Gregor KoblmÃ¼ller

List of Publications by Year
in descending order

116	4,046	76196	133063
papers	citations	40 h-index	59 g-index

118	118	118	3822
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Heat-Mode Excitation in a Proximity Superconductor. Nanomaterials, 2022, 12, 1461.	1.9	2
2	Growth dynamics and compositional structure in periodic InAsSb nanowire arrays on Si (111) grown by selective area molecular beam epitaxy. Nanotechnology, 2021, 32, 135604.	1.3	10
3	Low-threshold strain-compensated InGaAs/(In,Al)GaAs multi-quantum well nanowire lasers emitting near 1.3 Î¼m at room temperature. Applied Physics Letters, 2021, 118, .	1.5	18
4	Ultrafast electron cycloids driven by the transverse spin of a surface acoustic wave. Science Advances, 2021, 7, .	4.7	14
5	Charge-neutral nonlocal response in superconductor-InAs nanowire hybrid devices. Semiconductor Science and Technology, 2021, 36, 09LT04.	1.0	9
6	High-Dimensional Acousto-optoelectric Correlation Spectroscopy Reveals Coupled Carrier Dynamics in Polytypic Nanowires. Physical Review Applied, 2021, 16, .	1.5	3
7	Sub-nanosecond acousto-electric carrier redistribution dynamics and transport in polytypic GaAs nanowires. Nanotechnology, 2021, 32, .	1.3	3
8	Epitaxial type-I and type-II InAs-AlAsSb coreâ€“shell nanowires on silicon. Applied Physics Letters, 2021, 119, .	1.5	5
9	Purcell enhanced coupling of nanowire quantum emitters to silicon photonic waveguides. Optics Express, 2021, 29, 43068.	1.7	6
10	Quantumâ€Confinementâ€Enhanced Thermoelectric Properties in Modulationâ€Doped GaAsâ€“AlGaAs Coreâ€“Shell Nanowires. Advanced Materials, 2020, 32, e1905458.	11.1	19
11	Ultrathin catalyst-free InAs nanowires on silicon with distinct 1D sub-band transport properties. Nanoscale, 2020, 12, 21857-21868.	2.8	17
12	GaN thermal transport limited by the interplay of dislocations and size effects. Physical Review B, 2020, 102, .	1.1	26
13	Contact Architecture Controls Conductance in Monolayer Devices. ACS Applied Materials & Interfaces, 2020, 12, 28446-28450.	4.0	1
14	Demonstration of n-type behavior in catalyst-free Si-doped GaAs nanowires grown by molecular beam epitaxy. Applied Physics Letters, 2020, 116, .	1.5	14
15	Pulsed THz emission from wurtzite phase catalyst-free InAs nanowires. Journal Physics D: Applied Physics, 2020, 53, 19LT01.	1.3	3
16	Pulsed THz emission from wurtzite phase catalyst-free InAs nanowires. , 2020, , .		0
17	One-step transfer printing of patterned nanogap electrodes. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 040602.	0.6	1
18	Optical absorption of composition-tunable InGaAs nanowire arrays. Nanotechnology, 2019, 30, 495703.	1.3	11

