Ling-Feng Mao

List of Publications by Year in Descending Order

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	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	
108	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	
107	Applying quantum tunnelling concept in the study of the coupling in acoustic waveguides. *Results in Physics*, **2022**, 105528	3.7	
106	Physical origin of kink in GaN HEMTs. *Results in Physics*, **2021**, 30, 104894	3.7	1
105	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
104	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
103	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
102	Using models' temporal features and hierarchical structure for similar activity recognition. *Journal of Ambient Intelligence and Humanized Computing*, **2020**, 1	3.7	0
101	Hot-Carriers' Effect on the Performance of Organic Schottky Diodes. *IEEE Access*, **2020**, 8, 65970-65982	3.5	1
100	Electromagnetic spectrum chipless radio frequency identification: A review. *Digital Communications and Networks*, **2020**, 6, 377-388	5.9	3
99	Layer-dependent bandgap and electrical engineering of molybdenum disulfide. *Journal of Physics and Chemistry of Solids*, **2020**, 139, 109331	3.9	4
98	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
97	Physical origins of the ideality factor of the current equation in Schottky junctions **2020**, 94, 1		3
96	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
95	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
94	Physical unclonable function: architectures, applications and challenges for dependable security. *IET Circuits, Devices and Systems*, **2020**, 14, 407-424	1.1	11
93	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

92	Quantum scattering and its impact on the source□rain current with defect generation in the channel of nanoscale transistors. *Indian Journal of Physics*, **2020**, 94, 583-592	1.4	
91	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
90	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
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	Quantum coupling and electrothermal effects on electron transport in high-electron mobility transistors **2019**, 93, 1		6
87	Thermionic emission current in graphene-based electronic devices. *Applied Physics A: Materials Science and Processing*, **2019**, 125, 1	2.6	7
86	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
85	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
84	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
83	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
82	Observation of Ti-Ti Bonding in Ti/Cu/Pt-Supported Rutile Tio2(110) Surface: AB Initio Calculations. *Ceramic Transactions*, **2018**, 151-164	0.1	
81	Frequency Selective Surfaces: A Review. *Applied Sciences (Switzerland)*, **2018**, 8, 1689	2.6	68
80	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
79	Metal-substitution strategy to control the conductive path in titanium dioxide: ab initio calculations. *European Physical Journal B*, **2018**, 91, 1	1.2	2
78	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
77	A Precise Design for Testing High-Speed Embedded Memory using a BIST Circuit. *IETE Journal of Research*, **2017**, 63, 473-481	0.9	1
76	Formation mechanism of conduction path in titanium dioxide with Ti-interstitials-doped: Car□arrinello molecular dynamics **2017**,		1
75	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

74	Modeling of light coupling effect using tunneling theory based on particle properties of light. *Optical and Quantum Electronics*, **2017**, 49, 1	2.4	
73	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
72	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
71	Adsorption effect on the formation of conductive path in defective TiO2: ab initio calculations. *EPJ Applied Physics*, **2017**, 80, 10104	1.1	
70	Conductive Path Along Aggregated OD Bonds and Its Disruption as Oxygen Vacancy: Ab Initio Calculations. *Journal of Computational and Theoretical Nanoscience*, **2017**, 14, 4377-4383	0.3	
69	A method to measure the distance among scatters and the scatters' diameter in artificial composite materials. *Ultrasonics*, **2016**, 67, 70-75	3.5	4
68	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
67	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
66	Physical Modeling of Activation Energy in Organic Semiconductor Devices based on Energy and Momentum Conservations. *Scientific Reports*, **2016**, 6, 24777	4.9	23
65	Field emission from Dirac and Weyl semimetals. *Applied Physics A: Materials Science and Processing*, **2016**, 122, 1	2.6	
64	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
63	Graphene-sandwiched silicon structures for greatly enhanced unpolarized light absorption. *Optics Communications*, **2015**, 339, 47-52	2	5
62	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
61	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
60	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
59	A novel combinatorial triangle-type AMC structure for RCS reduction. *Microwave and Optical Technology Letters*, **2015**, 57, 2728-2732	1.2	10
58	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
57	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

