

Kevin D Leedy

List of Publications by Year in descending order

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135
papers

3,749
citations

159358

30
h-index

138251

58
g-index

136
all docs

136
docs citations

136
times ranked

3384
citing authors

#	ARTICLE	IF	CITATIONS
1	3.8-MV/cm Breakdown Strength of MOVPE-Grown Sn-Doped η -Ga ₂ O ₃ MOSFETs. IEEE Electron Device Letters, 2016, 37, 902-905.	2.2	468
2	Enhancement-mode Ga ₂ O ₃ wrap-gate fin field-effect transistors on native (100) η -Ga ₂ O ₃ substrate with high breakdown voltage. Applied Physics Letters, 2016, 109, .	1.5	298
3	η -Ga ₂ O ₃ MOSFETs for Radio Frequency Operation. IEEE Electron Device Letters, 2017, 38, 790-793.	2.2	248
4	Recessed-Gate Enhancement-Mode η -Ga ₂ O ₃ MOSFETs. IEEE Electron Device Letters, 2018, 39, 67-70.	2.2	187
5	η -Gallium oxide power electronics. APL Materials, 2022, 10, .	2.2	184
6	Ge-Doped η -Ga ₂ O ₃ MOSFETs. IEEE Electron Device Letters, 2017, 38, 775-778.	2.2	165
7	Highly conductive homoepitaxial Si-doped Ga ₂ O ₃ films on (010) η -Ga ₂ O ₃ by pulsed laser deposition. Applied Physics Letters, 2017, 111, .	1.5	128
8	Selecting metal alloy electric contact materials for MEMS switches. Journal of Micromechanics and Microengineering, 2004, 14, 1157-1164.	1.5	97
9	Flyweight, Superelastic, Electrically Conductive, and Flame-Retardant 3D Multi-Nanometer Graphene/Ceramic Metamaterial. Advanced Materials, 2017, 29, 1605506.	11.1	89
10	Lateral η -Ga ₂ O ₃ field effect transistors. Semiconductor Science and Technology, 2020, 35, 013002.	1.0	85
11	Characterization of metal and metal alloy films as contact materials in MEMS switches. Journal of Micromechanics and Microengineering, 2006, 16, 557-563.	1.5	81
12	Coupling of Epsilon-Near-Zero Mode to Gap Plasmon Mode for Flat-Top Wideband Perfect Light Absorption. ACS Photonics, 2018, 5, 776-781.	3.2	78
13	Microwave ZnO Thin-Film Transistors. IEEE Electron Device Letters, 2008, 29, 1024-1026.	2.2	77
14	High pulsed current density η -Ga ₂ O ₃ MOSFETs verified by an analytical model corrected for interface charge. Applied Physics Letters, 2017, 110, .	1.5	75
15	High-Frequency ZnO Thin-Film Transistors on Si Substrates. IEEE Electron Device Letters, 2009, 30, 946-948.	2.2	70
16	Optical and electrical properties of ultra-thin indium tin oxide nanofilms on silicon for infrared photonics. Optical Materials Express, 2018, 8, 1231.	1.6	68
17	High temperature stability of postgrowth annealed transparent and conductive ZnO:Al films. Applied Physics Letters, 2008, 93, 022104.	1.5	65
18	Thin-Film Encapsulated RF MEMS Switches. Journal of Microelectromechanical Systems, 2007, 16, 304-309.	1.7	56

