S W King

List of Publications by Citations

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166	2,889	27	44
papers	citations	h-index	g-index
180	3,179	3.1	5.43
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
166	Cleaning of AlN and GaN surfaces. *Journal of Applied Physics*, **1998**, 84, 5248-5260	2.5	249
165	Plasma enhanced atomic layer deposition of SiNx:H and SiO2. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2011**, 29, 041501	2.9	91
164	Dielectric Barrier, Etch Stop, and Metal Capping Materials for State of the Art and beyond Metal Interconnects. *ECS Journal of Solid State Science and Technology*, **2015**, 4, N3029-N3047	2	90
163	Fourier transform infrared spectroscopy investigation of chemical bonding in low-k a-SiC:H thin films. *Journal of Non-Crystalline Solids*, **2011**, 357, 2970-2983	3.9	76
162	Dependence of (0001) GaN/AlN valence band discontinuity on growth temperature and surface reconstruction. *Journal of Applied Physics*, **1998**, 84, 2086-2090	2.5	75
161	Influence of network bond percolation on the thermal, mechanical, electrical and optical properties of high and low-k a-SiC:H thin films. *Journal of Non-Crystalline Solids*, **2013**, 379, 67-79	3.9	66
160	Review Investigation and Review of the Thermal, Mechanical, Electrical, Optical, and Structural Properties of Atomic Layer Deposited High-kDielectrics: Beryllium Oxide, Aluminum Oxide, Hafnium Oxide, and Aluminum Nitride. *ECS Journal of Solid State Science and Technology*, **2017**, 6, N189-N208	2	58
159	Investigation of the impact of insulator material on the performance of dissimilar electrode metal-insulator-metal diodes. *Journal of Applied Physics*, **2014**, 116, 024508	2.5	57
158	Research Updates: The three M's (materials, metrology, and modeling) together pave the path to future nanoelectronic technologies. *APL Materials*, **2013**, 1, 040701	5.7	54
157	Intrinsic stress effect on fracture toughness of plasma enhanced chemical vapor deposited SiNx:H films. *Thin Solid Films*, **2010**, 518, 4898-4907	2.2	53
156	Film Property Requirements for Hermetic Low-k a-SiOxCyNz:H Dielectric Barriers. *ECS Journal of Solid State Science and Technology*, **2012**, 1, N115-N122	2	52
155	Thermal conductivity and thermal boundary resistance of atomic layer deposited high-k dielectric aluminum oxide, hafnium oxide, and titanium oxide thin films on silicon. *APL Materials*, **2018**, 6, 058302	5.7	50
154	Wet Chemical Processing of (0001)Si 6H-SiC Hydrophobic and Hydrophilic Surfaces. *Journal of the Electrochemical Society*, **1999**, 146, 1910-1917	3.9	48
153	Nanoscale mapping of contact stiffness and damping by contact resonance atomic force microscopy. *Nanotechnology*, **2012**, 23, 215703	3.4	45
152	Mass and bond density measurements for PECVD a-SiCx:H thin films using Fourier transform-infrared spectroscopy. *Journal of Non-Crystalline Solids*, **2011**, 357, 3602-3615	3.9	45
151	Intrinsic stress fracture energy measurements for PECVD thin films in the SiOxCyNz:H system. *Microelectronics Reliability*, **2009**, 49, 721-726	1.2	44
150	X-ray photoelectron spectroscopy measurement of the Schottky barrier at the SiC(N)/Cu interface. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2011**, 29, 051207	1.3	41

149	Mechanical properties of high porosity low-kdielectric nano-films determined by Brillouin light scattering. *Journal Physics D: Applied Physics*, **2013**, 46, 045308	3	40
148	Defect structure and electronic properties of SiOC:H films used for back end of line dielectrics. *Journal of Applied Physics*, **2014**, 115, 234508	2.5	39
147	A method to extract absorption coefficient of thin films from transmission spectra of the films on thick substrates. *Journal of Applied Physics*, **2012**, 111, 073109	2.5	37
146	Elastic properties of porous low-k dielectric nano-films. *Journal of Applied Physics*, **2011**, 110, 043520	2.5	36
