

S W King

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

166
papers

2,889
citations

27
h-index

44
g-index

180
ext. papers

3,179
ext. citations

3.1
avg, IF

5.43
L-index

#	Paper	IF	Citations
166	Effects of ²⁹ Si and ¹ H on the near-zero field magnetoresistance response of Si/SiO ₂ interface states: Implications for oxide tunneling currents. <i>Applied Physics Letters</i> , 2021 , 119, 184101	3.4	3
165	Thermal Conductivity Enhancement in Ion-Irradiated Hydrogenated Amorphous Carbon Films. <i>Nano Letters</i> , 2021 , 21, 3935-3940	11.5	3
164	Probing thermal conductivity of subsurface, amorphous layers in irradiated diamond. <i>Journal of Applied Physics</i> , 2021 , 129, 055307	2.5	4
163	Electrically detected magnetic resonance and near-zero field magnetoresistance in ²⁸ Si/ ²⁸ SiO ₂ . <i>Journal of Applied Physics</i> , 2021 , 130, 065701	2.5	3
162	Extraction of dipolar coupling constants from low-frequency electrically detected magnetic resonance and near-zero field magnetoresistance spectra via least squares fitting to models developed from the stochastic quantum Liouville equation. <i>Journal of Applied Physics</i> , 2021 , 130, 234401	2.5	1
161	Band offsets at amorphous hydrogenated boron nitride/high-k oxide interfaces from x-ray photoelectron spectroscopy with charging effects analysis. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2020 , 38, 030601	1.3	2
160	Full characterization of ultrathin 5-nm low-k dielectric bilayers: Influence of dopants and surfaces on the mechanical properties. <i>Physical Review Materials</i> , 2020 , 4,	3.2	6
159	A Selectively Colorful yet Chilly Perspective on the Highs and Lows of Dielectric Materials for CMOS Nanoelectronics 2020 ,		2
158	Observation of Radiation-Induced Leakage Current Defects in MOS Oxides With Multifrequency Electrically Detected Magnetic Resonance and Near-Zero-Field Magnetoresistance. <i>IEEE Transactions on Nuclear Science</i> , 2020 , 67, 228-233	1.7	6
157	Thermal conductivity-structure-processing relationships for amorphous nano-porous organo-silicate thin films. <i>Journal of Porous Materials</i> , 2020 , 27, 565-586	2.4	2
156	X-ray photoelectron spectroscopy investigation of the valence band offset at beryllium oxide-diamond interfaces. <i>Diamond and Related Materials</i> , 2020 , 101, 107647	3.5	3
155	Interface and layer periodicity effects on the thermal conductivity of copper-based nanomultilayers with tungsten, tantalum, and tantalum nitride diffusion barriers. <i>Journal of Applied Physics</i> , 2020 , 128, 195302	2.5	4
154	Atomic force microscopy for nanoscale mechanical property characterization. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2020 , 38, 060801	1.3	10
153	Heat capacities, entropies, and Gibbs free energies of formation of low-k amorphous Si(O)CH dielectric films and implications for stability during processing. <i>Journal of Chemical Thermodynamics</i> , 2019 , 128, 320-335	2.9	4
152	Energetics of porous amorphous low-k SiOCH dielectric films. <i>Journal of Chemical Thermodynamics</i> , 2019 , 139, 105885	2.9	2
151	Valence and conduction band offsets at beryllium oxide interfaces with silicon carbide and III-V nitrides. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2019 , 37, 041206	1.3	2
150	Review Beyond the Highs and Lows: A Perspective on the Future of Dielectrics Research for Nanoelectronic Devices. <i>ECS Journal of Solid State Science and Technology</i> , 2019 , 8, N159-N185	2	10

