

# Heike Riel

## List of Publications by Year in descending order

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56  
papers

6,394  
citations

117625

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197818

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57  
all docs

57  
docs citations

57  
times ranked

6865  
citing authors

#	ARTICLE	IF	CITATIONS
1	Semiconductor Epitaxy in Superconducting Templates. Nano Letters, 2021, 21, 9922-9929.	9.1	2
2	Transition to the quantum hall regime in InAs nanowire cross-junctions. Semiconductor Science and Technology, 2019, 34, 035028.	2.0	4
3	Facet-selective group-III incorporation in InGaAs template assisted selective epitaxy. Nanotechnology, 2019, 30, 084004.	2.6	22
4	III-V Vertical Nanowires Grown on Si by Template-assisted Selective Epitaxy for Tandem Solar Cells. , 2019, , .		0
5	Towards Nanowire Tandem Junction Solar Cells on Silicon. IEEE Journal of Photovoltaics, 2018, 8, 733-740.	2.5	53
6	Room-Temperature Lasing from Monolithically Integrated GaAs Microdisks on Silicon. ACS Nano, 2018, 12, 2169-2175.	14.6	59
7	Dopant-Induced Modifications of Ga <sub>x</sub> In <sub>(1-x)</sub> P Nanowire-Based p-n Junctions Monolithically Integrated on Si(111). ACS Applied Materials & Interfaces, 2018, 10, 32588-32596.	8.0	18
8	Combined scanning probe electronic and thermal characterization of an indium arsenide nanowire. Beilstein Journal of Nanotechnology, 2018, 9, 129-136.	2.8	7
9	High-Mobility GaSb Nanostructures Cointegrated with InAs on Si. ACS Nano, 2017, 11, 2554-2560.	14.6	56
10	How non-ideality effects deteriorate the performance of tunnel FETs. , 2017, , .		1
11	Ballistic One-Dimensional InAs Nanowire Cross-Junction Interconnects. Nano Letters, 2017, 17, 2596-2602.	9.1	43
12	Observation of Twin-free GaAs Nanowire Growth Using Template-Assisted Selective Epitaxy. Crystal Growth and Design, 2017, 17, 6297-6302.	3.0	27
13	Integrated III-V nanoelectronic devices on Si. , 2017, , .		3
14	Monolithically integrated III-V gain material on virtual substrates on Si using template-assisted selective epitaxy. , 2017, , .		1
15	Monolithic integration of III-V nanostructures for electronic and photonic applications. , 2017, , .		1
16	Nanoscale thermometry by scanning thermal microscopy. Review of Scientific Instruments, 2016, 87, 074902.	1.3	39
17	Fingerprinting Electronic Molecular Complexes in Liquid. Scientific Reports, 2016, 6, 19009.	3.3	8
18	III-V-based hetero tunnel FETs: A simulation study with focus on non-ideality effects. , 2016, , .		14

#	ARTICLE	IF	CITATIONS
19	Temperature mapping of operating nanoscale devices by scanning probe thermometry. Nature Communications, 2016, 7, 10874.	12.8	172
20	Lateral InAs/Si p-Type Tunnel FETs Integrated on Si—Part 1: Experimental Devices. IEEE Transactions on Electron Devices, 2016, 63, 4233-4239.	3.0	35
21	A robust molecular probe for Å...ngstrom-scale analytics in liquids. Nature Communications, 2016, 7, 12403.	12.8	4
22	Lateral InAs/Si p-Type Tunnel FETs Integrated on Si—Part 2: Simulation Study of the Impact of Interface Traps. IEEE Transactions on Electron Devices, 2016, 63, 4240-4247.	3.0	66
23	III&#x2013;V device integration on Si using template-assisted selective epitaxy. , 2015, , .		0
24	Kelvin probe force microscopy for local characterisation of active nanoelectronic devices. Beilstein Journal of Nanotechnology, 2015, 6, 2193-2206.	2.8	32
25	Vertical InAs-Si Gate-All-Around Tunnel FETs Integrated on Si Using Selective Epitaxy in Nanotube Templates. IEEE Journal of the Electron Devices Society, 2015, 3, 176-183.	2.1	104
26	Mechanisms of template-assisted selective epitaxy of InAs nanowires on Si. Journal of Applied Physics, 2015, 117, .	2.5	49
27	Using the Seebeck coefficient to determine charge carrier concentration, mobility, and relaxation time in InAs nanowires. Applied Physics Letters, 2014, 104, .	3.3	44
28	III&#x2013;V compound semiconductor transistors&#x2013;from planar to nanowire structures. MRS Bulletin, 2014, 39, 668-677.	3.5	251
29	High-Conductive Organometallic Molecular Wires with Delocalized Electron Systems Strongly Coupled to Metal Electrodes. Nano Letters, 2014, 14, 5932-5940.	9.1	87
30	Vertical III&#x2013;V Nanowire Device Integration on Si(100). Nano Letters, 2014, 14, 1914-1920.	9.1	143
31	Nanoelectrical analysis of single molecules and atomic-scale materials at the solid/liquid interface. Nature Materials, 2014, 13, 947-953.	27.5	28
32	Organometallic Single-Molecule Electronics: Tuning Electron Transport through X(diphosphine)<sub>2</sub>FeC<sub>4</sub>Fe(diphosphine)<sub>2</sub>X Building Blocks by Varying the Fe&#x2013;X&#x2013;Au Anchoring Scheme from Coordinative to Covalent. Journal of the American Chemical Society, 2014, 136, 14560-14569.	13.7	74
33	Selective area growth of III&#x2013;V nanowires and their heterostructures on silicon in a nanotube template: towards monolithic integration of nano-devices. Nanotechnology, 2013, 24, 225304.	2.6	45
34	Thermal Transport into Graphene through Nanoscopic Contacts. Physical Review Letters, 2013, 111, 205901.	7.8	67
35	Tunneling and Occupancy Probabilities: How Do They Affect Tunnel-FET Behavior?. IEEE Electron Device Letters, 2013, 34, 726-728.	3.9	41
36	Nanoscale Origin of Defects at Metal/Molecule Engineered Interfaces. Langmuir, 2013, 29, 1340-1345.	3.5	12

