Chuan Seng Tan

List of Publications by Year
in descending order

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		136950	206112
335	4,151	32	48
papers	citations	h-index	g-index

339	339	339	2661
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cuâ€“Cu diffusion bonding enhancement at low temperature by surface passivation using self-assembled monolayer of alkane-thiol. Applied Physics Letters, 2009, 95, .	3.3	147
2	Morphology and Bond Strength of Copper Wafer Bonding. Electrochemical and Solid-State Letters, 2004, 7, G14.	2.2	135
3	Low-threshold optically pumped lasing in highly strained germanium nanowires. Nature Communications, 2017, 8, 1845.	12.8	131
4	Technology, performance, and computer-aided design of three-dimensional integrated circuits. , 2004, , .		113
5	Microstructure evolution and abnormal grain growth during copper wafer bonding. Applied Physics Letters, 2002, 81, 3774-3776.	3.3	96
6	Silicon Multilayer Stacking Based on Copper Wafer Bonding. Electrochemical and Solid-State Letters, 2005, 8, G147.	2.2	69
7	High-efficiency GeSn/Ge multiple-quantum-well photodetectors with photon-trapping microstructures operating at 2 Âµm. Optics Express, 2020, 28, 10280.	3.4	67
8	Germanium-on-silicon nitride waveguides for mid-infrared integrated photonics. Applied Physics Letters, 2016, 109, .	3.3	66
9	Copper bonded layers analysis and effects of copper surface conditions on bonding quality for three-dimensional integration. Journal of Electronic Materials, 2005, 34, 1464-1467.	2.2	64
10	Bonding parameters of blanket copper wafer bonding. Journal of Electronic Materials, 2006, 35, 230-234.	2.2	61
11	Online Condition Monitoring System for DC-Link Capacitor in Industrial Power Converters. IEEE Transactions on Industry Applications, 2018, 54, 4775-4785.	4.9	58
12	Growth and characterization of germanium epitaxial film on silicon (001) using reduced pressure chemical vapor deposition. Thin Solid Films, 2012, 520, 2711-2716.	1.8	52
13	High-efficiency normal-incidence vertical p-i-n photodetectors on a germanium-on-insulator platform. Photonics Research, 2017, 5, 702.	7.0	52
14	Condition Monitoring of DC-Link Capacitors Using Goertzel Algorithm for Failure Precursor Parameter and Temperature Estimation. IEEE Transactions on Power Electronics, 2020, 35, 6386-6396.	7.9	52
15	Fabrication and characterization of germanium-on-insulator through epitaxy, bonding, and layer transfer. Journal of Applied Physics, 2014, 116, .	2.5	49
16	Low-temperature thermal oxide to plasma-enhanced chemical vapor deposition oxide wafer bonding for thin-film transfer application. Applied Physics Letters, 2003, 82, 2649-2651.	3.3	47
17	Effects of nanowire texturing on the performance of Si/organic hybrid solar cells fabricated with a 2.2â€‰Î¼m thin-film Si absorber. Applied Physics Letters, 2012, 100, 103104.	3.3	47
18	Growth and characterization of germanium epitaxial film on silicon (001) with germane precursor in metal organic chemical vapour deposition (MOCVD) chamber. AIP Advances, 2013, 3, .	1.3	47

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19	Reduction of threading dislocation density in Ge/Si using a heavily As-doped Ge seed layer. AIP Advances, 2016, 6, .	1.3	47
20	Achieving Stable Through-Silicon Via (TSV) Capacitance with Oxide Fixed Charge. IEEE Electron Device Letters, 2011, 32, 668-670.	3.9	45
21	Defects reduction of Ge epitaxial film in a germanium-on-insulator wafer by annealing in oxygen ambient. APL Materials, 2015, 3, .	5.1	43
22	Three-Dimensional Wafer Stacking Using Cuâ€“Cu Bonding for Simultaneous Formation of Electrical, Mechanical, and Hermetic Bonds. IEEE Transactions on Device and Materials Reliability, 2012, 12, 194-200.	2.0	40
23	Abnormal contact resistance reduction of bonded copper interconnects in three-dimensional integration during current stressing. Applied Physics Letters, 2005, 86, 011903.	3.3	39
