

Kevin D Leedy

List of Publications by Year in descending order

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135
papers

3,749
citations

159358

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138251

58
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136
all docs

136
docs citations

136
times ranked

3384
citing authors

#	ARTICLE	IF	CITATIONS
1	In^{2+} -Gallium oxide power electronics. APL Materials, 2022, 10, .	2.2	184
2	Ultra-Low Power Schottky Barrier TFT-Based Neurotransmitter Detection and Regenerative Studies. IEEE Sensors Journal, 2022, 22, 7550-7561.	2.4	1
3	Optical and electronic effects of rapid thermal annealing at In^{2+} -Ga ₂ O ₃ interfaces. Journal of Applied Physics, 2022, 131, .	1.1	1
4	Ultra-low-power neurotransmitter sensor using novel In^{2+} -chemistry aptamer-functionalized deep subthreshold Schottky barrier IGZO TFT. MRS Communications, 2021, 11, 233-243.	0.8	5
5	Quantum magnetoconductivity characterization of interface disorder in indium-tin-oxide films on fused silica. Communications Materials, 2021, 2, .	2.9	1
6	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
7	VO ₂ -based micro-electro-mechanical tunable optical shutter and modulator. Optics Express, 2021, 29, 25242.	1.7	2
8	Depth-resolved cathodoluminescence and surface photovoltage spectroscopies of gallium vacancies in In^{2+} -Ga ₂ O ₃ with neutron irradiation and forming gas anneals. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2021, 39, .	0.6	5
9	Homoepitaxial In^{2+} -Ga ₂ O ₃ transparent conducting oxide with conductivity $\sigma = 2323 \text{ S cm}^{-1}$. APL Materials, 2021, 9, .	2.2	22
10	Study of Drift in RRAM Devices Under Various Operating Conditions. , 2021, , .		1
11	Lateral In^{2+} -Ga ₂ O ₃ field effect transistors. Semiconductor Science and Technology, 2020, 35, 013002.	1.0	85
12	Self-Heating Characterization of In^{2+} -Ga ₂ O ₃ Thin-Channel MOSFETs by Pulsed β - In^{2+} and Raman Nanothermography. IEEE Transactions on Electron Devices, 2020, 67, 204-211.	1.6	18
13	Deep-subthreshold Schottky barrier IGZO TFT for ultra low-power applications. Solid State Electronics Letters, 2020, 2, 59-66.	1.0	9
14	Electrical and optical properties of degenerate and semi-insulating ZnGa ₂ O ₄ : Electron/phonon scattering elucidated by quantum magnetoconductivity. Applied Physics Letters, 2020, 116, 252104.	1.5	6
15	Tunable indium tin oxide for metamaterial perfect absorbers and nonlinear devices. MRS Communications, 2020, 10, 573-578.	0.8	7
16	Toward high voltage radio frequency devices in In^{2+} -Ga ₂ O ₃ . Applied Physics Letters, 2020, 117, .	1.5	23
17	Pulsed Power Performance of In^{2+} -Ga ₂ O ₃ MOSFETs at L-Band. IEEE Electron Device Letters, 2020, 41, 989-992.	2.2	32
18	Gated Hall and field-effect transport characterization of e-mode ZnO TFTs. Applied Physics Letters, 2020, 116, 252105.	1.5	1

