

Kalpathy B Sundaram

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Methods to improve wind turbine generator bearing temperature imbalance for onshore wind turbines. Wind Engineering, 2022, 46, 150-159.	1.9	25
2	A review of recent developments in aluminum gallium oxide thin films and devices. Critical Reviews in Solid State and Materials Sciences, 2022, 47, 538-569.	12.3	13
3	Preparation and Characterization of Radio Frequency Sputtered Delafossite p-type Copper Gallium Oxide ($\text{p-CuGaO}_{2\text{O}}$) Thin Films. ECS Journal of Solid State Science and Technology, 2022, 11, 023005.	1.8	8
4	Effect of Substrate Temperature on the Properties of RF Magnetron Sputtered p-CuInO_x Thin Films for Transparent Heterojunction Devices. Coatings, 2022, 12, 500.	2.6	1
5	Preparation and Characterization of p-Type Copper Gallium Oxide ($\text{CuGaO}_{2\text{O}}$) Thin Films by Dual Sputtering Using Cu and Ga_{2O_3} Targets. ECS Journal of Solid State Science and Technology, 2022, 11, 065010.	1.8	7
6	A solution to reduce overheating and increase wind turbine systems availability. Wind Engineering, 2021, 45, 491-504.	1.9	29
7	Influence of Substrate Temperature on Electrical and Optical Properties of Hydrogenated Boron Carbide Thin Films Deposited by RF Sputtering. Coatings, 2021, 11, 196.	2.6	4
8	Nanoindentation and Photoluminescence Studies of Hydrogenated Boron Carbon Nitride Thin Films. ECS Journal of Solid State Science and Technology, 2021, 10, 057004.	1.8	1
9	Electrical and Optical Studies of Reactively Sputtered Indium Oxide Thin Films. ECS Journal of Solid State Science and Technology, 2021, 10, 065016.	1.8	15
10	Properties of RF Magnetron-Sputtered Copper Gallium Oxide (CuGa_2O_4) Thin Films. Coatings, 2021, 11, 921.	2.6	8
11	Hydrogenation of Boron Carbon Nitride Thin Films for Low-k Dielectric Applications. ECS Journal of Solid State Science and Technology, 2021, 10, 093001.	1.8	1
12	Manufacturing deformation impact on the performance of electrical generator for the wind turbine application. Wind Engineering, 2021, 45, 1193-1205.	1.9	21
13	Annealing Studies of Copper Indium Oxide ($\text{Cu}_2\text{In}_2\text{O}_5$) Thin Films Prepared by RF Magnetron Sputtering. Coatings, 2021, 11, 1290.	2.6	4
14	A review of boron carbon nitride thin films and progress in nanomaterials. Materials Today Advances, 2020, 8, 100106.	5.2	54
15	A New Low-Capacitance High-Voltage-Tolerant Protection Clamp for High-Speed Applications. IEEE Transactions on Electron Devices, 2020, 67, 3030-3034.	3.0	4
16	Stacking Switch to Achieve Low-Trigger and High-Holding-Voltage-Clamp Characteristics. IEEE Transactions on Electron Devices, 2020, 67, 1506-1510.	3.0	4
17	Boron Carbon Nitride (BCN) Nano-Coatings of Central Venous Catheters Inhibits Bacterial Colonization. ECS Journal of Solid State Science and Technology, 2020, 9, 115018.	1.8	12
18	Characterization and Modeling of the Transient Safe Operating Area in LDMOS Transistors. , 2019, , .		4