#	Article	IF	Citations
19	Optimized waveguide coupling of an integrated III-V nanowire laser on silicon. Journal of Applied Physics, 2019, 125, .	1.1	10
20	Breakdown of Corner States and Carrier Localization by Monolayer Fluctuations in Radial Nanowire Quantum Wells. Nano Letters, 2019, 19, 3336-3343.	4.5	14
21	Nanoscale mapping of carrier recombination in GaAs/AlGaAs core-multishell nanowires by cathodoluminescence imaging in a scanning transmission electron microscope. Applied Physics Letters, 2019, 115, 243102.	1.5	4
22	Dislocation-induced thermal transport anisotropy in single-crystal group-III nitride films. Nature Materials, 2019, 18, 136-140.	13.3	76
23	Contactless Optical Characterization of Carrier Dynamics in Free-Standing InAs-InAlAs Coreâ€“Shell Nanowires on Silicon. Nano Letters, 2019, 19, 990-996.	4.5	16
24	Tuning Lasing Emission towards Long Wavelengths in GaAs-(In,Al)GaAs Core-Multishell Nanowires. , 2019, , .		0
25	Waveguide Coupling of an Integrated Nanowire Laser on Silicon with Enhanced End-Facet Reflectivity. , 2019, , .		0
26	Carrier concentration dependent photoluminescence properties of Si-doped InAs nanowires. Applied Physics Letters, 2018, 112, .	1.5	14
27	Correlated Chemical and Electrically Active Dopant Analysis in Catalyst-Free Si-Doped InAs Nanowires. ACS Nano, 2018, 12, 1603-1610.	7.3	13
28	Measuring Three-Dimensional Strain and Structural Defects in a Single InGaAs Nanowire Using Coherent X-ray Multiangle Bragg Projection Ptychography. Nano Letters, 2018, 18, 811-819.	4.5	80
29	Carrier trapping and activation at short-period wurtzite/zinc-blende stacking sequences in polytypic InAs nanowires. Physical Review B, 2018, 97, .	1.1	10
30	Tuning Lasing Emission toward Long Wavelengths in GaAs-(In,Al)GaAs Coreâ€“Multishell Nanowires. Nano Letters, 2018, 18, 6292-6300.	4.5	43
31	He-Ion Microscopy as a High-Resolution Probe for Complex Quantum Heterostructures in Coreâ€“Shell Nanowires. Nano Letters, 2018, 18, 3911-3919.	4.5	13
32	Noise Insights into Electronic Transport. JETP Letters, 2018, 108, 71-83.	0.4	9
33	Connecting Composition-Driven Faceting with Facet-Driven Composition Modulation in GaAsâ€“AlGaAs Coreâ€“Shell Nanowires. Nano Letters, 2018, 18, 5179-5185.	4.5	13
34	Enhanced THz emission efficiency of composition-tunable InGaAs nanowire arrays. Applied Physics Letters, 2017, 110, .	1.5	8
35	GaAsâ€“AlGaAs coreâ€“shell nanowire lasers on silicon: invited review. Semiconductor Science and Technology, 2017, 32, 053001.	1.0	48
36	Nanometer-scale Resolved Cathodoluminescence Imaging: New Insights into GaAs/AlGaAs Core-shell Nanowire Lasers. Microscopy and Microanalysis, 2017, 23, 1470-1471.	0.2	0

