Ingrid De Wolf

List of Publications by Year
in descending order

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356	7,331	38	71
papers	citations	h-index	g-index
		87843	85498

360	360	360	4738
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Micro-Raman spectroscopy to study local mechanical stress in silicon integrated circuits. Semiconductor Science and Technology, 1996, 11, 139-154.	1.0	877
2	Stress measurements in silicon devices through Raman spectroscopy: Bridging the gap between theory and experiment. Journal of Applied Physics, 1996, 79, 7148-7156.	1.1	320
3	Design Issues and Considerations for Low-Cost 3-D TSV IC Technology. IEEE Journal of Solid-State Circuits, 2011, 46, 293-307.	3.5	236
4	A comprehensive model to predict the charging and reliability of capacitive RF MEMS switches. Journal of Micromechanics and Microengineering, 2004, 14, 514-521.	1.5	227
5	A physical model to predict stiction in MEMS. Journal of Micromechanics and Microengineering, 2002, 12, 702-713.	1.5	184
6	Stress measurements in Si microelectronics devices using Raman spectroscopy. Journal of Raman Spectroscopy, 1999, 30, 877-883.	1.2	168
7	Microâ€Raman study of stress distribution in local isolation structures and correlation with transmission electron microscopy. Journal of Applied Physics, 1992, 71, 898-906.	1.1	149
8	Printed circuit board technology inspired stretchable circuits. MRS Bulletin, 2012, 37, 254-260.	1.7	130
9	Analytical Model of the DC Actuation of Electrostatic MEMS Devices With Distributed Dielectric Charging and Nonplanar Electrodes. Journal of Microelectromechanical Systems, 2007, 16, 1243-1253.	1.7	123
10	Cu pumping in TSVs: Effect of pre-CMP thermal budget. Microelectronics Reliability, 2011, 51, 1856-1859.	0.9	122
11	Stresses and strains in latticeâ€mismatched stripes, quantum wires, quantum dots, and substrates in Si technology. Journal of Applied Physics, 1996, 79, 8145-8165.	1.1	116
12	Strain determination in silicon microstructures by combined convergent beam electron diffraction, process simulation, and micro-Raman spectroscopy. Journal of Applied Physics, 2003, 94, 5574-5583.	1.1	101
13	Comprehensive analysis of the impact of single and arrays of through silicon vias induced stress on high-k / metal gate CMOS performance. , 2010, , .		97
14	On the physics of stiction and its impact on the reliability of microstructures. Journal of Adhesion Science and Technology, 2003, 17, 563-582.	1.4	95
15	Study of damage and stress induced by backgrinding in Si wafers. Semiconductor Science and Technology, 2003, 18, 261-268.	1.0	92
16	Polyimide-Enhanced Stretchable Interconnects: Design, Fabrication, and Characterization. IEEE Transactions on Electron Devices, 2011, 58, 2680-2688.	1.6	91
17	Mechanical and electrical characterization of BCB as a bond and seal material for cavities housing (RF-)MEMS devices. Journal of Micromechanics and Microengineering, 2005, 15, S89-S96.	1.5	75
18	The effects of encapsulation on deformation behavior and failure mechanisms of stretchable interconnects. Thin Solid Films, 2011, 519, 2225-2234.	0.8	71

