

Hong-Xia Liu

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121
papers

772
citations

13
h-index

20
g-index

140
ext. papers

1,086
ext. citations

3.1
avg, IF

4.69
L-index

#	Paper	IF	Citations
121	. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 1343-1349	2.9	50
120	Design of High Performance Si/SiGe Heterojunction Tunneling FETs with a T-Shaped Gate. <i>Nanoscale Research Letters</i> , 2017 , 12, 198	5	42
119	Physical properties and electrical characteristics of H ₂ O-based and O ₃ -based HfO ₂ films deposited by ALD. <i>Microelectronics Reliability</i> , 2012 , 52, 1043-1049	1.2	32
118	Tunable graphene-based hybrid plasmonic modulators for subwavelength confinement. <i>Scientific Reports</i> , 2017 , 7, 5190	4.9	29
117	Analog/RF Performance of T-Shape Gate Dual-Source Tunnel Field-Effect Transistor. <i>Nanoscale Research Letters</i> , 2018 , 13, 321	5	28
116	Reduced Miller Capacitance in U-Shaped Channel Tunneling FET by Introducing Heterogeneous Gate Dielectric. <i>IEEE Electron Device Letters</i> , 2017 , 38, 403-406	4.4	23
115	A Multi-level Memristor Based on Al-Doped HfO Thin Film. <i>Nanoscale Research Letters</i> , 2019 , 14, 177	5	22
114	TCAD Simulation of Single-Event-Transient Effects in L-Shaped Channel Tunneling Field-Effect Transistors. <i>IEEE Transactions on Nuclear Science</i> , 2018 , 65, 2250-2259	1.7	21
113	Analog/RF performance of L- and U-shaped channel tunneling field-effect transistors and their application as digital inverters. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 064102	1.4	17
112	Hybrid Tube-Triangle Plasmonic Waveguide for Ultradeep Subwavelength Confinement. <i>Journal of Lightwave Technology</i> , 2017 , 35, 2259-2265	4	16
111	Defect Detection of IC Wafer Based on Spectral Subtraction. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2010 , 23, 141-147	2.6	15
110	Probing the Optical Properties of MoS on SiO/Si and Sapphire Substrates. <i>Nanomaterials</i> , 2019 , 9,	5.4	14
109	Magnetism investigation of GaN monolayer doped with group VIII B transition metals. <i>Journal of Materials Science</i> , 2018 , 53, 15986-15994	4.3	14
108	Silicon diffusion control in atomic-layer-deposited Al ₂ O ₃ /La ₂ O ₃ /Al ₂ O ₃ gate stacks using an Al ₂ O ₃ barrier layer. <i>Nanoscale Research Letters</i> , 2015 , 10, 141	5	13
107	Structural Properties Characterized by the Film Thickness and Annealing Temperature for LaO Films Grown by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , 2017 , 12, 233	5	12
106	Self-Compliance and High Performance Pt/HfO/Ti RRAM Achieved through Annealing. <i>Nanomaterials</i> , 2020 , 10,	5.4	12
105	The influence of process parameters and pulse ratio of precursors on the characteristics of La _{1-x} Al _x O ₃ films deposited by atomic layer deposition. <i>Nanoscale Research Letters</i> , 2015 , 10, 180	5	12

