

Wing Man Tang

List of Publications by Year in descending order

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124
papers

3,485
citations

331670

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all docs

125
docs citations

125
times ranked

6257
citing authors

#	ARTICLE	IF	CITATIONS
1	Improved carrier mobility of pentacene organic TFTs by suppressed oxide growth at remote interface using nitrogen doping in high-k NdNbO dielectric. <i>Organic Electronics</i> , 2022, 102, 106427.	2.6	1
2	Anti-Screening Effect of Gate-Electrode Holes on Remote Phonon Scattering in InGaZnO Thin-Film Transistors. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 174-179.	3.0	4
3	Low-Temperature-Processed High-Performance Pentacene OTFTs with Optimal Nd-Ti Oxynitride Mixture as Gate Dielectric. <i>Materials</i> , 2022, 15, 2255.	2.9	4
4	Influence of Source/Drain Catalytic Metal and Fabrication Method on OTFT-Based Hydrogen Sensor. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 2038-2042.	3.0	2
5	High-mobility pentacene organic thin-film transistors achieved by reducing remote phonon scattering and surface-roughness scattering. <i>Applied Surface Science</i> , 2021, 544, 148656.	6.1	10
6	Dependence of sensing performance of OTFT-based H ₂ sensor on channel length. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 16232-16240.	7.1	3
7	Enhanced screening on remote phonon scattering in InGaZnO thin-film transistor by using Ge gate electrode. <i>Journal of Applied Physics</i> , 2021, 130, .	2.5	4
8	Plasmon-phonon resonance at gate-electrode/gate-dielectric interface on carrier mobility of organic TFTs with high-k gate dielectrics. <i>Applied Surface Science</i> , 2021, 565, 150374.	6.1	5
9	Simulation Study of 4H-SiC High-k Pillar MOSFET With Integrated Schottky Barrier Diode. <i>IEEE Journal of the Electron Devices Society</i> , 2021, 9, 951-957.	2.1	6
10	Reduced screening of remote phonon scattering in thin-film transistors caused by gate-electrode/gate-dielectric interlayer. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	9
11	Few-Layered MoS ₂ Field-Effect Transistors with a Vertical Channel of Sub-10 nm. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 32943-32950.	8.0	23
12	Temperature Dependence of Sensing Characteristics for OTFT-Based Hydrogen Sensor. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 1776-1780.	3.0	3
13	Improved Interfacial and Electrical Properties of MoS ₂ Transistor With High/Low-Temperature Grown Hf _{0.5} Al _{0.5} O ₂ as Top-Gate Dielectric. <i>IEEE Electron Device Letters</i> , 2020, 41, 385-388.	3.9	4
14	Improved electrical properties of MoS ₂ transistor with Hf _{1-x} Ti _x O as gate dielectric. , 2019, , .		0
15	Effects of Gate Electron Concentration on Organic Thin-Film Transistors with Different Pentacene Thicknesses. , 2019, , .		0
16	Surface Passivation Using Lanthanide Oxynitrides for GaAs Metal-oxide-Semiconductor Applications. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 3080-3085.	3.0	2
17	Effects of Coulomb and Roughness Scatterings on 4H-SiC MOSFET. , 2019, , .		0
18	Improvement of Pentacene Organic Thin-Film Transistor by Using Fluorine Plasma-Treated or Ion-Implanted HfO ₂ as Gate Dielectric. , 2019, , .		0