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19	Processâ€induced mechanical stress in isolation structures studied by microâ€Raman spectroscopy. Journal of Applied Physics, 1993, 74, 4490-4500.	1.1	70
20	Influence of process-induced stress on device characteristics and its impact on scaled device performance. IEEE Transactions on Electron Devices, 1999, 46, 1245-1252.	1.6	70
21	Voltage-dependent Ba2+ block of K+ channels in apical membrane of frog skin. American Journal of Physiology - Cell Physiology, 1986, 251, C696-C706.	2.1	62
22	The investigation of microsystems using Raman spectroscopy. Optics and Lasers in Engineering, 2001, 36, 213-223.	2.0	60
23	Materials issues in the processing, the operation and the reliability of MEMS. Microelectronic Engineering, 2004, 76, 245-257.	1.1	60
24	Degradation of Cu6Sn5 intermetallic compound by pore formation in solidâ€"liquid interdiffusion Cu/Sn microbump interconnects. Microelectronic Engineering, 2014, 117, 26-34.	1.1	56
25	Techniques to study the reliability of metal RF MEMS capacitive switches. Microelectronics Reliability, 2002, 42, 1789-1794.	0.9	55
26	The effect of pitch on deformation behavior and the stretching-induced failure of a polymer-encapsulated stretchable circuit. Journal of Micromechanics and Microengineering, 2010, 20, 075036.	1.5	54
27	Extraction of the Appropriate Material Property for Realistic Modeling of Through-Silicon-Vias using Î¼-Raman Spectroscopy. , 2008, , .		50
28	Reliability and Failure Analysis of Sn-Ag-Cu Solder Interconnections for PSGA Packages on Ni/Au Surface Finish. IEEE Transactions on Device and Materials Reliability, 2004, 4, 5-10.	1.5	49
29	In situ observations on deformation behavior and stretching-induced failure of fine pitch stretchable interconnect. Journal of Materials Research, 2009, 24, 3573-3582.	1.2	48
30	Observation of single interface traps in submicron MOSFET's by charge pumping. IEEE Transactions on Electron Devices, 1996, 43, 940-945.	1.6	46
31	Creep characterization of Al alloy thin films for use in MEMS applications. Microelectronic Engineering, 2004, 76, 272-278.	1.1	46
32	Impact of post-plating anneal and through-silicon via dimensions on Cu pumping. , 2013, , .		46
33	Techniques for mechanical strain analysis in sub-micrometer structures: TEM/CBED, micro-Raman spectroscopy, X-ray micro-diffraction and modeling. Microelectronic Engineering, 2003, 70, 425-435.	1.1	44
34	Creep as a reliability problem in MEMS. Microelectronics Reliability, 2004, 44, 1733-1738.	0.9	44
35	A low frequency electrical test set-up for the reliability assessment of capacitive RF MEMS switches. Journal of Micromechanics and Microengineering, 2003, 13, 604-612.	1.5	43
36	Characterization of individual interface traps with charge pumping. Applied Physics Letters, 1996, 68, 1383-1385.	1.5	42

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37	Stress measurements using ultraviolet micro-Raman spectroscopy. Applied Physics Letters, 1999, 75, 2450-2451.	1.5	42
38	A physical model to predict stiction in MEMS. Journal of Micromechanics and Microengineering, 2006, 16, 189-189.	1.5	41
39	Non-uniform triggering of gg-nMOSt investigated by combined emission microscopy and transmission line pulsing. , 0, , .		40
40	Experimental characterization of stiction due to charging in RF MEMS. , 0, , .		40
41	Mechanical Issues of Cu-to-Cu Wire Bonding. IEEE Transactions on Components and Packaging Technologies, 2004, 27, 539-545.	1.4	40
42	Relation between Raman frequency and triaxial stress in Si for surface and cross-sectional experiments in microelectronics components. Journal of Applied Physics, 2015, 118, .	1.1	40
43	High-Efficiency Polymer-Based Direct Multi-Jet Impingement Cooling Solution for High-Power Devices. IEEE Transactions on Power Electronics, 2019, 34, 6601-6612.	5.4	40
44	The prediction of stiction failures in MEMS. IEEE Transactions on Device and Materials Reliability, 2003, 3, 167-172.	1.5	39
45	Polysilicon MEMS accelerometers exposed to shocks: numericalâ€“experimental investigation. Journal of Micromechanics and Microengineering, 2009, 19, 035023.	1.5	39
46	Correlation between Cu microstructure and TSV Cu pumping. , 2014, , .		39
47	Formation, processing and characterization of Coâ€“Sn intermetallic compounds for potential integration in 3D interconnects. Microelectronic Engineering, 2015, 140, 72-80.	1.1	39
48	Oxide and interface degradation and breakdown under medium and high field injection conditions: A correlation study. Microelectronic Engineering, 1995, 28, 313-316.	1.1	37
49	Local identification and mapping of the C49 and C54 titanium phases in submicron structures by micro-Raman spectroscopy. Applied Physics Letters, 1997, 70, 2262-2264.	1.5	36
50	Creep-resistant aluminum alloys for use in MEMS. Journal of Micromechanics and Microengineering, 2005, 15, S165-S170.	1.5	36
51	Characterization of the local mechanical stress induced during the Ti and Co/Ti salicidation in sub-0.25 Î¼m technologies. Journal of Applied Physics, 1999, 86, 4290-4297.	1.1	32
52	Laser Bonding of Glass to Silicon Using Polymer for Microsystems Packaging. Journal of Microelectromechanical Systems, 2007, 16, 571-580.	1.7	32
53	Process induced sub-surface damage in mechanically ground silicon wafers. Semiconductor Science and Technology, 2008, 23, 075038.	1.0	32
54	Effect of substrate charging on the reliability of capacitive RF MEMS switches. Sensors and Actuators A: Physical, 2009, 154, 261-268.	2.0	32

