Ling-Feng Mao

List of Publications by Citations

109 papers	626 citations	12 h-index	19 g-index
125 ext. papers	822 ext. citations	2.4 avg, IF	4.7 L-index

#	Paper	IF	Citations
109	Frequency Selective Surfaces: A Review. *Applied Sciences (Switzerland)*, **2018**, 8, 1689	2.6	68
108	Temperature dependence of the tunneling current in metal-oxide-semiconductor devices due to the coupling between the longitudinal and transverse components of the electron thermal energy. *Applied Physics Letters*, **2007**, 90, 183511	3.4	30
107	Recent advancements in surface plasmon polaritons-plasmonics in subwavelength structures in microwave and terahertz regimes. *Digital Communications and Networks*, **2018**, 4, 244-257	5.9	28
106	Physical Modeling of Activation Energy in Organic Semiconductor Devices based on Energy and Momentum Conservations. *Scientific Reports*, **2016**, 6, 24777	4.9	23
105	The Effects of the Injection-Channel Velocity on the Gate Leakage Current of Nanoscale MOSFETs. *IEEE Electron Device Letters*, **2007**, 28, 161-163	4.4	21
104	DESIGN OF PLANAR DUAL AND TRIPLE NARROW-BAND BANDSTOP FILTERS WITH INDEPENDENTLY CONTROLLED STOPBANDS AND IMPROVED SPURIOUS RESPONSE. *Progress in Electromagnetics Research*, **2012**, 131, 259-274	3.8	20
103	The Gate Leakage Current in Graphene Field-Effect Transistor. *IEEE Electron Device Letters*, **2008**, 29, 1047-1049	4.4	18
102	The effects of the in-plane momentum on the quantization of nanometer metal-oxide-semiconductor devices due to the difference between the effective masses of silicon and gate oxide. *Applied Physics Letters*, **2007**, 91, 123519	3.4	15
101	Thickness measurements for ultrathin-film insulator metal–oxide–semiconductor structures using Fowler–Nordheim tunneling current oscillations. *Journal of Applied Physics*, **2000**, 88, 6560-6563	2.5	15
100	Finite size effects on the gate leakage current in graphene nanoribbon field-effect transistors. *Nanotechnology*, **2009**, 20, 275203	3.4	13
99	Integrated SRAM compiler with clamping diode to reduce leakage and dynamic power in nano-CMOS process. *Micro and Nano Letters*, **2012**, 7, 171	0.9	12
98	Physical Modeling of Gate-Controlled Schottky Barrier Lowering of Metal-Graphene Contacts in Top-Gated Graphene Field-Effect Transistors. *Scientific Reports*, **2015**, 5, 18307	4.9	12
97	A NOVEL MINIATURIZED DUAL-BAND BANDSTOP FILTER USING DUAL-PLANE DEFECTED STRUCTURES. *Progress in Electromagnetics Research*, **2013**, 134, 397-417	3.8	12
96	Leakage Power Reduction Techniques of 55 nm SRAM Cells. *IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India)*, **2011**, 28, 135	1.5	12
95	Numerical analysis for root-mean-square roughness of SiO2/Si interface on direct tunneling current in ultrathin MOSFETs. *Solid-State Electronics*, **2001**, 45, 531-534	1.7	12
94	A Compact Reconfigurable Bandstop Resonator Using Defected Ground Structure on Coplanar Waveguide. *IEEE Antennas and Wireless Propagation Letters*, **2012**, 11, 457-459	3.8	11
93	Study of Fowler–Nordheim tunneling current oscillations of thin insulator MOS structure by wave interference method. *Solid-State Electronics*, **2000**, 44, 1501-1506	1.7	11