145	Gas source molecular beam epitaxy of scandium nitride on silicon carbide and gallium nitride surfaces. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2014**, 32, 061504	2.9	34
144	X-ray photoelectron spectroscopy analysis of GaN/(0001)AlN and AlN/(0001)GaN growth mechanisms. *Journal of Applied Physics*, **1999**, 86, 5584-5593	2.5	34
143	Valence band discontinuity, surface reconstruction, and chemistry of (0001), (0001), and (11 00) 2H AlN/6H SiC interfaces. *Journal of Applied Physics*, **1999**, 86, 4483-4490	2.5	33
142	Elastic modulus of low-k dielectric thin films measured by load-dependent contact-resonance atomic force microscopy. *Journal of Materials Research*, **2009**, 24, 2960-2964	2.5	32
141	X-ray photoelectron spectroscopy investigation of the Schottky barrier at low-k a-SiO(C):H/Cu interfaces. *Applied Physics Letters*, **2011**, 99, 202903	3.4	31
140	Fracture properties of hydrogenated amorphous silicon carbide thin films. *Acta Materialia*, **2012**, 60, 682-691	8.4	29
139	Hydrogen desorption kinetics and band bending for 6H SiC(0 0 0 1) surfaces. *Surface Science*, **2009**, 603, 3104-3118	1.8	26
138	Interfacial Defect Vibrations Enhance Thermal Transport in Amorphous Multilayers with Ultrahigh Thermal Boundary Conductance. *Advanced Materials*, **2018**, 30, e1804097	24	26
137	The influence of hydrogen on the chemical, mechanical, optical/electronic, and electrical transport properties of amorphous hydrogenated boron carbide. *Journal of Applied Physics*, **2015**, 118, 035703	2.5	25
136	Defect-induced bandgap narrowing in low-k dielectrics. *Applied Physics Letters*, **2015**, 107, 082903	3.4	25
135	Detection of surface electronic defect states in low and high-k dielectrics using reflection electron energy loss spectroscopy. *Journal of Materials Research*, **2013**, 28, 2771-2784	2.5	25
134	Ultraviolet radiation effects on paramagnetic defects in low- dielectrics for ultralarge scale integrated circuit interconnects. *Applied Physics Letters*, **2010**, 97, 063506	3.4	25
133	Remote H2/N2 plasma processes for simultaneous preparation of low-k interlayer dielectric and interconnect copper surfaces. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2012**, 30, 031212	1.3	25
132	Valence band discontinuity of the (0001) 2H-GaN / (111) 3C-SiC interface. *Journal of Electronic Materials*, **1999**, 28, L34-L37	1.9	25

131	X-ray photoelectron diffraction from (3□) and (□□)R 30□(0001)Si 6H□SiC surfaces. *Journal of Applied Physics*, **1998**, 84, 6042-6048	2.5	24
130	Full Characterization of the Mechanical Properties of 11-50 nm Ultrathin Films: Influence of Network Connectivity on the Poisson's Ratio. *Nano Letters*, **2017**, 17, 2178-2183	11.5	23
129	Measurement of the band gap by reflection electron energy loss spectroscopy. *Journal of Electron Spectroscopy and Related Phenomena*, **2016**, 212, 74-80	1.7	23
128	Thermodynamic Stability of Low-k Amorphous SiOCH Dielectric Films. *Journal of the American Ceramic Society*, **2016**, 99, 2752-2759	3.8	23
127	Impact of VUV photons on SiO2 and organosilicate low-k dielectrics: General behavior, practical applications, and atomic models. *Applied Physics Reviews*, **2019**, 6, 011301	17.3	23
126	X-ray Photoelectron Spectroscopy Investigation of the Schottky Barrier at a-BN:H□Cu Interfaces. *Electrochemical and Solid-State Letters*, **2011**, 14, H478		22
125	Defects and electronic transport in hydrogenated amorphous SiC films of interest for low dielectric constant back end of the line dielectric systems. *Journal of Applied Physics*, **2013**, 114, 074501	2.5	21
124	Simple bond energy approach for non-destructive measurements of the fracture toughness of brittle materials. *Thin Solid Films*, **2007**, 515, 7232-7241	2.2	21
123	Thermal conductivity and sound velocity measurements of plasma enhanced chemical vapor deposited a-SiC:H thin films. *Thin Solid Films*, **2011**, 519, 7895-7898	2.2	20
