

Bert Voigtlander

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129
papers

4,143
citations

33
h-index

61
g-index

139
ext. papers

4,378
ext. citations

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avg. IF

5.43
L-index

#	Paper	IF	Citations
129	Epitaxial growth of thin magnetic cobalt films on Au(111) studied by scanning tunneling microscopy. <i>Physical Review B</i> , 1991 , 44, 10354-10357	3.3	363
128	Fundamental processes in Si/Si and Ge/Si epitaxy studied by scanning tunneling microscopy during growth. <i>Surface Science Reports</i> , 2001 , 43, 127-254	12.9	326
127	Modification of growth kinetics in surfactant-mediated epitaxy. <i>Physical Review B</i> , 1995 , 51, 7583-7591	3.3	211
126	Kinetically Self-Limiting Growth of Ge Islands on Si(001). <i>Physical Review Letters</i> , 1999 , 82, 2745-2748	7.4	161
125	Simultaneous molecular beam epitaxy growth and scanning tunneling microscopy imaging during Ge/Si epitaxy. <i>Applied Physics Letters</i> , 1993 , 63, 3055-3057	3.4	158
124	Nanowires and nanorings at the atomic level. <i>Physical Review Letters</i> , 2003 , 91, 096102	7.4	105
123	Structure and adsorbate-adsorbate interactions of the compressed Ni(110)-(2 × 1)CO structure. <i>Surface Science</i> , 1990 , 225, 151-161	1.8	105
122	Transition from Island Growth to Step-Flow Growth for Si/Si(100) Epitaxy. <i>Physical Review Letters</i> , 1997 , 78, 2164-2167	7.4	97
121	Influence of surfactants on the growth-kinetics of Si on Si(111). <i>Surface Science</i> , 1993 , 292, L775-L780	1.8	96
120	Scanning Probe Microscopy. <i>Nanoscience and Technology</i> , 2015 ,	0.6	95
119	Magic Islands in Si/Si(111) Homoepitaxy. <i>Physical Review Letters</i> , 1998 , 81, 858-861	7.4	93
118	Silicon-germanium nanostructures with quantum dots: Formation mechanisms and electrical properties. <i>Semiconductors</i> , 2000 , 34, 1229-1247	0.7	92
117	Epitaxial growth of Fe on Au(111): a scanning tunneling microscopy investigation. <i>Surface Science</i> , 1991 , 255, L529-L535	1.8	90
116	Scanning tunneling microscopy of surfactant-mediated epitaxy of Ge on Si(111): strain relief mechanisms and growth kinetics. <i>Surface Science</i> , 1992 , 274, L541-L545	1.8	87
115	Hydrogen adsorption and the adsorbate-induced Ni(110) reconstruction- an EELS study. <i>Surface Science</i> , 1989 , 208, 113-135	1.8	83
114	Direct observation of subcritical fluctuations during the formation of strained semiconductor islands. <i>Physical Review Letters</i> , 2000 , 84, 330-3	7.4	78
113	On the microscopic origin of the kinetic step bunching instability on vicinal Si(). <i>Surface Science</i> , 2002 , 520, 193-206	1.8	72

