Mikael SyvÃ¤jÃ¤rvi

List of Publications by Year
in descending order

79 papers	1,843 citations	361045 20 h-index	301761 39 g-index
79 all docs	79 docs citations	79 times ranked	2151 citing authors

#	Article	IF	Citations
1	Towards a quantum resistance standard based on epitaxial graphene. Nature Nanotechnology, 2010, 5, 186-189.	15.6	405
2	Isolated Spin Qubits in SiC with a High-Fidelity Infrared Spin-to-Photon Interface. Physical Review X, 2017, 7, .	2.8	125
3	Growth of large area monolayer graphene on 3C-SiC and a comparison with other SiC polytypes. Carbon, 2013, 57, 477-484.	5.4	100
4	Analysis of the Formation Conditions for Large Area Epitaxial Graphene on SiC Substrates. Materials Science Forum, 0, 645-648, 565-568.	0.3	62
5	Advances in wide bandgap SiC for optoelectronics. European Physical Journal B, 2014, 87, 1.	0.6	58
6	Advancements in net-zero pertinency of lignocellulosic biomass for climate neutral energy production. Renewable and Sustainable Energy Reviews, 2022, 161, 112393.	8.2	57
7	Fluorescent SiC and its application to white light-emitting diodes. Journal of Semiconductors, 2011, 32, 013004.	2.0	51
8	A nanostructured NiO/cubic SiC pâ€“n heterojunction photoanode for enhanced solar water splitting. Journal of Materials Chemistry A, 2019, 7, 4721-4728.	5.2	50
9	Lateral Enlargement Growth Mechanism of 3C-SiC on Off-Oriented 4H-SiC Substrates. Crystal Growth and Design, 2014, 14, 6514-6520.	1.4	46
10	The influence of substrate morphology on thickness uniformity and unintentional doping of epitaxial graphene on SiC. Applied Physics Letters, 2012, 100, .	1.5	45
11	Tuning the Emission Energy of Chemically Doped Graphene Quantum Dots. Nanomaterials, 2016, 6, 198.	1.9	45
12	Donor-acceptor-pair emission characterization in N-B doped fluorescent SiC. Optical Materials Express, 2011, 1, 1439.	1.6	43
13	Cubic silicon carbide as a potential photovoltaic material. Solar Energy Materials and Solar Cells, 2016, 145, 104-108.	3.0	41
14	Single Domain 3C-SiC Growth on Off-Oriented 4H-SiC Substrates. Crystal Growth and Design, 2015, 15, 2940-2947.	1.4	38
15	Nanoporous Cubic Silicon Carbide Photoanodes for Enhanced Solar Water Splitting. ACS Nano, 2021, 15, 5502-5512.	7.3	34
16	New Approaches and Understandings in the Growth of Cubic Silicon Carbide. Materials, 2021, 14, 5348.	1.3	34
17	Atomic-Scale Tuning of Graphene/Cubic SiC Schottky Junction for Stable Low-Bias Photoelectrochemical Solar-to-Fuel Conversion. ACS Nano, 2020, 14, 4905-4915.	7.3	31
18	White Light Emission from Fluorescent SiC with Porous Surface. Scientific Reports, 2017, 7, 9798.	1.6	28