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19	Neutron irradiation and forming gas anneal impact on $\hat{\text{I}}^2\text{-Ga}_{2\text{O}}_{3\text{O}}$ deep level defects. Journal Physics D: Applied Physics, 2020, 53, 465102.	1.3	14
20	Deep level defects and their instability in PLD-grown IGZO ($\text{In}_{2\text{Ga}}_{2\text{Zn}}_{5\text{O}}_{11}$) thin films studied by thermally stimulated current spectroscopy. Semiconductor Science and Technology, 2020, 35, 124002.	1.0	3
21	Thin channel $\hat{\text{I}}^2\text{-Ga}_{2\text{O}}_{3\text{O}}$ MOSFETs with self-aligned refractory metal gates. Applied Physics Express, 2019, 12, 126501.	1.1	35
22	Deep level defects in $\hat{\text{I}}^2\text{-Ga}_2\text{O}_3$ pulsed laser deposited thin films and Czochralski-grown bulk single crystals by thermally stimulated techniques. Journal of Applied Physics, 2019, 125, .	1.1	22
23	Wide bandgap oxides. APL Materials, 2019, 7, .	2.2	2
24	Classical and quantum conductivity in $\hat{\text{I}}^2\text{-Ga}_2\text{O}_3$. Scientific Reports, 2019, 9, 1290.	1.6	7
25	Efficient broadband energy detection from the visible to near-infrared using a plasmon FET. Nanotechnology, 2018, 29, 285201.	1.3	4
26	Recessed-Gate Enhancement-Mode Ga_2O_3 MOSFETs. IEEE Electron Device Letters, 2018, 39, 67-70.	2.2	187
27	Tungsten-doped vanadium dioxide thin film based tunable antenna. Materials Research Bulletin, 2018, 101, 287-290.	2.7	11
28	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
29	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
30	Reflection coefficient of HfO_2 -based RRAM in different resistance states. Applied Physics Letters, 2018, 113, .	1.5	10
31	Si content variation and influence of deposition atmosphere in homoepitaxial Si-doped $\hat{\text{I}}^2\text{-Ga}_{2\text{O}}_{3\text{O}}$ films by pulsed laser deposition. APL Materials, 2018, 6, 101102.	2.2	40
32	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
33	Vertical resistivity in nanocrystalline ZnO and amorphous InGaZnO. , 2018, , .		1
34	Persistent photocurrent and deep level traps in PLD-grown In-Ga-Zn-O thin films studied by thermally stimulated current spectroscopy. , 2018, , .		2
35	Heterogeneous integration of low-temperature metal-oxide TFTs. , 2017, , .		1
36	Ga_2O_3 MOSFETs for Radio Frequency Operation. IEEE Electron Device Letters, 2017, 38, 790-793.	2.2	248

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37	Ge-Doped η -Ga ₂ O ₃ MOSFETs. IEEE Electron Device Letters, 2017, 38, 775-778.	2.2	165
38	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
39	Near-infrared (1 to 4 μ m) control of plasmonic resonance wavelength in Ga-doped ZnO. Optical Engineering, 2017, 56, 057109.	0.5	2
40	Flyweight, Superelastic, Electrically Conductive, and Flame-Retardant 3D Multi-Nanometer Graphene/Ceramic Metamaterial. Advanced Materials, 2017, 29, 1605506.	11.1	89
41	Model-free determination of optical constants: application to undoped and Ga-doped ZnO. Optical Engineering, 2017, 56, 034112.	0.5	10
42	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
43	Infrared photonic to plasmonic couplers using spray deposited conductive metal oxides. , 2017, , .		1
44	Near-IR (1 μ m to 4 μ m) control of plasmonic resonance wavelength in Ga-doped ZnO. Proceedings of SPIE, 2017, , .	0.8	0
45	Model-free determination of optical constants: application to undoped and Ga-doped ZnO. Proceedings of SPIE, 2017, , .	0.8	0
46	Toward realization of Ga ₂ O ₃ for power electronics applications. , 2017, , .		5
47	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
48	Gate-recessed, laterally-scaled η -Ga ₂ O ₃ MOSFETs with high-voltage enhancement-mode operation. , 2017, , .		7
49	ALD TiO ₂ as a top-gate dielectric and passivation layer for InGaZnO ₃ ISFETs. Semiconductor Science and Technology, 2017, 32, 114004.	1.0	4
50	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
51	Gallium oxide technologies and applications. , 2017, , .		7
52	Conformal spray-deposited fluorine-doped tin oxide for mid- and long-wave infrared plasmonics. Optical Materials Express, 2017, 7, 2477.	1.6	7
53	Al _{1-x} Sc _x N Thin Film Structures for Pyroelectric Sensing Applications. MRS Advances, 2016, 1, 2711-2716.	0.5	6
54	Induced conductivity in sol-gel ZnO films by passivation or elimination of Zn vacancies. AIP Advances, 2016, 6, .	0.6	28

