Kazumi Wada

List of Publications by Year
in descending order

60 papers	2,167 citations	567144 15 h-index	414303 32 g-index
60 all docs	60 docs citations	60 times ranked	1987 citing authors

#	Article	IF	Citations
1	High-quality Ge epilayers on Si with low threading-dislocation densities. Applied Physics Letters, 1999, 75, 2909-2911.	1.5	637
2	Strain-induced band gap shrinkage in Ge grown on Si substrate. Applied Physics Letters, 2003, 82, 2044-2046.	1.5	355
3	Mid-infrared integrated photonics on silicon: a perspective. Nanophotonics, 2017, 7, 393-420.	2.9	280
4	Tensile strained epitaxial Ge films on Si(100) substrates with potential application inL-band telecommunications. Applied Physics Letters, 2004, 84, 906-908.	1.5	141
5	SiO2/TiO2 omnidirectional reflector and microcavity resonator via the sol-gel method. Applied Physics Letters, 1999, 75, 3805-3807.	1.5	138
6	Optical characteristics of one-dimensional Siâˆ•SiO2 photonic crystals for thermophotovoltaic applications. Journal of Applied Physics, 2005, 97, 033529.	1.1	112
7	Design of monolithically integrated GeSi electro-absorption modulators and photodetectors on a SOI platform. Optics Express, 2007, 15, 623.	1.7	106
8	High-performance silicon photonics technology for telecommunications applications. Science and Technology of Advanced Materials, 2014, 15, 024603.	2.8	69
9	Si-Ge-Silica Monolithic Integration Platform and Its Application to a 22-Gb/s <formula formulatype="inline"><tex Notation="TeX">$imes$</tex></formula> 16-ch WDM Receiver. IEEE Photonics Journal, 2013, 5, 4500407-4500407.	1.0	42
10	Silicidation-induced band gap shrinkage in Ge epitaxial films on Si. Applied Physics Letters, 2004, 84, 660-662.	1.5	40
11	Germanium-rich silicon-germanium films epitaxially grown by ultrahigh vacuum chemical-vapor deposition directly on silicon substrates. Applied Physics Letters, 2007, 91, 252111.	1.5	40
12	A new material platform of Si photonics for implementing architecture of dense wavelength division multiplexing on Si bulk wafer. Science and Technology of Advanced Materials, 2017, 18, 283-293.	2.8	30
13	Near-Infrared Ge Photodiodes for Si Photonics: Operation Frequency and an Approach for the Future. IEEE Photonics Journal, 2010, 2, 306-320.	1.0	25
14	Scaling computation with silicon photonics. MRS Bulletin, 2014, 39, 687-695.	1.7	23
15	Contributions of Franzâ€“Keldysh and Avalanche Effects to Responsivity of a Germanium Waveguide Photodiode in the $hbox{L}$-Band. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 64-70.	1.9	17
16	Power-efficient generation of two-octave mid-IR frequency combs in a germanium microresonator. Nanophotonics, 2018, 7, 1461-1467.	2.9	16
17	Effect of Mesa Shape on Threading Dislocation Density in Ge Epitaxial Layers on Si after Post-Growth Annealing. Japanese Journal of Applied Physics, 2010, 49, 04DG23.	0.8	11
18	Coalescence induced dislocation reduction in selectively grown lattice-mismatched heteroepitaxy: Theoretical prediction and experimental verification. Journal of Applied Physics, 2018, 123, .	1.1	11