92	Physical unclonable function: architectures, applications and challenges for dependable security. *IET Circuits, Devices and Systems*, **2020**, 14, 407-424	1.1	11
91	A novel combinatorial triangle-type AMC structure for RCS reduction. *Microwave and Optical Technology Letters*, **2015**, 57, 2728-2732	1.2	10
90	Finite-Size Effects on Thermionic Emission in Metal□raphene-Nanoribbon Contacts. *IEEE Electron Device Letters*, **2010**, 31, 491-493	4.4	10
89	Miniaturised frequency selective surface based on fractal arrays with square slots for enhanced bandwidth. *IET Microwaves, Antennas and Propagation*, **2019**, 13, 1811-1819	1.6	9
88	The Current Collapse in AlGaN/GaN High-Electron Mobility Transistors Can Originate from the Energy Relaxation of Channel Electrons?. *PLoS ONE*, **2015**, 10, e0128438	3.7	9
87	Investigation of the Correlation Between Temperature and Enhancement of Electron Tunneling Current Through $hbox{HfO}_{bf 2}$ Gate Stacks. *IEEE Transactions on Electron Devices*, **2008**, 55, 782-788	2.9	9
86	Modeling of spectral shift in Raman spectroscopy, photo- and electro-luminescence induced by electric field tuning of graphene related electronic devices. *Carbon*, **2017**, 119, 446-452	10.4	8
85	A compact quad-band bandstop filter using dual-plane defected structures and open-loop resonators. *IEICE Electronics Express*, **2012**, 9, 1630-1636	0.5	8
84	A theoretical analysis of field emission from graphene nanoribbons. *Carbon*, **2011**, 49, 2709-2714	10.4	8
83	The quantum size effects on the surface potential of nanocrystalline silicon thin film transistors. *Thin Solid Films*, **2010**, 518, 3396-3401	2.2	8
82	Thermionic emission current in graphene-based electronic devices. *Applied Physics A: Materials Science and Processing*, **2019**, 125, 1	2.6	7
81	Effects of Channel Electron In-Plane Velocity on the Capacitance-Voltage Curve of MOS Devices. *ETRI Journal*, **2010**, 32, 68-72	1.4	7
80	Modeling the effects of the channel electron velocity on the channel surface potential of ballistic MOSFETs. *Solid-State Electronics*, **2008**, 52, 186-189	1.7	7
79	The effect of image potential on electron transmission and electric current in the direct tunneling regime of ultra-thin MOS structures. *Microelectronics Reliability*, **2001**, 41, 927-931	1.2	7
78	Quantum coupling and electrothermal effects on electron transport in high-electron mobility transistors **2019**, 93, 1		6
77	Quantum capacitance of the armchair-edge graphene nanoribbon **2013**, 81, 309-317		6
76	Anisotropic relaxation of a CuO/TiO2 surface under an electric field and its impact on visible light absorption: ab initio calculations. *Physical Chemistry Chemical Physics*, **2015**, 17, 17880-6	3.6	6
75	Effect of SiO2/Si interface roughness on gate current. *Microelectronics Reliability*, **2001**, 41, 1903-1907	1.2	6