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19	Model for thickness dependence of mobility and concentration in highly conductive zinc oxide. <i>Optical Engineering</i> , 2013, 52, 033801.	0.5	53
20	Alternative dielectric films for rf MEMS capacitive switches deposited using atomic layer deposited Al ₂ O ₃ /ZnO alloys. <i>Sensors and Actuators A: Physical</i> , 2007, 135, 262-272.	2.0	52
21	Biofunctionalized Zinc Oxide Field Effect Transistors for Selective Sensing of Riboflavin with Current Modulation. <i>Sensors</i> , 2011, 11, 6645-6655.	2.1	47
22	Defect segregation and optical emission in ZnO nano- and microwires. <i>Nanoscale</i> , 2016, 8, 7631-7637.	2.8	47
23	ZnO plasmonics for telecommunications. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	42
24	Si content variation and influence of deposition atmosphere in homoepitaxial Si-doped $\text{In}_2\text{Ga}_{2-x}\text{O}_{3-x}$ films by pulsed laser deposition. <i>APL Materials</i> , 2018, 6, 101102.	2.2	40
25	Copper alloy-stainless steel bonded laminates for fusion reactor applications: tensile strength and microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001, 297, 10-18.	2.6	38
26	Highly conductive ZnO grown by pulsed laser deposition in pure Ar. <i>Applied Physics Letters</i> , 2010, 97, 072113.	1.5	38
27	Miniaturized and Reconfigurable CPW Square-Ring Slot Antenna Loaded With Ferroelectric BST Thin Film Varactors. <i>IEEE Transactions on Antennas and Propagation</i> , 2012, 60, 3111-3119.	3.1	35
28	Thin channel $\text{In}_2\text{Ga}_{2-x}\text{O}_{3-x}$ MOSFETs with self-aligned refractory metal gates. <i>Applied Physics Express</i> , 2019, 12, 126501.	1.1	35
29	Switching dynamics and charge transport studies of resistive random access memory devices. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	33
30	Pulsed Power Performance of $\text{In}_2\text{Ga}_{2-x}\text{O}_{3-x}$ MOSFETs at L-Band. <i>IEEE Electron Device Letters</i> , 2020, 41, 989-992.	2.2	32
31	Radiation-Hard ZnO Thin Film Transistors. <i>IEEE Transactions on Nuclear Science</i> , 2015, 62, 1399-1404.	1.2	30
32	Induced conductivity in sol-gel ZnO films by passivation or elimination of Zn vacancies. <i>AIP Advances</i> , 2016, 6, .	0.6	28
33	Growth of vertically self-organized InGaAs quantum dots with narrow inhomogeneous broadening. <i>Applied Physics Letters</i> , 2000, 76, 3082-3084.	1.5	27
34	Toward high voltage radio frequency devices in $\text{In}_2\text{Ga}_{2-x}\text{O}_{3-x}$. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	23
35	Deep level defects in $\text{In}_2\text{Ga}_{2-x}\text{O}_{3-x}$ pulsed laser deposited thin films and Czochralski-grown bulk single crystals by thermally stimulated techniques. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	22
36	Homoepitaxial $\text{In}_2\text{Ga}_{2-x}\text{O}_{3-x}$ transparent conducting oxide with conductivity $\sigma = 2323 \text{ S cm}^{-1}$. <i>APL Materials</i> , 2021, 9, .	2.2	22

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37	Large area Ba _{1-x} Sr _x TiO ₃ thin films for microwave applications deposited by pulsed laser ablation. Thin Solid Films, 2009, 517, 2878-2881.	0.8	21
38	Copper alloy-stainless steel bonded laminates for fusion reactor applications: crack growth and fatigue. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 297, 19-25.	2.6	19
39	Influence of oxide buffer layers on the growth of carbon nanotube arrays on carbon substrates. Carbon, 2015, 87, 175-185.	5.4	19
40	Self-Heating Characterization of β -Ga ₂ O ₃ Thin-Channel MOSFETs by Pulsed δ and Raman Nanothermography. IEEE Transactions on Electron Devices, 2020, 67, 204-211.	1.6	18
41	A Nanoindenter Based Method for Studying MEMS Contact Switch Microcontacts. , 2008, , .		16
42	Effects of Ar vs. O ₂ ambient on pulsed-laser-deposited Ga-doped ZnO. Journal of Crystal Growth, 2011, 324, 110-114.	0.7	14
43	Investigation of the drain current shift in ZnO thin film transistors. Journal of Applied Physics, 2011, 109, 014503.	1.1	14
44	Tunable short- to mid-infrared perfectly absorbing thin films utilizing conductive zinc oxide on metal. Optical Materials Express, 2015, 5, 1898.	1.6	14
45	Naturally formed ultrathin V ₂ O ₅ heteroepitaxial layer on VO ₂ /sapphire(001) film. Applied Surface Science, 2017, 419, 365-372.	3.1	14
46	Neutron irradiation and forming gas anneal impact on β -Ga ₂ O ₃ deep level defects. Journal Physics D: Applied Physics, 2020, 53, 465102.	1.3	14
47	Growth of II-IV-V ₂ chalcopyrite nitrides by molecular beam epitaxy. Journal of Electronic Materials, 2005, 34, 1349-1356.	1.0	13
48	Bias-Temperature-Stress Characteristics of $\text{hbox}\{\text{ZnO}/\text{HfO}\}_{2}$ Thin-Film Transistors. IEEE Transactions on Electron Devices, 2012, 59, 1488-1493.	1.6	13
49	Investigation of plasmon resonance tunneling through subwavelength hole arrays in highly doped conductive ZnO films. Journal of Applied Physics, 2015, 118, .	1.1	13
50	Application of highly conductive ZnO to the excitation of long-range plasmons in symmetric hybrid waveguides. Optical Engineering, 2013, 52, 064603.	0.5	12
51	A Latching Capacitive RF MEMS Switch in a Thin Film Package. , 2006, , .		11
52	Mid- to long-wavelength infrared surface plasmon properties in doped zinc oxides. , 2012, , .		11
53	Plasmon resonance and perfect light absorption in subwavelength trench arrays etched in gallium-doped zinc oxide film. Applied Physics Letters, 2015, 107, .	1.5	11
54	Tungsten-doped vanadium dioxide thin film based tunable antenna. Materials Research Bulletin, 2018, 101, 287-290.	2.7	11