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19	Impact of Imbalanced Wind Turbine Generator Cooling on Reliability. , 2019, , .		24
20	Addressing Reduced Ingress Protection Class & Proper Filter Selection for Open Ventilated (IC3A1) Wind Turbine Generator. , 2019, , .		20
21	Characterization of Silicon Nanowires Reflectance by Effective Index Due to Air-Silicon Ratio. ECS Transactions, 2019, 89, 17-30.	0.5	0
22	Review of RF Sputtered Films of Ga ₂ O ₃ . ECS Journal of Solid State Science and Technology, 2019, 8, Q3064-Q3078.	1.8	81
23	System of Systems Strand Tilt Analysis Perspective on Medium High Voltage Stator Bar and a Non-Destructive Testing Case Study. , 2019, , .		20
24	Modeling and Simulation of Comprehensive Diode Behavior Under Electrostatic Discharge Stresses. IEEE Transactions on Device and Materials Reliability, 2019, 19, 90-96.	2.0	18
25	The Impact of the Converter on the Reliability of a Wind Turbine Generator. , 2019, , .		17
26	Work Function Extraction of Indium Tin Oxide Films from MOSFET Devices. ECS Journal of Solid State Science and Technology, 2018, 7, P87-P90.	1.8	44
27	Compact and Fast-Response Voltage Clamp for Bi-Directional Signal Swing Interface Applications. IEEE Electron Device Letters, 2018, 39, 1880-1883.	3.9	25
28	Distributed ESD Protection Network for Millimetre-Wave RF Applications. , 2018, , .		2
29	IC6A1A6 vs. IC3A1 Squirrel Cage Induction Generator Cooling Configuration Challenges and Advantages for Wind Turbine Application. , 2018, , .		12
30	Revising the Bypass Diode Test to Incorporate the Effects of Photovoltaic Module Mounting Configuration and Climate of Deployment. , 2018, , .		3
31	Characterization of Dielectric Breakdown and Lifetime Analysis for Silicon Nitride Metal-Insulator-Metal Capacitors under Electrostatic Discharge Stresses. , 2018, , .		1
32	Thermal failure and voltage overshoot models for diode behavior under electrostatic discharge stresses. , 2018, , .		1
33	Centimeter-Scale Periodically Corrugated Few-Layer 2D MoS ₂ with Tensile Stretch-Driven Tunable Multifunctionalities. ACS Applied Materials & Interfaces, 2018, 10, 30623-30630.	8.0	21
34	Investigation on Electrical and Optical Properties of Hydrogen Doped Boron Carbide Thin Films. ECS Transactions, 2018, 85, 1607-1613.	0.5	1
35	Three dimensionally-ordered 2D MoS ₂ vertical layers integrated on flexible substrates with stretch-tunable functionality and improved sensing capability. Nanoscale, 2018, 10, 17525-17533.	5.6	31
36	Morphology in Porous Silicon Prepared from Si-Nanowires Grown by Electroless Etching. ECS Transactions, 2017, 75, 169-174.	0.5	2

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37	Optical and XPS studies of BCN thin films by co-sputtering of B4C and BN targets. Applied Surface Science, 2017, 396, 484-491.	6.1	57
38	Work Function Extraction of Indium Tin Oxide Used as Transparent Gate Electrode for MOSFET. ECS Transactions, 2017, 77, 1905-1910.	0.5	1
39	Characterization of ESD protection devices under total ionizing dose irradiation. , 2017, , .		9
40	Heterogeneous stacking silicon controlled rectifier design with improved ESD performance. , 2017, , .		1
41	Novel voltage triggered electrostatic discharge (ESD) detection circuit. , 2017, , .		2
42	Novel electrostatic discharge (ESD) clamp circuit with low leakage current. , 2017, , .		2
43	Boron carbon nitride based metal-insulator-metal UV detectors for harsh environment applications. Optics Letters, 2016, 41, 4249.	3.3	19
44	Study of copper diffusion in RF magnetron sputtered boron carbon nitride thin films. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2016, 34, 040603.	1.2	5
45	Photoluminescence studies on BCN thin films synthesized by RF magnetron sputtering. Materials Letters, 2016, 183, 355-358.	2.6	22
46	Post cleaning effects on silicon nanowires grown by electroless etching. Journal of Materials Science: Materials in Electronics, 2016, 27, 12247-12250.	2.2	1
47	Feasibility of Etching Studies on BCN Thin Films. ECS Journal of Solid State Science and Technology, 2016, 5, N35-N39.	1.8	4
48	Deposition and XPS studies of dual sputtered BCN thin films. Diamond and Related Materials, 2016, 64, 80-88.	3.9	32
49	Studies on Electrical Properties of RF Sputtered Deposited Boron Carbon Nitride Thin Films. ECS Journal of Solid State Science and Technology, 2015, 4, N25-N29.	1.8	17
50	Investigation on the reflectance properties on silicon nanowires grown by electroless etching. Materials Research Express, 2015, 2, 105006.	1.6	3
51	Predicting service life of bypass diodes in photovoltaic modules. , 2015, , .		4
52	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.	1.8	22
53	Electrical properties of Barium Strontium Titanate thin films for embedded capacitor applications. , 2015, , .		3
54	Hardness Studies of RF Sputtered Deposited BCN Thin Films. ECS Transactions, 2014, 58, 147-153.	0.5	2