149	Topological Constraint Theory Analysis of Rigidity Transition in Highly Coordinate Amorphous Hydrogenated Boron Carbide. <i>Frontiers in Materials</i> , 2019 , 6,	4	2
148	Thermal and Chemical Integrity of Ru Electrode in Cu/TaOx/Ru ReRAM Memory Cell. <i>ECS Journal of Solid State Science and Technology</i> , 2019 , 8, N220-N233	2	4
147	Impact of VUV photons on SiO2 and organosilicate low-k dielectrics: General behavior, practical applications, and atomic models. <i>Applied Physics Reviews</i> , 2019 , 6, 011301	17.3	23
146	Influence of topological constraints on ion damage resistance of amorphous hydrogenated silicon carbide. <i>Acta Materialia</i> , 2019 , 165, 587-602	8.4	5
145	Thermal conductivity of plasma deposited amorphous hydrogenated boron and carbon rich thin films. <i>Journal of Nuclear Materials</i> , 2019 , 514, 154-160	3.3	9
144	Thermodynamics of amorphous SiN(O)H dielectric films synthesized by plasma-enhanced chemical vapor deposition. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 2017-2027	3.8	3
143	Measurement of the vacuum-ultraviolet absorption spectrum of low-k dielectrics using X-ray reflectivity. <i>Applied Physics Letters</i> , 2018 , 112, 082902	3.4	3
142	Acoustic Phonons and Mechanical Properties of Ultra-Thin Porous Low-k Films: A Surface Brillouin Scattering Study. <i>Journal of Electronic Materials</i> , 2018 , 47, 3942-3950	1.9	7
141	Microstructure-mechanical properties correlation in irradiated amorphous SiOC. <i>Scripta Materialia</i> , 2018 , 146, 316-320	5.6	17
140	The effect of edge compliance on the contact between a spherical indenter and a high-aspect-ratio rectangular fin.. <i>Experimental Mechanics</i> , 2018 , 58, 1157	2.6	3
139	Narrowing of the Boudier intermediate phase window for amorphous hydrogenated silicon carbide. <i>Journal of Non-Crystalline Solids</i> , 2018 , 499, 252-256	3.9	5
138	Modeling and simulation of Cu diffusion and drift in porous CMOS backend dielectrics. <i>APL Materials</i> , 2018 , 6, 066101	5.7	4
137	Underlying role of mechanical rigidity and topological constraints in physical sputtering and reactive ion etching of amorphous materials. <i>Physical Review Materials</i> , 2018 , 2,	3.2	3
136	Back-end-of-line a-SiOxCy:H dielectrics for resistive memory. <i>AIP Advances</i> , 2018 , 8, 095215	1.5	6
135	Interfacial Defect Vibrations Enhance Thermal Transport in Amorphous Multilayers with Ultrahigh Thermal Boundary Conductance. <i>Advanced Materials</i> , 2018 , 30, e1804097	24	26
134	Preface: Materials, metrology, and modeling for a future beyond CMOS technology. <i>APL Materials</i> , 2018 , 6, 058001	5.7	4
133	Thermal conductivity and thermal boundary resistance of atomic layer deposited high-k dielectric aluminum oxide, hafnium oxide, and titanium oxide thin films on silicon. <i>APL Materials</i> , 2018 , 6, 058302	5.7	50
132	Optimization of amorphous semiconductors and low-/high-k dielectrics through percolation and topological constraint theory. <i>MRS Bulletin</i> , 2017 , 42, 39-44	3.2	9

131	Role of CMOS Back-End Metals as Active Electrodes for Resistive Switching in ReRAM Cells. <i>ECS Journal of Solid State Science and Technology</i> , 2017 , 6, N1-N9	2	11
130	Full Characterization of the Mechanical Properties of 11-50 nm Ultrathin Films: Influence of Network Connectivity on the Poisson's Ratio. <i>Nano Letters</i> , 2017 , 17, 2178-2183	11.5	23
129	Boron and high-k dielectrics: Possible fourth etch stop colors for multipattern optical lithography processing. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017 , 35, 021510	2.9	5
128	Molecular layer deposition using cyclic azasilanes, maleic anhydride, trimethylaluminum, and water. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017 , 35, 01B136	2.9	7
127	Carbon-Enriched Amorphous Hydrogenated Boron Carbide Films for Very-Low-k Interlayer Dielectrics. <i>Advanced Electronic Materials</i> , 2017 , 3, 1700116	6.4	11
126	Relationships between chemical structure, mechanical properties and materials processing in nanopatterned organosilicate fins. <i>Beilstein Journal of Nanotechnology</i> , 2017 , 8, 863-871	3	6
125	Investigation and Review of the Thermal, Mechanical, Electrical, Optical, and Structural Properties of Atomic Layer Deposited High-k Dielectrics: Beryllium Oxide, Aluminum Oxide, Hafnium Oxide, and Aluminum Nitride. <i>ECS Journal of Solid State Science and Technology</i> , 2017 , 6, N189-N208	2	58
124	Effects of cesium ion implantation on the mechanical and electrical properties of porous SiCOH low-k dielectrics. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017 , 35, 061506	2.9	1
123	Modeling and Simulation of Cu Diffusion in Porous Low-k Dielectrics. <i>ECS Transactions</i> , 2017 , 77, 121-132	1	3
122	Modeling and Simulation of Cu Drift in Porous Low-k Dielectrics. <i>ECS Transactions</i> , 2017 , 80, 327-337	1	2
121	Impact of Embedment of Cu/TaOx/Ru on Its Device Performance. <i>ECS Transactions</i> , 2017 , 80, 911-921	1	
120	Extrinsic time-dependent dielectric breakdown of low-k organosilicate thin films from vacuum-ultraviolet irradiation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017 , 35, 021509	2.9	2
119	Measurement of the band gap by reflection electron energy loss spectroscopy. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2016 , 212, 74-80	1.7	23
118	Nanoscale chemical structure variations in nano-patterned and nano-porous low-k dielectrics: A comparative photothermal induced resonance and infrared spectroscopy investigation. <i>Vibrational Spectroscopy</i> , 2016 , 86, 223-232	2.1	7
117	Nanoscale tomographic reconstruction of the subsurface mechanical properties of low-k high-aspect ratio patterns. <i>Nanotechnology</i> , 2016 , 27, 485706	3.4	13
116	Radiation induced leakage currents in dense and porous low-k dielectrics 2016 ,		3
115	Effects of cesium ion-implantation on mechanical and electrical properties of organosilicate low-k films. <i>Applied Physics Letters</i> , 2016 , 108, 202901	3.4	1
114	Thermodynamic Stability of Low-k Amorphous SiOCH Dielectric Films. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 2752-2759	3.8	23