#	Article	IF	Citations
37	Direct Coupling of Coherent Emission from Site-Selectively Grown IIIâ€“V Nanowire Lasers into Proximal Silicon Waveguides. ACS Photonics, 2017, 4, 2537-2543.	3.2	34
38	Quantum Transport and Sub-Band Structure of Modulation-Doped GaAs/AlAs Coreâ€“Superlattice Nanowires. Nano Letters, 2017, 17, 4886-4893.	4.5	18
39	Proximity effect and interface transparency in Al/InAs-nanowire/Al diffusive junctions. Semiconductor Science and Technology, 2017, 32, 094007.	1.0	6
40	Long-term mutual phase locking of picosecond pulse pairs generated by a semiconductor nanowire laser. Nature Communications, 2017, 8, 15521.	5.8	14
41	Widely tunable alloy composition and crystal structure in catalyst-free InGaAs nanowire arrays grown by selective area molecular beam epitaxy. Applied Physics Letters, 2016, 108, .	1.5	27
42	Suppression of alloy fluctuations in GaAs-AlGaAs core-shell nanowires. Applied Physics Letters, 2016, 109, .	1.5	17
43	Continuous wave lasing from individual GaAs-AlGaAs core-shell nanowires. Applied Physics Letters, 2016, 108, .	1.5	24
44	Thermoelectric properties of In-rich InGaN and InN/InGaN superlattices. AIP Advances, 2016, 6, 045216.	0.6	26
45	Coaxial GaAs-AlGaAs core-multishell nanowire lasers with epitaxial gain control. Applied Physics Letters, 2016, 108, .	1.5	59
46	The Native Material Limit of Electron and Hole Mobilities in Semiconductor Nanowires. ACS Nano, 2016, 10, 4942-4953.	7.3	26
47	Direct Measurements of Fermi Level Pinning at the Surface of Intrinsically n-Type InGaAs Nanowires. Nano Letters, 2016, 16, 5135-5142.	4.5	60
48	Microscopic nature of crystal phase quantum dots in ultrathin GaAs nanowires by nanoscale luminescence characterization. New Journal of Physics, 2016, 18, 063009.	1.2	12
49	Monolithically Integrated High-Î² Nanowire Lasers on Silicon. Nano Letters, 2016, 16, 152-156.	4.5	112
50	Tunable Quantum Confinement in Ultrathin, Optically Active Semiconductor Nanowires Via Reverseâ€Reaction Growth. Advanced Materials, 2015, 27, 2195-2202.	11.1	50
51	Alloy Fluctuations Act as Quantum Dot-like Emitters in GaAs-AlGaAs Coreâ€“Shell Nanowires. ACS Nano, 2015, 9, 8335-8343.	7.3	65
52	Lattice-Matched InGaAsâ€“InAlAs Coreâ€“Shell Nanowires with Improved Luminescence and Photoresponse Properties. Nano Letters, 2015, 15, 3533-3540.	4.5	46
53	Demonstration of Confined Electron Gas and Steep-Slope Behavior in Delta-Doped GaAs-AlGaAs Coreâ€“Shell Nanowire Transistors. Nano Letters, 2015, 15, 3295-3302.	4.5	60
54	Crystal Phase Quantum Dots in the Ultrathin Core of GaAsâ€“AlGaAs Coreâ€“Shell Nanowires. Nano Letters, 2015, 15, 7544-7551.	4.5	47

#	Article	IF	Citations
55	Photocurrents in a Single InAs Nanowire/Silicon Heterojunction. ACS Nano, 2015, 9, 9849-9858.	7.3	26
56	Ultrafast Photodetection in the Quantum Wells of Single AlGaAs/GaAs-Based Nanowires. Nano Letters, 2015, 15, 6869-6874.	4.5	35
57	Growth and properties of InGaAs nanowires on silicon. Physica Status Solidi - Rapid Research Letters, 2014, 8, 11-30.	1.2	68
58	Radio frequency occupancy state control of a single nanowire quantum dot. Journal Physics D: Applied Physics, 2014, 47, 394011.	1.3	22
59	Pressure dependence of Raman spectrum in InAs nanowires. Journal of Physics Condensed Matter, 2014, 26, 235301.	0.7	6
60	Trade-off between morphology, extended defects, and compositional fluctuation induced carrier localization in high In-content InGaN films. Journal of Applied Physics, 2014, 116, .	1.1	17
61	Strong Terahertz Emission and Its Origin from Catalyst-Free InAs Nanowire Arrays. Nano Letters, 2014, 14, 1508-1514.	4.5	37
62	Effect of interwire separation on growth kinetics and properties of site-selective GaAs nanowires. Applied Physics Letters, 2014, 105, .	1.5	34
63	Dynamic Acoustic Control of Individual Optically Active Quantum Dot-like Emission Centers in Heterostructure Nanowires. Nano Letters, 2014, 14, 2256-2264.	4.5	64
64	Lasing from individual GaAs-AlGaAs core-shell nanowires up to room temperature. Nature Communications, 2013, 4, 2931.	5.8	207
65	Enhanced Luminescence Properties of InAsâ€“InAsP Coreâ€“Shell Nanowires. Nano Letters, 2013, 13, 6070-6077.	4.5	73
66	High Mobility One- and Two-Dimensional Electron Systems in Nanowire-Based Quantum Heterostructures. Nano Letters, 2013, 13, 6189-6196.	4.5	56
67	Spontaneous Alloy Composition Ordering in GaAs-AlGaAs Coreâ€“Shell Nanowires. Nano Letters, 2013, 13, 1522-1527.	4.5	116
68	Role of microstructure on optical properties in high-uniformity In<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Ga<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>As nanowire arrays: Evidence of a wider wurtzite band gap. Physical Review B, 2013, 87, .	1.1	46
69	E₁(A) Electronic Band Gap in Wurtzite InAs Nanowires Studied by Resonant Raman Scattering. Nano Letters, 2013, 13, 3011-3016.	4.5	32
70	Acoustically regulated carrier injection into a single optically active quantum dot. Physical Review B, 2013, 88, .	1.1	41
71	Probing the trapping and thermal activation dynamics of excitons at single twin defects in GaAsâ€“AlGaAs coreâ€“shell nanowires. New Journal of Physics, 2013, 15, 113032.	1.2	30
72	Ultrafast photocurrents and THz generation in single InAsâ€nanowires. Annalen Der Physik, 2013, 525, 180-188.	0.9	27

