## Moritz Brehm

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Advanced preparation of plan-view specimens on a MEMS chip for in situ TEM heating experiments. MRS Bulletin, 2022, 47, 359-370.	3.5	12
2	On-chip infrared photonics with Si-Ge-heterostructures: What is next?. APL Photonics, 2022, 7, .	5.7	18
3	Relaxation Delay of Geâ€Rich Epitaxial SiGe Films on Si(001). Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	3
4	(Invited) Light-Emitting Devices Based on Defect-Enhanced Group-IV Nanostructures. ECS Meeting Abstracts, 2022, MA2022-01, 1080-1080.	0.0	0
5	Light-Emission from Ion-Implanted Group-IV Nanostructures. Topics in Applied Physics, 2021, , 67-103.	0.8	2
6	Advanced hydrogenation process applied on Ge on Si quantum dots for enhanced light emission. Applied Physics Letters, 2021, 118, .	3.3	8
7	Light emission from direct band gap germanium containing split-interstitial defects. Physical Review B, 2021, 103, .	3.2	11
8	Photoluminescence enhancement by deterministically site-controlled, vertically stacked SiGe quantum dots. Scientific Reports, 2021, 11, 20597.	3.3	4
9	Gettering and Defect Engineering in Semiconductor Technology (GADEST 2021). Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100728.	1.8	1
10	In-Situ Annealing and Hydrogen Irradiation of Defect-Enhanced Germanium Quantum Dot Light Sources on Silicon. Crystals, 2020, 10, 351.	2.2	10
11	Thermal Stability of Defectâ€Enhanced Ge on Si Quantum Dot Luminescence upon Millisecond Flash Lamp Annealing. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900307.	1.8	9
12	Future Roads for Group-IV Defect-enhanced Quantum Dot Light-emitters for Silicon Photonics. , 2019, ,		0
13	Assessing Carrier Recombination Processes in Typeâ€II SiGe/Si(001) Quantum Dots. Annalen Der Physik, 2019, 531, 1800259.	2.4	7
14	SiGe quantum well infrared photodetectors on strained-silicon-on-insulator. Optics Express, 2019, 27, 32009.	3.4	14
15	Room-Temperature Group-IV LED Based on Defect-Enhanced Ge Quantum Dots. ACS Photonics, 2018, 5, 431-438.	6.6	30
16	Photoluminescence enhancement through vertical stacking of defect-engineered Ge on Si quantum dots. Semiconductor Science and Technology, 2017, 32, 02LT01.	2.0	19
17	Enhanced Telecom Emission from Single Group-IV Quantum Dots by Precise CMOS-Compatible Positioning in Photonic Crystal Cavities. ACS Photonics, 2017, 4, 665-673.	6.6	48
18	Site-controlled and advanced epitaxial Ge/Si quantum dots: fabrication, properties, and applications. Nanotechnology, 2017, 28, 392001.	2.6	49