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55	An electrostatic fringing-field actuator (EFFA): application towards a low-complexity thin-film RF-MEMS technology. Journal of Micromechanics and Microengineering, 2007, 17, S204-S210.	1.5	31
56	Experimental characterization and model validation of liquid jet impingement cooling using a high spatial resolution and programmable thermal test chip. Applied Thermal Engineering, 2019, 152, 308-318.	3.0	31
57	Theoretical and experimental Raman spectroscopy study of mechanical stress induced by electronic packaging. IEEE Transactions on Components and Packaging Technologies, 2005, 28, 484-492.	1.4	30
58	In-depth Raman spectroscopy analysis of various parameters affecting the mechanical stress near the surface and bulk of Cu-TSVs. , 2012, , .		30
59	A spectroscopic study of the chromatic properties of GafChromicâ„¢EBT3 films. Medical Physics, 2016, 43, 1156-1166.	1.6	29
60	1/f noise measurements for faster evaluation of electromigration in advanced microelectronics interconnections. Journal of Applied Physics, 2016, 119, .	1.1	29
61	Reliability Challenges Related to TSV Integration and 3-D Stacking. IEEE Design and Test, 2016, 33, 37-45.	1.1	29
62	Experimental validation of mechanical stress models by micro-Raman spectroscopy. Microelectronics Reliability, 1996, 36, 1751-1754.	0.9	28
63	Impact of through silicon via induced mechanical stress on fully depleted Bulk FinFET technology. , 2012, , .		28
64	MEMS packaging and reliability: An undividable couple. Microelectronics Reliability, 2012, 52, 2228-2234.	0.9	28
65	11-Megapixel CMOS-Integrated SiGe Micromirror Arrays for High-End Applications. Journal of Microelectromechanical Systems, 2010, 19, 202-214.	1.7	27
66	Mechanical stress measurements using micro-Raman spectroscopy. Microsystem Technologies, 1998, 5, 13-17.	1.2	26
67	Photo-carrier generation as the origin of Fowler-Nordheim-induced substrate hole current in thin oxides. IEEE Transactions on Electron Devices, 2001, 48, 231-238.	1.6	26
68	3D stacking induced mechanical stress effects. , 2014, , .		26
69	Influence of Field-Plate Configuration on Power Dissipation and Temperature Profiles in AlGaN/GaN on Silicon HEMTs. IEEE Transactions on Electron Devices, 2015, 62, 2416-2422.	1.6	26
70	Analysis of local mechanical stresses in and near tungsten lines on silicon substrate. Journal of Applied Physics, 1999, 85, 6477-6485.	1.1	25
71	Highly reliable CMOS-integrated 11MPixel SiGe-based micro-mirror arrays for high-end industrial applications. , 2008, , .		25
72	On the assessment of local stress distributions in integrated circuits. Applied Surface Science, 1993, 63, 119-125.	3.1	23

