Masahiro Watanabe

List of Publications by Year
in descending order

53 papers	617 citations	687363 13 h-index	677142 22 g-index
53 all docs	53 docs citations	53 times ranked	201 citing authors

#	Article	IF	Citations
1	Design, fabrication, and evaluation of waveguide structure using Si/CaF₂ heterostructure for near- and mid- infrared silicon photonics. IEICE Transactions on Electronics, 2022, , .	0.6	2
2	Room temperature near-infrared electroluminescence of Si/CaF2 quantum cascade laser structures grown on an SOI substrate. Japanese Journal of Applied Physics, 2021, 60, SBBE03.	1.5	4
3	Negative differential resistance of CaF2/Si double barrier resonant tunneling diodes fabricated using plasma etching mesa isolation process. Japanese Journal of Applied Physics, 2020, 59, SIIE03.	1.5	2
4	Resistance switching memory characteristics of CaF₂/Si/CaF₂ resonant-tunneling quantum-well heterostructures sandwiched by nanocrystalline Si secondary barrier layers. Applied Physics Express, 2016, 9, 074001.	2.4	9
5	Analysis of single- and double-barrier tunneling diode structures using ultrathin CaF2/CdF2/Si multilayered heterostructures grown on Si. Japanese Journal of Applied Physics, 2015, 54, 04DJ05.	1.5	5
6	Resistance switching memory characteristics of Si/CaF₂/CdF₂/CaF₂/Si resonant-tunneling quantum-well structures. Applied Physics Express, 2014, 7, 044103.	2.4	13
7	Resistance Switching Memory Characteristics of Si/CaF₂/CdF₂ Quantum-Well Structures Grown on Metal (CoSi₂) Layer. Japanese Journal of Applied Physics, 2013, 52, 04CJ07.	1.5	10
8	Room temperature negative differential resistance of CdF2âˆ•CaF2 double-barrier resonant tunneling diode structures grown on Si(100) substrates. Applied Physics Letters, 2007, 90, 092101.	3.3	11
9	Suppression of Leakage Current of CdF2/CaF2Resonant Tunneling Diode Structures Grown on Si(100) Substrates by Nanoarea Local Epitaxy. Japanese Journal of Applied Physics, 2007, 46, 3388-3390.	1.5	13
10	Improvement of electroluminescence from CdF2/CaF2 intersubband transition light-emitting structure by trench patterning and hydrogen annealing of Si substrate. IEICE Electronics Express, 2006, 3, 493-498.	0.8	1
11	Optically pumped ultraviolet lasing of BeMgZnSe based quantum well laser structures. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 878-880.	0.8	1
12	Room-Temperature Electroluminescence from Single-Period (CdF2/CaF2) Inter-Subband Quantum Cascade Structure on Si substrate. Japanese Journal of Applied Physics, 2006, 45, 3656-3658.	1.5	9
13	Improvement of Crystalline Quality of BeZnSe Using Buffer Layer by Migration Enhanced Epitaxy on GaP(001) Substrate. Japanese Journal of Applied Physics, 2005, 44, L75-L77.	1.5	4
14	Ultraviolet lasing from optically pumped BeMgZnSe quantum-well laser structures. Applied Physics Letters, 2005, 87, 142106.	3.3	0
15	BeMgZnSe-based ultraviolet lasers. Semiconductor Science and Technology, 2005, 20, 1187-1197.	2.0	15
16	Epitaxial growth and optical properties for ultraviolet regionof BeMgZnSe on GaP(001) substrate. Physica Status Solidi (B): Basic Research, 2004, 241, 479-482.	1.5	1
17	Effect of Buffer Layer on Epitaxial Growth of High-Magnesium-Content BeMgZnSe Lattice Matched to GaP(001) Substrate. Japanese Journal of Applied Physics, 2003, 42, L599-L602.	1.5	3
18	Epitaxial Growth of BeZnSe on CaF2/Si(111) Substrate. Japanese Journal of Applied Physics, 2002, 41, L876-L877.	1.5	6