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55	Electro-optic polymer spatial light modulator based on a Fabry-Pérot interferometer configuration. Optics Express, 2011, 19, 12750.	1.7	10
56	Model-free determination of optical constants: application to undoped and Ga-doped ZnO. Optical Engineering, 2017, 56, 034112.	0.5	10
57	Reflection coefficient of HfO ₂ -based RRAM in different resistance states. Applied Physics Letters, 2018, 113, .	1.5	10
58	Influence of metal stress on RF MEMS capacitive switches. Sensors and Actuators A: Physical, 2007, 134, 600-605.	2.0	9
59	Pulsed Laser Deposited ZnO for Thin Film Transistor Applications. ECS Transactions, 2009, 16, 61-73.	0.3	9
60	Improved photoluminescence of vertically aligned ZnO nanorods grown on BaSrTiO ₃ by pulsed laser deposition. Nanotechnology, 2009, 20, 385706.	1.3	9
61	High conductance in ultrathin films of ZnO. Japanese Journal of Applied Physics, 2014, 53, 05FJ01.	0.8	9
62	Ionic Metal-Oxide TFTs for Integrated Switching Applications. IEEE Transactions on Electron Devices, 2016, 63, 1921-1927.	1.6	9
63	Deep-subthreshold Schottky barrier IGZO TFT for ultra low-power applications. Solid State Electronics Letters, 2020, 2, 59-66.	1.0	9
64	Nanocrystalline ZnO microwave thin film transistors. , 2010, , .		8
65	Influence of Substrate Temperature and Post-Deposition Annealing on Material Properties of Ga-Doped ZnO Prepared by Pulsed Laser Deposition. Journal of Electronic Materials, 2011, 40, 419-428.	1.0	8
66	Oxygen effects on barium strontium titanate morphology and MOS device performance. Materials Letters, 2013, 92, 389-392.	1.3	8
67	Characterization of hafnium oxide resistive memory layers deposited on copper by atomic layer deposition. Thin Solid Films, 2014, 562, 519-524.	0.8	8
68	Effects of Substrate and Post-Growth Treatments on the Microstructure and Properties of ZnO Thin Films Prepared by Atomic Layer Deposition. Journal of Electronic Materials, 2016, 45, 6337-6345.	1.0	8
69	A LOW VOLTAGE TUNABLE ANALOG PHASE SHIFTER UTILIZING FERROELECTRIC VARACTORS. Integrated Ferroelectrics, 2008, 100, 156-164.	0.3	7
70	Linearity and temperature dependence of large-area processed high-q barium strontium titanate thin-film varactors [Correspondence]. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 1692-1695.	1.7	7
71	Admittance Spectroscopy of Interface States in ZnO/HfO_2 Thin-Film Electronics. IEEE Electron Device Letters, 2011, 32, 1713-1715.	2.2	7
72	Nondestructive quantitative mapping of impurities and point defects in thin films: Ga and VZn in ZnO:Ga. Applied Physics Letters, 2014, 104, 242107.	1.5	7