74	Direct tunneling relaxation spectroscopy in ultra-thin gate oxide MOS structures. *Solid-State Electronics*, **2000**, 44, 2021-2025	1.7	6
73	DFT Calculation about Oxygen Vacancy to Promote Adsorption of a CO Molecule on Single Au-Supported Titanium Dioxide. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1800386	1.3	6
72	Enhanced Sparse Regularization Based on Logarithm Penalty and Its Application to Gearbox Compound Fault Diagnosis. *IEEE Transactions on Instrumentation and Measurement*, **2021**, 70, 1-12	5.2	6
71	Graphene-sandwiched silicon structures for greatly enhanced unpolarized light absorption. *Optics Communications*, **2015**, 339, 47-52	2	5
70	Dot size effects of nanocrystalline germanium on charging dynamics of memory devices. *Nanoscale Research Letters*, **2013**, 8, 21	5	5
69	Interface traps and quantum size effects on the retention time in nanoscale memory devices. *Nanoscale Research Letters*, **2013**, 8, 369	5	5
68	Effects of quantum coupling on the performance of metal-oxide-semiconductor field transistors **2009**, 72, 407-414		5
67	Modeling of temperature dependence of the leakage current through a hafnium silicate gate dielectric in a MOS device. *Semiconductor Science and Technology*, **2007**, 22, 1203-1208	1.8	5
66	The effect of oxygen vacancy at CO oxidation on anatase (001)-supported single-Au catalyst. *Materials Chemistry and Physics*, **2020**, 240, 122291	4.4	5
65	Impact of Energy Relaxation of Channel Electrons on Drain-Induced Barrier Lowering in Nano-Scale Si-Based MOSFETs. *ETRI Journal*, **2017**, 39, 284-291	1.4	4
64	Current Reduction Caused by the Quantum Coupling of Hot Electrons in AlGaN/GaN Transistors. *Physica Status Solidi (A) Applications and Materials Science*, **2018**, 215, 1701035	1.6	4
63	A method to measure the distance among scatters and the scatters' diameter in artificial composite materials. *Ultrasonics*, **2016**, 67, 70-75	3.5	4
62	Quantum coupling effects on charging dynamics of nanocrystalline memory devices. *Microelectronics Reliability*, **2014**, 54, 404-409	1.2	4
61	Mismatch of dielectric constants at the interface of nanometer metal-oxide-semiconductor devices with high-K gate dielectric impacts on the inversion charge density **2011**, 76, 657-666		4
60	Energy distribution of channel electrons and its impacts on the gate leakage current in graphene field-effect transistors. *Applied Physics A: Materials Science and Processing*, **2010**, 98, 565-569	2.6	4
59	Investigating the effects of the interface defects on the gate leakage current in MOSFETs. *Applied Surface Science*, **2008**, 254, 6628-6632	6.7	4
58	The effect of transition region on the direct tunneling current and Fowler–Nordheim tunneling current oscillations in ultrathin MOS structures. *Microelectronics Reliability*, **2002**, 42, 175-181	1.2	4
57	Layer-dependent bandgap and electrical engineering of molybdenum disulfide. *Journal of Physics and Chemistry of Solids*, **2020**, 139, 109331	3.9	4

56	Electromagnetic spectrum chipless radio frequency identification: A review. *Digital Communications and Networks*, **2020**, 6, 377-388	5.9	3
55	Quantum size impacts on the threshold voltage in nanocrystalline silicon thin film transistors. *Microelectronics Reliability*, **2013**, 53, 1886-1890	1.2	3
54	First-principles study on defected titanium dioxide with the Zr substitution for improved reliability of the conduction path. *EPJ Applied Physics*, **2015**, 70, 10103	1.1	3
53	Interaction of oxygen vacancy and its impact on transmission coefficient in oxygen-deficient titanium dioxide: Ab initio calculations. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 2735-2744	1.3	3
52	Effects of the size of silicon grain on the gate-leakage current in nanocrystalline silicon thin-film transistors. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2010**, 28, 460-465	1.3	3
51	A miniaturized dual-frequency Wilkinson power divider using planar artificial transmission lines **2010**,		3
50	Numerical analysis for the effects of SiO2/Si interface roughness on quantum oscillations in ultrathin MOSFETs. *Solid-State Electronics*, **2001**, 45, 773-776	1.7	3
49	Stress-induced high-field gate leakage current in ultra-thin gate oxide. *Solid-State Electronics*, **2000**, 44, 977-980	1.7	3
48	Physical origins of the ideality factor of the current equation in Schottky junctions **2020**, 94, 1		3
47	Structure properties and electrical mechanisms of Si(001)/SiO2 interface with varying Si layer thickness in nano-scale transistor. *Current Applied Physics*, **2018**, 18, 1020-1025	2.6	3
46	Current-voltage Characteristics of Graphene Nanoribbon Schottky Diodes. *IETE Journal of Research*, **2012**, 58, 65	0.9	2
45	Low frequency current noise in 2.5 nm MOSFET and fractal dimension of soft breakdown. *Solid-State Electronics*, **2003**, 47, 1451-1456	1.7	2
44	Numerical analysis for the effects of interface roughness on the attenuation amplitudes of Fowler–Nordheim tunneling current oscillations in ultrathin MOSFETs. *Solid-State Electronics*, **2001**, 45, 1081-1084	1.7	2
43	Novel spoof surface plasmon polaritons on a planar metallic strip with periodic semi-elliptical grooves at microwave frequency. *Journal of Electromagnetic Waves and Applications*, **2019**, 33, 125-137	1.3	2
42	Physical Model of the Effects of Drift Velocity on Current Transport in PN Junctions under the Forward Electric Field. *Silicon*, **2020**, 12, 1539-1545	2.4	2
41	Metal-substitution strategy to control the conductive path in titanium dioxide: ab initio calculations. *European Physical Journal B*, **2018**, 91, 1	1.2	2
40	A DFT+U study about agglomeration of Au atoms on reduced surface of rutile TiO2 (110). *Materials Chemistry and Physics*, **2021**, 271, 124944	4.4	2
39	A Precise Design for Testing High-Speed Embedded Memory using a BIST Circuit. *IETE Journal of Research*, **2017**, 63, 473-481	0.9	1