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19	Repair of Oxygen Vacancies and Improvement of HfO ₂ /MoS ₂ Interface by NH ₃ -Plasma Treatment. IEEE Transactions on Electron Devices, 2019, 66, 4337-4342.	3.0	4
20	Gate Screening on Remote Phonon Scattering for Pentacene Organic TFTs: Holes Versus Electrons. IEEE Electron Device Letters, 2019, 40, 893-896.	3.9	10
21	Advances in La-Based High-k Dielectrics for MOS Applications. Coatings, 2019, 9, 217.	2.6	24
22	Influence of Gate Doping Concentration on the Characteristics of Amorphous InGaZnO Thin-Film Transistors With HfLaO Gate Dielectric. IEEE Electron Device Letters, 2019, 40, 1953-1956.	3.9	18
23	Effects of Trapped Charges in Gate Dielectric and High-k Encapsulation on Performance of MoS ₂ Transistor. IEEE Transactions on Electron Devices, 2019, 66, 1107-1112.	3.0	9
24	High-Performance Pentacene Organic Thin-Film Transistor by Using Nd ₂ O ₃ Gate Dielectric Doped with Nb. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700609.	1.8	6
25	Effects of Catalytic Electrode Thickness on a Hydrogen Sensor Based on Organic Thin-Film Transistor. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700786.	1.8	2
26	A Study on Organic Thin-Film Transistors Using Hf-La Oxides With Different La Contents as Gate Dielectrics. IEEE Transactions on Electron Devices, 2018, 65, 1107-1112.	3.0	6
27	Effects of Metal-Hydroxyl and InO Defects on Performance of InGaZnO Thin-Film Transistor. IEEE Transactions on Electron Devices, 2018, 65, 1009-1013.	3.0	13
28	Electrochemical characteristics of amorphous silicon carbide film as a lithium-ion battery anode. RSC Advances, 2018, 8, 5189-5196.	3.6	51
29	A comparative study of Hf and Ta incorporations in the dielectric of Pd-WO ₃ -SiC Schottky-diode hydrogen sensor. Sensors and Actuators B: Chemical, 2018, 259, 725-729.	7.8	10
30	GaAs Metal-Oxide Semiconductor Capacitor With Nd-Based High-k Oxynitrides as Gate Dielectric and Passivation Layer. IEEE Transactions on Electron Devices, 2018, 65, 72-78.	3.0	9
31	Hydrogen Sensor Based on Pentacene Organic Thin-Film Transistor for Flexible Applications. , 2018, , .		2
32	Flexible Solid-state Supercapacitors Using Paper-based Electrodes for Energy Storage. , 2018, , .		2
33	Improved Performance of Pentacene OTFT by using Hybrid Oxide of Nd and Hf as Gate Dielectric. , 2018, , .		0
34	Hydrogen sensors based on TFTs with catalytic source/drain electrodes: IGZO vs. pentacene. IEEE Electron Device Letters, 2018, , 1-1.	3.9	3
35	Double-Layer MnCo ₂ S ₄ @Ni-Co-S Core/Shell Nanostructure on Nickel Foam for High-Performance Supercapacitor. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800147.	1.8	6
36	Effects of Gate Electron Concentration on the Performance of Pentacene Organic Thin-Film Transistors. IEEE Electron Device Letters, 2018, 39, 963-966.	3.9	13

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37	Effects of a Gate-Electrode/Gate-Dielectric Interlayer on Carrier Mobility for Pentacene Organic Thin-Film Transistors. IEEE Electron Device Letters, 2018, 39, 1516-1519.	3.9	6
38	Improved Electrical Performance of Multilayer MoS ₂ Transistor With NH ₃ -Annealed ALD HfTiO Gate Dielectric. IEEE Transactions on Electron Devices, 2017, 64, 1020-1025.	3.0	22
39	High-Mobility Pentacene Organic Thin-Film Transistor with La ₃ NbO ₉ Dielectric Fabricated on Vacuum Tape. IEEE Transactions on Electron Devices, 2017, 64, 1716-1722.	3.0	19
40	Improved Interfacial and Electrical Properties of GaAs MOS Capacitor With LaON/TiON Multilayer Composite Gate Dielectric and LaON as Interfacial Passivation Layer. IEEE Transactions on Electron Devices, 2017, 64, 1535-1540.	3.0	13
41	A Study on Pentacene Organic Thin-Film Transistor With Different Gate Materials on Various Substrates. IEEE Electron Device Letters, 2017, 38, 744-747.	3.9	21
42	Electrical and Interfacial Properties of GaAs MOS Capacitors With La-Doped ZrON as Interfacial Passivation Layer. IEEE Transactions on Electron Devices, 2017, 64, 2179-2184.	3.0	7
43	Improved Interfacial and Electrical Properties of GaAs Metal-Oxide Semiconductor Capacitor by Using Fluorine-Plasma-Treated Interfacial Passivation Layer. IEEE Transactions on Device and Materials Reliability, 2017, 17, 458-462.	2.0	4
44	Effective passivation of HfO ₂ /Ge interface by using nitrided germanate as passivation interlayer. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600974.	1.8	1
45	High-performance pentacene OTFT by incorporating Ti in LaON gate dielectric. Applied Physics Letters, 2017, 111, .	3.3	13
46	Improved interfacial and electrical properties of Ge MOS capacitor with ZrON/TaON multilayer composite gate dielectric by using fluorinated Si passivation layer. Applied Physics Letters, 2017, 111, 053501.	3.3	3
47	Working Principle of Hydrogen Sensor Based on Pentacene Thin-Film Transistor. IEEE Electron Device Letters, 2017, 38, 1132-1135.	3.9	13
48	Improvements of Interfacial and Electrical Properties for Ge MOS Capacitor by Using TaYON Interfacial Passivation Layer and Fluorine Incorporation. IEEE Transactions on Electron Devices, 2017, 64, 3528-3533.	3.0	5
49	Fabrication and electrical performance of CVD-grown MoS ₂ transistor. , 2017, , .		3
50	A study on MnCo ₂ S ₄ @NiCo(OH) ₂ core-shell nanocomposite for high-performance solid-state supercapacitor applications. , 2017, , .		0
51	Improved performance of pentacene OTFT by incorporating Ti in NdON gate dielectric. , 2017, , .		1
52	Low-voltage otft-based H ₂ sensor fabricated on vacuum tape. , 2017, , .		0
53	Interfacial and Electrical Properties of Ge MOS Capacitor by ZrLaON Passivation Layer and Fluorine Incorporation. IOP Conference Series: Materials Science and Engineering, 2017, 229, 012018.	0.6	2
54	Analytical modeling of nonideal Schottky diode with series and shunt resistance and application in hydrogen gas sensors. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2764-2768.	1.8	3

