

# Roberto Bergamaschini

## List of Publications by Year in descending order

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Version: 2024-02-01

45  
papers

755  
citations

516561

16  
h-index

552653

26  
g-index

45  
all docs

45  
docs citations

45  
times ranked

661  
citing authors

#	ARTICLE	IF	CITATIONS
1	Scaling Hetero-Epitaxy from Layers to Three-Dimensional Crystals. <i>Science</i> , 2012, 335, 1330-1334.	6.0	149
2	Faceting of Equilibrium and Metastable Nanostructures: A Phase-Field Model of Surface Diffusion Tackling Realistic Shapes. <i>Crystal Growth and Design</i> , 2015, 15, 2787-2794.	1.4	69
3	Self-aligned Ge and SiGe three-dimensional epitaxy on dense Si pillar arrays. <i>Surface Science Reports</i> , 2013, 68, 390-417.	3.8	43
4	Anomalous Smoothing Preceding Island Formation During Growth on Patterned Substrates. <i>Physical Review Letters</i> , 2012, 109, 156101.	2.9	34
5	Ge Crystals on Si Show Their Light. <i>Physical Review Applied</i> , 2014, 1, .	1.5	34
6	Growth kinetics and morphological analysis of homoepitaxial GaAs fins by theory and experiment. <i>Physical Review Materials</i> , 2018, 2, .	0.9	31
7	Critical strain for Sn incorporation into spontaneously graded Ge/GeSn core/shell nanowires. <i>Nanoscale</i> , 2018, 10, 7250-7256.	2.8	28
8	Engineered Coalescence by Annealing 3D Ge Microstructures into High-Quality Suspended Layers on Si. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 19219-19225.	4.0	24
9	Competition Between Kinetics and Thermodynamics During the Growth of Faceted Crystal by Phase Field Modeling. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1800518.	0.7	23
10	Strain engineering in Ge/GeSn core/shell nanowires. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	22
11	3D heteroepitaxy of mismatched semiconductors on silicon. <i>Thin Solid Films</i> , 2014, 557, 42-49.	0.8	18
12	Phase-field simulations of faceted Ge/Si-crystal arrays, merging into a suspended film. <i>Applied Surface Science</i> , 2017, 391, 33-38.	3.1	18
13	Dislocation-Free SiGe/Si Heterostructures. <i>Crystals</i> , 2018, 8, 257.	1.0	18
14	Temperature-dependent evolution of the wetting layer thickness during Ge deposition on Si(001). <i>Nanotechnology</i> , 2011, 22, 285704.	1.3	17
15	Kinetic Control of Morphology and Composition in Ge/GeSn Core/Shell Nanowires. <i>ACS Nano</i> , 2020, 14, 2445-2455.	7.3	17
16	Dynamics of pit filling in heteroepitaxy via phase-field simulations. <i>Physical Review B</i> , 2016, 94, .	1.1	16
17	Modeling the competition between elastic and plastic relaxation in semiconductor heteroepitaxy: From cyclic growth to flat films. <i>Physical Review B</i> , 2016, 94, .	1.1	16
18	(Invited) Three-Dimensional Epitaxial Si <sub>1-x</sub> Ge <sub>x</sub> , Ge and SiC Crystals on Deeply Patterned Si Substrates. <i>ECS Transactions</i> , 2014, 64, 631-648.	0.3	14