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55	Influence of annealing on the optical properties of reactively sputtered BCN thin films. Materials Chemistry and Physics, 2013, 141, 596-601.	4.0	14
56	Investigation on Electrical Properties of RF Sputtered Deposited BCN Thin Films. ECS Transactions, 2013, 53, 53-58.	0.5	4
57	Recession and Characterization of Patterned Nanowires Grown by Electroless Etching of Silicon. ECS Journal of Solid State Science and Technology, 2012, 1, P40-P45.	1.8	3
58	Oxidation of Single Crystal Silicon Nanowires. ECS Transactions, 2012, 41, 37-46.	0.5	1
59	Characterization of silicon nanowires grown by electroless etching. , 2012, , .		1
60	Mathematical characterization of oxidized crystalline silicon nanowires grown by electroless process. Applied Surface Science, 2012, 258, 4607-4613.	6.1	4
61	Studies on the effect of hydrogen doping during deposition of Al:ZnO films using RF magnetron sputtering. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2012, 177, 1777-1782.	3.5	6
62	Optical characterization of BCN films deposited at various N ₂ /Ar gas flow ratios by RF magnetron sputtering. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2011, 176, 878-882.	3.5	13
63	Effect of Substrate Temperature on Optical Properties of BCN Thin Films. Electrochemical and Solid-State Letters, 2011, 14, G49.	2.2	6
64	Importance of Practical Relevance and Design Modules in Electrical Circuits education. , 2011, , .		0
65	Recession and Characterization of Patterned Nanowires Grown by Electroless Etching of Silicon. ECS Transactions, 2011, 35, 63-73.	0.5	5
66	Importance of Practical Relevance and Design Modules in Electrical Circuits Education. International Journal of Online and Biomedical Engineering, 2011, 7, 10.	1.4	1
67	Photoluminescence from RF sputtered SiCBN thin films. Journal of Materials Science: Materials in Electronics, 2009, 20, 144-148.	2.2	12
68	Influence of N ₂ /Ar gas mixture ratio and annealing on optical properties of SiCBN thin films prepared by rf sputtering. Diamond and Related Materials, 2008, 17, 944-948.	3.9	8
69	Effect of N ₂ /Ar Gas Mixture Composition on the Chemistry of SiCBN Thin Films Prepared by RF Reactive Sputtering. Journal of the Electrochemical Society, 2007, 154, H271.	2.9	18
70	Spray Cooling of IGBT Devices. Journal of Electronic Packaging, Transactions of the ASME, 2007, 129, 316-323.	1.8	48
71	Amorphous-SiCBN-Based Metal/Semiconductor/Metal Photodetector for High-Temperature Applications. IEEE Electron Device Letters, 2007, 28, 713-715.	3.9	24
72	Oxygen Annealing Characterization of Reactively Sputtered SiCBN Thin Films by X-Ray Photoelectron Spectroscopy. Journal of the Electrochemical Society, 2007, 154, H547.	2.9	5