104	Monte Carlo calculation of electron diffusion coefficient in wurtzite indium nitride. <i>Applied Physics Letters</i> , 2012 , 100, 142105	3.4	12
103	Negative differential resistance in single-walled SiC nanotubes. <i>Science Bulletin</i> , 2008 , 53, 3770-3772		12
102	Graphene-Hexagonal Boron Nitride Heterostructure as a Tunable Phonon-Plasmon Coupling System. <i>Crystals</i> , 2017 , 7, 49	2.3	11
101	Modulation speed limits of a graphene-based modulator. <i>Optical and Quantum Electronics</i> , 2018 , 50, 1	2.4	11
100	A 130 GHz Electro-Optic Ring Modulator with Double-Layer Graphene. <i>Crystals</i> , 2017 , 7, 65	2.3	10
99	Theoretical research of diluted magnetic semiconductors: GaN monolayer doped with transition metal atoms. <i>Superlattices and Microstructures</i> , 2018 , 120, 382-388	2.8	10
98	Optical Transport Properties of Graphene Surface Plasmon Polaritons in Mid-Infrared Band. <i>Crystals</i> , 2019 , 9, 354	2.3	10
97	Two ESD Detection Circuits for 3x VDD-Tolerant I/O Buffer in Low-Voltage CMOS Processes With Low Leakage Currents. <i>IEEE Transactions on Device and Materials Reliability</i> , 2013 , 13, 319-321	1.6	9
96	Analog/RF performance of four different Tunneling FETs with the recessed channels. <i>Superlattices and Microstructures</i> , 2016 , 100, 1238-1248	2.8	8
95	Identification of optimal ALD process conditions of Nd ₂ O ₃ on Si by spectroscopic ellipsometry. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 114, 545-550	2.6	8
94	Influence of different oxidants on the band alignment of HfO ₂ films deposited by atomic layer deposition. <i>Chinese Physics B</i> , 2012 , 21, 087702	1.2	8
93	Defect detection of IC wafer based on two-dimension wavelet transform. <i>Microelectronics Journal</i> , 2010 , 41, 171-177	1.8	8
92	Impacts of Annealing Conditions on the Flat Band Voltage of Alternate La ₂ O ₃ /Al ₂ O ₃ Multilayer Stack Structures. <i>Nanoscale Research Letters</i> , 2016 , 11, 394	5	8
91	A New Electro-Optical Switch Modulator Based on the Surface Plasmon Polaritons of Graphene in Mid-Infrared Band. <i>Sensors</i> , 2018 , 19,	3.8	8
90	A high performance Ge/Si _{0.5} Ge _{0.5} /Si heterojunction dual sources tunneling transistor with a U-shaped channel. <i>Superlattices and Microstructures</i> , 2017 , 106, 8-19	2.8	7
89	A Horizontal-Gate Monolayer MoS Transistor Based on Image Force Barrier Reduction. <i>Nanomaterials</i> , 2019 , 9,	5.4	7
88	Multi-Level Switching of Al-Doped HfO ₂ RRAM with a Single Voltage Amplitude Set Pulse. <i>Electronics (Switzerland)</i> , 2021 , 10, 731	2.6	7
87	Design and Investigation of the Junction-Less TFET with Ge/Si _{0.3} Ge _{0.7} /Si Heterojunction and Heterogeneous Gate Dielectric. <i>Electronics (Switzerland)</i> , 2019 , 8, 476	2.6	6