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73	Characterization and failure analysis of MEMS: high resolution optical investigation of small out-of-plane movements and fast vibrations. Microsystem Technologies, 2004, 10, 89-96.	1.2	23
74	Compact thermal modeling of hot spots in advanced 3D-stacked ICs. , 2009, , .		23
75	A Novel Mechanism of Embrittlement Affecting the Impact Reliability of Tin-Based Lead-Free Solder Joints. Journal of Electronic Materials, 2009, 38, 1881-1895.	1.0	23
76	Addendum: â€œStress measurements in silicon devices through Raman spectroscopy: Bridging the gap between theory and experimentâ€•[J. Appl. Phys. 79, 7148 (1996)]. Journal of Applied Physics, 1999, 85, 7484-7485.	1.1	22
77	SCB and SMI: two stretchable circuit technologies, based on standard printed circuit board processes. Circuit World, 2012, 38, 232-242.	0.7	22
78	Electromigration Activation Energies in Alternative Metal Interconnects. IEEE Transactions on Electron Devices, 2019, 66, 5278-5283.	1.6	22
79	The effect of externally imposed mechanical stress on the hot-carrier-induced degradation of deep-sub micron nMOSFET's. IEEE Transactions on Electron Devices, 1997, 44, 943-950.	1.6	21
80	A systematic study of trade-offs in engineering a locally strained pMOSFET. , 0, , .		21
81	Stress-Induced Mobility Enhancement for Integrated Power Transistors. , 2007, , .		21
82	Fast and Distributed Thermal Model for Thermal Modeling of GaN Power Devices. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 1747-1755.	1.4	21
83	Effect of Gas Pressure on the Lifetime of Capacitive RF MEMS Switches. , 0, , .		19
84	Influence of the substrate on the lifetime of capacitive RF MEMS switches. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	19
85	New insights into charging in capacitive RF MEMS switches. , 2008, , .		19
86	Copper through silicon via induced keep out zone for 10nm node bulk FinFET CMOS technology. , 2013, , .		19
87	A new characterization method for electrostatically actuated resonant MEMS: Determination of the mechanical resonance frequency, quality factor and dielectric charging. Sensors and Actuators A: Physical, 2009, 154, 304-315.	2.0	18
88	Processing assessment and adhesion evaluation of copper through-silicon vias (TSVs) for three-dimensional stacked-integrated circuit (3D-SIC) architectures. Microelectronics Reliability, 2010, 50, 1636-1640.	0.9	18
89	Chip package interaction (CPI): Thermo mechanical challenges in 3D technologies. , 2012, , .		18
90	Expected Failures in 3-D Technology and Related Failure Analysis Challenges. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 711-718.	1.4	18

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91	Thermal Modelling of Silicon Photonic Ring Modulator with Substrate Undercut. Journal of Lightwave Technology, 2022, 40, 4357-4363.	2.7	18
92	Developing an Advanced Module for Back-Contact Solar Cells. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 1319-1327.	1.4	17
93	Impact of through silicon vias on front-end-of-line performance after thermal cycling and thermal storage. , 2012, , .		17
94	<i>In-situ</i> scanning electron microscopy study of fracture events during back-end-of-line microbeam bending tests. Applied Physics Letters, 2014, 105, .	1.5	17
95	On the scalability of source/drain current enhancement in thin film sSOI. , 0, , .		16
96	Mechanical characterization of poly-SiGe layers for CMOSâ€“MEMS integrated application. Journal of Micromechanics and Microengineering, 2010, 20, 015014.	1.5	16
97	Raman Spectroscopy Analysis Of Mechanical Stress Near Cu-TSVs. AIP Conference Proceedings, 2011, , .	0.3	16
98	Analysis of microbump induced stress effects in 3D stacked IC technologies. , 2012, , .		16
99	Poly-SiGe-Based MEMS Thin-Film Encapsulation. Journal of Microelectromechanical Systems, 2012, 21, 110-120.	1.7	16
100	Chip-Package Interaction in 3D stacked IC packages using Finite Element Modelling. Microelectronics Reliability, 2014, 54, 1200-1205.	0.9	16
101	Effect of test structure on electromigration characteristics in three-dimensional through silicon via stacked devices. Japanese Journal of Applied Physics, 2015, 54, 05EE01.	0.8	16
102	Experimental Benchmarking of Electrical Methods and <inline-formula> <tex-math notation="LaTeX">$mu $ </tex-math> </inline-formula>-Raman Spectroscopy for Channel Temperature Detection in AlGaN/GaN HEMTs. IEEE Transactions on Electron Devices, 2016, 63, 2321-2327.	1.6	16
103	Investigation by Convergent Beam Electron Diffraction of the Stress around Shallow Trench Isolation Structures. Journal of the Electrochemical Society, 2001, 148, G597.	1.3	15
104	Above-IC generic poly-SiGe thin film wafer level packaging and MEM device technology: Application to accelerometers. , 2011, , .		15
105	FET arrays as CPI sensors for 3D stacking and packaging characterization. , 2012, , .		15
106	Properties of ultrathin molybdenum films for interconnect applications. Materialia, 2022, 24, 101511.	1.3	15
107	Forskolin activates gated Cl- channels in frog skin. American Journal of Physiology - Cell Physiology, 1989, 256, C1239-C1249.	2.1	14
108	<title>High-resolution stress and temperature measurements in semiconductor devices using micro-Raman spectroscopy</title>. , 1999, 3897, 239.		14

