Ling Li

List of Publications by Year
in descending order

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71 papers	1,956 citations	279798 23 h-index	276875 41 g-index
73 all docs	73 docs citations	73 times ranked	2764 citing authors

#	Article	IF	Citations
1	Current Status and Opportunities of Organic Thin-Film Transistor Technologies. IEEE Transactions on Electron Devices, 2017, 64, 1906-1921.	3.0	224
2	Full imitation of synaptic metaplasticity based on memristor devices. Nanoscale, 2018, 10, 5875-5881.	5.6	99
3	A review of carrier thermoelectric-transport theory in organic semiconductors. Physical Chemistry Chemical Physics, 2016, 18, 19503-19525.	2.8	95
4	Photoelectric Plasticity in Oxide Thin Film Transistors with Tunable Synaptic Functions. Advanced Electronic Materials, 2018, 4, 1800556.	5.1	94
5	Thermoelectric Seebeck effect in oxide-based resistive switching memory. Nature Communications, 2014, 5, 4598.	12.8	92
6	Thermal crosstalk in 3-dimensional RRAM crossbar array. Scientific Reports, 2015, 5, 13504.	3.3	92
7	Improvement of durability and switching speed by incorporating nanocrystals in the HfOx based resistive random access memory devices. Applied Physics Letters, 2018, 113, .	3.3	72
8	Charge Transfer within the F₄TCNQâ€MoS₂ van der Waals Interface: Toward Electrical Properties Tuning and Gas Sensing Application. Advanced Functional Materials, 2018, 28, 1806244.	14.9	62
9	General Einstein relation model in disordered organic semiconductors under quasiequilibrium. Physical Review B, 2014, 90, .	3.2	59
10	Self-Rectifying Resistive-Switching Device With $ hbox{a-Si/WO}_{3}$ Bilayer. IEEE Electron Device Letters, 2013, 34, 229-231.	3.9	47
11	Universal carrier thermoelectric-transport model based on percolation theory in organic semiconductors. Physical Review B, 2015, 91, .	3.2	47
12	Compact Model for Organic Thin-Film Transistor. IEEE Electron Device Letters, 2010, 31, 210-212.	3.9	44
13	Physical model of dynamic Joule heating effect for reset process in conductive-bridge random access memory. Journal of Computational Electronics, 2014, 13, 432-438.	2.5	41
14	Charge carrier hopping transport based on Marcus theory and variable-range hopping theory in organic semiconductors. Journal of Applied Physics, 2015, 118, .	2.5	39
15	A Review for Compact Model of Thin-Film Transistors (TFTs). Micromachines, 2018, 9, 599.	2.9	39
16	Electric field-dependent charge transport in organic semiconductors. Applied Physics Letters, 2009, 95, .	3.3	37
17	A review for polaron dependent charge transport in organic semiconductor. Organic Electronics, 2018, 61, 223-234.	2.6	35
18	Carrier concentration dependence of the mobility in organic semiconductors. Synthetic Metals, 2007, 157, 243-246.	3.9	33