#	ARTICLE	IF	CITATIONS
37	Bonding and Electronic Transport Properties of Fullerene and Fullerene Derivatives in Break-Junction Geometries. <i>Small</i> , 2013, 9, 209-214.	10.0	22
38	Transport Properties of a Single-Molecule Diode. <i>ACS Nano</i> , 2012, 6, 4931-4939.	14.6	143
39	Silicon Nanowire Esaki Diodes. <i>Nano Letters</i> , 2012, 12, 699-703.	9.1	49
40	Quantitative Thermometry of Nanoscale Hot Spots. <i>Nano Letters</i> , 2012, 12, 596-601.	9.1	125
41	InAs nanowire growth on oxide-masked $\text{Si}^{111}$ silicon. <i>Journal of Crystal Growth</i> , 2012, 344, 31-37.	1.5	54
42	<i>in situ</i> doping of catalyst-free InAs nanowires. <i>Nanotechnology</i> , 2012, 23, 505708.	2.6	24
43	Trap-Assisted Tunneling in Si-InAs Nanowire Heterojunction Tunnel Diodes. <i>Nano Letters</i> , 2011, 11, 4195-4199.	9.1	147
44	Tunnel field-effect transistors as energy-efficient electronic switches. <i>Nature</i> , 2011, 479, 329-337.	27.8	2,448
45	A statistical approach to inelastic electron tunneling spectroscopy on fullerene-terminated molecules. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 14325.	2.8	30
46	Modular Functionalization of Electrodes by Cross-Coupling Reactions at Their Surfaces. <i>Advanced Functional Materials</i> , 2011, 21, 3706-3714.	14.9	19
47	Influence of the Anchor Group on Charge Transport through Single-Molecule Junctions. <i>ChemPhysChem</i> , 2011, 12, 1677-1682.	2.1	46
48	Donor deactivation in silicon nanostructures. <i>Nature Nanotechnology</i> , 2009, 4, 103-107.	31.5	308
49	Mapping Active Dopants in Single Silicon Nanowires Using Off-Axis Electron Holography. <i>Nano Letters</i> , 2009, 9, 3837-3843.	9.1	63
50	Charge Transport Through a Cardan-Joint Molecule. <i>Small</i> , 2008, 4, 2229-2235.	10.0	60
51	Charge Transport through Molecular Rods with Reduced $\pi$ -Conjugation. <i>ChemPhysChem</i> , 2008, 9, 2252-2258.	2.1	43
52	Toward Nanowire Electronics. <i>IEEE Transactions on Electron Devices</i> , 2008, 55, 2827-2845.	3.0	316
53	Statistical Approach to Investigating Transport through Single Molecules. <i>Physical Review Letters</i> , 2007, 98, 176807.	7.8	188
54	Fully Depleted Nanowire Field-Effect Transistor in Inversion Mode. <i>Small</i> , 2007, 3, 230-234.	10.0	67

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55	Realization of a Silicon Nanowire Vertical Surround-Gate Field-Effect Transistor. <i>Small</i> , 2006, 2, 85-88.	10.0	361
56	Reversible and Controllable Switching of a Single-Molecule Junction. <i>Small</i> , 2006, 2, 973-977.	10.0	268