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109	High frequency scanning acoustic microscopy applied to 3D integrated process: Void detection in Through Silicon Vias. , 2013, , .		14
110	Three-dimensional micro-Raman spectroscopy mapping of stress induced in Si by Cu-filled through-Si vias. Applied Physics Letters, 2015, 106, 191901.	1.5	14
111	Extraction of elastic modulus of porous ultra-thin low-k films by two-dimensional finite-element simulations of nanoindentation. Journal of Applied Physics, 2016, 119, .	1.1	14
112	50Gb/s C-band GeSi Waveguide Electro-Absorption Modulator. , 2016, , .		14
113	Title is missing!. Journal of Materials Science: Materials in Electronics, 1999, 10, 351-358.	1.1	13
114	Detection of failure sites by focused ion beam and nano-probing in the interconnect of three-dimensional stacked circuit structures. Microelectronics Reliability, 2008, 48, 1517-1520.	0.9	13
115	Charging and discharging phenomena in electrostatically-driven single-crystal-silicon MEM resonators: DC bias dependence and influence on the series resonance frequency. Microelectronics Reliability, 2008, 48, 1221-1226.	0.9	13
116	Impact of thinning and through silicon via proximity on High-k / Metal Gate first CMOS performance. , 2010, , .		13
117	Diffusion growth of Cu3Sn phase in the bump and thin film Cu/Sn structures. Microelectronics Reliability, 2012, 52, 1971-1974.	0.9	13
118	Fast convolution based thermal model for 3D-ICs: Methodology, accuracy analysis and package impact. Microelectronics Journal, 2014, 45, 1746-1752.	1.1	13
119	Microstructure simulation of grain growth in Cu through silicon vias using phase-field modeling. Microelectronics Reliability, 2015, 55, 765-770.	0.9	13
120	Impact of oxide liner properties on TSV Cu pumping and TSV stress. , 2015, , .		13
121	Statistical Distribution of Through-Silicon via Cu Pumping. IEEE Transactions on Device and Materials Reliability, 2017, 17, 549-559.	1.5	13
122	Low-frequency noise and defects in copper and ruthenium resistors. Applied Physics Letters, 2019, 114, .	1.5	13
123	Experimental Characterization of a Chip-Level 3-D Printed Microjet Liquid Impingement Cooler for High-Performance Systems. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 1815-1824.	1.4	13
124	EPR in LiHoF4 with a far infrared laser. Journal of Physics and Chemistry of Solids, 1985, 46, 1387-1391.	1.9	12
125	<title>Fabrication and reliability testing of Ti/TiN heaters</title>. , 1999, , .		12
126	Si Trench Around Drain (STAD) technology of GaN-DHFETs on Si substrate for boosting power performance. , 2011, , .		12