#	Article	IF	Citations
19	Surface functionalization of epitaxial graphene on SiC by ion irradiation for gas sensing application. Applied Surface Science, 2017, 403, 707-716.	3.1	24
20	Engineering and metrology of epitaxial graphene. Solid State Communications, 2011, 151, 1094-1099.	0.9	23
21	Nucleation Control of Cubic Silicon Carbide on 6H- Substrates. Crystal Growth and Design, 2012, 12, 197-204.	1.4	23
22	Wetting Properties and Interfacial Energies in Liquid Phase Growth of Î±-SiC. Materials Science Forum, 1998, 264-268, 159-162.	0.3	22
23	White light-emitting diode based on fluorescent SiC. Thin Solid Films, 2012, 522, 23-25.	0.8	21
24	A carbon fiber solder matrix composite for thermal management of microelectronic devices. Journal of Materials Chemistry C, 2014, 2, 7184-7187.	2.7	21
25	Flat-Band Electronic Structure and Interlayer Spacing Influence in Rhombohedral Four-Layer Graphene. Nano Letters, 2018, 18, 5862-5866.	4.5	20
26	Cubic SiC formation on the C-face of 6Hâ€“SiC (0001) substrates. Journal of Crystal Growth, 2012, 348, 91-96.	0.7	19
27	Broadband Antireflection and Light Extraction Enhancement in Fluorescent SiC with Nanodome Structures. Scientific Reports, 2014, 4, 4662.	1.6	18
28	Monitoring of epitaxial graphene anodization. Electrochimica Acta, 2017, 238, 91-98.	2.6	18
29	Broadband and omnidirectional light harvesting enhancement of fluorescent SiC. Optics Express, 2012, 20, 7575.	1.7	17
30	Atomically manipulated proton transfer energizes water oxidation on silicon carbide photoanodes. Journal of Materials Chemistry A, 2018, 6, 24358-24366.	5.2	17
31	Sublimation Growth and Structural Characterization of 3C-SiC on Hexagonal and Cubic SiC Seeds. Materials Science Forum, 0, 645-648, 175-178.	0.3	16
32	A comparative study of high-quality C-face and Si-face 3C-SiC(1â€‰1â€‰1) grown on off-oriented 4H-SiC substrates. Journal Physics D: Applied Physics, 2019, 52, 345103.	1.3	16
33	Cubic SiC Photoanode Coupling with Ni:FeOOH Oxygenâ€Evolution Cocatalyst for Sustainable Photoelectrochemical Water Oxidation. Solar Rrl, 2020, 4, 1900364.	3.1	16
34	Large area buffer-free graphene on non-polar (0 0 1) cubic silicon carbide. Carbon, 2014, 80, 823-829.	5.4	15
35	Surface functionalization of epitaxial graphene using ion implantation for sensing and optical applications. Carbon, 2020, 157, 169-184.	5.4	15
36	Structure Evolution of 3C-SiC on Cubic and Hexagonal Substrates. Materials Science Forum, 2006, 527-529, 283-286.	0.3	14

#	Article	IF	Citations
37	Quantitative Study of the Role of Supersaturation during Sublimation Growth on the Yield of 50 mm 3C-SiC. Materials Science Forum, 0, 821-823, 77-80.	0.3	14
38	Elimination of step bunching in the growth of large-area monolayer and multilayer graphene on off-axis 3C SiC (111). Carbon, 2018, 140, 533-542.	5.4	14
39	Progress in 3C-SiC Growth and Novel Applications. Materials Science Forum, 0, 711, 3-10.	0.3	13
40	Broadband light-extraction enhanced by arrays of whispering gallery resonators. Applied Physics Letters, 2012, 101, .	1.5	13
41	Broadband antireflection silicon carbide surface by self-assembled nanopatterned reactive-ion etching. Optical Materials Express, 2013, 3, 86.	1.6	13
42	Solar Driven Energy Conversion Applications Based on 3C-SiC. Materials Science Forum, 0, 858, 1028-1031.	0.3	13
43	Omnidirectional luminescence enhancement of fluorescent SiC via pseudoperiodic antireflective subwavelength structures. Optics Letters, 2012, 37, 3816.	1.7	12
44	3C-SiÐ¡ Hetero-Epitaxially Grown on Silicon Compliance Substrates and New 3C-SiÐ¡ Substrates for Sustainable Wide-Band-Gap Power Devices (CHALLENGE). Materials Science Forum, 2018, 924, 913-918.	0.3	12
45	Surface engineering of SiC via sublimation etching. Applied Surface Science, 2016, 390, 816-822.	3.1	10
46	Modifications in structural, optical and electrical properties of epitaxial graphene on SiC due to 100 MeV silver ion irradiation. Materials Science in Semiconductor Processing, 2018, 74, 122-128.	1.9	10
47	Characterizations of SiC/SiO₂ Interface Quality Toward High Power MOSFETs Realization. Materials Science Forum, 2004, 457-460, 1281-1286.	0.3	9
48	Polycrystalline SiC as Source Material for the Growth of Fluorescent SiC Layers. Materials Science Forum, 2013, 740-742, 39-42.	0.3	8
49	Structural Modifications in Epitaxial Graphene on SiC Following 10 keV Nitrogen Ion Implantation. Applied Sciences (Switzerland), 2020, 10, 4013.	1.3	7
50	Physical Vapor Growth of Double Position Boundary Free, Quasi-Bulk 3C-SiC on High Quality 3C-SiC on Si CVD Templates. Materials Science Forum, 0, 858, 89-92.	0.3	6
51	Boron-Implanted 3C-SiC for Intermediate Band Solar Cells. Materials Science Forum, 2016, 858, 291-294.	0.3	6
52	Electrical analysis and interface states evaluation of Ni Schottky diodes on 4H-SiC thick epilayers. Physica Status Solidi A, 2005, 202, 2508-2514.	1.7	5
53	Structural Properties of 3C-SiC Grown by Sublimation Epitaxy. Materials Science Forum, 2009, 615-617, 181-184.	0.3	5
54	An adhesive bonding approach by hydrogen silsesquioxane for silicon carbide-based LED applications. Materials Science in Semiconductor Processing, 2019, 91, 9-12.	1.9	5

