Sebastian Koelling

List of Publications by Year
in descending order

54 papers	2,422 citations	257450 24 h-index	197818 49 g-index
61 all docs	61 docs citations	61 times ranked	3148 citing authors

#	Article	IF	Citations
1	Direct-bandgap emission from hexagonal Ge and SiGe alloys. Nature, 2020, 580, 205-209.	27.8	231
2	Ballistic superconductivity in semiconductor nanowires. Nature Communications, 2017, 8, 16025.	12.8	181
3	Hexagonal Silicon Realized. Nano Letters, 2015, 15, 5855-5860.	9.1	142
4	Hard Superconducting Gap in InSb Nanowires. Nano Letters, 2017, 17, 2690-2696.	9.1	103
5	Growth and Optical Properties of Direct Band Gap Ge/Ge_{0.87}Sn_{0.13} Core/Shell Nanowire Arrays. Nano Letters, 2017, 17, 1538-1544.	9.1	72
6	Single-Crystalline Hexagonal Siliconâ€“Germanium. Nano Letters, 2017, 17, 85-90.	9.1	59
7	Boosting Hole Mobility in Coherently Strained [110]-Oriented Geâ€“Si Coreâ€“Shell Nanowires. Nano Letters, 2017, 17, 2259-2264.	9.1	51
8	Selective-area chemical beam epitaxy of in-plane InAs one-dimensional channels grown on InP(001), InP(111)B, and InP(011) surfaces. Physical Review Materials, 2019, 3, .	2.4	48
9	Interaction of precipitation with austenite-to-ferrite phase transformation in vanadium micro-alloyed steels. Acta Materialia, 2019, 181, 10-24.	7.9	41
10	Observation of Conductance Quantization in InSb Nanowire Networks. Nano Letters, 2017, 17, 6511-6515.	9.1	37
11	In-plane selective area InSbâ€“Al nanowire quantum networks. Communications Physics, 2020, 3, .	5.3	37
12	Suppressing Segregation in Highly Phosphorus Doped Silicon Monolayers. ACS Nano, 2015, 9, 12537-12541.	14.6	36
13	Pâ€“N Junctions in Ultrathin Topological Insulator Sb₂Te₃/Bi₂Te₃ Heterostructures Grown by Molecular Beam Epitaxy. Crystal Growth and Design, 2016, 16, 2057-2061.	3.0	36
14	High Mobility Stemless InSb Nanowires. Nano Letters, 2019, 19, 3575-3582.	9.1	36
15	Atom-by-Atom Analysis of Semiconductor Nanowires with Parts Per Million Sensitivity. Nano Letters, 2017, 17, 599-605.	9.1	35
16	High-purity 3D nano-objects grown by focused-electron-beam induced deposition. Nanotechnology, 2016, 27, 355301.	2.6	34
17	High depth resolution analysis of Si/SiGe multilayers with the atom probe. Applied Physics Letters, 2009, 95, .	3.3	33
18	Phonon Engineering in Twinning Superlattice Nanowires. Nano Letters, 2019, 19, 4702-4711.	9.1	31

#	Article	IF	Citations
19	Ballistic Phonons in Ultrathin Nanowires. Nano Letters, 2020, 20, 2703-2709.	9.1	30
20	Critical strain for Sn incorporation into spontaneously graded Ge/GeSn core/shell nanowires. Nanoscale, 2018, 10, 7250-7256.	5.6	28
21	High-Bandwidth Extended-SWIR GeSn Photodetectors on Silicon Achieving Ultrafast Broadband Spectroscopic Response. ACS Photonics, 2022, 9, 1425-1433.	6.6	28
22	Bottomâ€Up Grown 2D InSb Nanostructures. Advanced Materials, 2019, 31, e1808181.	21.0	26
23	Martensite crystallography and chemistry in dual phase and fully martensitic steels. Materials Characterization, 2018, 139, 411-420.	4.4	22
24	Spinâ€“Orbit Interaction and Induced Superconductivity in a One-Dimensional Hole Gas. Nano Letters, 2018, 18, 6483-6488.	9.1	22
25	Strain engineering in Ge/GeSn core/shell nanowires. Applied Physics Letters, 2019, 115, .	3.3	22
26	Failure mechanisms of silicon-based atom-probe tips. Ultramicroscopy, 2009, 109, 486-491.	1.9	21
27	Atomic Layer Deposition of In₂O₃:H from InCp and H₂O/O₂: Microstructure and Isotope Labeling Studies. ACS Applied Materials & Interfaces, 2017, 9, 592-601.	8.0	21
28	Topography and structure of ultrathin topological insulator Sb2Te3 films on Si(111) grown by means of molecular beam epitaxy. Journal of Crystal Growth, 2016, 453, 158-162.	1.5	20
29	Hard Superconducting Gap and Diffusion-Induced Superconductors in Geâ€“Si Nanowires. Nano Letters, 2020, 20, 122-130.	9.1	18
30	Micro and Nanoscale Characterization of Complex Multilayer-Structured White Etching Layer in Rails. Metals, 2018, 8, 749.	2.3	17
31	Kinetic Control of Morphology and Composition in Ge/GeSn Core/Shell Nanowires. ACS Nano, 2020, 14, 2445-2455.	14.6	17
32	Te incorporation and activation as <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -type dopant in self-catalyzed GaAs nanowires. Physical Review Materials, 2019, 3, .	2.4	17
33	True Atomic-Scale Imaging in Three Dimensions: A Review of the Rebirth of Field-Ion Microscopy. Microscopy and Microanalysis, 2017, 23, 210-220.	0.4	16
34	Efficient Green Emission from Wurtzite Al_xIn_{1â€“x}P Nanowires. Nano Letters, 2018, 18, 3543-3549.	9.1	16
35	Growth of PbTe nanowires by molecular beam epitaxy. Materials for Quantum Technology, 2022, 2, 015001.	3.1	13
36	Evolution of the precipitate composition during annealing of vanadium micro-alloyed steels by in-situ SANS. Acta Materialia, 2020, 201, 217-230.	7.9	12