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127	Correlation between stress-induced leakage current and dielectric degradation in ultra-porous SiOCH low-k materials. Journal of Applied Physics, 2015, 118, .	1.1	12
128	Edge-enhanced Raman scattering in narrow sGe fin field-effect transistor channels. Applied Physics Letters, 2015, 106, .	1.5	12
129	Substrate Independent Elastic Modulus of Thin Low Dielectric Constant Materials. Advanced Engineering Materials, 2017, 19, 1600653.	1.6	12
130	High efficiency direct liquid jet impingement cooling of high power devices using a 3D-shaped polymer cooler. , 2017, , .		12
131	Effects of isothermal storage on grain structure of Cu/Sn/Cu microbump interconnects for 3D stacking. Microelectronics Reliability, 2019, 102, 113296.	0.9	12
132	Investigation of stress in shallow trench isolation using UV micro-Raman spectroscopy. Microelectronics Reliability, 2001, 41, 511-515.	0.9	11
133	Hermeticity Testing and Failure Analysis of MEMS Packages. , 2007, , .		11
134	AlCuMgMn micro-tensile samples. Sensors and Actuators A: Physical, 2008, 143, 120-128.	2.0	11
135	Reliability assessment of stretchable interconnects. , 2010, , .		11
136	A study of blister formation in ALD Al<inf>2</inf>O<inf>3</inf> grown on silicon. , 2012, , .		11
137	Correlation between field dependent electrical conduction and dielectric breakdown in a SiCOH based low-k (kâ€‰=â€‰2.0) dielectric. Applied Physics Letters, 2013, 103, .	1.5	11
138	Investigating stress measurement capabilities of GHz Scanning Acoustic Microscopy for 3D failure analysis. Microelectronics Reliability, 2016, 64, 336-340.	0.9	11
139	Study of the effect of Sn grain boundaries on IMC morphology in solid state inter-diffusion soldering. Scientific Reports, 2019, 9, 14862.	1.6	11
140	Nozzle scaling effects for the thermohydraulic performance of microjet impingement cooling with distributed returns. Applied Thermal Engineering, 2020, 180, 115767.	3.0	11
141	Oxytocin stimulates the apical K+ conductance in frog skin. Pflugers Archiv European Journal of Physiology, 1986, 407, 602-606.	1.3	10
142	The influence of oxidation-induced stress on the generation current and its impact on scaled device performance. , 0, , .		10
143	Electrical field induced ageing of polymer light-emitting diodes in an oxygen-rich atmosphere studied by emission microscopy, scanning electron microscopy and secondary ion mass spectroscopy. Synthetic Metals, 1998, 96, 87-96.	2.1	10
144	Metrology and inspection for process control during bonding and thinning of stacked wafers for manufacturing 3D SIC's. , 2011, , .		10

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145	Fast Transient Convolution-Based Thermal Modeling Methodology for Including the Package Thermal Impact in 3D ICs. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 424-431.	1.4	10
146	Advanced Raman Spectroscopy Using Nanofocusing of Light. Advanced Engineering Materials, 2017, 19, 1600612.	1.6	10
147	3D Printed Liquid Jet Impingement Cooler: Demonstration, Opportunities and Challenges. , 2018, , .		10
148	Stress measurements in Si microelectronics devices using Raman spectroscopy. , 1999, 30, 877.		10
149	Substrate hole current origin after oxide breakdown. , 0, , .		9
150	Spectroscopic identification of light emitted from defects in silicon devices. Journal of Applied Physics, 2001, 89, 249-258.	1.1	9
151	A reliable and compact polymer-based package for capacitive RF-MEMS switches. , 0, , .		9
152	The influence of the package environment on the functioning and reliability of RF-MEMS switches. , 0, , .		9
153	Outgassing study of thin films used for poly-SiGe based vacuum packaging of MEMS. Microelectronics Reliability, 2011, 51, 1878-1881.	0.9	9
154	Hydrogen outgassing induced liner/barrier reliability degradation in through silicon via's. Applied Physics Letters, 2014, 104, 142906.	1.5	9
155	Impact of Cu TSVs on BEOL metal and dielectric reliability. , 2014, , .		9
156	In-situ scanning electron microscope observation of electromigration-induced void growth in 30â€‰nm Â½ pitch Cu interconnect structures. Journal of Applied Physics, 2014, 115, 074305.	1.1	9
157	Reliability challenges for barrier/liner system in high aspect ratio through silicon vias. Microelectronics Reliability, 2014, 54, 1949-1952.	0.9	9
158	As-grown donor-like traps in low-k dielectrics and their impact on intrinsic TDDB reliability. Microelectronics Reliability, 2014, 54, 1675-1679.	0.9	9
159	Effects of packaging on mechanical stress in 3D-ICs. , 2015, , .		9
160	Nanofocusing of light into semiconducting fin photonic crystals. Applied Physics Letters, 2016, 108, .	1.5	9
161	Investigation of Advanced Dicing Technologies for Ultra Low-k and 3D Integration. , 2016, , .		9
162	Impact of Via Density on the Mechanical Integrity of Advanced Back-End-of-Line During Packaging. , 2016, , .		9