112	Surfactant-mediated epitaxy of Ge on Si(111): The role of kinetics and characterization of the Ge layers. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1994 , 12, 1932-1937	2.9	70
111	Molecular beam epitaxy of silicon-germanium nanostructures. <i>Thin Solid Films</i> , 2000 , 367, 75-84	2.2	69
110	Growth Processes in Si/Si(111) Epitaxy Observed by Scanning Tunneling Microscopy during Epitaxy. <i>Physical Review Letters</i> , 1996 , 77, 3861-3864	7.4	68
109	Nucleation and growth of CoSi ₂ on Si(100) studied by scanning tunneling microscopy. <i>Surface Science</i> , 1997 , 372, 71-82	1.8	60
108	Evolution of the strain relaxation in a Ge layer on Si(001) by reconstruction and intermixing. <i>Physical Review B</i> , 1999 , 60, R5121-R5124	3.3	60
107	The Frjus nucleon decay detector. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1987 , 262, 463-495	1.2	57
106	Symmetry and structure of the reconstructed Ni(110)-(2 × 1)O surface. <i>Surface Science</i> , 1990 , 225, 162-170	0.8	53
105	Nucleation behavior in molecular beam and chemical vapor deposition of silicon on Si(111)-(7 × 7). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1996 , 14, 312-318	2.9	52
104	Structure of the adatom electron band of the Si(111)-(7 × 7) surface. <i>Physical Review B</i> , 2006 , 73,	3.3	47
103	Temperature-dependent morphologies of gold surfaces. <i>Surface Science</i> , 1992 , 272, 10-16	1.8	39
102	Influence of material, surface reconstruction, and strain on diffusion at the Ge(111) surface. <i>Physical Review B</i> , 2004 , 69,	3.3	38
101	Etched graphene quantum dots on hexagonal boron nitride. <i>Applied Physics Letters</i> , 2013 , 103, 073113	3.4	37
100	Surface and Step Conductivities on Si(111) Surfaces. <i>Physical Review Letters</i> , 2015 , 115, 066801	7.4	33
99	Ultra compact multitip scanning tunneling microscope with a diameter of 50 nm. <i>Review of Scientific Instruments</i> , 2012 , 83, 033707	1.7	33
98	Ordered growth of Ge islands above a misfit dislocation network in a Ge layer on Si(111). <i>Surface Science</i> , 2000 , 461, L575-L580	1.8	33
97	Investigation of the growth of Co on Cu(111) and Sb/Cu(111) using photoelectron forward scattering. <i>Surface Science</i> , 1994 , 318, 115-128	1.8	33
96	Search for muons from the direction of cygnus X-3. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1986 , 174, 118-122	4.2	32
95	Scanning tunneling microscopy of equilibrium crystal shapes. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1998 , 16, 1059-1065	2.9	31

94	Chemical identification of atoms at multicomponent surfaces on an atomic scale: CoSi ₂ (100). <i>Physical Review B</i> , 1997 , 55, R13444-R13447	3.3	27
93	Design and performance of a beetle-type double-tip scanning tunneling microscope. <i>Review of Scientific Instruments</i> , 2006 , 77, 093701	1.7	27
92	High temperature scanning tunneling microscopy during molecular beam epitaxy. <i>Review of Scientific Instruments</i> , 1996 , 67, 2568-2572	1.7	27
91	Invited Review Article: Multi-tip scanning tunneling microscopy: Experimental techniques and data analysis. <i>Review of Scientific Instruments</i> , 2018 , 89, 101101	1.7	27
90	Nucleation and growth of Si/Si(111) observed by scanning tunneling microscopy during epitaxy. <i>Physical Review B</i> , 1996 , 54, 7709-7712	3.3	26
89	Resistance and dopant profiling along freestanding GaAs nanowires. <i>Applied Physics Letters</i> , 2013 , 103, 143104	3.4	24
88	A nanopositioner for scanning probe microscopy: the KoalaDrive. <i>Review of Scientific Instruments</i> , 2012 , 83, 023703	1.7	24
87	Size of small Si and Ge clusters on Si(111) and Ge(111) surfaces. <i>Surface Science</i> , 2005 , 588, 19-25	1.8	24
86	Structure of the Stranski-Krastanov layer in surfactant-mediated Sb/Ge/Si(111) epitaxy. <i>Surface Science</i> , 1996 , 351, L233-L238	1.8	24
85	Modification of the conductance of single fullerene molecules by endohedral doping. <i>Applied Physics Letters</i> , 2009 , 95, 133118	3.4	23
84	Optimized Ge nanowire arrays on Si by modified surfactant mediated epitaxy. <i>Physical Review B</i> , 2007 , 75,	3.3	23
83	Scaling of submonolayer island sizes in surfactant-mediated epitaxy of semiconductors. <i>Physical Review B</i> , 2004 , 70,	3.3	23
82	Electrical resistance of individual defects at a topological insulator surface. <i>Nature Communications</i> , 2017 , 8, 15704	17.4	22
81	Magic islands and barriers to attachment: A Si/Si(111)7 \times 7 growth model. <i>Physical Review B</i> , 1999 , 60, 13869-13873	3.3	22
80	Scanning tunneling potentiometry implemented into a multi-tip setup by software. <i>Review of Scientific Instruments</i> , 2015 , 86, 123701	1.7	21
79	Phonon dispersion measurements and first-principles calculations for the Au(110) surface. <i>Physical Review B</i> , 1989 , 40, 8068-8071	3.3	21
78	Identification of Ge/Si intermixing processes at the Bi/Ge/Si(111) surface. <i>Physical Review Letters</i> , 2007 , 98, 166104	7.4	20
77	Growth mechanisms in Ge/Si(111) heteroepitaxy with and without Bi as a surfactant. <i>Physical Review B</i> , 2004 , 69,	3.3	20