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73	Finesse of silicon-based terahertz Fabry-Perot spectrometer. , 2007, , .		0
74	In Situ High Temperature Electrical Characterization of RF Sputtered SiCBN Thin Films. Journal of the Electrochemical Society, 2007, 154, H875.	2.9	17
75	Development of a Transparent Heater to Measure Surface Temperature Fluctuations for Pool Boiling and Spray Cooling. , 2007, , .		0
76	A Highly Efficient 200â€™000 RPM Permanent Magnet Motor System. IEEE Transactions on Magnetics, 2007, 43, 2528-2530.	2.1	73
77	Comparison of the Work Function of Ptâ€™Ru Binary Metal Alloys Extracted From MOS Capacitor and Schottky-Barrier-Diode Measurements. IEEE Transactions on Electron Devices, 2007, 54, 807-813.	3.0	10
78	Wet etching of sputtered tantalum thin films in NaOH and KOH based solutions. Journal of Materials Science: Materials in Electronics, 2007, 18, 535-539.	2.2	8
79	Characterization of Pt-Ru binary alloy thin films for work function tuning. IEEE Electron Device Letters, 2006, 27, 542-545.	3.9	13
80	Investigation of oxygen annealing effects on RF sputter deposited SiC thin films. Solid-State Electronics, 2006, 50, 1189-1193.	1.4	16
81	X-Ray Photoelectron Spectroscopy Analysis of Oxygen Annealed Radio Frequency Sputter Deposited SiCN Thin Films. Journal of the Electrochemical Society, 2006, 153, G640.	2.9	17
82	Characterization of copper indium ditelluride/electrolyte interface utilizing electrochemical impedance spectroscopy. Applied Surface Science, 2005, 242, 168-176.	6.1	20
83	Design of a superhigh-speed cryogenic permanent magnet synchronous motor. IEEE Transactions on Magnetics, 2005, 41, 3823-3825.	2.1	35
84	Smooth etching of silicon using TMAH and isopropyl alcohol for MEMS applications. Microelectronic Engineering, 2005, 77, 230-241.	2.4	59
85	Wavelength selection for the far-infrared p-Ge laser using etched silicon lamellar gratings. Optics and Laser Technology, 2005, 37, 87-91.	4.6	3
86	Spray Cooling of IGBTs Under High Heat Flux. , 2005, , 709.		1
87	The Application of Chemical Mechanical Polishing for Nickel Used in MEMS Devices. Materials Research Society Symposia Proceedings, 2004, 816, 751.	0.1	1
88	Chemical mechanical polishing of tantalum: oxidizer and pH effects. Journal of Materials Science: Materials in Electronics, 2004, 15, 87-90.	2.2	19
89	Chemical mechanical polishing of nickel for applications in MEMS devices. Microelectronic Engineering, 2004, 75, 234-241.	2.4	34
90	Role of oxidizer in the chemical mechanical planarization of the Ti/TiN barrier layer. Microelectronic Engineering, 2003, 65, 478-488.	2.4	33

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91	Polishing mechanism of tantalum films by SiO ₂ particles. Microelectronic Engineering, 2003, 70, 93-101.	2.4	36
92	Wet etching studies of silicon nitride thin films deposited by electron cyclotron resonance (ECR) plasma enhanced chemical vapor deposition. Microelectronic Engineering, 2003, 70, 109-114.	2.4	28
93	Fixed wavelength selection for the far-infrared p-Ge laser using patterned silicon etched mirrors. , 2003, 5085, 119.		0
94	Selectivity Studies On Tantalum Barrier Layer In Copper CMP. Materials Research Society Symposia Proceedings, 2003, 767, 1.	0.1	3
95	The effects of oxidation on the optical properties of amorphous SiC films. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 90, 47-49.	3.5	11
96	Effect of deposition temperature on the morphology, structure, surface chemistry and mechanical properties of magnetron sputtered Ti ₇₀ Al ₃₀ thin films on steel substrate. Surface and Coatings Technology, 2001, 141, 252-261.	4.8	10
97	The effect of nitrogen on the chemistry of sputter-deposited SiC _x N _y films. Applied Surface Science, 2001, 183, 270-277.	6.1	12
98	Deposition and optical studies of silicon carbide nitride thin films. Thin Solid Films, 2000, 370, 151-154.	1.8	85
99	A study of on-resistance and switching characteristics of the power MOSFET under cryogenic conditions. International Journal of Electronics, 2000, 87, 99-106.	1.4	10
100	Simulation of silicon carbide power MOSFETs at high temperature. Solid-State Electronics, 1999, 43, 367-374.	1.4	5
101	Simulation of Si power MOSFET under cryogenic conditions. Solid-State Electronics, 1999, 43, 771-777.	1.4	10
102	Photoluminescence enhancement in porous silicon layers. Journal of Materials Science: Materials in Electronics, 1998, 9, 271-274.	2.2	2
103	Electropolishing of silicon using hydrazine. Journal of Materials Science: Materials in Electronics, 1997, 8, 99-101.	2.2	1
104	Photoluminescence studies of thermal impurity diffused porous silicon layers. Journal of Materials Science: Materials in Electronics, 1997, 8, 163-169.	2.2	3
105	Characterization and optimization of zinc oxide films by r.f. magnetron sputtering. Thin Solid Films, 1997, 295, 87-91.	1.8	224
106	Studies on chemical bath deposited cadmium sulphide films by buffer solution technique. Journal of Materials Science: Materials in Electronics, 1995, 6, 52.	2.2	18
107	Design and fabrication process for electrostatic side-drive motors. Journal of Micromechanics and Microengineering, 1995, 5, 11-17.	2.6	7
108	Fabrication and characterization of metal-insulator-semiconductor field effect transistors using sputtered silicon nitride film as a gate dielectric. International Journal of Electronics, 1994, 77, 61-69.	1.4	3