122	Chemical Vapor Cleaning of 6H-SiC Surfaces. *Journal of the Electrochemical Society*, **1999**, 146, 3448-3454	3.9	20
121	Ex Situ and in Situ Methods for Oxide and Carbon Removal from AlN and GaN Surfaces. *Materials Research Society Symposia Proceedings*, **1995**, 395, 739		20
120	Spin transport, magnetoresistance, and electrically detected magnetic resonance in amorphous hydrogenated silicon nitride. *Applied Physics Letters*, **2016**, 109, 062403	3.4	20
119	Investigation of the Dielectric and Mechanical Properties for Magnetron Sputtered BCN Thin Films. *ECS Journal of Solid State Science and Technology*, **2015**, 4, N3122-N3126	2	19
118	Validation of a correction procedure for removing the optical effects from transmission spectra of thin films on substrates. *Journal of Applied Physics*, **2012**, 112, 093514	2.5	19
117	Defect chemistry and electronic transport in low-□dielectrics studied with electrically detected magnetic resonance. *Journal of Applied Physics*, **2016**, 119, 094102	2.5	19
116	Valence and conduction band offsets at amorphous hexagonal boron nitride interfaces with silicon network dielectrics. *Applied Physics Letters*, **2014**, 104, 102901	3.4	18
115	Tailored amorphous silicon carbide barrier dielectrics by nitrogen and oxygen doping. *Thin Solid Films*, **2013**, 531, 552-558	2.2	18
114	Tuning the properties of a complex disordered material: Full factorial investigation of PECVD-grown amorphous hydrogenated boron carbide. *Materials Chemistry and Physics*, **2016**, 173, 268-284	4.4	18

113	Atomic layer deposited lithium aluminum oxide: (In)dependency of film properties from pulsing sequence. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2015**, 33, 01A101	2.9	17
112	Microstructure-mechanical properties correlation in irradiated amorphous SiOC. *Scripta Materialia*, **2018**, 146, 316-320	5.6	17
111	Influence of hydrogen content and network connectivity on the coefficient of thermal expansion and thermal stability for a-SiC:H thin films. *Journal of Non-Crystalline Solids*, **2014**, 389, 78-85	3.9	17
110	Tunable plasticity in amorphous silicon carbide films. *ACS Applied Materials & Interfaces*, **2013**, 5, 7950-5	9.5	17
109	Rigidity Percolation in Plasma Enhanced Chemical Vapor Deposited a-SiC:H Thin Films. *ECS Transactions*, **2010**, 33, 185-194	1	17
108	Valence band offset at the amorphous hydrogenated boron nitride-silicon (100) interface. *Applied Physics Letters*, **2012**, 101, 042903	3.4	17
107	XPS Measurement of the SiC/AlN Band-Offset at the (0001) Interface. *Materials Research Society Symposia Proceedings*, **1995**, 395, 375		17
106	Conquering the Low-k Death Curve: Insulating Boron Carbide Dielectrics with Superior Mechanical Properties. *Advanced Electronic Materials*, **2016**, 2, 1600073	6.4	17
105	Nanoscale Chemical-Mechanical Characterization of Nanoelectronic Low-kDielectric/Cu Interconnects. *ECS Journal of Solid State Science and Technology*, **2016**, 5, P3018-P3024	2	16
104	Investigation of atomic layer deposited beryllium oxide material properties for high-k dielectric applications. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2014**, 32, 03D117	1.3	16
103	Toughening thin-film structures with ceramic-like amorphous silicon carbide films. *Small*, **2014**, 10, 253-7	11	14
102	Dry Ex Situ Cleaning Processes for (0001) Si 6H-SiC Surfaces. *Journal of the Electrochemical Society* , **1999**, 146, 2648-2651	3.9	14
101	Mechanical properties of low- and high-k dielectric thin films: A surface Brillouin light scattering study. *Journal of Applied Physics*, **2016**, 119, 144102	2.5	14
100	Nanoscale tomographic reconstruction of the subsurface mechanical properties of low-k high-aspect ratio patterns. *Nanotechnology*, **2016**, 27, 485706	3.4	13
99	Nanoscale Buckling of Ultrathin Low-k Dielectric Lines during Hard-Mask Patterning. *Nano Letters*, **2015**, 15, 3845-50	11.5	13