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55	Impact of Nitrogen Incorporation on the Interface Between Ge and La_2O_3 or Y_2O_3 Gate Dielectric: A Study on the Formation of Germanate. IEEE Transactions on Electron Devices, 2016, 63, 4888-4892.	3.0	6
56	Improved hydrogen-sensing performance of Pd/WO ₃ /SiC Schottky diode by La doping. , 2016, , .		1
57	Equivalent distributed capacitance model of oxide traps on frequency dispersion of $C \sim V$ curve for MOS capacitors. Chinese Physics B, 2016, 25, 118502.	1.4	4
58	Hydrogen sensor based on pentacene thin-film transistor. , 2016, , .		4
59	Improved interfacial and electrical properties of Ge MOS capacitor by using TaON/LaON dual passivation interlayer. Applied Physics Letters, 2016, 109, .	3.3	5
60	Improved characteristics for OTFT with HfO ₂ gate dielectric by using chlorinated indium tin oxide gate electrode. , 2016, , .		1
61	Effects of annealing on electrical performance of multilayer MoS ₂ transistors with atomic layer deposited HfO ₂ gate dielectric. Applied Physics Express, 2016, 9, 095202.	2.4	11
62	Improved interfacial and electrical properties of HfLaON gate dielectric Ge MOS capacitor by NbON/Si dual passivation layer and fluorine incorporation. Applied Physics Letters, 2016, 109, .	3.3	9
63	Electrical performance of multilayer MoS ₂ transistor with ALD HfTiO gate dielectric. , 2016, , .		0
64	N ₂ -Plasma-Treated Ga_2O_3 (Gd_2O_3) as Interface Passivation Layer for Ge MOS Capacitor With HfTiON Gate Dielectric. IEEE Transactions on Electron Devices, 2016, 63, 2838-2843.	3.0	6
65	Improved interfacial quality of GaAs metal-oxide-semiconductor device with NH ₃ -plasma treated yttrium-oxynitride as interfacial passivation layer. Microelectronics Reliability, 2016, 56, 17-21.	1.7	12
66	Suppressing the Coffee-Ring Effect in Semitransparent MnO ₂ Film for a High-Performance Solar-Powered Energy Storage Window. ACS Applied Materials & Interfaces, 2016, 8, 9088-9096.	8.0	26
67	A 2-D analytical threshold-voltage model for GeOI/GeON MOSFET with high-k gate dielectric. Microelectronics Reliability, 2016, 57, 24-33.	1.7	1
68	High-performance organic thin-film transistor by using LaNbO as gate dielectric. Applied Physics Letters, 2015, 107, .	3.3	23
69	Thermal annealing effect on electrical characteristics of CuPc thin-film transistors on glass with ZrO ₂ as gate dielectric. , 2015, , .		0
70	Interfacial and electrical properties of InGaAs metal-oxide-semiconductor capacitor with TiON/TaON multilayer composite gate dielectric. Applied Physics Letters, 2015, 106, 123504.	3.3	6
71	Highly flexible and transferable supercapacitors with ordered three-dimensional MnO ₂ /Au/MnO ₂ nanospire arrays. Journal of Materials Chemistry A, 2015, 3, 10199-10204.	10.3	53
72	A Study on La Incorporation in Transition-Metal (Y, Zr, and Nb) Oxides as Gate Dielectric of Pentacene Organic Thin-Film Transistor. IEEE Transactions on Electron Devices, 2015, 62, 2313-2319.	3.0	17