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73	Fabrication, characterization, and modeling of memristor devices. , 2014, , .		7
74	Gate-recessed, laterally-scaled $\text{In}_2\text{Ga}_2\text{O}_3$ MOSFETs with high-voltage enhancement-mode operation. , 2017, , .		7
75	Gallium oxide technologies and applications. , 2017, , .		7
76	Conformal spray-deposited fluorine-doped tin oxide for mid- and long-wave infrared plasmonics. Optical Materials Express, 2017, 7, 2477.	1.6	7
77	Tuning the Phase and Microstructural Properties of TiO_2 Films Through Pulsed Laser Deposition and Exploring Their Role as Buffer Layers for Conductive Films. Journal of Electronic Materials, 2018, 47, 2271-2276.	1.0	7
78	Classical and quantum conductivity in $\text{In}_2\text{Ga}_2\text{O}_3$. Scientific Reports, 2019, 9, 1290.	1.6	7
79	Tunable indium tin oxide for metamaterial perfect absorbers and nonlinear devices. MRS Communications, 2020, 10, 573-578.	0.8	7
80	Cathodoluminescence, microstructure, and morphology of tensile-strained $\text{Al}_x\text{Ga}(1-x)\text{N}$ epitaxial films grown by gas source molecular beam epitaxy. Journal of Applied Physics, 1999, 86, 3120-3128.	1.1	6
81	Dopant profiles in heavily doped ZnO. Optical Engineering, 2013, 52, 053801.	0.5	6
82	Interfacial properties of Ga-doped ZnO thin films on Si. Optical Engineering, 2014, 53, 087108.	0.5	6
83	$\text{Al}_{1-x}\text{Sc}_x\text{N}$ Thin Film Structures for Pyroelectric Sensing Applications. MRS Advances, 2016, 1, 2711-2716.	0.5	6
84	Electrical and optical properties of degenerate and semi-insulating ZnGa_2O_4 : Electron/phonon scattering elucidated by quantum magnetoconductivity. Applied Physics Letters, 2020, 116, 252104.	1.5	6
85	Development of an optical emission spectroscopy-based method for dynamic compositional analysis of sputter deposited films from multicomponent targets. Applied Physics Letters, 1995, 66, 676-678.	1.5	5
86	Characterization of Gold-Gold Microcontact Behavior Using a Nanoindenter Based Setup. Journal of Adhesion Science and Technology, 2010, 24, 2597-2615.	1.4	5
87	Ordered nanocrystalline ZnO films for high speed and transparent thin film transistors. , 2011, , .		5
88	Illumination instabilities in ZnO/HfO ₂ thin-film transistors and influence of grain boundary charge. Journal of Materials Research, 2012, 27, 2199-2204.	1.2	5
89	Toward realization of Ga_2O_3 for power electronics applications. , 2017, , .		5
90	Ultra-low-power neurotransmitter sensor using novel Cu -chemistry aptamer-functionalized deep subthreshold Schottky barrier IGZO TFT. MRS Communications, 2021, 11, 233-243.	0.8	5

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91	Depth-resolved cathodoluminescence and surface photovoltage spectroscopies of gallium vacancies in $\text{In}^{2-}\text{Ga}_2\text{O}_3$ with neutron irradiation and forming gas anneals. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2021, 39, .	0.6	5
92	ZnO NANOCRYSTALLINE HIGH PERFORMANCE THIN FILM TRANSISTORS. International Journal of High Speed Electronics and Systems, 2011, 20, 171-182.	0.3	4
93	ALD TiO ₂ as a top-gate dielectric and passivation layer for InGaZnO ₁₁₅ ISFETs. Semiconductor Science and Technology, 2017, 32, 114004.	1.0	4
94	Efficient broadband energy detection from the visible to near-infrared using a plasmon FET. Nanotechnology, 2018, 29, 285201.	1.3	4
95	Spontaneous, non-aqueous electrochemical deposition of copper and palladium on Al and Al(Cu) thin films. Journal of Electronic Materials, 2001, 30, 349-354.	1.0	3
96	A Reconfigurable Coplanar Waveguide Bowtie Antenna Using an Integrated Ferroelectric Thin-Film Varactor. International Journal of Antennas and Propagation, 2012, 2012, 1-6.	0.7	3
97	Subtractive plasma-etch process for patterning high performance ZnO TFTs. , 2015, , .		3
98	Fourier Transform Infrared Spectroscopy Measurements of Multi-phonon and Free-Carrier Absorption in ZnO. Journal of Electronic Materials, 2016, 45, 6329-6336.	1.0	3
99	Deep level defects and their instability in PLD-grown IGZO ($\text{In}_{20}\text{Ga}_{20}\text{Zn}_{50}\text{O}_{110}$) thin films studied by thermally stimulated current spectroscopy. Semiconductor Science and Technology, 2020, 35, 124002.	1.0	3
100	THICKNESS DEPENDENT PROPERTIES OF BARIUM STRONTIUM TITANATE THIN-FILM VARACTORS. Integrated Ferroelectrics, 2010, 112, 53-59.	0.3	2
101	Long-wavelength infrared surface plasmons on Ga-doped ZnO films excited via 2D hole arrays for extraordinary optical transmission. Proceedings of SPIE, 2013, , .	0.8	2
102	Thin film Barium-Strontium-Titanate Parallel-Plate varactors integrated on low-resistivity silicon and sapphire substrate. , 2013, , .		2
103	Self-assembled nanocrystalline ZnO thin film transistor performance optimization for high speed applications. Turkish Journal of Physics, 2014, 38, 375-390.	0.5	2
104	Near-infrared (1 to 4 μm) control of plasmonic resonance wavelength in Ga-doped ZnO. Optical Engineering, 2017, 56, 057109.	0.5	2
105	Wide bandgap oxides. APL Materials, 2019, 7, .	2.2	2
106	Interface control and electron transport in ALD ZnO/Al ₂ O ₃ TFTs studied by gated Hall effect. Semiconductor Science and Technology, 2021, 36, 075005.	1.0	2
107	VO ₂ -based micro-electro-mechanical tunable optical shutter and modulator. Optics Express, 2021, 29, 25242.	1.7	2
108	Persistent photocurrent and deep level traps in PLD-grown In-Ga-Zn-O thin films studied by thermally stimulated current spectroscopy. , 2018, , .		2