98	Bandgap measurements of low-k porous organosilicate dielectrics using vacuum ultraviolet irradiation. *Applied Physics Letters*, **2014**, 104, 062904	3.4	13
97	Valence and conduction band alignment at ScN interfaces with 3C-SiC (111) and 2H-GaN (0001). *Applied Physics Letters*, **2014**, 105, 081606	3.4	13
96	Kinetics of Ga and In desorption from (7□) Si(111) and (3□) 6H-SiC(0001) surfaces. *Surface Science*, **2008**, 602, 405-415	1.8	13

95	Band Alignment at Molybdenum Disulphide/Boron Nitride/Aluminum Oxide Interfaces. *Journal of Electronic Materials*, **2016**, 45, 983-988	1.9	12
94	Thermal Conductivity Measurement of Low-k Dielectric Films: Effect of Porosity and Density. *Journal of Electronic Materials*, **2014**, 43, 746-754	1.9	12
93	Valence band offset and Schottky barrier at amorphous boron and boron carbide interfaces with silicon and copper. *Applied Surface Science*, **2013**, 285, 545-551	6.7	12
92	Band diagram for low-k/Cu interconnects: The starting point for understanding back-end-of-line (BEOL) electrical reliability. *Microelectronics Reliability*, **2016**, 63, 201-213	1.2	12
91	Role of CMOS Back-End Metals as Active Electrodes for Resistive Switching in ReRAM Cells. *ECS Journal of Solid State Science and Technology*, **2017**, 6, N1-N9	2	11
90	Carbon-Enriched Amorphous Hydrogenated Boron Carbide Films for Very-Low-k Interlayer Dielectrics. *Advanced Electronic Materials*, **2017**, 3, 1700116	6.4	11
89	Network structure of a-SiO:H layers fabricated by plasma-enhanced chemical vapor deposition: Comparison with a-SiC:H layers. *Journal of Non-Crystalline Solids*, **2016**, 440, 49-58	3.9	11
88	Noncontact optical metrologies for Young's modulus measurements of nanoporous low-k dielectric thin films. *Journal of Nanophotonics*, **2013**, 7, 073094	1.1	11
87	Review—Beyond the Highs and Lows: A Perspective on the Future of Dielectrics Research for Nanoelectronic Devices. *ECS Journal of Solid State Science and Technology*, **2019**, 8, N159-N185	2	10
86	Mechanical property changes in porous low-k dielectric thin films during processing. *Applied Physics Letters*, **2014**, 105, 152906	3.4	10
85	Valence Band Offset at a-B:H and a-BP:H/Si Interfaces. *ECS Journal of Solid State Science and Technology*, **2012**, 1, P250-P253	2	10
84	Atomic force microscopy for nanoscale mechanical property characterization. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2020**, 38, 060801	1.3	10
83	Breaking network connectivity leads to ultralow thermal conductivities in fully dense amorphous solids. *Applied Physics Letters*, **2016**, 109, 191905	3.4	10
82	Characterization of Porous BEOL Dielectrics for Resistive Switching. *ECS Transactions*, **2016**, 72, 35-50	1	10
81	Optimization of amorphous semiconductors and low-/high-k dielectrics through percolation and topological constraint theory. *MRS Bulletin*, **2017**, 42, 39-44	3.2	9
80	Cleaning of pyrolytic hexagonal boron nitride surfaces. *Surface and Interface Analysis*, **2015**, 47, 798-803	1.5	9
79	Analysis of Low-k Dielectric Thin Films on Thick Substrates by Transmission FTIR Spectroscopy. *ECS Journal of Solid State Science and Technology*, **2015**, 4, N3146-N3152	2	9
78	Photoemission investigation of the Schottky barrier at the Sc/3C-SiC (111) interface. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 391-396	1.3	9

77	Plasma Enhanced Atomic Layer Deposition of SiN:H Using N2 and Silane. *ECS Transactions*, **2010**, 33, 365-373	1	9
76	Combinatorial survey of fluorinated plasma etching in the silicon-oxygen-carbon-nitrogen-hydrogen system. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2016**, 34, 061302	2.9	9
75	Thermal conductivity of plasma deposited amorphous hydrogenated boron and carbon rich thin films. *Journal of Nuclear Materials*, **2019**, 514, 154-160	3.3	9