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37	Highly Tensile-Strained Self-Assembled Ge Quantum Dots on InP Substrates for Integrated Light Sources. ACS Applied Nano Materials, 2021, 4, 897-906.	5.0	12
38	BenchIT â€" Performance measurement and comparison for scientific applications. Advances in Parallel Computing, 2004, 13, 501-508.	0.3	10
39	Conductive diamond probes with electroplated holder chips. Microelectronic Engineering, 2007, 84, 1178-1181.	2.4	10
40	Sponge-like Si-SiO₂ nanocompositeâ€"Morphology studies of spinodally decomposed silicon-rich oxide. Applied Physics Letters, 2013, 103, 131911.	3.3	10
41	Influence of growth conditions on the performance of InP nanowire solar cells. Nanotechnology, 2016, 27, 454003.	2.6	10
42	Editorial Expression of Concern: Quantized Majorana conductance. Nature, 2020, 581, E4-E4.	27.8	10
43	Composition analysis and transition energies of ultrathin Sn-rich GeSn quantum wells. Physical Review Materials, 2020, 4, .	2.4	10
44	InSb Nanowires with Built-In Ga_xIn_{1â€"x}Sb Tunnel Barriers for Majorana Devices. Nano Letters, 2017, 17, 721-727.	9.1	9
45	Extended-SWIR Photodetection in All-Group IV Core/Shell Nanowires. ACS Photonics, 2022, 9, 914-921.	6.6	8
46	Absence of Quantum-Confined Stark Effect in GaN Quantum Disks Embedded in (Al,Ga)N Nanowires Grown by Molecular Beam Epitaxy. Nano Letters, 2019, 19, 5938-5948.	9.1	7
47	Electronic Structure and Epitaxy of CdTe Shells on InSb Nanowires. Advanced Science, 2022, 9, e2105722.	11.2	7
48	(Invited) Probing Semiconductor Heterostructures from the Atomic to the Micrometer Scale. ECS Transactions, 2020, 98, 447-455.	0.5	6
49	Prismatic Ge-rich inclusions in the hexagonal SiGe shell of GaPâ€"Siâ€"SiGe nanowires by controlled faceting. Nanoscale, 2021, 13, 9436-9445.	5.6	1
50	Te-doped selective-area grown InAs nanowires for superconducting hybrid devices. Physical Review Materials, 2022, 6, .	2.4	1
51	Exploration of Doped Semiconductors at the Atomic Scale. Microscopy and Microanalysis, 2017, 23, 670-671.	0.4	0
52	Design and Characterization of a Sharp GaAs/Zn(Mn)Se Heterovalent Interface: A Sub-Nanometer Scale View. Nanomaterials, 2020, 10, 1315.	4.1	0
53	(Invited) Probing Semiconductor Heterostructures from the Atomic to the Micrometer Scale. ECS Meeting Abstracts, 2020, MA2020-02, 1770-1770.	0.0	0
54	(Invited) Engineering SiGeSn Semiconductors for MIR and THz Opto-electronic Devices. ECS Meeting Abstracts, 2020, MA2020-02, 1718-1718.	0.0	0