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19	Room-Temperature Ultraviolet Photoluminescence of BeZnSe on GaP(001). Japanese Journal of Applied Physics, 2002, 41, L751-L753.	1.5	5
20	Theoretical Analysis of The threshold Current Density in BeMgZnSe Quantum-Well Ultraviolet Lasers. Japanese Journal of Applied Physics, 2001, 40, 6872-6873.	1.5	7
21	Epitaxial Growth and Electrical Characteristics of CaF2/Si/CaF2 Resonant Tunneling Diode Structures Grown on Si(111) 1Â°-off Substrate. Japanese Journal of Applied Physics, 2000, 39, L964-L967.	1.5	56
22	Improvement of the Visible Electroluminescence from Nanocrystalline Silicon Embedded in CaF2on Si(111) Substrate Prepared by Rapid Thermal Annealing. Japanese Journal of Applied Physics, 2000, 39, 1996-2000.	1.5	8
23	CaF2/CdF2 Double-Barrier Resonant Tunneling Diode with High Room-Temperature Peak-to-Valley Ratio. Japanese Journal of Applied Physics, 2000, 39, L716-L719.	1.5	41
24	Epitaxial Growth and Ultraviolet Photoluminescence of CaF 2/ZnO/CaF 2 Heterostructures on Si(111). Japanese Journal of Applied Physics, 2000, 39, L500-L502.	1.5	15
25	Negative Differential Resistance of CaF 2/CdF 2 Triple-Barrier Resonant-Tunneling Diode on Si(111) Grown by Partially Ionized Beam Epitaxy. Japanese Journal of Applied Physics, 1999, 38, L116-L118.	1.5	23
26	Shortening of Detection Time for Observation of Hot Electron Spatial Distribution by Scanning Hot Electron Microscopy. Japanese Journal of Applied Physics, 1999, 38, 2108-2113.	1.5	7
27	Visible Electroluminescence from Nanocrystalline Silicon Embedded in Single-Crystalline CaF 2/Si(111) with Rapid Thermal Anneal. Japanese Journal of Applied Physics, 1999, 38, L904-L906.	1.5	9
28	Resonant Tunneling Diodes in Si/CaF 2 Heterostructures Grown by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 1999, 38, L920-L922.	1.5	24
29	Light emission from Si nanocrystals embedded in CaF2 epilayers on Si(111): Effect of rapid thermal annealing. Journal of Luminescence, 1998, 80, 253-256.	3.1	2
30	Epitaxial growth of nanometer-thick CaF2/CdF2 heterostructures using partially ionized beam epitaxy. Solid-State Electronics, 1998, 42, 1627-1630.	1.4	12
31	Electroluminescence of Nanocrystal Si Embedded in Single-Crystal CaF 2/Si(111). Japanese Journal of Applied Physics, 1998, 37, L591-L593.	1.5	7
32	Reduction of Electrical Resistance of Nanometer-Thick CoSi2Film on CaF2by Pseudomorphic Growth of CaF2on Si(111). Japanese Journal of Applied Physics, 1997, 36, 4470-4471.	1.5	1
33	Transfer efficiency of hot electrons in a metal(CoSi2)/insulator(CaF2) quantum interference transistor. Surface Science, 1996, 361-362, 209-212.	1.9	0
34	Room-temperature observation of multiple negative differential resistance in a metal (CoSi2)/insulator (CaF2) quantum interference transistor structure. Physica B: Condensed Matter, 1996, 227, 213-215.	2.7	5
35	Detection of hot electron current with scanning hot electron microscopy. Applied Physics Letters, 1996, 69, 2196-2198.	3.3	14
36	Proposal and Analysis of Very Short Channel Field Effect Transistor Using Vertical Tunneling with New Heterostructures on Silicon. Japanese Journal of Applied Physics, 1996, 35, L1104-L1106.	1.5	12

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37	Seventy-nm-Pitch Patterning on CaF2by e-beam Exposure. Japanese Journal of Applied Physics, 1996, 35, 6342-6343.	1.5	3
38	Theoretical and measured characteristics of metal (CoSi/sub 2/)-insulator(CaF/sub 2/) resonant tunneling transistors and the influence of parasitic elements. IEEE Transactions on Electron Devices, 1995, 42, 2203-2210.	3.0	12
39	Epitaxial growth of a metal(CoSi2)/insulator(CaF2) nanometerâ€thick heterostructure and its application to quantumâ€effect devices. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 623-628.	2.1	6
40	Metal (CoSi$_{f 2}$)/Insulator (CaF$_{f 2}$) Hot Electron Transistor Fabricated by Electron-Beam Lithography on a Si Substrate. Japanese Journal of Applied Physics, 1995, 34, L1254-L1256.	1.5	7
41	Formation of Silicon and Cobalt Silicide Nanoparticles in CaF2. Japanese Journal of Applied Physics, 1995, 34, 4380-4383.	1.5	5
42	Multiple Negative Differential Resistance due to Quantum Interference of Hot Electron Waves in Metal (CoSi2)/Insulator (CaF2) Heterostructures and Influence of Parasitic Circuit Elements. Japanese Journal of Applied Physics, 1995, 34, 4481-4484.	1.5	5
43	Quantum Interference of Electron Wave in Metal $f (CoSi_{2})/Insulator (CaF_{2})$ Resonant Tunneling Hot Electron Transistor Structure. Japanese Journal of Applied Physics, 1994, 33, L1762-L1765.	1.5	10
44	Metal(CoSi2)/Insulator(CaF2) Resonant Tunneling Diode. Japanese Journal of Applied Physics, 1994, 33, 57-65.	1.5	38
45	Negative differential resistance of metal (CoSi2)/insulator (CaF2) tripleâ€barrier resonant tunneling diode. Applied Physics Letters, 1993, 62, 300-302.	3.3	62
46	Reflection High-Energy Electron Diffraction Oscillation during CaF2Growth on Si(111) by Partially Ionized Beam Epitaxy. Japanese Journal of Applied Physics, 1993, 32, 940-941.	1.5	3
47	Epitaxial Growth of Metal(CoSi2)/Insulator(CaF2) Nanometer-Thick Layered Structure on Si(111). Japanese Journal of Applied Physics, 1992, 31, L116-L118.	1.5	32
48	Room temperature negative differential resistance of metal (CoSi2)/insulator (CaF2) resonant tunnelling diode. Electronics Letters, 1992, 28, 1432.	1.0	22
49	Transistor action of metal (CoSi2)/insulator (CaF2) hot electron transistor structure. Electronics Letters, 1992, 28, 1002-1004.	1.0	28
50	Epitaxial growth and electrical conductance of metal(CoSi2)/insulator(CaF2) nanometer-thick layered structures on Si (111). Journal of Electronic Materials, 1992, 21, 783-789.	2.2	11
51	Negative differential resistance in metal (CoSi/sub 2/)/insulator (CaF/sub 2/) resonant tunneling diode. IEEE Transactions on Electron Devices, 1992, 39, 2644.	3.0	0
52	Low Temperature (â^¼420Â°C) Epitaxial Growth of CaF2/Si(111) by Ionized-Cluster-Beam Technique. Japanese Journal of Applied Physics, 1990, 29, 1803-1804.	1.5	16
53	Room temperature negative differential resistance with high peak-to-valley current ratio of CdF/sub 2//CaF/sub 2/ resonant tunneling diode on silicon. , 0, , .		0