74	Effects of vacuum-ultraviolet irradiation on copper penetration into low-k dielectrics under bias-temperature stress. *Applied Physics Letters*, **2015**, 106, 012904	3.4	8
73	Valence and conduction band offsets at low-k a-SiOxCy:H/a-SiCxNy:H interfaces. *Journal of Applied Physics*, **2014**, 116, 113703	2.5	8
72	Desorption and sublimation kinetics for fluorinated aluminum nitride surfaces. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2014**, 32, 051402	2.9	8
71	Moisture-assisted cracking and atomistic crack path meandering in oxidized hydrogenated amorphous silicon carbide films. *Journal of Applied Physics*, **2013**, 113, 083521	2.5	8
70	Molecular layer deposition using cyclic azasilanes, maleic anhydride, trimethylaluminum, and water. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2017**, 35, 01B136	2.9	7
69	Hydrogen desorption from hydrogen fluoride and remote hydrogen plasma cleaned silicon carbide (0001) surfaces. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2015**, 33, 05E105	2.9	7
68	Acoustic Phonons and Mechanical Properties of Ultra-Thin Porous Low-k Films: A Surface Brillouin Scattering Study. *Journal of Electronic Materials*, **2018**, 47, 3942-3950	1.9	7
67	Nanoscale chemical structure variations in nano-patterned and nano-porous low-k dielectrics: A comparative photothermal induced resonance and infrared spectroscopy investigation. *Vibrational Spectroscopy*, **2016**, 86, 223-232	2.1	7
66	Characterization of very low thermal conductivity thin films. *Journal of Thermal Analysis and Calorimetry*, **2014**, 115, 1541-1550	4.1	7
65	Probing limits of acoustic nanometrology using coherent extreme ultraviolet light **2013**,		7
64	Observation of space charge limited current by Cu ion drift in porous low-k/Cu interconnects. *Applied Physics Letters*, **2010**, 96, 091903	3.4	7
63	Demonstration of a reliable high-performance and yielding Air gap interconnect process **2010**,		7
62	Band alignment at AlN/Si (111) and (001) interfaces. *Journal of Applied Physics*, **2015**, 118, 045304	2.5	6
61	Hydrogen desorption kinetics for aqueous hydrogen fluoride and remote hydrogen plasma processed silicon (001) surfaces. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2015**, 33, 05E115	2.9	6
60	Relationships between chemical structure, mechanical properties and materials processing in nanopatterned organosilicate fins. *Beilstein Journal of Nanotechnology*, **2017**, 8, 863-871	3	6

59	Atomic scale trap state characterization by dynamic tunneling force microscopy. *Applied Physics Letters*, **2014**, 105, 052903	3.4	6
58	Thermal stability of Ti, Pt, and Ru interfacial layers between seedless copper and a tantalum diffusion barrier. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2013**, 31, 022205	1.3	6
57	Full characterization of ultrathin 5-nm low-k dielectric bilayers: Influence of dopants and surfaces on the mechanical properties. *Physical Review Materials*, **2020**, 4,	3.2	6
56	Observation of Radiation-Induced Leakage Current Defects in MOS Oxides With Multifrequency Electrically Detected Magnetic Resonance and Near-Zero-Field Magnetoresistance. *IEEE Transactions on Nuclear Science*, **2020**, 67, 228-233	1.7	6
55	Back-end-of-line a-SiOxCy:H dielectrics for resistive memory. *AIP Advances*, **2018**, 8, 095215	1.5	6
54	Boron and high-k dielectrics: Possible fourth etch stop colors for multipattern optical lithography processing. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2017**, 35, 021510	2.9	5
53	Picosecond ultrasonic study of surface acoustic waves on titanium nitride nanostructures. *Journal of Applied Physics*, **2015**, 117, 095305	2.5	5
52	Narrowing of the Boolchand intermediate phase window for amorphous hydrogenated silicon carbide. *Journal of Non-Crystalline Solids*, **2018**, 499, 252-256	3.9	5
51	Cu film thermal stability on plasma cleaned polycrystalline Ru. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2012**, 30, 052203	1.3	5
