Shotaro Takeuchi

List of Publications by Year in descending order

72	1,194	471061 17	395343 33
papers	citations	h-index	g-index

73	73	73	934
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Growth of highly strain-relaxed Ge1â^'xSnx/virtual Ge by a Sn precipitation controlled compositionally step-graded method. Applied Physics Letters, 2008, 92, .	1.5	112
2	Characterization of GeSn materials for future Ge pMOSFETs source/drain stressors. Microelectronic Engineering, 2011, 88, 342-346.	1.1	103
3	High Quality Ge Virtual Substrates on Si Wafers with Standard STI Patterning. Journal of the Electrochemical Society, 2010, 157, H13.	1.3	83
4	Mobility Behavior of Ge_{1-x}Sn_xLayers Grown on Silicon-on-Insulator Substrates. Japanese Journal of Applied Physics, 2010, 49, 04DA10.	0.8	81
5	Phonon transport control by nanoarchitecture including epitaxial Ge nanodots for Si-based thermoelectric materials. Scientific Reports, 2015, 5, 14490.	1.6	71
6	Growth and structure evaluation of strain-relaxed Ge1â^'xSnxbuffer layers grown on various types of substrates. Semiconductor Science and Technology, 2007, 22, S231-S235.	1.0	70
7	Independent control of electrical and heat conduction by nanostructure designing for Si-based thermoelectric materials. Scientific Reports, 2016, 6, 22838.	1.6	45
8	Tensile strained Ge layers on strain-relaxed Ge1â^'Sn /virtual Ge substrates. Thin Solid Films, 2008, 517, 159-162.	0.8	41
9	Ge1â^'Sn stressors for strained-Ge CMOS. Solid-State Electronics, 2011, 60, 53-57.	0.8	33
10	Molecular beam deposition of Al2O3 on p-Ge(001)/Ge0.95Sn0.05 heterostructure and impact of a Ge-cap interfacial layer. Applied Physics Letters, 2011, 98, .	1.5	33
11	Growth of Ge1â^'xSnx heteroepitaxial layers with very high Sn contents on InP(001) substrates. Thin Solid Films, 2012, 520, 3201-3205.	0.8	32
12	Formation of Ni(Ge1â^'xSnx) layers with solid-phase reaction in Ni/Ge1â^'xSnx/Ge systems. Solid-State Electronics, 2011, 60, 46-52.	0.8	29
13	Si/SiGe Resonant Interband Tunneling Diodes Incorporating $delta$-Doping Layers Grown by Chemical Vapor Deposition. IEEE Electron Device Letters, 2009, 30, 1173-1175.	2.2	27
14	Luminescence induced by tunnelling recombination between neutral silver atoms and V_kcentres in alkali halides. Physica Status Solidi (B): Basic Research, 1979, 92, 611-618.	0.7	26
15	Si passivation for Ge pMOSFETs: Impact of Si cap growth conditions. Solid-State Electronics, 2011, 60, 116-121.	0.8	24
16	Fabrication of high quality Ge virtual substrates by selective epitaxial growth in shallow trench isolated Si (001) trenches. Thin Solid Films, 2010, 518, 2538-2541.	0.8	21
17	Vapor Phase Doping with N-type Dopant into Silicon by Atmospheric Pressure Chemical Vapor Deposition. ECS Transactions, 2008, 16, 495-502.	0.3	20
18	Growth and Characterization of Heteroepitaxial Layers of GeSiSn Ternary Alloy. ECS Transactions, 2013, 50, 907-913.	0.3	18