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163	Anisotropic stress in narrow sGe fin field-effect transistor channels measured using nano-focused Raman spectroscopy. APL Materials, 2018, 6, .	2.2	9
164	The first observation of p-type electromigration failure in full ruthenium interconnects. , 2018, , .		9
165	Hot-Electron-Induced Punch-Through (HEIP) Effect in p-MOSFET Enhanced by Mechanical Stress. IEEE Electron Device Letters, 2021, 42, 1424-1427.	2.2	9
166	Microelectrode study of voltage-dependent Ba2+ and Cs+ block of apical K+ channels in the skin of Rana temporaria. Pflugers Archiv European Journal of Physiology, 1991, 418, 400-407.	1.3	8
167	Analysis of externally imposed mechanical stress effects on the hot-carrier-induced degradation of MOSFET's. , 1994, , .		8
168	Determination of stress in shallow trench isolation for deep submicron MOS devices by UV Raman spectroscopy. , 0, , .		8
169	New Technique for Forming Continuous, Smooth, and Uniform Ultrathin (3â€‰nm) PtSi Layers. Electrochemical and Solid-State Letters, 1999, 2, 195.	2.2	8
170	The reliability of RF-MEMS: failure modes, test procedures, and instrumentation. , 2004, 5343, 1.		8
171	A new method to determine the mechanical resonance frequency, quality factor and charging in electrostatically actuated MEMS. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	8
172	High throughput measurement techniques for wafer level yield inspection of MEMS devices. Proceedings of SPIE, 2008, , .	0.8	8
173	Investigating ESD sensitivity in electrostatic SiGe MEMS. Journal of Micromechanics and Microengineering, 2010, 20, 055005.	1.5	8
174	Thermal optimization of GaN-on-Si HEMTs with plastic package. Microelectronics Reliability, 2011, 51, 1788-1791.	0.9	8
175	Reliability concerns in copper TSV's: Methods and results. , 2012, , .		8
176	3D chip package interaction thermo-mechanical challenges: Proximity effects of Through Silicon vias and μ-bumps. , 2012, , .		8
177	Simulation of Cu pumping during TSV fabrication. , 2013, , .		8
178	Mechanical stability of Cu/low-k BEOL interconnects. , 2014, , .		8
179	Evaluation of via density and low-k Young's modulus influence on mechanical performance of advanced node multi-level Back-End-Of-Line. Microelectronics Reliability, 2016, 56, 93-100.	0.9	8
180	Correlation between temperature dependence of Raman shifts and in-plane strains in an AlGaN/GaN stack. Journal of Applied Physics, 2017, 121, .	1.1	8

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181	Study of the enhanced electromigration performance of Cu(Mn) by low-frequency noise measurements and atom probe tomography. Applied Physics Letters, 2017, 111, .	1.5	8
182	A novel electromigration characterization method based on low-frequency noise measurements. Semiconductor Science and Technology, 2019, 34, 075002.	1.0	8
183	Optical Beam-Based Defect Localization Methodologies for Open and Short Failures in Micrometer-Scale 3-D TSV Interconnects. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 1542-1551.	1.4	8
184	Far infrared electron paramagnetic resonance in TmVO4. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 108, 221-224.	0.9	7
185	Current-voltage relations of Cs+-inhibited K+ currents through the apical membrane of frog skin. Pflugers Archiv European Journal of Physiology, 1988, 413, 111-117.	1.3	7
186	A reliability study of titanium silicide lines using micro-Raman spectroscopy and emission microscopy. Microelectronics Reliability, 1997, 37, 1591-1594.	0.9	7
187	Experimental one- and two-dimensional mechanical stress characterization of silicon microsystems using micro-Raman spectroscopy. , 2000, , .		7
188	Spectroscopic photon emission microscopy: a unique tool for failure analysis of microelectronics devices. Microelectronics Reliability, 2001, 41, 1161-1169.	0.9	7
189	Origin of substrate hole current after gate oxide breakdown. Journal of Applied Physics, 2002, 91, 2155-2160.	1.1	7
190	Long-term reliability measurements on MEMS using a laser-Doppler vibrometer. , 2008, , .		7
191	Design and analysis of a novel fine pitch and highly stretchable interconnect. Microelectronics International, 2010, 27, 33-38.	0.4	7
192	Defect detection in Through Silicon Vias by GHz Scanning Acoustic Microscopy: Key ultrasonic characteristics. , 2014, , .		7
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