76	On the origin of the kinetic growth instability of homoepitaxy on Si(001). <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2002 , 89, 410-414	3.1	20
75	Flatness and shape of (111) facets of equilibrated Pb crystals. <i>Physical Review B</i> , 1997 , 56, 12131-12134	3.3	19
74	Nanoscale charge transport measurements using a double-tip scanning tunneling microscope. <i>Journal of Applied Physics</i> , 2008 , 104, 094307	2.5	19
73	Dislocation networks in conventional and surfactant-mediated Ge/Si(1 1 1) epitaxy. <i>Surface Science</i> , 2005 , 599, 76-84	1.8	18
72	Hydrogen on Ni(110): frequency shifts of substrate phonons and new hydrogen modes. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1987 , 44, 263-270	1.7	18
71	Multistage nucleation of two-dimensional Si islands on Si(111) during MBE growth: STM experiments and extended rate-equation model. <i>Physical Review B</i> , 2007 , 76,	3.3	17
70	Formation of Si/Ge nanostructures at surfaces by self-organization. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, S1535-S1551	1.8	17
69	Phonon softening and the hydrogen-induced Ni(110) 12 reconstruction. <i>Physical Review B</i> , 1987 , 36, 2446-2449	3.3	17
68	Surface conductivity of Si(100) and Ge(100) surfaces determined from four-point transport measurements using an analytical N-layer conductance model. <i>Physical Review B</i> , 2017 , 95,	3.3	16
67	Atomic Force Microscopy. <i>Nanoscience and Technology</i> , 2019 ,	0.6	15
66	Symmetry breaking in the growth of two-dimensional islands on Si(111). <i>Physical Review Letters</i> , 2007 , 99, 126103	7.4	14
65	Fabrication of Si/Ge nanoring structures by MBE. <i>Thin Solid Films</i> , 2004 , 464-465, 185-189	2.2	14
64	Influence of strain on diffusion at Ge(111) surfaces. <i>Applied Physics Letters</i> , 2002 , 81, 4745-4747	3.4	14
63	Anisotropic profile decay on perturbed Au(111) vicinal surfaces. <i>Surface Science</i> , 1996 , 360, 242-248	1.8	14
62	In vivo STM studies of the growth of Germanium and Silicon on Silicon. <i>Applied Physics A: Materials Science and Processing</i> , 1996 , 63, 577-581	2.6	14
61	Scanning tunneling microscopy contrast in lateral Ge-Si nanostructures on Si(111)-Bi. <i>Physical Review B</i> , 2010 , 81,	3.3	13
60	Endohedral Fullerene 82 on Cu(111): Orientation, Electronic Structure, and Electron-Vibration Coupling. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 1656-1662	3.8	12
59	Scanning tunneling spectroscopy and manipulation of C60 on Cu(111). <i>Applied Physics A: Materials Science and Processing</i> , 2007 , 87, 475-478	2.6	12