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19	Continuum modelling of semiconductor heteroepitaxy: an applied perspective. <i>Advances in Physics: X</i> , 2016, 1, 331-367.	1.5	14
20	Optimal Growth Conditions for Selective Ge Islands Positioning on Pit-Patterned Si(001). <i>Nanoscale Research Letters</i> , 2010, 5, 1873-1877.	3.1	12
21	Kinetic growth mode of epitaxial GaAs on Si(001) micro-pillars. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	12
22	Temperature-controlled coalescence during the growth of Ge crystals on deeply patterned Si substrates. <i>Journal of Crystal Growth</i> , 2016, 440, 86-95.	0.7	11
23	The interplay of morphological and compositional evolution in crystal growth: a phase-field model. <i>Philosophical Magazine</i> , 2014, 94, 2162-2169.	0.7	10
24	Reduced-Pressure Chemical Vapor Deposition Growth of Isolated Ge Crystals and Suspended Layers on Micrometric Si Pillars. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 26374-26380.	4.0	10
25	A self-ordered, body-centered tetragonal superlattice of SiGe nanodot growth by reduced pressure CVD. <i>Nanotechnology</i> , 2017, 28, 485303.	1.3	10
26	Morphological evolution of Ge/Si nano-strips driven by Rayleigh-like instability. <i>Applied Physics Letters</i> , 2018, 112, 022101.	1.5	10
27	Optically reconfigurable polarized emission in Germanium. <i>Scientific Reports</i> , 2018, 8, 11119.	1.6	9
28	Growth and Coalescence of 3C-SiC on Si(111) Micro-Pillars by a Phase-Field Approach. <i>Materials</i> , 2019, 12, 3223.	1.3	9
29	Growth of thick [111]-oriented 3C-SiC films on T-shaped Si micropillars. <i>Materials and Design</i> , 2021, 208, 109833.	3.3	9
30	Selective Area Epitaxy of GaAs/Ge/Si Nanomembranes: A Morphological Study. <i>Crystals</i> , 2020, 10, 57.	1.0	8
31	Doubling the mobility of InAs/InGaAs selective area grown nanowires. <i>Physical Review Materials</i> , 2022, 6, .	0.9	8
32	Solving the critical thermal bowing in 3C-SiC/Si(111) by a tilting Si pillar architecture. <i>Journal of Applied Physics</i> , 2018, 123, 185703.	1.1	6
33	Sunburst pattern by kinetic segregation in core-shell nanowires: A phase-field study. <i>Applied Surface Science</i> , 2020, 517, 146056.	3.1	6
34	Epitaxial Ge-crystal arrays for X-ray detection. <i>Journal of Instrumentation</i> , 2014, 9, C03019-C03019.	0.5	5
35	Faceting of Si and Ge crystals grown on deeply patterned Si substrates in the kinetic regime: phase-field modelling and experiments. <i>Scientific Reports</i> , 2021, 11, 18825.	1.6	4
36	A Structural Characterization of GaAs MBE Grown on Si Pillars. <i>Acta Physica Polonica A</i> , 2014, 125, 986-990.	0.2	3

#	ARTICLE	IF	CITATIONS
37	Reentrant Behavior of the Density vs. Temperature of Indium Islands on GaAs(111)A. <i>Nanomaterials</i> , 2020, 10, 1512.	1.9	2
38	Self-Assembly of Nanovoids in Si Microcrystals Epitaxially Grown on Deeply Patterned Substrates. <i>Crystal Growth and Design</i> , 2020, 20, 2914-2920.	1.4	2
39	Three dimensional heteroepitaxy: A new path for monolithically integrating mismatched materials with silicon. , 2012, , .		1
40	Motion of crystalline inclusions by interface diffusion in the proximity of free surfaces. <i>Journal of Nanoparticle Research</i> , 2019, 21, 1.	0.8	1
41	Prismatic Ge-rich inclusions in the hexagonal SiGe shell of GaPâ€“Siâ€“SiGe nanowires by controlled faceting. <i>Nanoscale</i> , 2021, 13, 9436-9445.	2.8	1
42	Phase-field modeling of the morphological evolution of ringlike structures during growth: Thermodynamics, kinetics, and template effects. <i>Physical Review Materials</i> , 2022, 6, .	0.9	1
43	Space-Filling Arrays of Three-Dimensional Epitaxial Ge and Si <sub>1-x</sub> Gex Crystals. , 2012, , .		0
44	Slip trace-induced terrace erosion. <i>Applied Surface Science</i> , 2019, 466, 454-458.	3.1	0
45	Semiconductor Heteroepitaxy. <i>Crystals</i> , 2021, 11, 229.	1.0	0