

Masahiro Watanabe

List of Publications by Year in descending order

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53
papers

617
citations

777949

13
h-index

759306

22
g-index

53
all docs

53
docs citations

53
times ranked

218
citing authors

#	ARTICLE	IF	CITATIONS
1	Design, fabrication, and evaluation of waveguide structure using Si/CaF ₂ /Si heterostructure for near- and mid- infrared silicon photonics. IEICE Transactions on Electronics, 2022, , .	0.3	2
2	Room temperature near-infrared electroluminescence of Si/CaF ₂ quantum cascade laser structures grown on an SOI substrate. Japanese Journal of Applied Physics, 2021, 60, SBBE03.	0.8	4
3	Negative differential resistance of CaF ₂ /Si double barrier resonant tunneling diodes fabricated using plasma etching mesa isolation process. Japanese Journal of Applied Physics, 2020, 59, S11E03.	0.8	2
4	Resistance switching memory characteristics of CaF ₂ /Si/CaF ₂ resonant-tunneling quantum-well heterostructures sandwiched by nanocrystalline Si secondary barrier layers. Applied Physics Express, 2016, 9, 074001.	1.1	9
5	Analysis of single- and double-barrier tunneling diode structures using ultrathin CaF ₂ /CdF ₂ /Si multilayered heterostructures grown on Si. Japanese Journal of Applied Physics, 2015, 54, 04DJ05.	0.8	5
6	Resistance switching memory characteristics of Si/CaF ₂ /CdF ₂ /CaF ₂ /Si resonant-tunneling quantum-well structures. Applied Physics Express, 2014, 7, 044103.	1.1	13
7	Resistance Switching Memory Characteristics of Si/CaF ₂ /CdF ₂ Quantum-Well Structures Grown on Metal (CoSi ₂) Layer. Japanese Journal of Applied Physics, 2013, 52, 04CJ07.	0.8	10
8	Room temperature negative differential resistance of CdF ₂ /CaF ₂ double-barrier resonant tunneling diode structures grown on Si(100) substrates. Applied Physics Letters, 2007, 90, 092101.	1.5	11
9	Suppression of Leakage Current of CdF ₂ /CaF ₂ Resonant Tunneling Diode Structures Grown on Si(100) Substrates by Nanoarea Local Epitaxy. Japanese Journal of Applied Physics, 2007, 46, 3388-3390.	0.8	13
10	Improvement of electroluminescence from CdF ₂ /CaF ₂ intersubband transition light-emitting structure by trench patterning and hydrogen annealing of Si substrate. IEICE Electronics Express, 2006, 3, 493-498.	0.3	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 (CdF ₂ /CaF ₂) Inter-Subband Quantum Cascade Structure on Si substrate. Japanese Journal of Applied Physics, 2006, 45, 3656-3658.	0.8	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.	0.8	4
14	Ultraviolet lasing from optically pumped BeMgZnSe quantum-well laser structures. Applied Physics Letters, 2005, 87, 142106.	1.5	0
15	BeMgZnSe-based ultraviolet lasers. Semiconductor Science and Technology, 2005, 20, 1187-1197.	1.0	15
16	Epitaxial growth and optical properties for ultraviolet region of BeMgZnSe on GaP(001) substrate. Physica Status Solidi (B): Basic Research, 2004, 241, 479-482.	0.7	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.	0.8	3
18	Epitaxial Growth of BeZnSe on CaF ₂ /Si(111) Substrate. Japanese Journal of Applied Physics, 2002, 41, L876-L877.	0.8	6

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19	Room-Temperature Ultraviolet Photoluminescence of BeZnSe on GaP(001). Japanese Journal of Applied Physics, 2002, 41, L751-L753.	0.8	5
20	Theoretical Analysis of The threshold Current Density in BeMgZnSe Quantum-Well Ultraviolet Lasers. Japanese Journal of Applied Physics, 2001, 40, 6872-6873.	0.8	7
21	Epitaxial Growth and Electrical Characteristics of CaF ₂ /Si/CaF ₂ Resonant Tunneling Diode Structures Grown on Si(111) 1Å°-off Substrate. Japanese Journal of Applied Physics, 2000, 39, L964-L967.	0.8	56
22	Improvement of the Visible Electroluminescence from Nanocrystalline Silicon Embedded in CaF ₂ on Si(111) Substrate Prepared by Rapid Thermal Annealing. Japanese Journal of Applied Physics, 2000, 39, 1996-2000.	0.8	8
23	CaF ₂ /CdF ₂ Double-Barrier Resonant Tunneling Diode with High Room-Temperature Peak-to-Valley Ratio. Japanese Journal of Applied Physics, 2000, 39, L716-L719.	0.8	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.	0.8	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.	0.8	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.	0.8	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.	0.8	9
28	Resonant Tunneling Diodes in Si/CaF ₂ Heterostructures Grown by Molecular Beam Epitaxy. Japanese Journal of Applied Physics, 1999, 38, L920-L922.	0.8	24
29	Light emission from Si nanocrystals embedded in CaF ₂ epilayers on Si(111): Effect of rapid thermal annealing. Journal of Luminescence, 1998, 80, 253-256.	1.5	2
30	Epitaxial growth of nanometer-thick CaF ₂ /CdF ₂ heterostructures using partially ionized beam epitaxy. Solid-State Electronics, 1998, 42, 1627-1630.	0.8	12
31	Electroluminescence of Nanocrystal Si Embedded in Single-Crystal CaF ₂ /Si(111). Japanese Journal of Applied Physics, 1998, 37, L591-L593.	0.8	7
32	Reduction of Electrical Resistance of Nanometer-Thick CoSi ₂ Film on CaF ₂ by Pseudomorphic Growth of CaF ₂ on Si(111). Japanese Journal of Applied Physics, 1997, 36, 4470-4471.	0.8	1
33	Transfer efficiency of hot electrons in a metal(CoSi ₂)/insulator(CaF ₂) quantum interference transistor. Surface Science, 1996, 361-362, 209-212.	0.8	0
34	Room-temperature observation of multiple negative differential resistance in a metal (CoSi ₂)/insulator (CaF ₂) quantum interference transistor structure. Physica B: Condensed Matter, 1996, 227, 213-215.	1.3	5
35	Detection of hot electron current with scanning hot electron microscopy. Applied Physics Letters, 1996, 69, 2196-2198.	1.5	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.	0.8	12