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19	Field Effect Mobility Model in Oxide Semiconductor Thin Film Transistors With Arbitrary Energy Distribution of Traps. IEEE Electron Device Letters, 2014, 35, 226-228.	3.9	32
20	Novel Vertical Channel-All-Around (CAA) In-Ga-Zn-O FET for 2T0C-DRAM With High Density Beyond 4F² by Monolithic Stacking. IEEE Transactions on Electron Devices, 2022, 69, 2196-2202.	3.0	30
21	Field effect mobility model in organic thin film transistor. Applied Physics Letters, 2011, 98, .	3.3	29
22	Analytical surface-potential compact model for amorphous-IGZO thin-film transistors. Journal of Applied Physics, 2015, 117, .	2.5	29
23	A review for compact model of graphene field-effect transistors. Chinese Physics B, 2017, 26, 036804.	1.4	26
24	A compact model for polycrystalline pentacene thin-film transistor. Journal of Applied Physics, 2010, 107, .	2.5	24
25	Physical origin of nonlinear transport in organic semiconductor at high carrier densities. Journal of Applied Physics, 2014, 116, .	2.5	23
26	Possible Luttinger liquid behavior of edge transport in monolayer transition metal dichalcogenide crystals. Nature Communications, 2020, 11, 659.	12.8	23
27	Room Temperature-Processed a-IGZO Schottky Diode for Rectifying Circuit and Bipolar 1D1R Crossbar Applications. IEEE Transactions on Electron Devices, 2019, 66, 4087-4091.	3.0	22
28	Analytical carrier density and quantum capacitance for graphene. Applied Physics Letters, 2016, 108, 013503.	3.3	21
29	A new surface-potential-based compact model for the MoS2 field effect transistors in active matrix display applications. Journal of Applied Physics, 2018, 123, .	2.5	21
30	Effect of dipole layer on the density-of-states and charge transport in organic thin film transistors. Applied Physics Letters, 2013, 103, .	3.3	20
31	Polaron effect and energetic disorder dependence of Seebeck coefficient in organic transistors. Organic Electronics, 2015, 16, 113-117.	2.6	20
32	Influence of traps on charge transport in organic semiconductors. Solid-State Electronics, 2007, 51, 445-448.	1.4	19
33	Contact-Length-Dependent Contact Resistance of Top-Gate Staggered Organic Thin-Film Transistors. IEEE Electron Device Letters, 2013, 34, 69-71.	3.9	19
34	Modified Transmission Line Model for Bottom-Contact Organic Transistors. IEEE Electron Device Letters, 2013, 34, 1301-1303.	3.9	19
35	Electric field modified Arrhenius description of charge transport in amorphous oxide semiconductor thin film transistors. Physical Review B, 2018, 98, .	3.2	19
36	Tail states recombination limit of the open circuit voltage in bulk heterojunction organic solar cells. Organic Electronics, 2012, 13, 230-234.	2.6	16

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37	Physical model of Seebeck coefficient under surface dipole effect in organic thin-film transistors. Organic Electronics, 2016, 29, 27-32.	2.6	16
38	Field-Dependent Mobility Enhancement and Contact Resistance in a-IGZO TFTs. IEEE Transactions on Electron Devices, 2019, 66, 5166-5169.	3.0	16
39	Bulkâ€Like Electrical Properties Induced by Contactâ€Limited Charge Transport in Organic Diodes: Revised Space Charge Limited Current. Advanced Electronic Materials, 2018, 4, 1700493.	5.1	15
40	A tied Fermi liquid to Luttinger liquid model for nonlinear transport in conducting polymers. Nature Communications, 2021, 12, 58.	12.8	15
41	A unified physical model of Seebeck coefficient in amorphous oxide semiconductor thin-film transistors. Journal of Applied Physics, 2014, 116, 104502.	2.5	14
42	Understanding the transport mechanism of organic-inorganic perovskite solar cells: The effect of exciton or free-charge on diffusion length. Organic Electronics, 2019, 66, 163-168.	2.6	14
43	Simulation study of conductive filament growth dynamics in oxide-electrolyte-based ReRAM. Journal of Semiconductors, 2014, 35, 104007.	3.7	13
44	A unified description of thermal transport performance in disordered organic semiconductors. Organic Electronics, 2017, 41, 294-300.	2.6	13
45	Universal description of exciton diffusion length in organic photovoltaic cell. Organic Electronics, 2015, 23, 53-56.	2.6	12
46	Limitation of the concept of transport energy in disordered organic semiconductors. Europhysics Letters, 2014, 106, 17005.	2.0	11
47	Compact model for organic thin-film transistor with Gaussian density of states. AIP Advances, 2015, 5, 047123.	1.3	11
48	Thickness of accumulation layer in amorphous indium-gallium-zinc-oxide thin-film transistors by Kelvin Probe Force Microscopy. Applied Physics Letters, 2019, 114, .	3.3	11
49	Short-circuit current model of organic solar cells. Chemical Physics Letters, 2014, 614, 27-30.	2.6	10
50	Surface potential measurement on contact resistance of amorphous-InGaZnO thin film transistors by Kelvin probe force microscopy. Applied Physics Letters, 2016, 109, 023509.	3.3	9
51	Unified percolation model for bipolaron-assisted organic magnetoresistance in the unipolar transport regime. Physical Review B, 2016, 94, .	3.2	9
52	Charge transport mechanism in low temperature polycrystalline silicon (LTPS) thin-film transistors. AIP Advances, 2019, 9, .	1.3	9
53	Anomalous Positive Bias Stress Instability in MoS₂ Transistors With High-Hydrogen-Concentration SiO₂ Gate Dielectrics. IEEE Electron Device Letters, 2019, 40, 232-235.	3.9	9
54	Directly probing the charge transport in initial molecular layers of organic polycrystalline field effect transistors. Journal of Materials Chemistry C, 2021, 9, 649-656.	5.5	9

