

Hartmut Bracht

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8952672/publications.pdf>

Version: 2024-02-01

107
papers

4,033
citations

109321

35
h-index

123424

61
g-index

107
all docs

107
docs citations

107
times ranked

1955
citing authors

#	ARTICLE	IF	CITATIONS
1	Atomistic simulations on the relationship between solid-phase epitaxial recrystallization and self-diffusion in amorphous silicon. <i>Journal of Applied Physics</i> , 2022, 131, .	2.5	3
2	Retarded boron and phosphorus diffusion in silicon nanopillars due to stress induced vacancy injection. <i>Journal of Applied Physics</i> , 2022, 131, 075702.	2.5	1
3	Electrochemical Proton Intercalation in Vanadium Pentoxide Thin Films and its Electrochromic Behavior in the near-IR Region. <i>ChemistryOpen</i> , 2021, 10, 340-346.	1.9	2
4	Impact of oxygen on gallium doped germanium. <i>AIP Advances</i> , 2021, 11, 065122.	1.3	3
5	Focused Ion Beam Sample Preparation for <i>In Situ</i> Thermal and Electrical Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2021, 27, 828-834.	0.4	7
6	Comparison of Experimental STEM Conditions for Fluctuation Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2020, 26, 1100-1109.	0.4	8
7	Diffusion of boron in germanium at 800–900 °C revisited. <i>Journal of Applied Physics</i> , 2020, 127, 025703.	2.5	3
8	Defect distribution in boron doped silicon nanostructures characterized by means of scanning spreading resistance microscopy. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	5
9	Fluctuation electron microscopy on silicon amorphized at varying self ion-implantation conditions. <i>Journal of Applied Physics</i> , 2019, 126, 095707.	2.5	5
10	Structural and Thermal Characterisation of Nanofilms by Time-Resolved X-ray Scattering. <i>Nanomaterials</i> , 2019, 9, 501.	4.1	3
11	Quantitative scanning spreading resistance microscopy on n-type dopant diffusion profiles in germanium and the origin of dopant deactivation. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	11
12	Self-Holding Optical Actuator Based on a Mixed Ionic–Electronic Conductor Material. <i>ACS Photonics</i> , 2019, 6, 1182-1190.	6.6	8
13	Analysis of medium-range order based on simulated segmented ring detector STEM-images: amorphous Si. <i>Ultramicroscopy</i> , 2019, 200, 169-179.	1.9	8
14	Self-diffusion in single crystalline silicon nanowires. <i>Journal of Applied Physics</i> , 2018, 123, 161515.	2.5	7
15	Self-Diffusion in Amorphous Silicon by Local Bond Rearrangements. <i>Physical Review Letters</i> , 2018, 120, 225902.	7.8	16
16	Towards fabrication of 3D isotopically modulated vertical silicon nanowires in selective areas by nanosphere lithography. <i>Microelectronic Engineering</i> , 2017, 179, 74-82.	2.4	32
17	Thermal transport across isotopic ²⁸ Si/mSi interfaces. <i>Computational Materials Science</i> , 2017, 139, 354-360.	3.0	1
18	Ion-Beam-Induced Atomic Mixing in Ge, Si, and SiGe, Studied by Means of Isotope Multilayer Structures. <i>Materials</i> , 2017, 10, 813.	2.9	7