24	Temperature and duration effects on microstructure evolution during copper wafer bonding. Journal of Electronic Materials, 2003, 32, 1371-1374.	2.2	38
25	Observation of interfacial void formation in bonded copper layers. Applied Physics Letters, 2005, 87, 201909.	3.3	38
26	Effects of surface treatment on the bonding quality of wafer-level Cu-to-Cu thermo-compression bonding for 3D integration. Journal of Micromechanics and Microengineering, 2013, 23, 045025.	2.6	38
27	Reliable 3-D Clock-Tree Synthesis Considering Nonlinear Capacitive TSV Model With Electricalâ€“Thermalâ€“Mechanical Coupling. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2013, 32, 1734-1747.	2.7	38
28	High Performance Flexible Visible-Blind Ultraviolet Photodetectors with Two-Dimensional Electron Gas Based on Unconventional Release Strategy. ACS Nano, 2021, 15, 8386-8396.	14.6	38
29	Enhanced copper micro/nano-particle mixed paste sintered at low temperature for 3D interconnects. Applied Physics Letters, 2016, 108, .	3.3	35
30	Dark current analysis of germanium-on-insulator vertical p-i-n photodetectors with varying threading dislocation density. Journal of Applied Physics, 2020, 127, .	2.5	35
31	A review of silicon-based wafer bonding processes, an approach to realize the monolithic integration of Si-CMOS and IIIâ€“V-on-Si wafers. Journal of Semiconductors, 2021, 42, 023106.	3.7	34
32	High-Density 3-D Interconnect of Cuâ€“Cu Contacts With Enhanced Contact Resistance by Self-Assembled Monolayer (SAM) Passivation. IEEE Transactions on Electron Devices, 2011, 58, 2500-2506.	3.0	33
33	Ultrafine Pitch (6 $muhbox{m}$) of Recessed and Bonded Cuâ€“Cu Interconnects by Three-Dimensional Wafer Stacking. IEEE Electron Device Letters, 2012, 33, 1747-1749.	3.9	33
34	Integration of GaAs, GaN, and Si-CMOS on a common 200 mm Si substrate through multilayer transfer process. Applied Physics Express, 2016, 9, 086501.	2.4	33
35	GeSn lateral p-i-n photodetector on insulating substrate. Optics Express, 2018, 26, 17312.	3.4	33
36	Overview of Wafer-Level 3D ICs. Integrated Circuits and Systems, 2008, , 1-11.	0.2	33

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37	GeSn-on-insulator substrate formed by direct wafer bonding. Applied Physics Letters, 2016, 109, .	3.3	31
38	Low Temperature Cu-to-Cu Bonding for Wafer-Level Hermetic Encapsulation of 3D Microsystems. Electrochemical and Solid-State Letters, 2011, 14, H470.	2.2	30
39	Single-mode surface-emitting concentric-circular-grating terahertz quantum cascade lasers. Applied Physics Letters, 2013, 102, 031119.	3.3	29
40	Novel three-dimensional carbon nanotube networks as high performance thermal interface materials. Carbon, 2018, 132, 359-369.	10.3	29
41	The role of AsH3 partial pressure on anti-phase boundary in GaAs-on-Ge grown by MOCVD â€“ Application to a 200mm GaAs virtual substrate. Journal of Crystal Growth, 2015, 421, 58-65.	1.5	28
42	Optimization and thermal characterization of uniform silicon micropillar based evaporators. International Journal of Heat and Mass Transfer, 2018, 127, 51-60.	4.8	28
43	Integrating GeSn photodiode on a 200 mm Ge-on-insulator photonics platform with Ge CMOS devices for advanced OEIC operating at 2 Î¼m band. Optics Express, 2019, 27, 26924.	3.4	28
44	Low temperature wafer-level bonding for hermetic packaging of 3D microsystems. Journal of Micromechanics and Microengineering, 2011, 21, 075006.	2.6	27
45	Comparative Studies of the Growth and Characterization of Germanium Epitaxial Film on Silicon (001) with 0Â° and 6Â° Offcut. Journal of Electronic Materials, 2013, 42, 1133-1139.	2.2	26
46	Germanium-Tin (GeSn) P-Channel Fin Field-Effect Transistor Fabricated on a Novel GeSn-on-Insulator Substrate. IEEE Transactions on Electron Devices, 2018, 65, 3754-3761.	3.0	26
47	1D photonic crystal direct bandgap GeSn-on-insulator laser. Applied Physics Letters, 2021, 119, .	3.3	26