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55	Enhancement-mode Ga ₂ O ₃ wrap-gate fin field-effect transistors on native (100) Ga_2O_3 substrate with high breakdown voltage. Applied Physics Letters, 2016, 109, .	1.5	298
56	Ionic Metal-Oxide TFTs for Integrated Switching Applications. IEEE Transactions on Electron Devices, 2016, 63, 1921-1927.	1.6	9
57	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
58	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
59	3.8-MV/cm Breakdown Strength of MOVPE-Grown Sn-Doped Ga_2O_3 MOSFETs. IEEE Electron Device Letters, 2016, 37, 902-905.	2.2	468
60	Defect segregation and optical emission in ZnO nano- and microwires. Nanoscale, 2016, 8, 7631-7637.	2.8	47
61	Investigation of plasmon resonance tunneling through subwavelength hole arrays in highly doped conductive ZnO films. Journal of Applied Physics, 2015, 118, .	1.1	13
62	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
63	Subtractive plasma-etch process for patterning high performance ZnO TFTs. , 2015, , .		3
64	A resonant circuit realization using a 3D inductor in combination with thin film varactor technology. , 2015, , .		0
65	Influence of oxide buffer layers on the growth of carbon nanotube arrays on carbon substrates. Carbon, 2015, 87, 175-185.	5.4	19
66	Radiation-Hard ZnO Thin Film Transistors. IEEE Transactions on Nuclear Science, 2015, 62, 1399-1404.	1.2	30
67	Tunable short- to mid-infrared perfectly absorbing thin films utilizing conductive zinc oxide on metal. Optical Materials Express, 2015, 5, 1898.	1.6	14
68	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
69	Mid-infrared extraordinary transmission through Ga-doped ZnO films with 2D hole arrays. Proceedings of SPIE, 2014, , .	0.8	1
70	High conductance in ultrathin films of ZnO. Japanese Journal of Applied Physics, 2014, 53, 05FJ01.	0.8	9
71	Interfacial properties of Ga-doped ZnO thin films on Si. Optical Engineering, 2014, 53, 087108.	0.5	6
72	Fabrication, characterization, and modeling of memristor devices. , 2014, , .		7

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73	Self-assembled nanocrystalline ZnO thin film transistor performance optimization for high speed applications. Turkish Journal of Physics, 2014, 38, 375-390.	0.5	2
74	Characterization of hafnium oxide resistive memory layers deposited on copper by atomic layer deposition. Thin Solid Films, 2014, 562, 519-524.	0.8	8
75	Application of highly conductive ZnO to the excitation of long-range plasmons in symmetric hybrid waveguides. Optical Engineering, 2013, 52, 064603.	0.5	12
76	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
77	Thin film Barium-Strontium-Titanate Parallel-Plate varactors integrated on low-resistivity silicon and sapphire substrate. , 2013, , .		2
78	Oxygen effects on barium strontium titanate morphology and MOS device performance. Materials Letters, 2013, 92, 389-392.	1.3	8
79	ZnO plasmonics for telecommunications. Applied Physics Letters, 2013, 102, .	1.5	42
80	Model for thickness dependence of mobility and concentration in highly conductive zinc oxide. Optical Engineering, 2013, 52, 033801.	0.5	53
81	Dopant profiles in heavily doped ZnO. Optical Engineering, 2013, 52, 053801.	0.5	6
82	Switching dynamics and charge transport studies of resistive random access memory devices. Applied Physics Letters, 2012, 101, .	1.5	33
83	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
84	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
85	Illumination instability analysis of ZnO thin film transistors with HfO ₂ gate dielectrics. , 2012, , .		0
86	Mid- to long-wavelength infrared surface plasmon properties in doped zinc oxides. , 2012, , .		11
87	Miniaturized and Reconfigurable CPW Square-Ring Slot Antenna Loaded With Ferroelectric BST Thin Film Varactors. IEEE Transactions on Antennas and Propagation, 2012, 60, 3111-3119.	3.1	35
88	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
89	Bias-Temperature-Stress Characteristics of ZnO/HfO_2 Thin-Film Transistors. IEEE Transactions on Electron Devices, 2012, 59, 1488-1493.	1.6	13
90	Coplanar waveguide varactors with bottom metal trenched in silicon. , 2011, , .		0