86	Probing the Growth Improvement of Large-Size High Quality Monolayer MoS ₂ by APCVD. <i>Nanomaterials</i> , 2019 , 9,	5.4	6
85	TCAD simulation of a double L-shaped gate tunnel field-effect transistor with a covered source channel. <i>Micro and Nano Letters</i> , 2020 , 15, 272-276	0.9	6
84	The optical properties of GaN (001) surface modified by intrinsic defects from density functional theory calculation. <i>Optik</i> , 2018 , 154, 378-382	2.5	6
83	Impacts of Cu-Doping on the Performance of La-Based RRAM Devices. <i>Nanoscale Research Letters</i> , 2019 , 14, 224	5	6
82	Effects of Annealing Ambient on the Characteristics of LaAlO ₃ Films Grown by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , 2017 , 12, 108	5	6
81	Optical characteristics of H ₂ O-based and O ₃ -based HfO ₂ films deposited by ALD using spectroscopy ellipsometry. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 119, 957-963	2.6	6
80	Influences of different oxidants on the characteristics of HfAlO _x films deposited by atomic layer deposition. <i>Chinese Physics B</i> , 2013 , 22, 027702	1.2	6
79	Influences of rapid thermal annealing on the characteristics of Al ₂ O ₃ La ₂ O ₃ Si and La ₂ O ₃ Al ₂ O ₃ Si films deposited by atomic layer deposition. <i>Journal of Materials Science: Materials in Electronics</i> , 2016 , 27, 8550-8558	2.1	6
78	The Study of Electrical Properties for Multilayer LaO/AlO Dielectric Stacks and LaAlO Dielectric Film Deposited by ALD. <i>Nanoscale Research Letters</i> , 2017 , 12, 230	5	5
77	Design and Investigation of the High Performance Doping-Less TFET with Ge/SiGe/Si Heterojunction. <i>Micromachines</i> , 2019 , 10,	3.3	5
76	A Doping-Less Tunnel Field-Effect Transistor with Si _{0.6} Ge _{0.4} Heterojunction for the Improvement of the On/Off Current Ratio and Analog/RF Performance. <i>Electronics (Switzerland)</i> , 2019 , 8, 574	2.6	5
75	Electrical Properties and Interfacial Issues of HfO ₂ /Ge MIS Capacitors Characterized by the Thickness of LaO Interlayer. <i>Nanomaterials</i> , 2019 , 9,	5.4	5
74	Design and investigation of dopingless dual-gate tunneling transistor based on line tunneling. <i>AIP Advances</i> , 2019 , 9, 045109	1.5	5
73	Electrical Phase Control Based on Graphene Surface Plasmon Polaritons in Mid-infrared. <i>Nanomaterials</i> , 2020 , 10,	5.4	5
72	A novel Ge based overlapping gate dopingless tunnel FET with high performance. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 100902	1.4	5
71	Monte Carlo transport simulation of velocity undershoot in zinc blende and wurtzite InN. <i>Physica Status Solidi (B): Basic Research</i> , 2012 , 249, 1761-1764	1.3	5
70	Performance investigations of novel dual-material gate (DMG) MOSFET with dielectric pockets (DP). <i>Science in China Series D: Earth Sciences</i> , 2009 , 52, 2400-2405		5
69	Frequency dispersion effect and parameters extraction method for novel HfO ₂ as gate dielectric. <i>Science China Information Sciences</i> , 2010 , 53, 878-884	3.4	5