48	Force-induced optical nonlinearity and Kerr-like coefficient in opto-mechanical ring resonators. Optics Express, 2012, 20, 18005.	3.4	25
49	High-performance GeSn photodetector and fin field-effect transistor (FinFET) on an advanced GeSn-on-insulator platform. Optics Express, 2018, 26, 10305.	3.4	25
50	Process development and bonding quality investigations of silicon layer stacking based on copper wafer bonding. Applied Physics Letters, 2005, 87, 031909.	3.3	24
51	Band structure of Ge_{1â^'x}Sn_x alloy: a full-zone 30-band k Â· p model. New Journal of Physics, 2019, 21, 073037.	2.9	24
52	Metal-Semiconductor-Metal GeSn Photodetectors on Silicon for Short-Wave Infrared Applications. Micromachines, 2020, 11, 795.	2.9	24
53	Thin Film Silicon Nanowire/PEDOT:PSS Hybrid Solar Cells with Surface Treatment. Nanoscale Research Letters, 2016, 11, 311.	5.7	23
54	Fabrication and characterization of single junction GaAs solar cells on Si with As-doped Ge buffer. Solar Energy Materials and Solar Cells, 2017, 172, 140-144.	6.2	23

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55	Spiral Waveguides on Germanium-on-Silicon Nitride Platform for Mid-IR Sensing Applications. IEEE Photonics Journal, 2018, 10, 1-7.	2.0	23
56	High speed and ultra-low dark current Ge vertical p-i-n photodetectors on an oxygen-annealed Ge-on-insulator platform with GeO_x surface passivation. Optics Express, 2020, 28, 23978.	3.4	23
57	Photo detection and modulation from 1,550 to 2,000â€...nm realized by a GeSn/Ge multiple-quantum-well photodiode on a 300-mm Si substrate. Optics Express, 2020, 28, 34772.	3.4	23
58	Low-Temperature Direct CVD Oxides to Thermal Oxide Wafer Bonding in Silicon Layer Transfer. Electrochemical and Solid-State Letters, 2005, 8, G1.	2.2	22
59	Resonant-cavity-enhanced responsivity in germanium-on-insulator photodetectors. Optics Express, 2020, 28, 23739.	3.4	22
60	Carrierless design for handling and processing of ultrathin wafers. , 2010, , .		21
61	Integration of IIIâ€“V materials and Si-CMOS through double layer transfer process. Japanese Journal of Applied Physics, 2015, 54, 030209.	1.5	21
62	The GaAs/GaAs/Si solar cell â€“ Towards current matching in an integrated two terminal tandem. Solar Energy Materials and Solar Cells, 2017, 160, 94-100.	6.2	21
63	Modulation of light absorption in flexible GeSn metalâ€“semiconductorâ€“metal photodetectors by mechanical bending. Journal of Materials Chemistry C, 2020, 8, 13557-13562.	5.5	21
64	Enhancing Cu-Cu Diffusion Bonding at Low Temperature Via Application of Self-assembled Monolayer Passivation. Journal of the Electrochemical Society, 2011, 158, H1057.	2.9	19
65	(Invited) Cu Surface Passivation with Self-Assembled Monolayer (SAM) and Its Application for Wafer Bonding at Moderately Low Temperature. ECS Transactions, 2013, 50, 115-123.	0.5	19
66	Monolithic Integration of Si-CMOS and III-V-on-Si Through Direct Wafer Bonding Process. IEEE Journal of the Electron Devices Society, 2018, 6, 571-578.	2.1	19
67	Thermal design optimization of evaporator micropillar wicks. International Journal of Thermal Sciences, 2018, 134, 179-187.	4.9	19
68	The effect of forming gas anneal on the oxygen content in bonded copper layer. Journal of Electronic Materials, 2005, 34, 1598-1602.	2.2	18
69	The first GeSn FinFET on a novel GeSnOI substrate achieving lowest S of 79 mV/decade and record high Gm, int of 807 Î¼S/Î¼m for GeSn P-FETs. , 2017, , .		18
70	Thermal mitigation using thermal through silicon via (TTSV) in 3-D ICs. , 2009, , .		17
71	Low temperature bump-less Cu-Cu bonding enhancement with self assembled monolayer (SAM) passivation for 3-D integration. , 2010, , .		17
72	Color tunable hybrid AC powder electroluminescent devices with organic fluorescent materials. Optical Materials Express, 2016, 6, 2879.	3.0	17