#	Article	IF	Citations
19	Dislocation confinement in the growth of Na flux GaN on metalorganic chemical vapor deposition-GaN. Journal of Applied Physics, 2015, 118, .	1.1	15
20	Control of Strain Relaxation Behavior of Ge1-xSnx Layers for Tensile Strained Ge Layers. ECS Transactions, 2010, 33, 205-210.	0.3	14
21	In-situ Ga doping of fully strained Ge1-xSnx heteroepitaxial layers grown on Ge(001) substrates. Thin Solid Films, 2012, 520, 3206-3210.	0.8	14
22	Leakage current analysis for dislocations in Na-flux GaN bulk single crystals by conductive atomic force microscopy. Journal of Applied Physics, 2018, 123, 161417.	1.1	14
23	Use of p- and n-type vapor phase doping and sub-melt laser anneal for extension junctions in sub-32 nm CMOS technology. Thin Solid Films, 2010, 518, S48-S52.	0.8	13
24	(Invited) Assessment of Ge1-xSnx Alloys for Strained Ge CMOS Devices. ECS Transactions, 2010, 33, 529-535.	0.3	13
25	Fabrication of Si Thermoelectric Nanomaterials Containing Ultrasmall Epitaxial Ge Nanodots with an Ultrahigh Density. Journal of Electronic Materials, 2015, 44, 2015-2020.	1.0	13
26	Fabrication of Carrier-Doped Si Nanoarchitecture for Thermoelectric Material by Ultrathin SiO2 Film Technique. Journal of Electronic Materials, 2016, 45, 1914-1920.	1.0	13
27	Si1â^'xGex growth using Si3H8 by low temperature chemical vapor deposition. Thin Solid Films, 2010, 518, S18-S22.	0.8	12
28	Ultrathin-body Ge-on-insulator wafers fabricated with strongly bonded thin Al₂O₃/SiO₂hybrid buried oxide layers. Applied Physics Express, 2014, 7, 086501.	1.1	12
29	Epitaxial Ge on Standard STI Patterned Si Wafers: High Quality Virtual Substrates for Ge pMOS and III/V nMOS. ECS Transactions, 2009, 25, 335-350.	0.3	11
30	Control of strain relaxation behavior of Ge1â^'xSnx buffer layers. Solid-State Electronics, 2011, 60, 84-88.	0.8	11
31	Epitaxial multilayers of Î²-FeSi2 nanodots/Si for Si-based nanostructured electronic materials. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, 041402.	0.9	11
32	Cross-sectional X-ray microdiffraction study of a thick AlN film grown on a trench-patterned AlN/Î±-Al2O3 template. Journal of Crystal Growth, 2013, 381, 37-42.	0.7	10
33	Epitaxial iron oxide nanocrystals with memory function grown on Si substrates. Applied Physics Express, 2016, 9, 055508.	1.1	10
34	Analysis of Ti valence states in resistive switching regions of a rutile TiO_{2â^'} _x four-terminal memristive device. Japanese Journal of Applied Physics, 2018, 57, 06KB02.	0.8	9
35	Quantification of local strain distributions in nanoscale strained SiGe FinFET structures. Journal of Applied Physics, 2017, 122, .	1.1	9
36	(Invited) GeSn Technology: Impact of Sn on Ge CMOS Applications. ECS Transactions, 2011, 41, 231-238.	0.3	8

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37	Microscopic crystalline structure of a thick AlN film grown on a trench-patterned AlN/Î±-Al2O3 template. Journal of Crystal Growth, 2015, 411, 38-44.	0.7	8
38	Control of Interfacial Properties of Al₂O₃/Ge Gate Stack Structure Using Radical Nitridation Technique. Japanese Journal of Applied Physics, 2011, 50, 10PE02.	0.8	8
39	Myoglobin-based non-precious metal carbon catalysts for an oxygen reduction reaction. Journal of Porphyrins and Phthalocyanines, 2015, 19, 510-516.	0.4	7
40	Control of dislocation morphology and lattice distortion in Na-flux GaN crystals. Journal of Applied Physics, 2017, 122, 105303.	1.1	7
41	Resistive switching characteristics of isolated core-shell iron oxide/germanium nanocrystals epitaxially grown on Si substrates. Applied Physics Letters, 2018, 112, .	1.5	7
42	Scanning tunneling microscopy observation of initial growth of Sn and Ge1âˆ’xSnx layers on Ge(001) substrates. Applied Surface Science, 2008, 254, 6048-6051.	3.1	6
43	Control of Interfacial Properties of Al₂O₃/Ge Gate Stack Structure Using Radical Nitridation Technique. Japanese Journal of Applied Physics, 2011, 50, 10PE02.	0.8	6
44	Crystalline property analysis of semipolar (20â€“21) GaN on (22â€“43) patterned sapphire substrate by Xâ€ray microdiffraction and transmission electron microscopy. Physica Status Solidi (B): Basic Research, 2015, 252, 1149-1154.	0.7	6
45	Microstructural analysis of an epitaxial AlN thick film/trench-patterned template by three-dimensional reciprocal lattice space mapping technique. Applied Physics Express, 2016, 9, 111001.	1.1	6
46	Tomographic Mapping Analysis in the Depth Direction of High-Ge-Content SiGe Layers with Compositionally Graded Buffers Using Nanobeam X-ray Diffraction. ACS Applied Materials & Interfaces, 2017, 9, 13726-13732.	4.0	6
47	Demonstrative operation of four-terminal memristive devices fabricated on reduced TiO2 single crystals. Scientific Reports, 2019, 9, 2601.	1.6	6
48	Initial growth behaviors of SiGeC in SiGe and C alternate deposition. Materials Science in Semiconductor Processing, 2005, 8, 5-9.	1.9	5
49	Thickness and growth condition dependence of crystallinity in semipolar (20â€“21) GaN films grown on (22â€“43) patterned sapphire substrates. Physica Status Solidi (B): Basic Research, 2015, 252, 1142-1148.	0.7	5
50	High-density formation of Ge quantum dots on SiO2. Solid-State Electronics, 2011, 60, 65-69.	0.8	4
51	Characterization of Ge Films on Si(001) Substrates Grown by Nanocontact Epitaxy. Japanese Journal of Applied Physics, 2013, 52, 095503.	0.8	4
52	Influence of Si1âˆ’xGex interlayer on the initial growth of SiGeC on Si(1 0 0). Applied Surface Science, 2004, 224, 117-121.	3.1	3
53	Anisotropic crystalline morphology of epitaxial thick AlN films grown on triangular-striped AlN/sapphire template. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 731-735.	0.8	3
54	Positional dependence of defect distribution in semipolar hydride vapor phase epitaxy-GaN films grown on patterned sapphire substrates. Japanese Journal of Applied Physics, 2016, 55, 05FA07.	0.8	3