#	ARTICLE	IF	CITATIONS
19	Ion-beam induced atomic mixing in isotopically controlled silicon multilayers. Journal of Applied Physics, 2016, 120, 185701.	2.5	6
20	Ultrafast study of phonon transport in isotopically controlled semiconductor nanostructures. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 541-548.	1.8	5
21	Molecular dynamics simulations of thermal transport in isotopically modulated semiconductor nanostructures. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 549-556.	1.8	10
22	Self-diffusion in crystalline silicon: A single diffusion activation enthalpy down to 755 meV . Physical Review B, 2016, 94, .	3.2	41
23	Vacancy-donor complexes in highly <i>n</i> -type Ge doped with As, P and Sb. Journal of Physics Condensed Matter, 2016, 28, 335801.	1.8	13
24	Measurement and analysis of thermal conductivity of isotopically controlled silicon layers by time-resolved X-ray scattering. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 3020-3028.	1.8	2
25	Atomic transport during solid-phase epitaxial recrystallization of amorphous germanium. Applied Physics Letters, 2015, 107, .	3.3	8
26	Diffusion and Point Defects in Silicon Materials. Lecture Notes in Physics, 2015, , 1-67.	0.7	2
27	Impact of zinc halide addition on the growth of zinc-rich layers generated by sherardizing. Surface and Coatings Technology, 2015, 263, 66-77.	4.8	14
28	Response to "Comment on "Diffusion of n-type dopants in germanium" [Appl. Phys. Rev. 2, 036101 (2015)]. Applied Physics Reviews, 2015, 2, 036102.	11.3	3
29	Thermal conductivity of isotopically controlled silicon nanostructures. New Journal of Physics, 2014, 16, 015021.	2.9	21
30	Temperature dependence of ion-beam mixing in crystalline and amorphous germanium isotope multilayer structures. Journal of Applied Physics, 2014, 115, 023506.	2.5	7
31	Microstructural Studies of Fluorine-implanted Titanium Aluminides for Enhanced Environmental Durability. Advanced Engineering Materials, 2014, 16, 52-59.	3.5	7
32	Reply to "Comment on "Contributions of vacancies and self-interstitials to self-diffusion in silicon under thermal equilibrium and nonequilibrium conditions" [Physical Review B, 2014, 90, .	3.2	4
33	Phonon coherence in isotopic silicon superlattices. Applied Physics Letters, 2014, 105, 132104.	3.3	11
34	Defect engineering in germanium. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 109-117.	1.8	16
35	Light absorption in Ge nanoclusters embedded in SiO ₂ : comparison between magnetron sputtering and sol-gel synthesis. Applied Physics A: Materials Science and Processing, 2014, 116, 233-241.	2.3	4
36	Diffusion of <i>n</i> -type dopants in germanium. Applied Physics Reviews, 2014, 1, 011301.	11.3	146

#	ARTICLE	IF	CITATIONS
37	Determination of nanoscale heat conductivity by time-resolved X-ray scattering. Thin Solid Films, 2013, 541, 28-31.	1.8	6
38	Antisites and anisotropic diffusion in GaAs and GaSb. Applied Physics Letters, 2013, 103, 142107.	3.3	11
39	Contributions of vacancies and self-interstitials to self-diffusion in silicon under thermal equilibrium and nonequilibrium conditions. Physical Review B, 2013, 88, .	3.2	49
40	Doping dependence of self-diffusion in germanium and the charge states of vacancies. Applied Physics Letters, 2013, 102, .	3.3	13
41	Radiation-enhanced self- and boron diffusion in germanium. Physical Review B, 2013, 87, .	3.2	21
42	Reduced thermal conductivity of isotopically modulated silicon multilayer structures. Applied Physics Letters, 2012, 101, 064103.	3.3	14
43	Cation diffusion in mixed cation silicate glasses under non-equilibrium conditions. Solid State Ionics, 2012, 222-223, 47-52.	2.7	3
44	A neutron reflectometry study on silicon self-diffusion at 900°C. Physica Status Solidi (B): Basic Research, 2012, 249, 2108-2112.	1.5	10
45	Structural and electrical properties of sol-gel derived Ge nanocrystals in SiO ₂ films. Applied Physics A: Materials Science and Processing, 2011, 103, 149-158.	2.3	9
46	A-centers and isovalent impurities in germanium: Density functional theory calculations. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 453-457.	3.5	25
47	Diffusion and doping issues in germanium. Microelectronic Engineering, 2011, 88, 452-457.	2.4	33
48	Suppression of donor-vacancy clusters in germanium by concurrent annealing and irradiation. Applied Physics Letters, 2011, 98, .	3.3	20
49	Diffusion of V_E centers in germanium predicted using GGA+U approach. Applied Physics Letters, 2011, 99, 072112.	3.3	77
50	Fluorine effect on As diffusion in Ge. Journal of Applied Physics, 2011, 109, .	2.5	73
51	Ion-beam mixing in crystalline and amorphous germanium isotope multilayers. Journal of Applied Physics, 2011, 110, 093502.	2.5	5
52	Composition dependence of Si and Ge diffusion in relaxed Si _{1-x} Ge _x alloys. Journal of Applied Physics, 2010, 107, .	2.5	72
53	Dynamics of Network Formers and Modifiers in Mixed Cation Silicate Glasses. Zeitschrift Fur Physikalische Chemie, 2010, 224, 1677-1705.	2.8	3
54	Experiments and simulation on diffusion and activation of codoped with arsenic and phosphorous germanium. Journal of Applied Physics, 2010, 108, 024903.	2.5	25