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19	Introduction to the Special Issue on Silicon Photonics. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 4-5.	1.9	8
20	Si Photonics and Fiber to the Home. Proceedings of the IEEE, 2009, 97, 1329-1336.	16.4	7
21	Analysis of Optical Integration between Si3N4 Waveguide and a Ge-Based Optical Modulator Using a Lateral Amorphous GeSi Taper at the Telecommunication Wavelength of 1.55 Âµm. Applied Sciences (Switzerland), 2019, 9, 3846.	1.3	7
22	FDTD investigation on compact and wideband optical integration between Si3N4 and Ge-based waveguide devices via amorphous Si and GeSi lateral tapers. Results in Physics, 2020, 18, 103256.	2.0	7
23	Defects and their reduction in Ge selective epitaxy and coalescence layer on Si with semicylindrical voids on SiO<formula> <tex>$_{2}$</tex> </formula> masks. IEEE Journal of Selected Topics in Quantum Electronics, 2018, , 1-1.	1.9	6
24	Correlation between photoreflectance signal intensity and current gain of InP/InGaAs heterojunction bipolar transistor structures. Journal of Applied Physics, 2000, 88, 1600-1605.	1.1	5
25	Differential signal transmission in silicon-photonics integrated circuit for high density optical interconnects. , 2011, , .		4
26	A Low-Loss Crossing of Silicon Waveguides for Optical Switches on CMOS Platform. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-5.	1.9	3
27	High concentration phosphorus doping in Ge for CMOS-integrated laser applications. Solid-State Electronics, 2019, 154, 43-49.	0.8	3
28	Energy Efficiency of Microring Resonator (MRR)-Based Binary Decision Diagram (BDD) Circuits. , 2019, , .		3
29	1/f Noise Characteristics of Waveguide-Integrated PbTe MIR Detectors and Impact on Limit of Detection. Journal of Lightwave Technology, 2021, 39, 7326-7333.	2.7	3
30	Germanium Photodetectors for Silicon Microphotonics by Direct Epitaxy on Silicon. Materials Research Society Symposia Proceedings, 1999, 607, 279.	0.1	2
31	High Speed Ge Photodetectors on Si Platform for GHz Optical Communications in C+L Bands. Materials Research Society Symposia Proceedings, 2004, 829, 24.	0.1	2
32	A monolithic integration of Ge photodiodes with Si variable optical attenuators. , 2009, , .		2
33	Franz-Keldysh and avalanche effects in a germanium waveguide photodiode. , 2013, , .		2
34	Flip-chip integration of 4-channel transimpedance amplifier chip on a Si/Ge-based photonic circuit. , 2014, , .		2
35	Development of silicon nitride arrayed waveguide grating by physical vapor deposition at room temperature. , 2015, , .		2
36	High detectivity PbSxSe1-x films for mid-wavelength infrared detectors. Thin Solid Films, 2021, 731, 138749.	0.8	2

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37	An Omnidirectional Reflector and Microcavity Resonatorvia the Sol-Gel Method. Materials Research Society Symposia Proceedings, 1999, 597, 75.	0.1	1
38	Low dark-current Ge photodiodes on Si with intrinsic-Si-layer insertion. , 2008, , .		1
39	Germanium photodetectors in silicon photonics. , 2009, , .		1
40	(Invited) Si Photonics and Recent Challenges for on-Chip WDM. ECS Transactions, 2015, 69, 39-46.	0.3	1
41	Nondestructive Analysis of Current Gain of InP/InGaAs Heterojunction Bipolar Transistor Structures using Photoreflectance Spectroscopy. Materials Research Society Symposia Proceedings, 1999, 588, 257.	0.1	0
42	Spectral responsivity of vertical p-i-n photodiode of selectively grown Ge on silicon-on-insulator (SOI) platform. , 2007, , .		0
43	Mid-Infrared Optical Amplifier utilizing Traveling Plasmons in Si-based Photonic Crystal Cavities. , 2007, , .		0
44	Light Emission and Detection for Si Photonics. , 2008, , .		0
45	Fabrication and responsivity spectra of p-Ge/i-Si/n-Si near-infrared photodiodes. , 2008, , .		0
46	Enhanced direct bandgap emission from germanium-based ring resonators. , 2008, , .		0
47	Low-dark-current pin photodiodes using as-grown Ge with an i-Si insertion layer: Mechanism of dark current suppression. , 2009, , .		0
48	Challenges of Si-LSIs integrated with optical components. , 2010, , .		0
49	Emission-wavelength control using a mechanically stressed micro-beam structure: GaAs on Si-on-insulator beam. , 2010, , .		0
50	As-grown Ge pin photodiodes on Si with low dark current achieved by hydrogen desorption technique. , 2010, , .		0
51	Hydrogen plasma treatment for Si waveguide smoothing. , 2011, , .		0
52	Si photonics for WDM implementation. , 2012, , .		0
53	Gas cluster ion beam treatment for silicon waveguide trimming. , 2012, , .		0
54	Design of low loss crossing of Si waveguides. , 2015, , .		0

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55	Enhanced photoluminescence from n⁺-Ge epitaxial layers on Si: Effect of growth/annealing temperature. , 2015, , .		0
56	Optical coupling between SiO<inf>x</inf>N<inf>y</inf> waveguide and Ge mesa structures for bulk-Si photonics platform. , 2015, , .		0
57	Ge/SiGe multiple quantum wells for photonic integrated circuits on silicon. , 2015, , .		0
58	Low-loss SOI waveguides at Mid-IR wavelengths (4800 nm) using the second-order TE mode. , 2016, , .		0
59	Silicon Photonics for Optical Interconnection. The Review of Laser Engineering, 2007, 35, 586-590.	0.0	0
60	Theoretical Calculation and Experimental Verification for Dislocation Reduction in Germanium Epitaxial Layers with Semicylindrical Voids on Silicon. Journal of Visualized Experiments, 2020, , .	0.2	0