113	Band Alignment at Molybdenum Disulphide/Boron Nitride/Aluminum Oxide Interfaces. <i>Journal of Electronic Materials</i> , 2016 , 45, 983-988	1.9	12
112	Network structure of a-SiO:H layers fabricated by plasma-enhanced chemical vapor deposition: Comparison with a-SiC:H layers. <i>Journal of Non-Crystalline Solids</i> , 2016 , 440, 49-58	3.9	11
111	Nanoscale Chemical-Mechanical Characterization of Nanoelectronic Low-kDielectric/Cu Interconnects. <i>ECS Journal of Solid State Science and Technology</i> , 2016 , 5, P3018-P3024	2	16
110	Conquering the Low-k Death Curve: Insulating Boron Carbide Dielectrics with Superior Mechanical Properties. <i>Advanced Electronic Materials</i> , 2016 , 2, 1600073	6.4	17
109	Combinatorial survey of fluorinated plasma etching in the silicon-oxygen-carbon-nitrogen-hydrogen system. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016 , 34, 061302	2.9	9
108	Breaking network connectivity leads to ultralow thermal conductivities in fully dense amorphous solids. <i>Applied Physics Letters</i> , 2016 , 109, 191905	3.4	10
107	Mechanical properties of low- and high-k dielectric thin films: A surface Brillouin light scattering study. <i>Journal of Applied Physics</i> , 2016 , 119, 144102	2.5	14
106	Influence of porosity on electrical properties of low-k dielectrics irradiated with vacuum-ultraviolet radiation. <i>Applied Physics Letters</i> , 2016 , 109, 122902	3.4	3
105	Defect chemistry and electronic transport in low-k dielectrics studied with electrically detected magnetic resonance. <i>Journal of Applied Physics</i> , 2016 , 119, 094102	2.5	19
104	Spin transport, magnetoresistance, and electrically detected magnetic resonance in amorphous hydrogenated silicon nitride. <i>Applied Physics Letters</i> , 2016 , 109, 062403	3.4	20
103	Characterization of Porous BEOL Dielectrics for Resistive Switching. <i>ECS Transactions</i> , 2016 , 72, 35-50	1	10
102	Tuning the properties of a complex disordered material: Full factorial investigation of PECVD-grown amorphous hydrogenated boron carbide. <i>Materials Chemistry and Physics</i> , 2016 , 173, 268-284	4.4	18
101	Band diagram for low-k/Cu interconnects: The starting point for understanding back-end-of-line (BEOL) electrical reliability. <i>Microelectronics Reliability</i> , 2016 , 63, 201-213	1.2	12
100	Hydrogen desorption from hydrogen fluoride and remote hydrogen plasma cleaned silicon carbide (0001) surfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 05E105	3.9	7
99	Investigation of the Dielectric and Mechanical Properties for Magnetron Sputtered BCN Thin Films. <i>ECS Journal of Solid State Science and Technology</i> , 2015 , 4, N3122-N3126	2	19
98	Cleaning of pyrolytic hexagonal boron nitride surfaces. <i>Surface and Interface Analysis</i> , 2015 , 47, 798-803	1.5	9
97	Effects of vacuum-ultraviolet irradiation on copper penetration into low-k dielectrics under bias-temperature stress. <i>Applied Physics Letters</i> , 2015 , 106, 012904	3.4	8
96	Picosecond ultrasonic study of surface acoustic waves on titanium nitride nanostructures. <i>Journal of Applied Physics</i> , 2015 , 117, 095305	2.5	5