68	Fabrication and Characterization of MoS/h-BN and WS/h-BN Heterostructures. <i>Micromachines</i> , 2020 , 11,	3.3	5
67	An analytical model of low field and high field electron mobility in wurtzite indium nitride. <i>Journal of Materials Science: Materials in Electronics</i> , 2016 , 27, 11353-11357	2.1	5
66	Effects of Rapid Thermal Annealing and Different Oxidants on the Properties of LaAlO Nanolaminate Films Deposited by Atomic Layer Deposition. <i>Nanoscale Research Letters</i> , 2017 , 12, 218	5	4
65	Design and Investigation of a Dual Material Gate Arsenic Alloy Heterostructure Junctionless TFET with a Lightly Doped Source. <i>Applied Sciences (Switzerland)</i> , 2019 , 9, 4104	2.6	4
64	Graphene Electro-Optical Switch Modulator by Adjusting Propagation Length Based on Hybrid Plasmonic Waveguide in Infrared Band. <i>Sensors</i> , 2020 , 20,	3.8	4
63	Electrical performance of InAs/GaAs _{0.1} Sb _{0.9} heterostructure junctionless TFET with dual-material gate and Gaussian-doped source. <i>Semiconductor Science and Technology</i> , 2020 , 35, 095004	1.8	4
62	The Programming Optimization of Capacitorless 1T DRAM Based on the Dual-Gate TFET. <i>Nanoscale Research Letters</i> , 2017 , 12, 524	5	4
61	A Long Propagation Distance Hybrid Triangular Prism Waveguide for Ultradeep Subwavelength Confinement. <i>IEEE Sensors Journal</i> , 2019 , 19, 11159-11166	4	4
60	Improvement of the Anneal-Induced Valence Band Offset Variation by the Hybrid Deposition of HfO_2 on Si. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 1536-1539	2.9	4
59	A Novel Dopingless Fin-Shaped SiGe Channel TFET with Improved Performance. <i>Nanoscale Research Letters</i> , 2020 , 15, 202	5	4
58	Improvement of Electrical Performance in Heterostructure Junctionless TFET Based on Dual Material Gate. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 126	2.6	4
57	Volatile and Nonvolatile Memory Operations Implemented in a Pt/HfO ₂ /Ti Memristor. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 1622-1626	2.9	4
56	Electrical properties and interfacial issues of high-k/Si MIS capacitors characterized by the thickness of Al ₂ O ₃ interlayer. <i>AIP Advances</i> , 2016 , 6, 065224	1.5	4
55	Impact of remote oxygen scavenging on the interfacial characteristics of atomic layer deposited LaAlO ₃ . <i>Materials Science in Semiconductor Processing</i> , 2019 , 90, 50-53	4.3	4
54	Simulation and Performance Analysis of Dielectric Modulated Dual Source Trench Gate TFET Biosensor. <i>Nanoscale Research Letters</i> , 2021 , 16, 34	5	4
53	Electron Momentum and Energy Relaxation Times in Wurtzite GaN, InN and AlN: A Monte Carlo Study. <i>Journal of Electronic Materials</i> , 2018 , 47, 1560-1568	1.9	4
52	Improvements on the Interfacial Properties of High-k/Ge MIS Structures by Inserting a La ₂ O ₃ Passivation Layer. <i>Materials</i> , 2018 , 11,	3.5	4
51	Probing the Field-Effect Transistor with Monolayer MoS Prepared by APCVD. <i>Nanomaterials</i> , 2019 , 9,	5.4	3

50	The Optimization of Spacer Engineering for Capacitor-Less DRAM Based on the Dual-Gate Tunneling Transistor. <i>Nanoscale Research Letters</i> , 2018 , 13, 73	5	3
49	Research on the origin of negative effect in uniform doping GaN-based Gunn diode under THz frequency. <i>Applied Physics A: Materials Science and Processing</i> , 2016 , 122, 1	2.6	3
48	Analog/RF performance of two tunnel FETs with symmetric structures. <i>Superlattices and Microstructures</i> , 2017 , 111, 568-573	2.8	3
47	Molecular dynamics simulation of latent track formation in bilayer graphene. <i>IEICE Electronics Express</i> , 2015 , 12, 20150771-20150771	0.5	3
46	Low-power design and application based on CSD optimization for a fixed coefficient multiplier. <i>Science China Information Sciences</i> , 2011 , 54, 2443-2453	3.4	3
45	Research on the Preparation and Spectral Characteristics of Graphene/TMDs Hetero-structures. <i>Nanoscale Research Letters</i> , 2020 , 15, 219	5	3
44	Sensitivity Analysis of Biosensors Based on a Dielectric-Modulated L-Shaped Gate Field-Effect Transistor. <i>Micromachines</i> , 2020 , 12,	3.3	3
43	Band alignments of La x Al y O films on Si substrates grown by atomic layer deposition with different La/Al atomic ratios. <i>Journal of Materials Science: Materials in Electronics</i> , 2017 , 28, 4702-4705	2.1	2
42	Band alignments of O3-based and H2O-based amorphous LaAlO3 films on silicon by atomic layer deposition. <i>Journal of Materials Science: Materials in Electronics</i> , 2017 , 28, 803-807	2.1	2
41	The Influence of Copper Substrates on Irradiation Effects of Graphene: A Molecular Dynamics Study. <i>Materials</i> , 2019 , 12,	3.5	2
40	Design and investigation of a dual source and U-shaped gate TFET with n buffer and SiGe pocket. <i>AIP Advances</i> , 2020 , 10, 055125	1.5	2
39	Wide-Range Tunable Narrow Band-Stop Filter Based on Bilayer Graphene in the Mid-Infrared Region. <i>IEEE Photonics Journal</i> , 2020 , 12, 1-9	1.8	2
38	The Large-Scale Preparation and Optical Properties of MoS/WS Vertical Hetero-Junction. <i>Molecules</i> , 2020 , 25,	4.8	2
37	Multiscale simulations of swift heavy ion irradiation effect on bilayer graphene. <i>IEICE Electronics Express</i> , 2016 , 13, 20151040-20151040	0.5	2
36	An analytical model of anisotropic low-field electron mobility in wurtzite indium nitride. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 114, 1113-1117	2.6	2
35	Improvement of the high- γ Ge interface thermal stability using an in-situ ozone treatment characterized by conductive atomic force microscopy. <i>Chinese Physics B</i> , 2017 , 26, 087701	1.2	2
34	The influence of La/Al atomic ratio on the dielectric constant and band-gap of stack-gate LaAlO ₃ /SiO ₂ structure. <i>Journal of Materials Science: Materials in Electronics</i> , 2017 , 28, 2004-2008	2.1	2
33	Interaction of NBTI with Hot Carriers in PMOSFETs for Advanced CMOS Technologies 2006 ,		2