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37	Seventy-nm-Pitch Patterning on CaF ₂ by e-beam Exposure. Japanese Journal of Applied Physics, 1996, 35, 6342-6343.	0.8	3
38	Theoretical and measured characteristics of metal (CoSi ₂)/insulator(CaF ₂) resonant tunneling transistors and the influence of parasitic elements. IEEE Transactions on Electron Devices, 1995, 42, 2203-2210.	1.6	12
39	Epitaxial growth of a metal(CoSi ₂)/insulator(CaF ₂) nanometer-thick heterostructure and its application to quantum effect devices. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1995, 13, 623-628.	0.9	6
40	Metal (CoSi ₂)/Insulator (CaF ₂) Hot Electron Transistor Fabricated by Electron-Beam Lithography on a Si Substrate. Japanese Journal of Applied Physics, 1995, 34, L1254-L1256.	0.8	7
41	Formation of Silicon and Cobalt Silicide Nanoparticles in CaF ₂ . Japanese Journal of Applied Physics, 1995, 34, 4380-4383.	0.8	5
42	Multiple Negative Differential Resistance due to Quantum Interference of Hot Electron Waves in Metal (CoSi ₂)/Insulator (CaF ₂) Heterostructures and Influence of Parasitic Circuit Elements. Japanese Journal of Applied Physics, 1995, 34, 4481-4484.	0.8	5
43	Quantum Interference of Electron Wave in Metal (CoSi ₂)/Insulator (CaF ₂) Resonant Tunneling Hot Electron Transistor Structure. Japanese Journal of Applied Physics, 1994, 33, L1762-L1765.	0.8	10
44	Metal(CoSi ₂)/Insulator(CaF ₂) Resonant Tunneling Diode. Japanese Journal of Applied Physics, 1994, 33, 57-65.	0.8	38
45	Negative differential resistance of metal (CoSi ₂)/insulator (CaF ₂) triple-barrier resonant tunneling diode. Applied Physics Letters, 1993, 62, 300-302.	1.5	62
46	Reflection High-Energy Electron Diffraction Oscillation during CaF ₂ Growth on Si(111) by Partially Ionized Beam Epitaxy. Japanese Journal of Applied Physics, 1993, 32, 940-941.	0.8	3
47	Epitaxial Growth of Metal(CoSi ₂)/Insulator(CaF ₂) Nanometer-Thick Layered Structure on Si(111). Japanese Journal of Applied Physics, 1992, 31, L116-L118.	0.8	32
48	Room temperature negative differential resistance of metal (CoSi ₂)/insulator (CaF ₂) resonant tunnelling diode. Electronics Letters, 1992, 28, 1432.	0.5	22
49	Transistor action of metal (CoSi ₂)/insulator (CaF ₂) hot electron transistor structure. Electronics Letters, 1992, 28, 1002-1004.	0.5	28
50	Epitaxial growth and electrical conductance of metal(CoSi ₂)/insulator(CaF ₂) nanometer-thick layered structures on Si (111). Journal of Electronic Materials, 1992, 21, 783-789.	1.0	11
51	Negative differential resistance in metal (CoSi ₂)/insulator (CaF ₂) resonant tunneling diode. IEEE Transactions on Electron Devices, 1992, 39, 2644.	1.6	0
52	Low Temperature (~420°C) Epitaxial Growth of CaF ₂ /Si(111) by Ionized-Cluster-Beam Technique. Japanese Journal of Applied Physics, 1990, 29, 1803-1804.	0.8	16
53	Room temperature negative differential resistance with high peak-to-valley current ratio of CdF ₂ /sub 2/CaF ₂ /sub 2 resonant tunneling diode on silicon. , 0, , .		0