#	Article	IF	Citations
73	Reduced threading dislocation densities in high-T/N-rich grown InN films by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2013, 102, 051916.	1.5	11
74	N-type conductivity and properties of carbon-doped InN(0001) films grown by molecular beam epitaxy. Journal of Applied Physics, 2013, 113, 033501.	1.1	9
75	Rate-limiting mechanisms in high-temperature growth of catalyst-free InAs nanowires with large thermal stability. Nanotechnology, 2012, 23, 235602.	1.3	37
76	Size, composition, and doping effects on In(Ga)As nanowire/Si tunnel diodes probed by conductive atomic force microscopy. Applied Physics Letters, 2012, 101, 233102.	1.5	43
77	Optimization of AlAs/AlGaAs quantum well heterostructures on on-axis and misoriented GaAs (111)B. Applied Physics Letters, 2012, 100, 192106.	1.5	14
78	High compositional homogeneity in In-rich InGaAs nanowire arrays on nanoimprinted SiO₂/Si (111). Applied Physics Letters, 2012, 101, 043116.	1.5	54
79	Surface acoustic wave controlled charge dynamics in a thin InGaAs quantum well. JETP Letters, 2012, 95, 575-580.	0.4	16
80	Diameter dependent optical emission properties of InAs nanowires grown on Si. Applied Physics Letters, 2012, 101, 053103.	1.5	36
81	Directional and Dynamic Modulation of the Optical Emission of an Individual GaAs Nanowire Using Surface Acoustic Waves. Nano Letters, 2011, 11, 1512-1517.	4.5	56
82	Absence of vapor-liquid-solid growth during molecular beam epitaxy of self-induced InAs nanowires on Si. Applied Physics Letters, 2011, 98, 123114.	1.5	69
83	Direct Observation of a Noncatalytic Growth Regime for GaAs Nanowires. Nano Letters, 2011, 11, 3848-3854.	4.5	119
84	Effect of charged dislocation scattering on electrical and electrothermal transport in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi></mml:math>-type InN. Physical Review B, 2011, 84, .	1.1	59
85	Nano Antenna Array for Terahertz Detection. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 2751-2757.	2.9	42
86	Effects of stacking variations on the lattice dynamics of InAs nanowires. Physical Review B, 2011, 84, .	1.1	39
87	Surface, bulk, and interface electronic properties of nonpolar InN. Applied Physics Letters, 2010, 97, .	1.5	30
88	Low defect-mediated reverse-bias leakage in (0001) GaN via high-temperature molecular beam epitaxy. Applied Physics Letters, 2010, 96, .	1.5	35
89	Thermal conductivity of GaAs nanowires studied by micro-Raman spectroscopy combined with laser heating. Applied Physics Letters, 2010, 97, .	1.5	96
90	Hole transport and photoluminescence in Mg-doped InN. Journal of Applied Physics, 2010, 107, .	1.1	67