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55	Thermal effect on endurance performance of 3-dimensional RRAM crossbar array. Chinese Physics B, 2016, 25, 056501.	1.4	8
56	Investigation of Asymmetric Characteristics of Novel Vertical Channel-All-Around (CAA) In-Ga-Zn-O Field Effect Transistors. IEEE Electron Device Letters, 2022, 43, 894-897.	3.9	8
57	Combining Bottom-Up and Top-Down Segmentation: A Way to Realize High-Performance Organic Circuit. IEEE Electron Device Letters, 2015, 36, 684-686.	3.9	6
58	Temperature, electric-field, and carrier-density dependence of hopping magnetoresistivity in disordered organic semiconductors. Physical Review B, 2017, 96, .	3.2	6
59	Charge carrier relaxation model in disordered organic semiconductors. AIP Advances, 2013, 3, 112119.	1.3	5
60	Polaron effect dependence of thermopower in organic semiconductors. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 3579-3581.	2.1	5
61	Spin diffusion in disordered organic semiconductors. Physical Review B, 2015, 92, .	3.2	5
62	Physical model for electroforming process in valence change resistive random access memory. Journal of Computational Electronics, 2015, 14, 146-150.	2.5	5
63	Understanding mobility degeneration mechanism in organic thin-film transistors (OTFT). Chemical Physics Letters, 2017, 681, 36-39.	2.6	5
64	Optimization of Electrical Properties of MoS 2 Fieldâ€Effect Transistors by Dipole Layer Coulombic Interaction With Trap States. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900007.	2.4	5
65	Understanding the adsorption behavior of small molecule in MoS₂ device based on first-principles calculations. Materials Research Express, 2021, 8, 055010.	1.6	5
66	A novel extraction method of device parameters for thin-film transistors (TFTs). Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 403, 127386.	2.1	5
67	Investigation of positive bias temperature instability for monolayer polycrystalline MoS2 field-effect transistors. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	5.1	3
68	Carrier thermoelectric transport model for black phosphorus field-effect transistors. Chemical Physics Letters, 2017, 678, 271-274.	2.6	2
69	Investigation of Hump Behavior of Amorphous Indium-Gallium-Zinc-Oxide Thin-Film Transistor Under Positive Bias Stress. IEEE Transactions on Electron Devices, 2022, 69, 549-554.	3.0	2
70	A physical model for dual gate a-InGaZnO thin film transistors based on multiple trapping and release mechanism. Microelectronics Journal, 2019, 86, 1-6.	2.0	1
71	Decoupling the Roles of Thermionic and Field Emissions in Contact Resistance of Field Effect Transistors. IEEE Electron Device Letters, 2022, 43, 1065-1068.	3.9	0