32	Comprehensive Performance Quasi-Non-Volatile Memory Compatible with Large-Scale Preparation by Chemical Vapor Deposition. <i>Nanomaterials</i> , 2020 , 10,	5.4	2
31	Effect of the High-Temperature Off-State Stresses on the Degradation of AlGaN/GaN HEMTs. <i>Electronics (Switzerland)</i> , 2019 , 8, 1339	2.6	2
30	Research on the Factors Affecting the Growth of Large-Size Monolayer MoS ₂ by APCVD. <i>Materials</i> , 2018 , 11,	3.5	2
29	Impacts of LaO _x Doping on the Performance of ITO/Al ₂ O ₃ /ITO Transparent RRAM Devices. <i>Electronics (Switzerland)</i> , 2021 , 10, 272	2.6	2
28	Improved resistive switching characteristics of atomic layer deposited Al ₂ O ₃ /La ₂ O ₃ /Al ₂ O ₃ multi-stacked films with Al ⁺ implantation. <i>Journal of Materials Science: Materials in Electronics</i> , 2019 , 30, 12577-12583	2.1	1
27	Filtering Characteristics of Phonon Polaritons Waves Based on Dielectric-h-BN-Dielectric Structure in Mid-Infrared Band. <i>Nanomaterials</i> , 2020 , 10,	5.4	1
26	The Effect of Ion Irradiation Density on the Defect of Graphene: A Molecular Dynamics Study. <i>Crystals</i> , 2020 , 10, 158	2.3	1
25	Anisotropic low-field electron diffusion coefficient and mobility in wurtzite indium nitride. <i>Physica Status Solidi (B): Basic Research</i> , 2014 , 251, 168-171	1.3	1
24	Anisotropic longitudinal electron diffusion coefficient in wurtzite gallium nitride. <i>Applied Physics A: Materials Science and Processing</i> , 2013 , 112, 933-938	2.6	1
23	Impacts of the Oxygen Precursor on the Interfacial Properties of LaAlO ₃ Films Grown by Atomic Layer Deposition on Ge. <i>Materials</i> , 2017 , 10,	3.5	1
22	A new method of thin gate SiO ₂ reliability characterization. <i>Surface and Interface Analysis</i> , 2002 , 34, 437-440	4.4	1
21	Modeling and Simulation of Hafnium Oxide RRAM Based on Oxygen Vacancy Conduction. <i>Crystals</i> , 2021 , 11, 1462	2.3	1
20	Study on Single Event Effect Simulation in T-Shaped Gate Tunneling Field-Effect Transistors. <i>Micromachines</i> , 2021 , 12,	3.3	1
19	Investigation of charge trapping mechanism in MoS ₂ field effect transistor by incorporating Al into host LaO ₃ gate dielectric. <i>Nanotechnology</i> , 2021 , 32,	3.4	1
18	TCAD Simulation of the Doping-Less TFET with Ge/SiGe/Si Hetero-Junction and Hetero-Gate Dielectric for the Enhancement of Device Performance. <i>Coatings</i> , 2020 , 10, 278	2.9	1
17	Synthesis and Spectral Characteristics Investigation of the 2D-2D vdWs Heterostructure Materials. <i>International Journal of Molecular Sciences</i> , 2021 , 22,	6.3	1
16	A subwavelength high modulation depth optical modulator based on bilayer graphene. <i>Optical Materials</i> , 2021 , 117, 111139	3.3	1
15	Total ionizing dose effect of gamma rays on H-gate PDSOI MOS devices at different dose rates. <i>Nuclear Science and Techniques/Hewuli</i> , 2017 , 28, 1	2.1	0