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73	Cuâ€“Cu Bonding in Ambient Environment by Ar/N₂ Plasma Surface Activation and Its Characterization. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 596-605.	2.5	17
74	TSV-integrated surface electrode ion trap for scalable quantum information processing. Applied Physics Letters, 2021, 118, .	3.3	17
75	Biaxially strained germanium crossbeam with a high-quality optical cavity for on-chip laser applications. Optics Express, 2021, 29, 14174.	3.4	17
76	Low Temperature PE-TEOS Oxide Bonding Assisted by a Thin Layer of High-Î¹ Dielectric. Electrochemical and Solid-State Letters, 2009, 12, H408.	2.2	16
77	Thermal reliability of fine pitch Cu-Cu bonding with self assembled monolayer (SAM) passivation for Wafer-on-Wafer 3D-Stacking. , 2011, , .		16
78	(Invited) SiGe and III-V Materials and Devices: New HEMT and LED Elements in 0.18-Micron CMOS Process and Design. ECS Transactions, 2016, 75, 439-446.	0.5	16
79	Grapheneâ€“CNT hetero-structure for next generation interconnects. RSC Advances, 2016, 6, 53054-53061.	3.6	16
80	Wafer-on-Wafer Stacking by Bumpless Cuâ€“Cu Bonding and Its Electrical Characteristics. IEEE Electron Device Letters, 2011, 32, 943-945.	3.9	15
81	Wafer-level hermetic packaging of 3D microsystems with low-temperature Cu-to-Cu thermo-compression bonding and its reliability. Journal of Micromechanics and Microengineering, 2012, 22, 105004.	2.6	15
82	Operating TSV in Stable Accumulation Capacitance Region by Utilizing $hbox{Al}_{2}hbox{O}_{3}$-Induced Negative Fixed Charge. IEEE Electron Device Letters, 2012, 33, 875-877.	3.9	15
83	Thermal-reliable 3D clock-tree synthesis considering nonlinear electrical-thermal-coupled TSV model. , 2013, , .		15
84	Hetero-epitaxy of high quality germanium film on silicon substrate for optoelectronic integrated circuit applications. Journal of Materials Research, 2017, 32, 4025-4040.	2.6	15
85	Heat transfer suppression by suspended droplets on microstructured surfaces. Applied Physics Letters, 2020, 116, .	3.3	15
86	Achieving low temperature Cu to Cu diffusion bonding with self assembly monolayer (SAM) passivation. , 2009, , .		14
87	Thermal Characteristics of InP-Al₂O₃/Si Low Temperature Heterogeneous Direct Bonding for Photonic Device Integration. ECS Journal of Solid State Science and Technology, 2013, 2, N169-N174.	1.8	14
88	Monolithic integration of IIIâ€“V HEMT and Si-CMOS through TSV-less 3D wafer stacking. , 2015, , .		14
89	Suppression of interfacial voids formation during silane (SiH4)-based silicon oxide bonding with a thin silicon nitride capping layer. Journal of Applied Physics, 2018, 123, .	2.5	14
90	High-Performance Back-Illuminated Ge_{0.92}Sn_{0.08}/Ge Multiple-Quantum-Well Photodetector on Si Platform For SWIR Detection. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-9.	2.9	14

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91	Microelectronics Thin Film Handling and Transfer Using Low-Temperature Wafer Bonding. Electrochemical and Solid-State Letters, 2005, 8, G362.	2.2	13
92	Mitigating heat dissipation and thermo-mechanical stress challenges in 3-D IC using thermal through silicon via (TTSV). , 2010, , .		13
93	Enhanced Siâ€“Ge interdiffusion in high phosphorus-doped germanium on silicon. Semiconductor Science and Technology, 2015, 30, 105008.	2.0	13
94	Physical and Electrical Characterization of 3D Embedded Capacitor: A High-Density MIM Capacitor Embedded in TSV. , 2017, , .		13
95	Effects of Copper Migration on the Reliability of Through-Silicon Via (TSV). IEEE Transactions on Device and Materials Reliability, 2018, 18, 520-528.	2.0	13
96	Ar/N₂ Plasma Induced Metastable Cu_xN_y for Cu-Cu Direct Bonding. ECS Transactions, 2020, 98, 203-210.	0.5	13
97	High density bump-less Cu-Cu bonding with enhanced quality achieved by pre-bonding temporary passivation for 3D wafer stacking. , 2011, , .		12