#	ARTICLE	IF	CITATIONS
55	Fluorine codoping in germanium to suppress donor diffusion and deactivation. Journal of Applied Physics, 2009, 106, .	2.5	61
56	Intrinsic and extrinsic diffusion of indium in germanium. Journal of Applied Physics, 2009, 106, .	2.5	72
57	Interstitial-Mediated Diffusion in Germanium under Proton Irradiation. Physical Review Letters, 2009, 103, 255501.	7.8	58
58	Self- and foreign alkaline-earth diffusion in mixed cation silicate glasses. Solid State Ionics, 2009, 180, 109-115.	2.7	12
59	E centers in ternary Si _{1-x} Ge _x random alloys. Applied Physics Letters, 2009, 95, .	3.3	64
60	Defect interactions in Sn _{1-x} Ge _x random alloys. Applied Physics Letters, 2009, 94, 252104.	3.3	65
61	Phosphorous clustering in germanium-rich silicon germanium. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2008, 154-155, 72-75.	3.5	51
62	Simultaneous diffusion of Si and Ge in isotopically controlled heterostructures. Materials Science in Semiconductor Processing, 2008, 11, 378-383.	4.0	20
63	Concentration of intrinsic defects and self-diffusion in GaSb. Journal of Applied Physics, 2008, 104, 093714.	2.5	25
64	Intrinsic and extrinsic diffusion of phosphorus, arsenic, and antimony in germanium. Journal of Applied Physics, 2008, 103, .	2.5	188
65	Correlation between self-diffusion in Si and the migration mechanisms of vacancies and self-interstitials: An atomistic study. Physical Review B, 2008, 78, .	3.2	36
66	P implantation into preamorphized germanium and subsequent annealing: Solid phase epitaxial regrowth, P diffusion, and activation. Journal of Vacuum Science & Technology B, 2008, 26, 430-434.	1.3	39
67	Diffusion and defect reactions between donors, C, and vacancies in Ge. I. Experimental results. Physical Review B, 2008, 77, .	3.2	117
68	Vacancy-mediated dopant diffusion activation enthalpies for germanium. Applied Physics Letters, 2008, 92, .	3.3	132
69	Self-diffusion in germanium isotope multilayers at low temperatures. Applied Physics Letters, 2008, 93, .	3.3	106
70	Diffusion and defect reactions between donors, C, and vacancies in Ge. II. Atomistic calculations of related complexes. Physical Review B, 2008, 77, .	3.2	81
71	Nonlinear stability of E centers in Si Electronic structure calculations. Physical Review B, 2008, 78, .	3.2	63
72	Proton irradiation of germanium isotope multilayer structures at elevated temperatures. Journal of Applied Physics, 2008, 103, 033517.	2.5	18

#	ARTICLE	IF	CITATIONS
73	Bodycote Prize Winner Sherardising "galvanising steel with zinc from vapour phase. International Heat Treatment and Surface Engineering, 2008, 2, 49-54.	0.2	7
74	The vacancy in silicon: A critical evaluation of experimental and theoretical results. Journal of Applied Physics, 2008, 104, 076108.	2.5	58
75	Vacancy-arsenic clusters in germanium. Applied Physics Letters, 2007, 91, .	3.3	75
76	Zinc and gallium diffusion in gallium antimonide. Physical Review B, 2007, 75, .	3.2	24
77	Self- and foreign-atom diffusion in semiconductor isotope heterostructures. I. Continuum theoretical calculations. Physical Review B, 2007, 75, .	3.2	67
78	Self- and foreign-atom diffusion in semiconductor isotope heterostructures. II. Experimental results for silicon. Physical Review B, 2007, 75, .	3.2	105
79	Defect reactions in gallium antimonide studied by zinc and self-diffusion. Physica B: Condensed Matter, 2007, 401-402, 262-265.	2.7	8
80	Atomic transport in germanium and the mechanism of arsenic diffusion. Materials Science in Semiconductor Processing, 2006, 9, 471-476.	4.0	71
81	Advanced dopant and self-diffusion studies in silicon. Nuclear Instruments & Methods in Physics Research B, 2006, 253, 105-112.	1.4	6
82	Diffusion mediated by doping and radiation-induced point defects. Physica B: Condensed Matter, 2006, 376-377, 11-18.	2.7	27
83	Diffusion of silicon in crystalline germanium. Semiconductor Science and Technology, 2006, 21, 758-762.	2.0	71
84	Zinc diffusion in gallium arsenide and the properties of gallium interstitials. Physical Review B, 2005, 71, .	3.2	38
85	Copper related diffusion phenomena in germanium and silicon. Materials Science in Semiconductor Processing, 2004, 7, 113-124.	4.0	66
86	Radiation Enhanced Silicon Self-Diffusion and the Silicon Vacancy at High Temperatures. Physical Review Letters, 2003, 91, 245502.	7.8	71
87	Self-diffusion in ⁶⁹ Ga/ ¹²¹ Sb/ ⁷¹ Ga/ ¹²³ Sb isotope heterostructures. Journal of Applied Physics, 2001, 89, 5393-5399.	2.5	28
88	Zinc diffusion enhanced Ga diffusion in GaAs isotope heterostructures. Physica B: Condensed Matter, 2001, 308-310, 831-834.	2.7	11
89	Mechanism of zinc diffusion in gallium antimonide. Physica B: Condensed Matter, 2001, 308-310, 854-857.	2.7	21
90	Microscopic defects in silicon induced by zinc out-diffusion. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 71, 160-165.	3.5	21