58	In situ disentangling surface state transport channels of a topological insulator thin film by gating. <i>Npj Quantum Materials</i> , 2018 , 3,	5	12
57	Low vibration laboratory with a single-stage vibration isolation for microscopy applications. <i>Review of Scientific Instruments</i> , 2017 , 88, 023703	1.7	11
56	Simultaneously measured signals in scanning probe microscopy with a needle sensor: frequency shift and tunneling current. <i>Review of Scientific Instruments</i> , 2010 , 81, 033703	1.7	11
55	Structure of steps on As-passivated Si(111): Ab initio calculations and scanning tunneling microscopy. <i>Physical Review B</i> , 2006 , 73,	3.3	11
54	One-dimensional ordering of Ge nanoclusters along atomically straight steps of Si(111). <i>Applied Physics Letters</i> , 2007 , 90, 013108	3.4	11
53	Removal of the surfactant in Bi/Ge/Si(111) surfactant-mediated epitaxy. <i>Surface Science</i> , 2004 , 551, 80-90.	3.8	11
52	Chalcogenide-based van der Waals epitaxy: Interface conductivity of tellurium on Si(111). <i>Physical Review B</i> , 2017 , 96,	3.3	10
51	Surfactant-mediated growth of CoSi ₂ on Si(100). <i>Surface Science</i> , 1997 , 381, L546-L550	1.8	10
50	Preparation of bead metal single crystals by electron beam heating. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2005 , 23, 1535-1537	2.9	10
49	Electron-induced excitation of vibrations of Ce atoms inside a C80 cage. <i>Physical Review B</i> , 2011 , 83,	3.3	9
48	Rotating steps in Si(001) homoepitaxy. <i>Surface Science</i> , 2004 , 549, 31-36	1.8	9
47	Comparison between surfactant-mediated Bi/Ge/Si(111) epitaxy and Ge/Si(111) epitaxy. <i>Surface Science</i> , 2004 , 564, 187-200	1.8	9
46	Measurement of Sb diffusion using shadow profiles created by a STM tip. <i>Surface Science</i> , 2000 , 464, 131-144	1.8	9
45	In-situ four-tip STM investigation of the transition from 2D to 3D charge transport in SrTiO ₃ . <i>Scientific Reports</i> , 2019 , 9, 2476	4.9	8
44	Nanoscale pit formation at 2D Ge layers on Si: influence of energy and entropy. <i>Physical Review Letters</i> , 2009 , 103, 096101	7.4	8
43	Voltage preamplifier for extensional quartz sensors used in scanning force microscopy. <i>Review of Scientific Instruments</i> , 2011 , 82, 063701	1.7	8
42	Metal bead crystals for easy heating by direct current. <i>Review of Scientific Instruments</i> , 2008 , 79, 033911.	1.7	8
41	Combination of a Besocke-type scanning tunneling microscope with a scanning electron microscope. <i>Review of Scientific Instruments</i> , 2001 , 72, 3546-3551	1.7	8

40	Si(111) strained layers on Ge(111): Evidence for c(2 \times 2) domains. <i>Physical Review B</i> , 2017 , 96,	3.3	7
39	Dynamical STM Studies of the Growth of Silicon and Germanium on Silicon. <i>Zeitschrift Fur Physikalische Chemie</i> , 1997 , 198, 189-203	3.1	7
38	Self-assembly of periodic nanoclusters of Si and Ge along atomically straight steps of a vicinal Si(111)a). <i>Journal of Applied Physics</i> , 2007 , 101, 081702	2.5	7
37	Scanning tunneling microscopy tip shape imaging by shadowing—Monitoring of in situ tip preparation. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1999 , 17, 294		7
36	Room temperature in-situ measurement of the spin voltage of a BiSbTe thin film. <i>Scientific Reports</i> , 2020 , 10, 2816	4.9	6
35	Four-point probe measurements using current probes with voltage feedback to measure electric potentials. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 054004	1.8	5
34	Investigation of charge carrier depletion in freestanding nanowires by a multi-probe scanning tunneling microscope. <i>Nano Research</i> , 2018 , 11, 5924-5934	10	5
33	Combined frequency modulated atomic force microscopy and scanning tunneling microscopy detection for multi-tip scanning probe microscopy applications. <i>Review of Scientific Instruments</i> , 2015 , 86, 123703	1.7	5
32	Selective adsorption of C60 on Ge/Si nanostructures. <i>Physical Review Letters</i> , 2012 , 108, 116101	7.4	5
31	Epitaxial growth of Fe on Au(111): a scanning tunneling microscopy investigation. <i>Surface Science Letters</i> , 1991 , 255, L529-L535		5
30	Influence of surfactants on the growth-kinetics of Si on Si(111). <i>Surface Science Letters</i> , 1993 , 292, L775-L780		5
29	Si nucleation on Si(111)-7 \times 7: From cluster pairs to 2D islands. <i>Surface Science</i> , 2007 , 601, 3876-3880	1.8	4
28	Strain-induced surface structures on Sb-covered Ge(111): Epitaxial Ge films on Si(111):Sb. <i>Europhysics Letters</i> , 2003 , 62, 547-553	1.6	4
27	Scanning tunneling microscopy studies during semiconductor growth. <i>Micron</i> , 1999 , 30, 33-39	2.3	4
26	Parasitic conduction channels in topological insulator thin films. <i>Physical Review B</i> , 2020 , 101,	3.3	3
25	Symmetry and shape of reconstructed two-dimensional islands. <i>Physical Review B</i> , 2011 , 83,	3.3	3
24	Ohmic contacts for GaAs based nanocolumns. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, 3559-3564	1.6	3
23	Influence of strain on binding energies of Si atoms at Ge(111) surfaces. <i>Surface Science</i> , 2002 , 512, L335-L340	1.34	3