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91	Bias temperature stress analysis of ZnO thin film transistors with HfO ₂ gate dielectrics. , 2011, , .		1
92	Indium-free transparent thin film transistors based on nanocrystalline ZnO. , 2011, , .		0
93	Biofunctionalized Zinc Oxide Field Effect Transistors for Selective Sensing of Riboflavin with Current Modulation. Sensors, 2011, 11, 6645-6655.	2.1	47
94	Electro-optic polymer spatial light modulator based on a Fabry-Pérot interferometer configuration. Optics Express, 2011, 19, 12750.	1.7	10
95	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
96	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
97	Investigation of the drain current shift in ZnO thin film transistors. Journal of Applied Physics, 2011, 109, 014503.	1.1	14
98	Miniaturized and reconfigurable CPW square-ring slot antenna using thin film varactor technology. , 2011, , .		1
99	ZnO NANOCRYSTALLINE HIGH PERFORMANCE THIN FILM TRANSISTORS. International Journal of High Speed Electronics and Systems, 2011, 20, 171-182.	0.3	4
100	Admittance Spectroscopy of Interface States in ZnO/HfO_2 Thin-Film Electronics. IEEE Electron Device Letters, 2011, 32, 1713-1715.	2.2	7
101	Novel Multi-Capacitor Architecture for BST Thin Film Varactors. Integrated Ferroelectrics, 2011, 125, 11-19.	0.3	1
102	Ordered nanocrystalline ZnO films for high speed and transparent thin film transistors. , 2011, , .		5
103	Characterization of Gold-Gold Microcontact Behavior Using a Nanoindenter Based Setup. , 2011, , 265-283.		0
104	THICKNESS DEPENDENT PROPERTIES OF BARIUM STRONTIUM TITANATE THIN-FILM VARACTORS. Integrated Ferroelectrics, 2010, 112, 53-59.	0.3	2
105	Highly conductive ZnO grown by pulsed laser deposition in pure Ar. Applied Physics Letters, 2010, 97, 072113.	1.5	38
106	Characterization of Gold-Gold Microcontact Behavior Using a Nanoindenter Based Setup. Journal of Adhesion Science and Technology, 2010, 24, 2597-2615.	1.4	5
107	Nanocrystalline ZnO microwave thin film transistors. , 2010, , .		8
108	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

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109	Growth temperature influence on nanocrystalline ZnO thin film FET performance. , 2010, , .		0
110	Pulsed Laser Deposited ZnO for Thin Film Transistor Applications. ECS Transactions, 2009, 16, 61-73.	0.3	9
111	Microwave ZnO thin film transistors on Si substrates. , 2009, , .		0
112	ZnO Thin Film Transistors for RF Applications. Materials Research Society Symposia Proceedings, 2009, 1201, 201.	0.1	1
113	Improved photoluminescence of vertically aligned ZnO nanorods grown on BaSrTiO ₃ by pulsed laser deposition. Nanotechnology, 2009, 20, 385706.	1.3	9
114	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
115	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
116	High-Frequency ZnO Thin-Film Transistors on Si Substrates. IEEE Electron Device Letters, 2009, 30, 946-948.	2.2	70
117	Investigation of the drain current shift in ZnO thin film transistors. , 2009, , .		0
118	Microwave ZnO Thin-Film Transistors. IEEE Electron Device Letters, 2008, 29, 1024-1026.	2.2	77
119	A Nanoindenter Based Method for Studying MEMS Contact Switch Microcontacts. , 2008, , .		16
120	A LOW VOLTAGE TUNABLE ANALOG PHASE SHIFTER UTILIZING FERROELECTRIC VARACTORS. Integrated Ferroelectrics, 2008, 100, 156-164.	0.3	7
121	High Frequency ZnO Thin Film Transistors. , 2008, , .		1
122	High temperature stability of postgrowth annealed transparent and conductive ZnO:Al films. Applied Physics Letters, 2008, 93, 022104.	1.5	65
123	Thin-Film Encapsulated RF MEMS Switches. Journal of Microelectromechanical Systems, 2007, 16, 304-309.	1.7	56
124	Influence of metal stress on RF MEMS capacitive switches. Sensors and Actuators A: Physical, 2007, 134, 600-605.	2.0	9
125	Alternative dielectric films for rf MEMS capacitive switches deposited using atomic layer deposited Al ₂ O ₃ /ZnO alloys. Sensors and Actuators A: Physical, 2007, 135, 262-272.	2.0	52
126	A Latching Capacitive RF MEMS Switch in a Thin Film Package. , 2006, , .		11

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127	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
128	Growth of II-IV-V ₂ chalcopyrite nitrides by molecular beam epitaxy. Journal of Electronic Materials, 2005, 34, 1349-1356.	1.0	13
129	Selecting metal alloy electric contact materials for MEMS switches. Journal of Micromechanics and Microengineering, 2004, 14, 1157-1164.	1.5	97
130	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
131	Copper alloy-stainless steel bonded laminates for fusion reactor applications: tensile strength and microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 297, 10-18.	2.6	38
132	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
133	Growth of vertically self-organized InGaAs quantum dots with narrow inhomogeneous broadening. Applied Physics Letters, 2000, 76, 3082-3084.	1.5	27
134	Cathodoluminescence, microstructure, and morphology of tensile-strained Al _x Ga(1-x)N epitaxial films grown by gas source molecular beam epitaxy. Journal of Applied Physics, 1999, 86, 3120-3128.	1.1	6
135	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