#	ARTICLE	IF	CITATIONS
91	Large disparity between gallium and antimony self-diffusion in gallium antimonide. <i>Nature</i> , 2000, 408, 69-72.	27.8	100
92	Diffusion Mechanisms and Intrinsic Point-Defect Properties in Silicon. <i>MRS Bulletin</i> , 2000, 25, 22-27.	3.5	92
93	Double-hump diffusion profiles of copper and nickel in germanium wafers yielding vacancy-related information. <i>Applied Physics Letters</i> , 2000, 77, 642-644.	3.3	54
94	Comment on "Self-Diffusion in Silicon: Similarity between the Properties of Native Point Defects". <i>Physical Review Letters</i> , 2000, 85, 4835-4835.	7.8	15
95	Point defects in silicon after zinc diffusion - a deep level transient spectroscopy and spreading-resistance profiling study. <i>Semiconductor Science and Technology</i> , 1999, 14, 435-440.	2.0	14
96	Enhanced and retarded Ga self-diffusion in Si and Be doped GaAs isotope heterostructures. <i>Solid State Communications</i> , 1999, 112, 301-314.	1.9	31
97	Diffusion in isotopically controlled semiconductor systems. <i>Physica B: Condensed Matter</i> , 1999, 273-274, 981-986.	2.7	9
98	Self- and interdiffusion in Al _x Ga _{1-x} As/GaAs isotope heterostructures. <i>Applied Physics Letters</i> , 1999, 74, 49-51.	3.3	43
99	Out-diffusion of Zn from Si: A method to study vacancy properties in Si. <i>Journal of Applied Physics</i> , 1998, 83, 8062-8064.	2.5	14
100	Silicon Self-Diffusion in Isotope Heterostructures. <i>Physical Review Letters</i> , 1998, 81, 393-396.	7.8	303
101	Self-Diffusion in Isotopically Controlled Heterostructures of Elemental and Compound Semiconductors. <i>Materials Research Society Symposia Proceedings</i> , 1998, 527, 335.	0.1	21
102	Properties of Vacancies in Silicon Determined by Out-Diffusion of Zinc from Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1998, 532, 219.	0.1	1
103	Kinetics of Interstitial-Substitutional Exchange of Zn, Pt, and Au in Si: Experimental Results and Theoretical Calculations. <i>Physica Status Solidi A</i> , 1996, 158, 47-55.	1.7	17
104	Properties of intrinsic point defects in silicon determined by zinc diffusion experiments under nonequilibrium conditions. <i>Physical Review B</i> , 1995, 52, 16542-16560.	3.2	295
105	Interstitial-Substitutional Diffusion Kinetics and Dislocation-Induced Trapping of Zinc in Plastically Deformed Silicon. <i>Physica Status Solidi A</i> , 1993, 137, 499-514.	1.7	26
106	Diffusion and solubility of copper, silver, and gold in germanium. <i>Physical Review B</i> , 1991, 43, 14465-14477.	3.2	91
107	Properties of Point Defects in Silicon: New Results after a Long-Time Debate. <i>Solid State Phenomena</i> , 0, 205-206, 151-156.	0.3	5