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73	Improved performance of asymmetric fiber-based micro-supercapacitors using carbon nanoparticles for flexible energy storage. <i>Journal of Materials Chemistry A</i> , 2015, 3, 15633-15641.	10.3	33
74	Pentacene organic thin-film transistor with HfYO gate dielectric made on adhesive vacuum tape. <i>Electronics Letters</i> , 2015, 51, 644-646.	1.0	2
75	Aqueous Manganese Dioxide Ink for Paper-Based Capacitive Energy Storage Devices. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 6800-6803.	13.8	69
76	Plasma-Nitrided Ga ₂ O ₃ (Gd ₂ O ₃) as Interfacial Passivation Layer for InGaAs Metal-Oxide Semiconductor Capacitor With HfTiON Gate Dielectric. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 1235-1240.	3.0	11
77	Improved performance of Pd/WO ₃ /SiC Schottky-diode hydrogen gas sensor by using fluorine plasma treatment. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	6
78	Influences of Remote Coulomb and Interface-Roughness Scatterings on Electron Mobility of InGaAs n-MOSFET With High-k Stacked Gate Dielectric. <i>IEEE Nanotechnology Magazine</i> , 2015, 14, 854-861.	2.0	10
79	High-performance fiber-shaped supercapacitors using carbon fiber thread (CFT)@polyaniline and functionalized CFT electrodes for wearable/stretchable electronics. <i>Nano Energy</i> , 2015, 11, 662-670.	16.0	134
80	Flexible solid-state fiber-shaped supercapacitors based on organic-inorganic hybrid electrodes for wearable energy storage. , 2014, , .		0
81	Schottky-diode hydrogen sensor based on InGaN/GaN multiple quantum wells. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2014, 32, 011212.	1.2	10
82	Effects of Ta incorporation in La ₂ O ₃ gate dielectric of InGaZnO thin-film transistor. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	45
83	High-mobility pentacene OTFT with TaLaO gate dielectric passivated by fluorine plasma. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 866-870.	2.4	3
84	On the voltage dependence of sensitivity for Schottky-type gas sensor. <i>Applied Physics Letters</i> , 2014, 105, 223503.	3.3	13
85	Improved Characteristics of InGaZnO Thin-Film Transistor by Using Fluorine Implant. <i>ECS Solid State Letters</i> , 2014, 3, P87-P90.	1.4	13
86	Split-Drain Magnetic Field-Effect Transistor Channel Charge Trapping and Stress Induced Sensitivity Deterioration. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-4.	2.1	5
87	High-mobility pentacene thin-film transistor by using La _x Ta _(1-x) O _y as gate dielectric. <i>Organic Electronics</i> , 2014, 15, 2499-2504.	2.6	25
88	Controllable functionalized carbon fabric for high-performance all-carbon-based supercapacitors. <i>RSC Advances</i> , 2014, 4, 33022.	3.6	40
89	Thermal stability of sectorial split-drain magnetic field-effect transistors. <i>Microelectronics Reliability</i> , 2014, 54, 1115-1118.	1.7	2
90	Nitrided HfTiON/Ga ₂ O ₃ (Gd ₂ O ₃) as stacked gate dielectric for GaAs MOS applications. <i>Applied Physics Express</i> , 2014, 7, 061201.	2.4	15