50	Influence of topological constraints on ion damage resistance of amorphous hydrogenated silicon carbide. *Acta Materialia*, **2019**, 165, 587-602	8.4	5
49	Modeling and simulation of Cu diffusion and drift in porous CMOS backend dielectrics. *APL Materials*, **2018**, 6, 066101	5.7	4
48	Heat capacities, entropies, and Gibbs free energies of formation of low-k amorphous Si(O)CH dielectric films and implications for stability during processing. *Journal of Chemical Thermodynamics* , **2019**, 128, 320-335	2.9	4
47	Measurements of Schottky barrier at the low-k SiOC:H/Cu interface using vacuum ultraviolet photoemission spectroscopy. *Applied Physics Letters*, **2015**, 107, 232905	3.4	4
46	Complete Elemental Analysis of Low-ka-SiC:H Thin Films by Transmission FTIR Spectroscopy. *ECS Journal of Solid State Science and Technology*, **2014**, 3, N52-N57	2	4
45	Time-dependent dielectric breakdown measurements of porous organosilicate glass using mercury and solid metal probes. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2014**, 32, 051509	2.9	4
44	Study of viscoplastic deformation in porous organosilicate thin films for ultra low-k applications. *Applied Physics Letters*, **2013**, 102, 221909	3.4	4
43	Thermal and Chemical Integrity of Ru Electrode in Cu/TaOx/Ru ReRAM Memory Cell. *ECS Journal of Solid State Science and Technology*, **2019**, 8, N220-N233	2	4
42	Interface and layer periodicity effects on the thermal conductivity of copper-based nanomultilayers with tungsten, tantalum, and tantalum nitride diffusion barriers. *Journal of Applied Physics*, **2020**, 128, 195302	2.5	4

41	Probing thermal conductivity of subsurface, amorphous layers in irradiated diamond. *Journal of Applied Physics*, **2021**, 129, 055307	2.5	4
40	Preface: Materials, metrology, and modeling for a future beyond CMOS technology. *APL Materials*, **2018**, 6, 058001	5.7	4
39	Thermodynamics of amorphous SiN(O)H dielectric films synthesized by plasma-enhanced chemical vapor deposition. *Journal of the American Ceramic Society*, **2018**, 101, 2017-2027	3.8	3
38	Measurement of the vacuum-ultraviolet absorption spectrum of low-k dielectrics using X-ray reflectivity. *Applied Physics Letters*, **2018**, 112, 082902	3.4	3
37	Radiation induced leakage currents in dense and porous low-k dielectrics **2016**,		3
36	The effect of edge compliance on the contact between a spherical indenter and a high-aspect-ratio rectangular fin.. *Experimental Mechanics*, **2018**, 58, 1157	2.6	3
35	Modeling and Simulation of Cu Diffusion in Porous Low-k Dielectrics. *ECS Transactions*, **2017**, 77, 121-132	1	3
34	Role of Nano-Porosity in Plasma Enhanced Chemical Vapor Deposition of Hermetic low-k a-SiOCN:H Dielectric Barrier Materials. *ECS Transactions*, **2013**, 45, 27-45	1	3
33	Reliability and performance limiting defects in low-�dielectrics for use as interlayer dielectrics **2010**,		3
32	Advances in metrology for the determination of Young's modulus for low-k dielectric thin films **2012**,		3
31	Underlying role of mechanical rigidity and topological constraints in physical sputtering and reactive ion etching of amorphous materials. *Physical Review Materials*, **2018**, 2,	3.2	3
30	Effects of 29Si and 1H on the near-zero field magnetoresistance response of Si/SiO2 interface states: Implications for oxide tunneling currents. *Applied Physics Letters*, **2021**, 119, 184101	3.4	3
29	X-ray photoelectron spectroscopy investigation of the valence band offset at beryllium oxide-diamond interfaces. *Diamond and Related Materials*, **2020**, 101, 107647	3.5	3
28	Thermal Conductivity Enhancement in Ion-Irradiated Hydrogenated Amorphous Carbon Films. *Nano Letters*, **2021**, 21, 3935-3940	11.5	3
27	Influence of porosity on electrical properties of low-k dielectrics irradiated with vacuum-ultraviolet radiation. *Applied Physics Letters*, **2016**, 109, 122902	3.4	3