56	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
55	Quantum coupling effects on charging dynamics of nanocrystalline memory devices. *Microelectronics Reliability*, **2014**, 54, 404-409	1.2	4
54	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	
53	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
52	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
51	Quantum capacitance of the armchair-edge graphene nanoribbon **2013**, 81, 309-317		6
50	Dot size effects of nanocrystalline germanium on charging dynamics of memory devices. *Nanoscale Research Letters*, **2013**, 8, 21	5	5
49	Interface traps and quantum size effects on the retention time in nanoscale memory devices. *Nanoscale Research Letters*, **2013**, 8, 369	5	5
48	A Low Power Area Efficient Full Custom 3-Read 3-Write General Purpose Register in 65nm Technology **2013**,		1
47	Quantum size impacts on the threshold voltage in nanocrystalline silicon thin film transistors. *Microelectronics Reliability*, **2013**, 53, 1886-1890	1.2	3
46	THE KINK EFFECTS IN NANO-GaAs DEVICES DUE TO MULTI-VALLEY ELECTRON TRANSPORT. *International Journal of Modern Physics B*, **2013**, 27, 1350172	1.1	
45	A NOVEL MINIATURIZED DUAL-BAND BANDSTOP FILTER USING DUAL-PLANE DEFECTED STRUCTURES. *Progress in Electromagnetics Research*, **2013**, 134, 397-417	3.8	12
44	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
43	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	
42	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
41	Current-voltage Characteristics of Graphene Nanoribbon Schottky Diodes. *IETE Journal of Research*, **2012**, 58, 65	0.9	2
40	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
39	Miniaturized dual-band bandstop filter using defected microstrip structure and defected ground structure **2012**,		1

38	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
37	Analysis of Resonant Frequency for Electromagnetic Bandgap Structure Based on Phase Coherence. *IETE Journal of Research*, **2012**, 58, 459	0.9	
36	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
35	A theoretical analysis of field emission from graphene nanoribbons. *Carbon*, **2011**, 49, 2709-2714	10.4	8
34	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
33	A New Method of Discriminating ECG Signals Based on Chaotic Dynamic Parameters. *Lecture Notes in Electrical Engineering*, **2011**, 299-306	0.2	
32	Effects of Channel Electron In-Plane Velocity on the Capacitance-Voltage Curve of MOS Devices. *ETRI Journal*, **2010**, 32, 68-72	1.4	7
31	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
30	Finite-Size Effects on Thermionic Emission in Metal□raphene-Nanoribbon Contacts. *IEEE Electron Device Letters*, **2010**, 31, 491-493	4.4	10
29	A miniaturized dual-frequency Wilkinson power divider using planar artificial transmission lines **2010**,		3
28	A compact dual-frequency wilkinson power divider with open-ended stubs **2010**,		1
27	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
26	The quantum size effects on the surface potential of nanocrystalline silicon thin film transistors. *Thin Solid Films*, **2010**, 518, 3396-3401	2.2	8
25	Effects of Dielectric Constant Mismatch on Capacitance-voltage Curve. *IETE Journal of Research*, **2009**, 55, 218	0.9	1
24	Effects of quantum coupling on the performance of metal-oxide-semiconductor field transistors **2009**, 72, 407-414		5
23	Finite size effects on the gate leakage current in graphene nanoribbon field-effect transistors. *Nanotechnology*, **2009**, 20, 275203	3.4	13
22	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
21	The Gate Leakage Current in Graphene Field-Effect Transistor. *IEEE Electron Device Letters*, **2008**, 29, 1047-1049	4.4	18

20	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
19	Investigating the effects of the interface defects on the gate leakage current in MOSFETs. *Applied Surface Science*, **2008**, 254, 6628-6632	6.7	4
18	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
17	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
16	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
15	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
14	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
13	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
12	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
11	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
10	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
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	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
7	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
6	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
5	Effect of SiO2/Si interface roughness on gate current. *Microelectronics Reliability*, **2001**, 41, 1903-1907	1.2	6
4	Stress-induced high-field gate leakage current in ultra-thin gate oxide. *Solid-State Electronics*, **2000**, 44, 977-980	1.7	3
3	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

2	Direct tunneling relaxation spectroscopy in ultra-thin gate oxide MOS structures. *Solid-State Electronics*, **2000**, 44, 2021-2025	1.7	6
1	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