95	Band alignment at AlN/Si (111) and (001) interfaces. <i>Journal of Applied Physics</i> , 2015 , 118, 045304	2.5	6
94	Hydrogen desorption kinetics for aqueous hydrogen fluoride and remote hydrogen plasma processed silicon (001) surfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 05E115	2.9	6
93	The influence of hydrogen on the chemical, mechanical, optical/electronic, and electrical transport properties of amorphous hydrogenated boron carbide. <i>Journal of Applied Physics</i> , 2015 , 118, 035703	2.5	25
92	Atomic layer deposited lithium aluminum oxide: (In)dependency of film properties from pulsing sequence. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 01A101	2.9	17
91	Atomic Layer Deposited Hybrid Organic-Inorganic Aluminates as Potential Low-k Dielectric Materials. <i>Materials Research Society Symposia Proceedings</i> , 2015 , 1791, 15-20		2
90	Measurements of Schottky barrier at the low-k SiOC:H/Cu interface using vacuum ultraviolet photoemission spectroscopy. <i>Applied Physics Letters</i> , 2015 , 107, 232905	3.4	4
89	Defect-induced bandgap narrowing in low-k dielectrics. <i>Applied Physics Letters</i> , 2015 , 107, 082903	3.4	25
88	Nanoscale Buckling of Ultrathin Low-k Dielectric Lines during Hard-Mask Patterning. <i>Nano Letters</i> , 2015 , 15, 3845-50	11.5	13
87	Analysis of Low-k Dielectric Thin Films on Thick Substrates by Transmission FTIR Spectroscopy. <i>ECS Journal of Solid State Science and Technology</i> , 2015 , 4, N3146-N3152	2	9
86	Photoemission investigation of the Schottky barrier at the Sc/3C-SiC (111) interface. <i>Physica Status Solidi (B): Basic Research</i> , 2015 , 252, 391-396	1.3	9
85	Dielectric Barrier, Etch Stop, and Metal Capping Materials for State of the Art and beyond Metal Interconnects. <i>ECS Journal of Solid State Science and Technology</i> , 2015 , 4, N3029-N3047	2	90
84	Thermal Conductivity Measurement of Low-k Dielectric Films: Effect of Porosity and Density. <i>Journal of Electronic Materials</i> , 2014 , 43, 746-754	1.9	12
83	Mechanical property changes in porous low-k dielectric thin films during processing. <i>Applied Physics Letters</i> , 2014 , 105, 152906	3.4	10
82	Gas source molecular beam epitaxy of scandium nitride on silicon carbide and gallium nitride surfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 061504	2.9	34
81	Investigation of atomic layer deposited beryllium oxide material properties for high-k dielectric applications. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2014 , 32, 03D117	1.3	16
80	Influence of hydrogen content and network connectivity on the coefficient of thermal expansion and thermal stability for a-SiC:H thin films. <i>Journal of Non-Crystalline Solids</i> , 2014 , 389, 78-85	3.9	17
79	Hardness Studies of RF Sputtered Deposited BCN Thin Films. <i>ECS Transactions</i> , 2014 , 58, 147-153	1	2
78	Bandgap measurements of low-k porous organosilicate dielectrics using vacuum ultraviolet irradiation. <i>Applied Physics Letters</i> , 2014 , 104, 062904	3.4	13