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19	Free-running Sn precipitates: an efficient phase separation mechanism for metastable Ge1â^'xSnx epilayers. Scientific Reports, 2017, 7, 16114.	3.3	31
20	Laser Level Scheme of Self-Interstitials in Epitaxial Ge Dots Encapsulated in Si. Nano Letters, 2016, 16, 6802-6807.	9.1	27
21	Lasing from Glassy Ge Quantum Dots in Crystalline Si. ACS Photonics, 2016, 3, 298-303.	6.6	87
22	Optical properties of individual site-controlled Ge quantum dots. Applied Physics Letters, 2015, 106, .	3.3	16
23	Atomic structure and composition distribution in wetting layers and islands of germanium grown on silicon (001) substrates. Nanotechnology, 2015, 26, 485702.	2.6	9
24	Photoluminescence investigation of strictly ordered Ge dots grown on pit-patterned Si substrates. Nanotechnology, 2015, 26, 225202.	2.6	12
25	Evolution of epitaxial semiconductor nanodots and nanowires from supersaturated wetting layers. Chemical Society Reviews, 2015, 44, 26-39.	38.1	41
26	Evolution and coarsening of Si-rich SiGe islands epitaxially grown at high temperatures on Si(001). Microelectronic Engineering, 2014, 125, 22-27.	2.4	3
27	Recipes for the fabrication of strictly ordered Ge islands on pit-patterned Si(001) substrates. Nanotechnology, 2013, 24, 105601.	2.6	72
28	Unrolling the evolution kinetics of ordered SiGe islands via Ge surface diffusion. Physical Review B, 2013, 88, .	3.2	16
29	Misfit dislocation gettering by substrate pit-patterning in SiGe films on Si(001). Applied Physics Letters, 2012, 101, .	3.3	12
30	Morphological evolution of Ge/Si(001) quantum dot rings formed at the rim of wet-etched pits. Nanoscale Research Letters, 2012, 7, 601.	5.7	12
31	Excitation intensity dependence of photoluminescence spectra of SiGe quantum dots grown on prepatterned Si substrates: Evidence for biexcitonic transition. Physical Review B, 2012, 86, .	3.2	17
32	Anisotropic remastering for reducing feature sizes on UV nanoimprint lithography replica molds. Nanotechnology, 2012, 23, 165302.	2.6	5
33	Dislocation engineering in SiGe heteroepitaxial films on patterned Si (001) substrates. Applied Physics Letters, 2011, 98, 121908.	3.3	9
34	Ultra-steep side facets in multi-faceted SiGe/Si(001) Stranski-Krastanow islands. Nanoscale Research Letters, 2011, 6, 70.	5.7	44
35	Assessing the delay of plastic relaxation onset in SiGe islands grown on pit-patterned Si(001) substrates. Applied Physics Letters, 2011, 99, 033106.	3.3	20
36	The influence of a Si cap on self-organized SiGe islands and the underlying wetting layer. Journal of Applied Physics, 2011, 109, 123505.	2.5	39

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37	How pit facet inclination drives heteroepitaxial island positioning on patterned substrates. Physical Review B, 2011, 84, .	3.2	41
38	Microphotoluminescence and perfect ordering of SiGe islands on pit-patterned Si(001) substrates. Nanotechnology, 2011, 22, 165302.	2.6	33
39	Temperature-dependent evolution of the wetting layer thickness during Ge deposition on Si(001). Nanotechnology, 2011, 22, 285704.	2.6	17
40	UV nanoimprint lithography for the realization of large-area ordered SiGe/Si(001) island arrays. Applied Physics Letters, 2011, 98, 143101.	3.3	30
41	Excitation Intensity Driven PL Shifts of SiGe Islands on Patterned and Planar Si(001) Substrates: Evidence for Ge-rich Dots in Islands. Nanoscale Research Letters, 2010, 5, 1868-1872.	5.7	26
42	Inverted Ge islands in {111} faceted Si pits—a novel approach towards SiGe islands with higher aspect ratio. New Journal of Physics, 2010, 12, 063002.	2.9	29
43	Enhanced infrared emission from colloidal HgTe nanocrystal quantum dots on silicon-on-insulator photonic crystals. Applied Physics Letters, 2009, 95, 053107.	3.3	7
44	Key role of the wetting layer in revealing the hidden path of Ge/Si(001) Stranski-Krastanow growth onset. Physical Review B, 2009, 80, .	3.2	96
45	Combined structural and photoluminescence study of SiGe islands on Si substrates: comparison with realistic energy level calculations. New Journal of Physics, 2009, 11, 063021.	2.9	33
46	Bandstructure and photoluminescence of SiGe islands with controlled Ge concentration. Microelectronics Journal, 2008, 39, 485-488.	2.0	3
47	Quantitative determination of Ge profiles across SiGe wetting layers on Si (001). Applied Physics Letters, 2008, 93, .	3.3	28
48	Epitaxial growth of planar hutwires on siliconâ€onâ€insulator substrates. Physica Status Solidi (A) Applications and Materials Science, 0, , .	1.8	0