#	Article	IF	Citations
91	Evaluation of threading dislocation densities in In- and N-face InN. Journal of Applied Physics, 2010, 107, .	1.1	66
92	In vacancies in InN grown by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2010, 97, 251907.	1.5	20
93	Self-induced growth of vertical free-standing InAs nanowires on Si(111) by molecular beam epitaxy. Nanotechnology, 2010, 21, 365602.	1.3	113
94	Influence of Ga/N ratio on morphology, vacancies, and electrical transport in GaN grown by molecular beam epitaxy at high temperature. Applied Physics Letters, 2010, 97, 191915.	1.5	39
95	Growth kinetics in position-controlled and catalyst-free InAs nanowire arrays on Si(111) grown by selective area molecular beam epitaxy. Journal of Applied Physics, 2010, 108, .	1.1	141
96	The role of threading dislocations and unintentionally incorporated impurities on the bulk electron conductivity of In-face InN. Applied Physics Letters, 2009, 95, 022103.	1.5	58
97	Surface structure and chemical states of a-plane and c-plane InN films. Applied Physics Letters, 2009, 95, .	1.5	46
98	Electrical and electrothermal transport in InN: The roles of defects. Physica B: Condensed Matter, 2009, 404, 4862-4865.	1.3	11
99	Effect of MBE Growth Conditions on Multiple Electron Transport in InN. Journal of Electronic Materials, 2008, 37, 593-596.	1.0	12
100	Intensity-dependent photoluminescence studies of the electric field in N-face and In-face InN/InGaN multiple quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1846-1848.	0.8	3
101	Multiple carrier transport in Nâ€face indium nitride. Physica Status Solidi (B): Basic Research, 2008, 245, 907-909.	0.7	5
102	Strain relaxation dependent island nucleation rates during the Stranskiâ€“Krastanow growth of GaN on AlN by molecular beam epitaxy. Applied Physics Letters, 2008, 93, 243105.	1.5	10
103	INDIUM NITRIDE: A NEW MATERIAL FOR HIGH EFFICIENCY, COMPACT, 1550nm LASER-BASED TERAHERTZ SOURCES IN CHEMICAL AND BIOLOGICAL DETECTION. International Journal of High Speed Electronics and Systems, 2008, 18, 3-9.	0.3	1
104	Molecular beam epitaxy and structural anisotropy of m-plane InN grown on free-standing GaN. Applied Physics Letters, 2008, 93, 171902.	1.5	38
105	Influence of growth conditions and polarity on interface-related electron density in InN. Journal of Applied Physics, 2008, 104, .	1.1	15
106	In situ investigation of growth modes during plasma-assisted molecular beam epitaxy of (0001) GaN. Applied Physics Letters, 2007, 91, .	1.5	87
107	High electron mobility GaN grown under N-rich conditions by plasma-assisted molecular beam epitaxy. Applied Physics Letters, 2007, 91, .	1.5	59
108	Optimization of the surface and structural quality of N-face InN grown by molecular beam epitaxy. Applied Physics Letters, 2006, 89, 071902.	1.5	103

#	Article	IF	Citations
109	Excitation wavelength dependence of terahertz emission from InN and InAs. Applied Physics Letters, 2006, 89, 141115.	1.5	81
110	In situ characterization of GaN quantum dot growth with reflection high-energy electron diffraction and line-of-sight mass spectrometry. Journal of Applied Physics, 2006, 99, 124909.	1.1	6
111	Characterisation of Multiple Carrier Transport in Indium Nitride Grown by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2006, 45, L1090-L1092.	0.8	43
112	Quantification of Ga surface coverages and their desorption kinetics on GaN (0001) and (000-1) surfaces. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2178-2182.	0.8	3
113	Ga Adlayer Governed Surface Defect Evolution of (0001)GaN Films Grown by Plasma-Assisted Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 2005, 44, L906-L908.	0.8	50
114	Delayed nucleation during molecular-beam epitaxial growth of GaN observed by line-of-sight quadrupole mass spectrometry. Applied Physics Letters, 2002, 80, 2281-2283.	1.5	23
115	Nucleation Phenomena during Molecular Beam Epitaxy of GaN Observed by Line-of-Sight Quadrupole Mass Spectrometry. Physica Status Solidi A, 2002, 194, 515-519.	1.7	5
116	Noise Insights into Electronic Transport. , 0, .		1