14	Robust and Latch-Up-Immune LVTSCR Device with an Embedded PMOSFET for ESD Protection in a 28-nm CMOS Process. <i>Nanoscale Research Letters</i> , 2020 , 15, 212	5	0
13	Adjusting transmissivity based on graphene-BN-graphene heterostructure as a tunable phonon-plasmon coupling system in mid-infrared band. <i>Journal of Materials Science</i> , 2021 , 56, 3210-3219	4.3	0
12	A waveguide-integrated graphene-based subwavelength electro-optic switch at 1550 nm. <i>Optics Communications</i> , 2021 , 495, 127121	2	0
11	Polarization properties in grating-gated AlN/GaN HEMTs at mid-infrared frequencies.. <i>Optics Express</i> , 2022 , 30, 14748-14758	3.3	0
10	Electrical and Thermal Characteristics of AlGaIn/GaN HEMT Devices with Dual Metal Gate Structure: A Theoretical Investigation. <i>Materials</i> , 2022 , 15, 3818	3.5	0
9	A novel ESD power supply clamp circuit with double pull-down paths. <i>Science China Information Sciences</i> , 2013 , 56, 1-8	3.4	
8	Modeling of enhancement factor of hole mobility for strained silicon under low stress intensity. <i>Microelectronics Reliability</i> , 2011 , 51, 909-913	1.2	
7	Characteristics analysis and optimization design of a new ESD power clamp circuit. <i>Microelectronics Reliability</i> , 2010 , 50, 1087-1093	1.2	
6	Interface optimization of La-based gate dielectric for molybdenum disulfide field-effect transistors. <i>Applied Surface Science</i> , 2022 , 581, 152248	6.7	
5	Simulation of Displacement Damage in Nanoscale MOSFET Caused by Galactic Cosmic Rays. <i>Journal of Computational and Theoretical Nanoscience</i> , 2016 , 13, 5242-5246	0.3	
4	Effects of total dose irradiation on the threshold voltage of H-gate SOI NMOS devices. <i>Nuclear Science and Techniques/Hewuli</i> , 2016 , 27, 1	2.1	
3	Enhanced Electrical Properties of Atomic Layer Deposited LaAlO Thin Films with Stress Relieved Preoxide Pretreatment. <i>Materials</i> , 2018 , 11,	3.5	
2	Construction and electrical performance improvement of MoS ₂ FET with graphene/metal contact. <i>Optical Materials Express</i> , 2021 , 11, 3099	2.6	
1	Investigation of Negative Bias Temperature Instability Effect in Nano PDSOI PMOSFET. <i>Micromachines</i> , 2022 , 13, 808	3.3	