26	Electrically detected magnetic resonance and near-zero field magnetoresistance in 28Si/28SiO2. *Journal of Applied Physics*, **2021**, 130, 065701	2.5	3
25	Band offsets at amorphous hydrogenated boron nitride/high-k oxide interfaces from x-ray photoelectron spectroscopy with charging effects analysis. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2020**, 38, 030601	1.3	2
24	Energetics of porous amorphous low-k SiOCH dielectric films. *Journal of Chemical Thermodynamics*, **2019**, 139, 105885	2.9	2

23	Valence and conduction band offsets at beryllium oxide interfaces with silicon carbide and III-V nitrides. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2019**, 37, 041206	1.3	2
22	Topological Constraint Theory Analysis of Rigidity Transition in Highly Coordinate Amorphous Hydrogenated Boron Carbide. *Frontiers in Materials*, **2019**, 6,	4	2
21	Atomic Layer Deposited Hybrid Organic-Inorganic Aluminates as Potential Low-k Dielectric Materials. *Materials Research Society Symposia Proceedings*, **2015**, 1791, 15-20		2
20	Spectroscopic method for measuring refractive index. *Applied Optics*, **2013**, 52, 4477-82	1.7	2
19	Modeling and Simulation of Cu Drift in Porous Low-k Dielectrics. *ECS Transactions*, **2017**, 80, 327-337	1	2
18	Hardness Studies of RF Sputtered Deposited BCN Thin Films. *ECS Transactions*, **2014**, 58, 147-153	1	2
17	An Electron Paramagnetic Resonance Study of Defects in Interlayer Dielectrics. *ECS Transactions*, **2011**, 35, 747-756	1	2
16	Characterization of ultrathin films by laser-induced sub-picosecond photoacoustics with coherent extreme ultraviolet detection **2012**,		2
15	Removal of Fluorine From a Si (100) Surface by a Remote RF Hydrogen Plasma. *Materials Research Society Symposia Proceedings*, **1995**, 386, 357		2
14	Extrinsic time-dependent dielectric breakdown of low-k organosilicate thin films from vacuum-ultraviolet irradiation. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2017**, 35, 021509	2.9	2
13	A Selectively Colorful yet Chilly Perspective on the Highs and Lows of Dielectric Materials for CMOS Nanoelectronics **2020**,		2
12	Thermal conductivity-structure-processing relationships for amorphous nano-porous organo-silicate thin films. *Journal of Porous Materials*, **2020**, 27, 565-586	2.4	2
11	Effects of cesium ion-implantation on mechanical and electrical properties of organosilicate low-k films. *Applied Physics Letters*, **2016**, 108, 202901	3.4	1
10	Effects of cesium ion implantation on the mechanical and electrical properties of porous SiCOH low-k dielectrics. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2017**, 35, 061506	2.9	1
9	Defects in low-□dielectrics and etch stop layers for use as interlayer dielectrics in ULSI **2010**,		1
8	Mechanical properties of hydrogenated amorphous silicon carbide thin films **2010**,		1
7	Transmission Fourier Transform Infra-red Spectroscopy Investigation of Structure Property Relationships in Low-k SiOxCy:H Dielectric Thin Films. *Materials Research Society Symposia Proceedings*, **2012**, 1520, 1		1
6	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. *Journal of Applied Physics*, **2021**, 130, 234401	2.5	1

#	Publication		
5	Impact of Film Stress on Nanoidentation Fracture Toughness Measurements for PECVD SiNx:H Films. *ECS Transactions*, **2009**, 19, 455-466	1	0
4	Impact of Embedment of Cu/TaOx/Ru on Its Device Performance. *ECS Transactions*, **2017**, 80, 911-921	1	
3	Valence Band Offset at Amorphous Boron Carbide / Silicon Interfaces. *Materials Research Society Symposia Proceedings*, **2013**, 1576, 1		
2	High Toughness and Moisture Insensitive Hydrogenated Amorphous Silicon Carbide Films for MEMS/NEMS. *ECS Transactions*, **2010**, 33, 257-261	1	
1	Ex Situ and In Situ Methods for Complete Oxygen and Non-Carbidic Carbon Removal from (0001)SI 6H-SiC Surfaces. *Materials Research Society Symposia Proceedings*, **1996**, 423, 563		