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55	Microstructural analysis in the depth direction of a heteroepitaxial AlN thick film grown on a trench-patterned template by nanobeam X-ray diffraction. Journal of Applied Physics, 2018, 123, .	1.1	3
56	Depth-resolved analysis of lattice distortions in high-Ge-content SiGe/compositionally graded SiGe films using nanobeam x-ray diffraction. Semiconductor Science and Technology, 2018, 33, 124005.	1.0	3
57	Strained Ge and Ge_{1-x}Sn_x Technology for Future CMOS Devices. Key Engineering Materials, 0, 470, 146-151.	0.4	1
58	Effect of atomic deuterium irradiation on initial growth of Sn and Ge1â^'xSnx on Ge(001) substrates. Applied Surface Science, 2012, 259, 754-757.	3.1	1
59	(Invited) GOI Substrates: Fabrication and Characterization. ECS Transactions, 2013, 50, 709-725.	0.3	1
60	Dislocation behavior of surface-oxygen-concentration controlled Si wafers. Thin Solid Films, 2014, 557, 106-109.	0.8	1
61	Study on the influence of different trench-patterned templates on the crystalline microstructure of AlN epitaxial films by X-ray microdiffraction. Japanese Journal of Applied Physics, 2017, 56, 025502.	0.8	1
62	Local piezoelectric properties in Na-flux GaN bulk single crystals. Journal of Applied Physics, 2020, 128, 125110.	1.1	1
63	Growth and Structure Evaluation of Strain-Relaxed Ge>inf<1-x>/inf<Sn>inf<x>/inf<Buffer Layers on Virtual Ge. , 0, , .		0
64	Growth and Structure Evaluation of Strain-Relaxed Ge>inf<1-x>/inf<Sn>inf<x>/inf<Buffer Layers on Virtual Ge. , 0, , .		0
65	Growth and Structure Evaluation of Strain-Relaxed Ge1-xSnxBuffer Layers on Virtual Ge. , 2006, , .		0
66	Zero-bias Si backward diodes detectors incorporating P and B δ-doping layers grown by chemical vapor deposition. , 2009, , .		0
67	Interface and Defect Control for Group IV Channel Engineering. ECS Transactions, 2008, 16, 687-698.	0.3	0
68	Evaluation of DiMethylAminoGermaniumTetraChloride as a novel Carbon-Dopant and Germanium Precursor for Germanium and Silicon Germanium Chemical Vapor Deposition. ECS Transactions, 2009, 16, 159-162.	0.3	0
69	Growth and Characterization of Ge_{1-x}Sn_x Layers for High Mobility Tensile-Strained Ge Channels of CMOS Devices. Materials Science Forum, 2010, 654-656, 1788-1791.	0.3	0
70	Tensile-strained Ge and Ge<inf>1−x</inf>Sn<inf>x</inf> layers for high-mobility channels in future CMOS Devices. , 2010, , .		0
71	Improvement of current drive of Ge-nMISFETs by epitaxially grown n⁺-Ge:P source and drain. , 2014, , .		0
72	Local Strain Distribution in AlN Thick Films Analyzed by X-Ray Microdiffraction. Materials Science Forum, 0, 783-786, 2016-2021.	0.3	0