#	Article	IF	Citations
55	Photoluminescence and Raman Spectroscopy Characterization of Boron- and Nitrogen-Doped 6H Silicon Carbide. Materials Science Forum, 0, 717-720, 233-236.	0.3	4
56	Growth optimization and applicability of thick on-axis SiC layers using sublimation epitaxy in vacuum. Journal of Crystal Growth, 2016, 448, 51-57.	0.7	4
57	Surface passivation of nano-textured fluorescent SiC by atomic layer deposited TiO₂. Physica Scripta, 2016, 91, 074001.	1.2	4
58	TEM Investigation of the 3C/6H-SiC Transformation Interface in Layers Grown by Sublimation Epitaxy. Solid State Phenomena, 2010, 163, 97-100.	0.3	3
59	Boron-doping of cubic SiC for intermediate band solar cells: a scanning transmission electron microscopy study. SciPost Physics, 2018, 5, .	1.5	3
60	Evaluation of On-State Resistance and Boron-Related Levels in n-Type 4H-SiC. Materials Science Forum, 2005, 483-485, 425-428.	0.3	2
61	The Influence of the Temperature Gradient on the Defect Structure of 3C-SiC Grown Heteroepitaxially on 6H-SiC by Sublimation Epitaxy. Materials Science Forum, 2010, 645-648, 367-370.	0.3	2
62	Characterization of B-Implanted 3C-SiC for Intermediate Band Solar Cells. Materials Science Forum, 2017, 897, 299-302.	0.3	2
63	Bioelectrocatalysis on Anodized Epitaxial Graphene and Conventional Graphitic Interfaces. ChemElectroChem, 2019, 6, 3791-3796.	1.7	2
64	A patterning-free approach for growth of free-standing graphene nanoribbons using step-bunched facets of off-oriented 4H-SiC(0â€‰0â€‰0â€‰1) epilayers. Journal Physics D: Applied Physics, 2020, 53, 115102.	1.3	2
65	Catalytic Effect of Silicon Carbide on the Composite Anode of Fuel Cells. ACS Applied Energy Materials, 2021, 4, 6436-6444.	2.5	2
66	Progress in paper-based analytical devices for climate neutral biosensing. Biosensors and Bioelectronics: X, 2022, 11, 100166.	0.9	2
67	Towards Large Area Growth of 3C-SiC. , 2010, , .		1
68	Lateral Boron Distribution in Polycrystalline SiC Source Materials. Materials Science Forum, 0, 740-742, 397-400.	0.3	1
69	Fabrication of Broadband Antireflective Sub-Wavelength Structures on Fluorescent SiC. Materials Science Forum, 0, 740-742, 1024-1027.	0.3	1
70	Growth, Defects and Doping of 3C-SiC on Hexagonal Polytypes. ECS Journal of Solid State Science and Technology, 2017, 6, P741-P745.	0.9	1
71	(Invited) Growth, Defects and Doping of 3C-SiC on Hexagonal Polytypes. ECS Transactions, 2017, 80, 107-115.	0.3	1
72	Optical and Microstructural Investigation of Heavy B-Doping Effects in Sublimation-Grown 3C-SiC. Materials Science Forum, 2018, 924, 221-224.	0.3	1

#	Article	IF	Citations
73	Structural and optical modification in 4H-SiC following 30 keV silver ion irradiation. AIP Conference Proceedings, 2018, , .	0.3	1
74	Epitaxial Graphene Growth on the Stepâ€Structured Surface of Offâ€Axis Câ€Face 3Câ€SiC(1Â¯1Â¯1Â¯). Physica Status Solidi (B): Basic Research, 2020, 257, 1900718.	0.7	1
75	Optical Properties of Aluminium and Nitrogen in Compensated 4H-SiC Epitaxial Layers. Materials Research Society Symposia Proceedings, 2000, 640, 1.	0.1	0
76	Polytype Inclusions in Cubic Silicon Carbide. Materials Science Forum, 2013, 740-742, 335-338.	0.3	0
77	Photoluminescence Topography of Fluorescent SiC and its Corresponding Source Crystals. Materials Science Forum, 2013, 740-742, 421-424.	0.3	0
78	Optical Investigation of 3C-SiC Hetero-Epitaxial Layers Grown by Sublimation Epitaxy under Gas Atmosphere. Materials Science Forum, 0, 778-780, 243-246.	0.3	0
79	Enhanced extraction efficiency of fluorescent SiC by surface nanostructuring. , 2012, , .		0