98	Characterization of the Youngâ€™s modulus, residual stress and fracture strength of Cuâ€“Snâ€“In thin films using combinatorial deposition and micro-cantilevers. Journal of Micromechanics and Microengineering, 2015, 25, 035023.	2.6	12
99	Highly Tensile-Strained Self-Assembled Ge Quantum Dots on InP Substrates for Integrated Light Sources. ACS Applied Nano Materials, 2021, 4, 897-906.	5.0	12
100	Void Density Reduction at the Cuâ€“Cu Bonding Interface by Means of Prebonding Surface Passivation with Self-Assembled Monolayer. Electrochemical and Solid-State Letters, 2010, 13, H412.	2.2	11
101	PE-TEOS Wafer Bonding Enhancement at Low Temperature with a High-Îº Dielectric Capping Layer of Al[sub 2]O[sub 3]. Journal of the Electrochemical Society, 2011, 158, H137.	2.9	11
102	Study of Hydrophilic Si Direct Bonding with Ultraviolet Ozone Activation for 3D Integration. ECS Journal of Solid State Science and Technology, 2012, 1, P291-P296.	1.8	11
103	Surface Passivation of Cu for Low Temperature 3D Wafer Bonding. ECS Solid State Letters, 2012, 1, P11-P14.	1.4	11
104	Homogeneous Chip to Wafer Bonding of InP-Al2O3-Si Using UV/O3Activation. ECS Journal of Solid State Science and Technology, 2014, 3, P43-P47.	1.8	11
105	Implementation of carbon nanotube bundles in sub-5 micron diameter through-silicon-via structures for three-dimensionally stacked integrated circuits. Materials Today Communications, 2015, 2, e16-e25.	1.9	11
106	Opto-impedance spectroscopy and equivalent circuit analyses of AC powder electroluminescent devices. Optics Express, 2017, 25, A454.	3.4	11
107	Impacts of doping on epitaxial germanium thin film quality and Si-Ge interdiffusion. Optical Materials Express, 2018, 8, 1117.	3.0	11
108	Simulation of high-efficiency resonant-cavity-enhanced GeSn single-photon avalanche photodiodes for sensing and optical quantum applications. IEEE Sensors Journal, 2021, , 1-1.	4.7	11

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109	Low-power and high-detectivity Ge photodiodes by in-situ heavy As doping during Ge-on-Si seed layer growth. Optics Express, 2021, 29, 2940.	3.4	11
110	Optical design considerations of rear-side dielectric for higher efficiency of PERC solar cells. Optics Express, 2019, 27, A758.	3.4	11
111	High throughput Cu-Cu bonding by non-thermo-compression method. , 2013, , .		10
112	Uncooled resonant infrared detector based on aluminum nitride piezoelectric film through charge generations and lattice absorptions. Applied Physics Letters, 2014, 104, .	3.3	10
113	Study of Near-Surface Stresses in Silicon Around Through-Silicon Vias at Elevated Temperatures by Raman Spectroscopy and Simulations. IEEE Transactions on Device and Materials Reliability, 2015, 15, 142-148.	2.0	10
114	Online equivalent series resistance estimation method for condition monitoring of DC-link capacitors. , 2017, , .		10
115	In0.49Ga0.51P/GaAs heterojunction bipolar transistors (HBTs) on 200 mm Si substrates: Effects of base thickness, base and sub-collector doping concentrations. AIP Advances, 2018, 8, 115132.	1.3	10
116	A highly ordered and damage-free Ge inverted pyramid array structure for broadband antireflection in the mid-infrared. Journal of Materials Chemistry C, 2021, 9, 9884-9891.	5.5	10
117	Surface plasmon enhanced GeSn photodetectors operating at 2 Âµm. Optics Express, 2021, 29, 8498.	3.4	10
118	Sub-mA/cm² Dark Current Density, Buffer-Less Germanium (Ge) Photodiodes on a 200-mm Ge-on-Insulator Substrate. IEEE Transactions on Electron Devices, 2021, 68, 1730-1737.	3.0	10
119	Impact of thermal through silicon via (TTSV) on the temperature profile of multi-layer 3-D device stack. , 2009, , .		9
120	Thermal characteristic of Cuâ€“Cu bonding layer in 3-D integrated circuits stack. Microelectronic Engineering, 2010, 87, 682-685.	2.4	9