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109	Electrochemical investigation into the environmental degradation of YBa ₂ Cu ₃ O ₇ superconductors. Physica Status Solidi A, 1994, 143, 109-116.	1.7	2
110	Studies on deposition parameters of silicon-nitride films prepared by a silane?nitrogen plasma-enhanced-chemical-vapour-deposition process nitride films prepared by a silane?nitrogen. Journal of Materials Science: Materials in Electronics, 1994, 5, 255-259.	2.2	6
111	Measurement of the current transient in Ta ₂ O ₅ films. Thin Solid Films, 1993, 230, 95-98.	1.8	3
112	Deposition parameters studies of silicon nitride films prepared by plasma-enhanced CVD process using silane-ammonia. Journal of Materials Science: Materials in Electronics, 1993, 4, 283.	2.2	5
113	Electrochemical Etching of Silicon by Hydrazine. Journal of the Electrochemical Society, 1993, 140, 1592-1597.	2.9	21
114	New experimental technique for the fabrication of ion diffused optical glass waveguides. Review of Scientific Instruments, 1993, 64, 2978-2982.	1.3	1
115	Electrochemical etching of highT _c superconducting materials. Journal of Materials Science: Materials in Electronics, 1992, 3, 26-28.	2.2	2
116	Auger electron spectroscopy and secondary-ion mass spectroscopy study of interdiffusion in gold-bismuth oxide and aluminium-bismuth oxide thin films. Journal of Materials Science: Materials in Electronics, 1992, 3, 257-262.	2.2	2
117	Characterization and optimization of cerium dioxide films deposited by r.f. magnetron sputtering. Thin Solid Films, 1992, 221, 13-16.	1.8	35
118	Cerium dioxide thin film optical waveguides. Optics and Laser Technology, 1992, 24, 263-266.	4.6	8
119	Effect of Varying Sputtering Power Levels on Y _{1-x} Ba _x Cu _{1-x} O Film Composition. Physica Status Solidi A, 1991, 126, 377-381.	1.7	2
120	Optical Absorption in Cerium Dioxide Thin Films. Physica Status Solidi (B): Basic Research, 1990, 161, K63.	1.5	47
121	A non-quasi-static small-signal model for metal-semiconductor junction diodes. Solid-State Electronics, 1990, 33, 1629-1632.	1.4	0
122	Fractal formation of a Y-Ba-Cu-O thin film onSrTiO ₃ . Physical Review B, 1989, 40, 2627-2630.	3.2	2
123	Some studies on the growth and properties of Pb _{1-x} Sn _x Te layers by hot-wall and liquid-phase epitaxy. Canadian Journal of Physics, 1985, 63, 753-756.	1.1	0
124	Properties of ZnO films reactively RE sputtered using a Zn target. Journal Physics D: Applied Physics, 1984, 17, 147-153.	2.8	13
125	High-temperature annealing effects on tin oxide films. Journal Physics D: Applied Physics, 1983, 16, 69-76.	2.8	20
126	Optical absorption studies on tin oxide films. Journal Physics D: Applied Physics, 1981, 14, 921-925.	2.8	51

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127	Chemical vapour deposition of tin oxide films and their electrical properties. Journal Physics D: Applied Physics, 1981, 14, 333-338.	2.8	35
128	X-ray and electron diffraction studies of chemically vapour-deposited tin oxide films. Thin Solid Films, 1981, 78, 35-40.	1.8	42
129	Electrical and photovoltaic properties of tin oxide-silicon heterojunctions. Thin Solid Films, 1979, 63, 197-201.	1.8	20