38	Formation mechanism of conduction path in titanium dioxide with Ti-interstitials-doped: Car-Parrinello molecular dynamics **2017**,		1
37	Electrochemical Modeling of the Effects of F Ions in the AlGaN Layer on the Two-Dimensional Electron Density in AlGaN/GaN HEMTs. *ECS Journal of Solid State Science and Technology*, **2019**, 8, P472-P479	2	1
36	Effects of Energy Relaxation via Quantum Coupling Among Three-Dimensional Motion on the Tunneling Current of Graphene Field-Effect Transistors. *Nanoscale Research Letters*, **2015**, 10, 1039	5	1
35	Hot-Carriers' Effect on the Performance of Organic Schottky Diodes. *IEEE Access*, **2020**, 8, 65970-65982	3.5	1
34	A Low Power Area Efficient Full Custom 3-Read 3-Write General Purpose Register in 65nm Technology **2013**,		1
33	Investigation of visible-light absorption in Cu2O/TiO2 heterojunctions with an interstitial at the interface. *Physica Status Solidi (B): Basic Research*, **2017**, 254, 1600420	1.3	1
32	Energy relaxation of electrons impacts on channel quantization in nano-MOSFETs. *Applied Physics A: Materials Science and Processing*, **2014**, 117, 1835-1840	2.6	1
31	First-principle study on the relaxation of defected titanium dioxide under electric fields and its impacts on capacitor-voltage curves. *European Physical Journal B*, **2014**, 87, 1	1.2	1
30	Miniaturized dual-band bandstop filter using defected microstrip structure and defected ground structure **2012**,		1
29	A compact dual-frequency wilkinson power divider with open-ended stubs **2010**,		1
28	Effects of Dielectric Constant Mismatch on Capacitance-voltage Curve. *IETE Journal of Research*, **2009**, 55, 218	0.9	1
27	An analytical approach to the tunnelling current of MOSFETs considering the barrier height reduction caused by the channel electron velocity due to the effective electron mass difference between silicon and oxide. *Physica Status Solidi (A) Applications and Materials Science*, **2007**, 204, 3193-3200	1.6	1
26	Measurements of the widths of transition regions at Si-SiO2 interfaces in metal-oxide-semiconductor structures from quantum oscillations in Fowler-Nordheim tunneling current. *Solid State Communications*, **2001**, 119, 67-71	1.6	1
25	Physical origin of kink in GaN HEMTs. *Results in Physics*, **2021**, 30, 104894	3.7	1
24	The Dopant Local Effect on the Stability of an Oxygen Vacancy and the Reliability of a Conductive Filament in Rutile Titanium Dioxide. *Physica Status Solidi (B): Basic Research*, **2020**, 257, 1900455	1.3	1
23	The phononic crystal interface layer determines slow-wave and pulse broadening effects. *Turkish Journal of Electrical Engineering and Computer Sciences*, **2016**, 24, 3759-3768	0.9	1
22	The impact of the dopants on the formation of conductive path in titanium dioxide: ab initio calculations. *European Physical Journal B*, **2016**, 89, 1	1.2	1
21	Electrical Double-Layer Modeling of Different Al-Content on the Performance of AlGaN/GaN HEMTs. *ECS Journal of Solid State Science and Technology*, **2018**, 7, P496-P500	2	1