77	Valence and conduction band offsets at low-k a-SiO _x Cy:H/a-SiC _x Ny:H interfaces. <i>Journal of Applied Physics</i> , 2014 , 116, 113703	2.5	8
76	Defect structure and electronic properties of SiOC:H films used for back end of line dielectrics. <i>Journal of Applied Physics</i> , 2014 , 115, 234508	2.5	39
75	Complete Elemental Analysis of Low-ka-SiC:H Thin Films by Transmission FTIR Spectroscopy. <i>ECS Journal of Solid State Science and Technology</i> , 2014 , 3, N52-N57	2	4
74	Time-dependent dielectric breakdown measurements of porous organosilicate glass using mercury and solid metal probes. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 051509	2.9	4
73	Valence and conduction band alignment at ScN interfaces with 3C-SiC (111) and 2H-GaN (0001). <i>Applied Physics Letters</i> , 2014 , 105, 081606	3.4	13
72	Investigation of the impact of insulator material on the performance of dissimilar electrode metal-insulator-metal diodes. <i>Journal of Applied Physics</i> , 2014 , 116, 024508	2.5	57
71	Atomic scale trap state characterization by dynamic tunneling force microscopy. <i>Applied Physics Letters</i> , 2014 , 105, 052903	3.4	6
70	Desorption and sublimation kinetics for fluorinated aluminum nitride surfaces. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 051402	2.9	8
69	Toughening thin-film structures with ceramic-like amorphous silicon carbide films. <i>Small</i> , 2014 , 10, 253-711		14
68	Valence and conduction band offsets at amorphous hexagonal boron nitride interfaces with silicon network dielectrics. <i>Applied Physics Letters</i> , 2014 , 104, 102901	3.4	18
67	Characterization of very low thermal conductivity thin films. <i>Journal of Thermal Analysis and Calorimetry</i> , 2014 , 115, 1541-1550	4.1	7
66	Valence band offset and Schottky barrier at amorphous boron and boron carbide interfaces with silicon and copper. <i>Applied Surface Science</i> , 2013 , 285, 545-551	6.7	12
65	Defects and electronic transport in hydrogenated amorphous SiC films of interest for low dielectric constant back end of the line dielectric systems. <i>Journal of Applied Physics</i> , 2013 , 114, 074501	2.5	21
64	Spectroscopic method for measuring refractive index. <i>Applied Optics</i> , 2013 , 52, 4477-82	1.7	2
63	Influence of network bond percolation on the thermal, mechanical, electrical and optical properties of high and low-k a-SiC:H thin films. <i>Journal of Non-Crystalline Solids</i> , 2013 , 379, 67-79	3.9	66
62	Study of viscoplastic deformation in porous organosilicate thin films for ultra low-k applications. <i>Applied Physics Letters</i> , 2013 , 102, 221909	3.4	4
61	Mechanical properties of high porosity low-k dielectric nano-films determined by Brillouin light scattering. <i>Journal Physics D: Applied Physics</i> , 2013 , 46, 045308	3	40
60	Tunable plasticity in amorphous silicon carbide films. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 7950-5	9.5	17

59	Tailored amorphous silicon carbide barrier dielectrics by nitrogen and oxygen doping. <i>Thin Solid Films</i> , 2013 , 531, 552-558	2.2	18
58	Thermal stability of Ti, Pt, and Ru interfacial layers between seedless copper and a tantalum diffusion barrier. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2013 , 31, 022205	1.3	6
57	Role of Nano-Porosity in Plasma Enhanced Chemical Vapor Deposition of Hermetic low-k a-SiOCN:H Dielectric Barrier Materials. <i>ECS Transactions</i> , 2013 , 45, 27-45	1	3
56	Noncontact optical metrologies for Young's modulus measurements of nanoporous low-k dielectric thin films. <i>Journal of Nanophotonics</i> , 2013 , 7, 073094	1.1	11
55	Probing limits of acoustic nanometrology using coherent extreme ultraviolet light 2013 ,		7
54	Valence Band Offset at Amorphous Boron Carbide / Silicon Interfaces. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1576, 1		
53	Research Updates: The three M's (materials, metrology, and modeling) together pave the path to future nanoelectronic technologies. <i>APL Materials</i> , 2013 , 1, 040701	5.7	54
52	Moisture-assisted cracking and atomistic crack path meandering in oxidized hydrogenated amorphous silicon carbide films. <i>Journal of Applied Physics</i> , 2013 , 113, 083521	2.5	8
51	Detection of surface electronic defect states in low and high-k dielectrics using reflection electron energy loss spectroscopy. <i>Journal of Materials Research</i> , 2013 , 28, 2771-2784	2.5	25
50	Validation of a correction procedure for removing the optical effects from transmission spectra of thin films on substrates. <i>Journal of Applied Physics</i> , 2012 , 112, 093514	2.5	19
49	A method to extract absorption coefficient of thin films from transmission spectra of the films on thick substrates. <i>Journal of Applied Physics</i> , 2012 , 111, 073109	2.5	37
48	Nanoscale mapping of contact stiffness and damping by contact resonance atomic force microscopy. <i>Nanotechnology</i> , 2012 , 23, 215703	3.4	45
47	Fracture properties of hydrogenated amorphous silicon carbide thin films. <i>Acta Materialia</i> , 2012 , 60, 682-691	8.4	29
46	Characterization of ultrathin films by laser-induced sub-picosecond photoacoustics with coherent extreme ultraviolet detection 2012 ,		2
45	Transmission Fourier Transform Infra-red Spectroscopy Investigation of Structure Property Relationships in Low-k SiO _x Cy:H Dielectric Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1520, 1		1
44	Cu film thermal stability on plasma cleaned polycrystalline Ru. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2012 , 30, 052203	1.3	5
43	Advances in metrology for the determination of Young's modulus for low-k dielectric thin films 2012 ,		3
42	Valence band offset at the amorphous hydrogenated boron nitride-silicon (100) interface. <i>Applied Physics Letters</i> , 2012 , 101, 042903	3.4	17