121	Low Temperature Wafer Bonding of Low-Î° Carbon-Doped Oxide for Application in 3D Integration. Electrochemical and Solid-State Letters, 2010, 13, H27.	2.2	9
122	Application of self-assembled monolayer (SAM) in low temperature bump-less Cu-Cu bonding for advanced 3D IC. , 2010, , .		9
123	Integration of Low-$kappa$ Dielectric Liner in Through Silicon Via and Thermomechanical Stress Relief. Applied Physics Express, 2012, 5, 126601.	2.4	9
124	Novel development of the micro-tensile test at elevated temperature using a test structure with integrated micro-heater. Journal of Micromechanics and Microengineering, 2012, 22, 085015.	2.6	9
125	Cuâ€“Cu Hermetic Seal Enhancement Using Self-Assembled Monolayer Passivation. Journal of Electronic Materials, 2013, 42, 502-506.	2.2	9
126	$hbox{Al}_{2}hbox{O}_{3}$ Interface Engineering of Germanium Epitaxial Layer Grown Directly on Silicon. IEEE Transactions on Electron Devices, 2013, 60, 56-62.	3.0	9

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127	Cu-Cu Die to Die Surface Activated Bonding in Atmospheric Environment Using Ar and Ar/N2 Plasma. ECS Transactions, 2016, 75, 109-116.	0.5	9
128	Temperature enhanced spontaneous emission rate spectra in GeSn/Ge quantum wells. Optical Materials Express, 2017, 7, 800.	3.0	9
129	Insights into the Origins of Guided Microtrenches and Microholes/rings from Sn Segregation in Germaniumâ€“Tin Epilayers. Journal of Physical Chemistry C, 2020, 124, 20035-20045.	3.1	9
130	In-Depth Parametric Study of Ar or N2 Plasma Activated Cu Surfaces for Cu-Cu Direct Bonding. , 2021, , .		9
131	Advanced 3D Integration Technologies in Various Quantum Computing Devices. IEEE Open Journal of Nanotechnology, 2021, 2, 101-110.	2.0	9
132	Effect of direct current stressing to Cuâ€“Cu bond interface imperfection for three dimensional integrated circuits. Microelectronic Engineering, 2013, 106, 149-154.	2.4	8
133	Enabling the integrated circuits of the future. , 2015, , .		8
134	Experiments on the ultrathin silicon vapor chamber for enhanced heat transfer performance. , 2016, , .		8
135	Reliability Evaluation of Copper (Cu) Through-Silicon Vias (TSV) Barrier and Dielectric Liner by Electrical Characterization and Physical Failure Analysis (PFA). , 2017, , .		8
136	MOCVD growth of InGaP/GaAs heterojunction bipolar transistors on 200 mm Si wafers for heterogeneous integration with Si CMOS. Semiconductor Science and Technology, 2018, 33, 115011.	2.0	8
137	High-performance AlGaInP light-emitting diodes integrated on silicon through a superior quality germanium-on-insulator. Photonics Research, 2018, 6, 290.	7.0	8
138	Assembly Process and Electrical Properties of Top-Transferred Graphene on Carbon Nanotubes for Carbon-Based 3-D Interconnects. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 516-524.	2.5	8
139	GeSn-on-insulator dual-waveband resonant-cavity-enhanced photodetectors at the 2â€‰â€‰Âµm and 1.55â€‰â€‰Âµm optical communication bands. Optics Letters, 2021, 46, 3809.	3.3	8
140	Design and Fabrication of Grating Couplers for the Optical Addressing of Trapped Ions. IEEE Photonics Journal, 2021, 13, 1-6.	2.0	8
141	Optically pumped low-threshold microdisk lasers on a GeSn-on-insulator substrate with reduced defect density. Photonics Research, 2022, 10, 1332.	7.0	8
142	Application of self assembly monolayer (SAM) in lowering the process temperature during Cu-Cu diffusion bonding of 3D IC. , 2009, , .		7
143	Fine-pitch bump-less Cu-Cu bonding for wafer-on-wafer stacking and its quality enhancement. , 2010, , .		7
144	Dopant profile control of epitaxial emitter for silicon solar cells by low temperature epitaxy. Applied Physics Letters, 2011, 99, 011102.	3.3	7

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145	Temporary passivation of Cu for low temperature (< 300°C) 3D wafer stacking. , 2011, , .		7
146	Ultrafine pitch (6-µm) evolution of Cu-Cu bonded interconnects in 3D wafer-on-wafer stacking. , 2012, , .		7