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91	Effects of fluorine plasma and ammonia annealing on pentacene thin-film transistor with HfTiO as gate dielectric. , 2013, , .		0
92	High-Performance Pentacene Thin-Film Transistor With High- κ HfLaON as Gate Dielectric. IEEE Electron Device Letters, 2013, 34, 1397-1399.	3.9	13
93	A novel hydrogen sensor based on Pt/WO ₃ /Si MIS Schottky diode. , 2013, , .		2
94	A study on the electrical characteristics of copper phthalocyanine-based OTFTs with ZrTaO as gate dielectric. , 2013, , .		0
95	Metal/Metal-Oxide Interfaces: How Metal Contacts Affect the Work Function and Band Structure of MoO ₃ . Advanced Functional Materials, 2013, 23, 215-226.	14.9	326
96	Comparison of CuPc-based organic thin-film transistors made by different dielectric structures. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2013, 31, 012201.	1.2	3
97	Effects of Annealing Time on the Performance of OTFT on Glass with ZrO ₂ as Gate Dielectric. Active and Passive Electronic Components, 2012, 2012, 1-5.	0.3	3
98	Electrical properties of CuPc-based OTFTs with atomic layer deposited HfAlO gate dielectric. , 2012, , .		0
99	Improved Sensing Characteristics of a Novel Pt/HfTiO ₂ /SiC Schottky-Diode Hydrogen Sensor. IEEE Transactions on Electron Devices, 2012, 59, 2818-2824.	3.0	6
100	Transition Metal Oxide Work Functions: The Influence of Cation Oxidation State and Oxygen Vacancies. Advanced Functional Materials, 2012, 22, 4557-4568.	14.9	694
101	Universal energy-level alignment of molecules on metal oxides. Nature Materials, 2012, 11, 76-81.	27.5	836
102	Work function of fluorine doped tin oxide. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, .	2.1	163
103	Effects of different Ar/O ₂ ratios on the electrical properties of CuPc-based TFTs with ZrO ₂ gate dielectric. , 2011, , .		0
104	Enhanced Sensing Performance of MISiC Schottky-Diode Hydrogen Sensor by Using HfON as Gate Insulator. IEEE Sensors Journal, 2011, 11, 2940-2946.	4.7	8
105	Effects of UV-ozone treatment on radio-frequency magnetron sputtered ZnO thin films. Thin Solid Films, 2011, 520, 569-573.	1.8	24
106	Effects of interfacial oxide layers of the electrode metals on the electrical characteristics of organic thin-film transistors with HfO ₂ gate dielectric. Journal of Applied Physics, 2011, 110, 044108.	2.5	9
107	Effects of N ₂ -annealing conditions on the sensing properties of Pt/HfO ₂ /SiC Schottky-diode hydrogen sensor. Thin Solid Films, 2010, 519, 505-511.	1.8	11
108	A metallic molybdenum suboxide buffer layer for organic electronic devices. Applied Physics Letters, 2010, 96, .	3.3	82

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109	UV ozone passivation of the metal/dielectric interface for HfO ₂ -based organic thin film transistors. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, 1100-1103.	1.2	7
110	Effects of Processing Conditions on the Work Function and Energy-Level Alignment of NiO Thin Films. Journal of Physical Chemistry C, 2010, 114, 19777-19781.	3.1	176
111	Electrode effects on the breakdown characteristics of high-k HfO ₂ . , 2010, , .		1
112	Enhanced performance for OTFT on glass with HfO ₂ as gate dielectric by UV-ozone treatment. , 2009, , .		0
113	Improved sensing characteristics of MISiC Schottky-diode hydrogen sensor by using HfO ₂ as gate insulator. Microelectronics Reliability, 2008, 48, 1780-1785.	1.7	9
114	Effects of annealing temperature on sensing properties of Pt/HfO ₂ /SiC Schottky-diode hydrogen sensor. , 2008, , .		0
115	Correlation between carrier mobility of pentacene thin-film transistor and surface passivation of its gate dielectric. Journal of Applied Physics, 2008, 104, .	2.5	16
116	Pentacene thin-film transistors with HfO ₂ gate dielectric annealed in NH ₃ or N ₂ O. , 2008, , .		2
117	Effects of Insulator Thickness on the Sensing Properties of MISiC Schottky-Diode Hydrogen Sensor. , 2008, , .		0
118	Sensing characteristics of a novel MISiC Schottky-diode hydrogen sensor with HfO ₂ as gate insulator. , 2007, , .		2
119	Improved Performance for OTFT with HfTiO ₂ as gate dielectric by N ₂ O annealing. , 2007, , .		1
120	A Comparison of MISiC Schottky-Diode Hydrogen Sensors Made by NO ₂ , or NH ₃ Nitridations. IEEE Transactions on Electron Devices, 2006, 53, 2378-2383.	3.0	4
121	Enhanced hydrogen-sensing characteristics of MISiC Schottky-diode hydrogen sensor by trichloroethylene oxidation. Sensors and Actuators A: Physical, 2005, 119, 63-67.	4.1	11
122	Sensing characteristics of a novel NH ₃ -nitrided Schottky-diode hydrogen sensor. , 2004, , .		0
123	Determination of optimal insulator thickness for MISiC hydrogen sensors. Solid-State Electronics, 2004, 48, 1673-1677.	1.4	8
124	Effects of gate-insulator nitridation gas on MISiC Schottky-diode hydrogen sensors. , 0, , .		0