41	Valence Band Offset at a-B:H and a-BP:H/Si Interfaces. <i>ECS Journal of Solid State Science and Technology</i> , 2012 , 1, P250-P253	2	10
40	Film Property Requirements for Hermetic Low-k a-SiO _x CyNz:H Dielectric Barriers. <i>ECS Journal of Solid State Science and Technology</i> , 2012 , 1, N115-N122	2	52
39	Remote H ₂ /N ₂ plasma processes for simultaneous preparation of low-k interlayer dielectric and interconnect copper surfaces. <i>Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics</i> , 2012 , 30, 031212	1.3	25
38	Elastic properties of porous low-k dielectric nano-films. <i>Journal of Applied Physics</i> , 2011 , 110, 043520	2.5	36
37	Fourier transform infrared spectroscopy investigation of chemical bonding in low-k a-SiC:H thin films. <i>Journal of Non-Crystalline Solids</i> , 2011 , 357, 2970-2983	3.9	76
36	Mass and bond density measurements for PECVD a-SiC _x :H thin films using Fourier transform-infrared spectroscopy. <i>Journal of Non-Crystalline Solids</i> , 2011 , 357, 3602-3615	3.9	45
35	Thermal conductivity and sound velocity measurements of plasma enhanced chemical vapor deposited a-SiC:H thin films. <i>Thin Solid Films</i> , 2011 , 519, 7895-7898	2.2	20
34	X-ray photoelectron spectroscopy measurement of the Schottky barrier at the SiC(N)/Cu interface. <i>Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics</i> , 2011 , 29, 051207	1.3	41
33	Plasma enhanced atomic layer deposition of SiN _x :H and SiO ₂ . <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2011 , 29, 041501	2.9	91
32	X-ray photoelectron spectroscopy investigation of the Schottky barrier at low-k a-SiO(C):H/Cu interfaces. <i>Applied Physics Letters</i> , 2011 , 99, 202903	3.4	31
31	An Electron Paramagnetic Resonance Study of Defects in Interlayer Dielectrics. <i>ECS Transactions</i> , 2011 , 35, 747-756	1	2
30	X-ray Photoelectron Spectroscopy Investigation of the Schottky Barrier at a-BN:H/Cu Interfaces. <i>Electrochemical and Solid-State Letters</i> , 2011 , 14, H478		22
29	Rigidity Percolation in Plasma Enhanced Chemical Vapor Deposited a-SiC:H Thin Films. <i>ECS Transactions</i> , 2010 , 33, 185-194	1	17
28	Observation of space charge limited current by Cu ion drift in porous low-k/Cu interconnects. <i>Applied Physics Letters</i> , 2010 , 96, 091903	3.4	7
27	High Toughness and Moisture Insensitive Hydrogenated Amorphous Silicon Carbide Films for MEMS/NEMS. <i>ECS Transactions</i> , 2010 , 33, 257-261	1	
26	Plasma Enhanced Atomic Layer Deposition of SiN:H Using N ₂ and Silane. <i>ECS Transactions</i> , 2010 , 33, 365-373		9
25	Ultraviolet radiation effects on paramagnetic defects in low- κ dielectrics for ultralarge scale integrated circuit interconnects. <i>Applied Physics Letters</i> , 2010 , 97, 063506	3.4	25
24	Defects in low- κ dielectrics and etch stop layers for use as interlayer dielectrics in ULSI 2010 ,		1