20	First-Principles investigation on the behavior of Pt single and triple atoms supported on monolayer CuO (1 1 0) in CO oxidation. *Applied Surface Science*, **2021**, 564, 150435	6.7	1
19	Using model temporal features and hierarchical structure for similar activity recognition. *Journal of Ambient Intelligence and Humanized Computing*, **2020**, 1	3.7	0
18	Nature of the Interstitials in Titanium Dioxide and Their Impact on Transmission Coefficient:Ab InitioCalculations. *Journal of Nanomaterials*, **2015**, 2015, 1-9	3.2	0
17	Novel crest-trough shaped spoof surface plasmon polaritons for low pass filtering applications. *Microwave and Optical Technology Letters*, **2020**, 62, 1533-1541	1.2	0
16	Physical origin of the temperature-dependent open-circuit voltage in solar cells. *Applied Physics A: Materials Science and Processing*, **2020**, 126, 1	2.6	0
15	Modeling of light coupling effect using tunneling theory based on particle properties of light. *Optical and Quantum Electronics*, **2017**, 49, 1	2.4	
14	First-principle study on the effects of electric field and anisotropic oxygen vacancy on dielectric properties of rutile titanium dioxide. *EPJ Applied Physics*, **2014**, 68, 10104	1.1	
13	Transmission resonant frequency and its amplitude prediction for ebg structure based on phase coherence. *Microwave and Optical Technology Letters*, **2012**, 54, 409-412	1.2	
12	Adsorption effect on the formation of conductive path in defective TiO2: ab initio calculations. *EPJ Applied Physics*, **2017**, 80, 10104	1.1	
11	THE KINK EFFECTS IN NANO-GaAs DEVICES DUE TO MULTI-VALLEY ELECTRON TRANSPORT. *International Journal of Modern Physics B*, **2013**, 27, 1350172	1.1	
10	Analysis of Resonant Frequency for Electromagnetic Bandgap Structure Based on Phase Coherence. *IETE Journal of Research*, **2012**, 58, 459	0.9	
9	An improved method for determining the critical energy for interface trap generation of n-MOSFETs under Vg=Vd/2 stress mode. *Solid-State Electronics*, **2001**, 45, 385-389	1.7	
8	Quantum coupling and hot-carriers impacts on excitons and optical spectrum of GaN devices. *Physica E: Low-Dimensional Systems and Nanostructures*, **2022**, 139, 115156	3	
7	Modeling source–drain voltage-dependent energy needed for emission or absorption of a photon in GaN devices. *Applied Physics A: Materials Science and Processing*, **2022**, 128, 1	2.6	
6	Conductive Path Along Aggregated O□ Bonds and Its Disruption as Oxygen Vacancy: Ab Initio Calculations. *Journal of Computational and Theoretical Nanoscience*, **2017**, 14, 4377-4383	0.3	
5	A New Method of Discriminating ECG Signals Based on Chaotic Dynamic Parameters. *Lecture Notes in Electrical Engineering*, **2011**, 299-306	0.2	
4	Field emission from Dirac and Weyl semimetals. *Applied Physics A: Materials Science and Processing*, **2016**, 122, 1	2.6	
3	Quantum scattering and its impact on the source–drain current with defect generation in the channel of nanoscale transistors. *Indian Journal of Physics*, **2020**, 94, 583-592	1.4	

2	Observation of Ti-Ti Bonding in Ti/Cu/Pt-Supported Rutile Tio2(110) Surface: AB Initio Calculations. *Ceramic Transactions*, **2018**, 151-164	0.1
1	Applying quantum tunnelling concept in the study of the coupling in acoustic waveguides. *Results in Physics*, **2022**, 105528	3.7