22	The Multimeter at the Nanoscale. <i>Vakuum in Forschung Und Praxis</i> , 2016 , 28, 38-42	0.3	3
21	Element specific surface reconstructions of islands during surfactant-mediated growth on Si (111). <i>Physical Review Letters</i> , 2002 , 89, 236101	7.4	2
20	Surface structures of tellurium on Si(111)($\sqrt{7}\times\sqrt{7}$) studied by low-energy electron diffraction and scanning tunneling microscopy. <i>Surface Science</i> , 2019 , 681, 130-133	1.8	2
19	Lifting the Spin-Momentum Locking in Ultra-Thin Topological Insulator Films. <i>Advanced Quantum Technologies</i> , 2021 , 2100083	4.3	2
18	Growth of Ag on the Bi-terminated Ge/Si(111) surface. <i>Surface Science</i> , 2008 , 602, 1954-1956	1.8	1
17	Step bunching during Si(001) homoepitaxy caused by the surface diffusion anisotropy. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 749, 1		1
16	Secondary ion mass spectrometry of SiGe structures grown by surfactant-mediated epitaxy and by low pressure chemical vapour deposition. <i>Surface and Interface Analysis</i> , 1994 , 22, 342-345	1.5	1
15	Ultra-Compact Multitip Scanning Probe Microscope with an Outer Diameter of 50 nm. <i>Advances in Atom and Single Molecule Machines</i> , 2012 , 9-21	0	1
14	Charge transport in GaAs nanowires: interplay between conductivity through the interior and surface conductivity. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 074004	1.8	1
13	Special issue on multiprobe techniques. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 490301	1.8	1
12	Nanoscale tip positioning with a multi-tip scanning tunneling microscope using topography images.. <i>Review of Scientific Instruments</i> , 2022 , 93, 013702	1.7	0
11	Strong and Weak 3D Topological Insulators Probed by Surface Science Methods. <i>Physica Status Solidi (B): Basic Research</i> , 2021 , 258, 2000060	1.3	0
10	Quartz Sensors in Atomic Force Microscopy. <i>Nanoscience and Technology</i> , 2019 , 301-307	0.6	
9	Formation of pits during growth of Si/Ge nanostructures. <i>Surface Science</i> , 2010 , 604, 424-427	1.8	
8	Kinetic and strain-driven growth phenomena on Si(001). <i>Physica Status Solidi A</i> , 2004 , 201, 324-328		
7	Fabrication of two-dimensional Si/Ge nanowires and nanorings. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 794, 66		
6	Growth and Decay of Germanium Islands on Silicon Studied by High Temperature STM. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 583, 155		
5	Halbleiterwachstum live abgebildet. <i>Physik in Unserer Zeit</i> , 1996 , 27, 184-184	0.1	

- 4 Phonon dispersion on Au(110)EELS results compared to μ SR model and first principles calculations. *Vacuum*, **1990**, 41, 422-423 3.7
- 3 Formation of Two-Dimensional Si/Ge Nanostructures Observed by STM **2005**, 43-54
- 2 Atomic Force Microscopy Designs. *Nanoscience and Technology*, **2019**, 69-86 0.6
- 1 Formation of Nanostructures by Self-Assembly305