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109	High Frequency ZnO Thin Film Transistors. , 2008, , .		1
110	ZnO Thin Film Transistors for RF Applications. Materials Research Society Symposia Proceedings, 2009, 1201, 201.	0.1	1
111	Bias temperature stress analysis of ZnO thin film transistors with HfO ₂ gate dielectrics. , 2011, , .		1
112	Miniaturized and reconfigurable CPW square-ring slot antenna using thin film varactor technology. , 2011, , .		1
113	Novel Multi-Capacitor Architecture for BST Thin Film Varactors. Integrated Ferroelectrics, 2011, 125, 11-19.	0.3	1
114	A Nanoindenter Based Investigation of Gold-Ruthenium Alloy Microcontact Behavior under Cyclic Condition. Journal of Adhesion Science and Technology, 2012, 26, 1181-1199.	1.4	1
115	Mid-infrared extraordinary transmission through Ga-doped ZnO films with 2D hole arrays. Proceedings of SPIE, 2014, , .	0.8	1
116	Heterogeneous integration of low-temperature metal-oxide TFTs. , 2017, , .		1
117	Infrared photonic to plasmonic couplers using spray deposited conductive metal oxides. , 2017, , .		1
118	Effect of Compound Dielectric and Metal Thinning on Metal-Insulator-Metal Resonant Absorbers for Multispectral Infrared Air-Bridge Bolometers. MRS Advances, 2017, 2, 2281-2286.	0.5	1
119	Gated Hall and field-effect transport characterization of e-mode ZnO TFTs. Applied Physics Letters, 2020, 116, 252105.	1.5	1
120	Quantum magnetoconductivity characterization of interface disorder in indium-tin-oxide films on fused silica. Communications Materials, 2021, 2, .	2.9	1
121	Vertical resistivity in nanocrystalline ZnO and amorphous InGaZnO. , 2018, , .		1
122	Ultra-Low Power Schottky Barrier TFT-Based Neurotransmitter Detection and Regenerative Studies. IEEE Sensors Journal, 2022, 22, 7550-7561.	2.4	1
123	Study of Drift in RRAM Devices Under Various Operating Conditions. , 2021, , .		1
124	Optical and electronic effects of rapid thermal annealing at Ir-Ga ₂ O ₃ interfaces. Journal of Applied Physics, 2022, 131, .	1.1	1
125	Microwave ZnO thin film transistors on Si substrates. , 2009, , .		0
126	Effects of annealing on donor and acceptor concentrations in Ga-doped ZnO thin films. Materials Research Society Symposia Proceedings, 2009, 1201, 57.	0.1	0

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127	Investigation of the drain current shift in ZnO thin film transistors. , 2009, , .		0
128	Growth temperature influence on nanocrystalline ZnO thin film FET performance. , 2010, , .		0
129	Coplanar waveguide varactors with bottom metal trenched in silicon. , 2011, , .		0
130	Indium-free transparent thin film transistors based on nanocrystalline ZnO. , 2011, , .		0
131	Illumination instability analysis of ZnO thin film transistors with HfO ₂ gate dielectrics. , 2012, , .		0
132	A resonant circuit realization using a 3D inductor in combination with thin film varactor technology. , 2015, , .		0
133	Near-IR (1 μ m - 4 μ m) control of plasmonic resonance wavelength in Ga-doped ZnO. Proceedings of SPIE, 2017, , .	0.8	0
134	Model-free determination of optical constants: application to undoped and Ga-doped ZnO. Proceedings of SPIE, 2017, , .	0.8	0
135	Characterization of Gold-Gold Microcontact Behavior Using a Nanoindenter Based Setup. , 2011, , 265-283.		0