23	Reliability and performance limiting defects in low-k dielectrics for use as interlayer dielectrics 2010 ,		3
22	Demonstration of a reliable high-performance and yielding Air gap interconnect process 2010 ,		7
21	Mechanical properties of hydrogenated amorphous silicon carbide thin films 2010 ,		1
20	Intrinsic stress effect on fracture toughness of plasma enhanced chemical vapor deposited SiN _x :H films. <i>Thin Solid Films</i> , 2010 , 518, 4898-4907	2.2	53
19	Elastic modulus of low-k dielectric thin films measured by load-dependent contact-resonance atomic force microscopy. <i>Journal of Materials Research</i> , 2009 , 24, 2960-2964	2.5	32
18	Impact of Film Stress on Nanoidentation Fracture Toughness Measurements for PECVD SiN _x :H Films. <i>ECS Transactions</i> , 2009 , 19, 455-466	1	0
17	Intrinsic stress fracture energy measurements for PECVD thin films in the SiO _x CyNz:H system. <i>Microelectronics Reliability</i> , 2009 , 49, 721-726	1.2	44
16	Hydrogen desorption kinetics and band bending for 6H-SiC(0 0 0 1) surfaces. <i>Surface Science</i> , 2009 , 603, 3104-3118	1.8	26
15	Kinetics of Ga and In desorption from (7 $\bar{7}$) Si(111) and (3 \bar{B}) 6H-SiC(0001) surfaces. <i>Surface Science</i> , 2008 , 602, 405-415	1.8	13
14	Simple bond energy approach for non-destructive measurements of the fracture toughness of brittle materials. <i>Thin Solid Films</i> , 2007 , 515, 7232-7241	2.2	21
13	Dry Ex Situ Cleaning Processes for (0001) Si 6H-SiC Surfaces. <i>Journal of the Electrochemical Society</i> , 1999 , 146, 2648-2651	3.9	14
12	Valence band discontinuity of the (0001) 2H-GaN / (111) 3C-SiC interface. <i>Journal of Electronic Materials</i> , 1999 , 28, L34-L37	1.9	25
11	Valence band discontinuity, surface reconstruction, and chemistry of (0001), (0001), and (11 00) 2H-AlN/6H-SiC interfaces. <i>Journal of Applied Physics</i> , 1999 , 86, 4483-4490	2.5	33
10	Wet Chemical Processing of (0001)Si 6H-SiC Hydrophobic and Hydrophilic Surfaces. <i>Journal of the Electrochemical Society</i> , 1999 , 146, 1910-1917	3.9	48
9	X-ray photoelectron spectroscopy analysis of GaN/(0001)AlN and AlN/(0001)GaN growth mechanisms. <i>Journal of Applied Physics</i> , 1999 , 86, 5584-5593	2.5	34
8	Chemical Vapor Cleaning of 6H-SiC Surfaces. <i>Journal of the Electrochemical Society</i> , 1999 , 146, 3448-3454	3.9	20
7	Cleaning of AlN and GaN surfaces. <i>Journal of Applied Physics</i> , 1998 , 84, 5248-5260	2.5	249
6	X-ray photoelectron diffraction from (3 \bar{B}) and (B \bar{B})R 30 $\bar{0}$ (0001)Si 6H-SiC surfaces. <i>Journal of Applied Physics</i> , 1998 , 84, 6042-6048	2.5	24

5	Dependence of (0001) GaN/AlN valence band discontinuity on growth temperature and surface reconstruction. <i>Journal of Applied Physics</i> , 1998 , 84, 2086-2090	2.5	75
4	Ex Situ and In Situ Methods for Complete Oxygen and Non-Carbidic Carbon Removal from (0001)Si 6H-SiC Surfaces. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 423, 563		
3	Removal of Fluorine From a Si (100) Surface by a Remote RF Hydrogen Plasma. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 386, 357		2
2	XPS Measurement of the SiC/AlN Band-Offset at the (0001) Interface. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 395, 375		17
1	Ex Situ and in Situ Methods for Oxide and Carbon Removal from AlN and GaN Surfaces. <i>Materials Research Society Symposia Proceedings</i> , 1995 , 395, 739		20