.3	59
47	Method to characterize the three-dimensional distribution of focused ion beam induced damage in silicon after 50 keV Ga ⁺ irradiation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2003 , 21, 1644-1648	2.9	12
46	Simulation of Focused Ion Beam Induced Damage Formation in Crystalline Silicon. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 792, 68		1
45	Coupled Kinetic Monte Carlo and Molecular Dynamics Simulations of Implant Damage Accumulation in Silicon. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 792, 434		
44	Current density profile extraction of focused ion beams based on atomic force microscopy contour profiling of nanodots. <i>Journal of Applied Physics</i> , 2002 , 92, 4037-4042	2.5	51
43	Range of ion-implanted rare earth elements in Si and SiO ₂ . <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2001 , 81, 83-85	3.1	18

42	Simulation of topography evolution and damage formation during TEM sample preparation using focused ion beams. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001 , 175-177, 102-107	1.2	17
41	FIBSIM [Dynamic Monte Carlo simulation of compositional and topography changes caused by focused ion beam milling. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001 , 180, 125-129	1.2	25
40	On the useful range of application of molecular dynamics simulations in the recoil interaction approximation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001 , 180, 203-208	1.2	41
39	Initial Conditions for Transient Enhanced Diffusion: Beyond the Plus-Factor Approach 2001 , 34-37		3
38	Use of transient enhanced diffusion to tailor boron out-diffusion. <i>IEEE Transactions on Electron Devices</i> , 2000 , 47, 1401-1405	2.9	1
37	Dose, Energy, and Ion Species Dependence of the Effective Plus Factor for Transient Enhanced Diffusion. <i>Journal of the Electrochemical Society</i> , 2000 , 147, 3494	3.9	16
36	Channeling of low-energy implanted ions through the poly-Si gate. <i>IEEE Electron Device Letters</i> , 1999 , 20, 357-359	4.4	7
35	Continuum treatment of spatial correlation in damage annealing. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1999 , 153, 172-176	1.2	7
34	Modeling of {311} Defects. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 568, 123		10
33	Modeling of the ion mass effect on transient enhanced diffusion: Deviation from the $\frac{1}{2}$ model. <i>Applied Physics Letters</i> , 1998 , 73, 1421-1423	3.4	54
32	Verification of lateral secondary ion mass spectrometry as a method for measuring lateral dopant dose distributions in microelectronics test structures. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1998 , 16, 386		5
31	Model-independent determination of 2D strain distribution in ion-implanted silicon crystals from x-ray diffraction data. <i>Semiconductor Science and Technology</i> , 1997 , 12, 350-354	1.8	9
30	A study of ultra-shallow implanted dopant profiles in silicon using BC and MD simulations. <i>Radiation Effects and Defects in Solids</i> , 1997 , 141, 113-125	0.9	4
29	Verification of models for the simulation of boron implantation into crystalline silicon. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996 , 14, 272		11
28	Theoretical estimate of the low-energy limit to ion channeling. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1996 , 115, 323-327	1.2	14
27	Computer Simulation of Oxygen Precipitation in Czochralski-Grown Silicon during HI-LO-HI Anneals. <i>Journal of the Electrochemical Society</i> , 1996 , 143, 995-1001	3.9	30
26	Critical angles and low-energy limits to ion channeling in silicon. <i>Radiation Effects and Defects in Solids</i> , 1996 , 139, 21-85	0.9	53
25	A Kinetic Model for Precipitation of Oxygen in Silicon 1996 , 447-454		

24	Model for the electronic stopping of channeled ions in silicon around the stopping power maximum 1996 , 47-50		
23	Modeling of electronic stopping and damage accumulation during arsenic implantation in silicon. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1995 , 100, 483-489	1.2	8
22	Model for the electronic stopping of channeled ions in silicon around the stopping power maximum. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1995 , 106, 47-50	1.2	10
21	Acceleration of binary collision simulations in crystalline targets using critical angles for ion channeling. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1995 , 102, 24-28	1.2	6
20	Round robin computer simulation of ion transmission through crystalline layers. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1995 , 102, 183-197	1.2	49
19	Monte Carlo simulation of two-dimensional implanted dopant distributions at mask edges. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1995 , 96, 155-162	1.2	103
18	A model for oxygen precipitation in silicon including bulk stacking fault growth. <i>Journal of Applied Physics</i> , 1995 , 78, 6469-6476	2.5	24
17	Determination of silicon point defect parameters and reaction barrier energies from gold diffusion experiments. <i>Journal of Applied Physics</i> , 1995 , 77, 1320-1322	2.5	17
16	Boron channeling implantations in silicon: Modeling of electronic stopping and damage accumulation. <i>Journal of Applied Physics</i> , 1995 , 77, 3697-3703	2.5	38
15	Comparison of Damage Accumulation Models for Boron Implantation in Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 389, 221		1
14	Monte Carlo Simulation of Multiple-Species Ion Implantation and its Application to the Modeling of 0.1 μ m PMOS Devices 1995 , 484-487		1
13	Round robin computer simulation of ion transmission through crystalline layers 1995 , 102, 183-183		22
12	Electronic Stopping of Channeled Ions in Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1992 , 279, 165		10
11	THE EFFECT OF A SCREENING OXIDE ON ION IMPLANTATION STUDIED BY MONTE CARLO SIMULATIONS. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 1992 , 11, 403-411	0.7	5
10	Comparison of Transmission Electron Microscope Cross Sections of Amorphous Regions in Ion Implanted Silicon with Point-Defect Density Calculations. <i>Journal of the Electrochemical Society</i> , 1992 , 139, 3631-3638	3.9	38
9	Dependence of boron axial channelling in silicon on crystal orientation. <i>Surface and Interface Analysis</i> , 1992 , 19, 369-373	1.5	5
8	Boron implantation in Si: Channeling effects studied by SIMS and simulation. <i>Mikrochimica Acta</i> , 1992 , 107, 161-169	5.8	2
7	AN EMPIRICAL MODEL FOR THE ELECTRONIC STOPPING OF BORON IN SILICON. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 1991 , 10, 323-330	0.7	7

6	Calculation of internal gettering sites after double-step and CMOS-type thermal anneals. <i>Microelectronic Engineering</i> , 1991 , 15, 57-60	2.5	1
5	. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 1989 , 8, 450-459	2.5	29
4	. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 1988 , 7, 174-180	2.5	40
3	Two-dimensional modeling of ion implantation with spatial moments. <i>Solid-State Electronics</i> , 1987 , 30, 445-455	1.7	29
2	Modeling of ultra-low energy boron implantation in silicon		6
1			2