147	Effect of Prebonding Anneal on the Microstructure Evolution and Cuâ€“Cu Diffusion Bonding Quality for Three-Dimensional Integration. Journal of Electronic Materials, 2012, 41, 2567-2572.	2.2	7
148	Effect of bonding temperature on hermetic seal and mechanical support of wafer-level Cu-to-Cu thermo-compression bonding for 3D integration. Microsystem Technologies, 2013, 19, 661-667.	2.0	7
149	Experimental characterization of Si micropillar based evaporator for advanced vapor chambers. , 2014, , .		7
150	Through-substrate via (TSV) with embedded capacitor as an on-chip energy storage element. , 2016, , .		7
151	Dielectric relaxation in AC powder electroluminescent devices. Solid State Communications, 2017, 250, 53-56.	1.9	7
152	Thermal stability of germanium-tin (GeSn) fins. Applied Physics Letters, 2017, 111, 252103.	3.3	7
153	High-Sensitivity and Mechanically Compliant Flexible Ge Photodetectors with a Vertical pâ€“iâ€“n Configuration. ACS Applied Electronic Materials, 2021, 3, 1780-1786.	4.3	7
154	Gourd-shaped hole array germanium (Ge)-on-insulator photodiodes with improved responsivity and specific detectivity at 1,550â€…nm. Optics Express, 2021, 29, 16520.	3.4	7
155	Ge-on-insulator lateral p-i-n waveguide photodetectors for optical communication. Optics Letters, 2020, 45, 6683.	3.3	7
156	Time-Dependent Evolution Study of Ar/N₂ Plasma-Activated Cu Surface for Enabling Two-Step Cu-Cu Direct Bonding in a Non-Vacuum Environment. ECS Journal of Solid State Science and Technology, 2021, 10, 124001.	1.8	7
157	Transferable single-layer GeSn nanomembrane resonant-cavity-enhanced photodetectors for 2 Î¼m band optical communication and multi-spectral short-wave infrared sensing. Nanoscale, 2022, 14, 7341-7349.	5.6	7
158	Through Silicon Via Fabrication with Low-$kappa$ Dielectric Liner and Its Implications on Parasitic Capacitance and Leakage Current. Japanese Journal of Applied Physics, 2012, 51, 04DB03.	1.5	6
159	Strategy for TSV scaling with consideration on thermo-mechanical stress and acceptable delay. , 2012, , .		6
160	Experiment and modeling of microstructured capillary wicks for thermal management of electronics. , 2013, , .		6
161	Strain relaxation of germanium-tin (GeSn) fins. AIP Advances, 2018, 8, 025111.	1.3	6
162	Design and Development of Single-Qubit Ion Trap on Glass and Si Substrates With RF Analysis and Performance Benchmarking. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 1221-1231.	2.5	6

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163	Development of a CMOS-Compatible Carbon Nanotube Array Transfer Method. Micromachines, 2021, 12, 95.	2.9	6
164	PIC-integrable, uniformly tensile-strained Ge-on-insulator photodiodes enabled by recessed SiN_x stressor. Photonics Research, 2021, 9, 1255.	7.0	6
165	Growth and Characterizations of GeSn Films with High Sn Composition by Chemical Vapor Deposition (CVD) Using Ge2H6 and SnCl4 for Mid-IR Applications. ECS Transactions, 2020, 98, 91-98.	0.5	6
166	Suspended germanium membranes photodetector with tunable biaxial tensile strain and location-determined wavelength-selective photoresponsivity. Applied Physics Letters, 2021, 119, .	3.3	6
167	Study of the evolution of Cu-Cu bonding interface imperfection under direct current stressing for three dimensional integrated circuits. , 2011, , .		5
168	Low Temperature Wafer Bonding of Low-Î¤ Carbon Doped Oxide (CDO) for High Performance 3D IC Application. Journal of the Electrochemical Society, 2011, 158, H1107.	2.9	5
169	3D integration of MEMS and CMOS via Cu-Cu bonding with simultaneous formation of electrical, mechanical and hermetic bonds. , 2012, , .		5
170	Cuâ€“Cu Bond Quality Enhancement Through the Inclusion of a Hermetic Seal for 3-D IC. IEEE Transactions on Electron Devices, 2013, 60, 1444-1450.	3.0	5
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