# Wu Lu

List of Publications by Year
in descending order



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|---|---|---|---|
| 74 papers | 1,969 citations | 361296 20 h-index | 254106 43 g-index |
| 76 all docs | 76 docs citations | 76 times ranked | 3067 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Temperature dependent carrier transport in few-layered MoS<sub>2</sub>: from hopping to band transport. Journal Physics D: Applied Physics, 2022, 55, 195109. | 1.3 | 3 |
| 2 | Small signal analysis of ultra-wide bandgap Al0.7Ga0.3N channel MESFETs. Microelectronic Engineering, 2021, 237, 111495. | 1.1 | 2 |
| 3 | Electron transport of perovskite oxide BaSnO3 on (110) DyScO3 substrate with channel-recess for ferroelectric field effect transistors. Applied Physics Letters, 2021, 118, . | 1.5 | 7 |
| 4 | Highâ€Currentâ€Density Enhancementâ€Mode Ultrawideâ€Bandgap AlGaN Channel Metalâ€“Insulatorâ€“Semiconductor Heterojunction Fieldâ€Effect Transistors with a Threshold Voltage of 5â€‰V. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000576. | 1.2 | 5 |
| 5 | Breakdown Voltage Enhancement in ScAlN/GaN High-Electron-Mobility Transistors by High-k Bismuth Zinc Niobate Oxide. IEEE Transactions on Electron Devices, 2021, 68, 3333-3338. | 1.6 | 14 |
| 6 | Temperature-Dependent Low-Frequency Noise Analysis of ZnO Nanowire Field-Effect Transistors. IEEE Transactions on Electron Devices, 2021, 68, 3532-3536. | 1.6 | 5 |
| 7 | Design and development of 1.5ÂkV vertical GaN pn diodes on HVPE substrate. Journal of Materials Research, 2021, 36, 4919-4926. | 1.2 | 7 |
| 8 | Thermal Management of High-Power Switching Transistors Using Thick CVD-Grown Graphene Nanomaterial. IEEE Transactions on Power Electronics, 2020, 35, 578-590. | 5.4 | 9 |
| 9 | All MOCVD grown Al0.7Ga0.3N/Al0.5Ga0.5N HFET: An approach to make ohmic contacts to Al-rich AlGaN channel transistors. Solid-State Electronics, 2020, 164, 107696. | 0.8 | 17 |
| 10 | Large-scale generation of functional mRNA-encapsulating exosomes via cellular nanoporation. Nature Biomedical Engineering, 2020, 4, 69-83. | 11.6 | 415 |
| 11 | Linearity Improvement With AlGaN Polarization- Graded Field Effect Transistors With Low Pressure Chemical Vapor Deposition Grown SiN<sub>x</sub> Passivation. IEEE Electron Device Letters, 2020, 41, 19-22. | 2.2 | 36 |
| 12 | Nanoscale etching of perovskite oxides for field effect transistor applications. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, . | 0.6 | 8 |
| 13 | Low frequency electrochemical noise in AlGaN/GaN field effect transistor biosensors. Applied Physics Letters, 2020, 117, . | 1.5 | 3 |
| 14 | High-Current Perovskite Oxide BaTiO<sub>3</sub>/BaSnO<sub>3</sub> Heterostructure Field Effect Transistors. IEEE Electron Device Letters, 2020, 41, 621-624. | 2.2 | 8 |
| 15 | Al<sub>0.65</sub>Ga<sub>0.35</sub>N/Al<sub>0.4</sub>Ga<sub>0.6</sub>N Micro-Channel Heterojunction Field Effect Transistors With Current Density Over 900 mA/mm. IEEE Electron Device Letters, 2020, 41, 677-680. | 2.2 | 19 |
| 16 | Improved DC-RF dispersion with epitaxial passivation for high linearity graded AlGaN channel field effect transistors. Applied Physics Express, 2020, 13, 036502. | 1.1 | 10 |
| 17 | Dynamic Switching of SiC Power MOSFETs Based on Analytical Subcircuit Model. IEEE Transactions on Power Electronics, 2020, 35, 9680-9689. | 5.4 | 18 |
| 18 | BaTiO3/Al0.58Ga0.42N lateral heterojunction diodes with breakdown field exceeding 8 MV/cm. Applied Physics Letters, 2020, 116, . | 1.5 | 17 |

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|---|---|---|---|
| 19 | $eta$ -Ga<sub>2</sub>O<sub>3</sub> Delta-Doped Field-Effect Transistors With Current Gain Cutoff Frequency of 27 GHz. IEEE Electron Device Letters, 2019, 40, 1052-1055. | 2.2 | 119 |
| 20 | Design of compositionally graded contact layers for MOCVD grown high Al-content AlGaN transistors. Applied Physics Letters, 2019, 115, . | 1.5 | 17 |
| 21 | Velocity saturation in La-doped BaSnO3 thin films. Applied Physics Letters, 2019, 115, . | 1.5 | 9 |
| 22 | Al<sub>0.75</sub>Ga<sub>0.25</sub>N/Al<sub>0.6</sub>Ga<sub>0.4</sub>N heterojunction field effect transistor with f<sub>T</sub> of 40 GHz. Applied Physics Express, 2019, 12, 066502. | 1.1 | 24 |
| 23 | Dual Silicon Oxycarbide Accelerated Growth of Wellâ€Ordered Graphitic Networks for Electronic and Thermal Applications. Advanced Materials Technologies, 2019, 4, 1800324. | 3.0 | 6 |
| 24 | SiOCâ€Accelerated Graphene Grown on SiO<sub>2</sub>/Si with Tunable Electronic Properties. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900017. | 1.2 | 2 |
| 25 | Plasmonic Metasurfaces with High UVâ€“Vis Transmittance for Photopatterning of Designer Molecular Orientations. Advanced Optical Materials, 2019, 7, 1900117. | 3.6 | 17 |
| 26 | Polarization Engineering of AlGaN/GaN HEMT With Graded InGaN Sub-Channel for High-Linearity X-Band Applications. IEEE Electron Device Letters, 2019, 40, 522-525. | 2.2 | 29 |
| 27 | Silicon Oxycarbide Accelerated Chemical Vapor Deposition of Graphitic Networks on Ceramic Substrates for Thermal Management Enhancement. ACS Applied Nano Materials, 2019, 2, 452-458. | 2.4 | 12 |
| 28 | Thiolated-graphene-based supercapacitors with high energy density and stable cycling performance. Carbon, 2018, 134, 326-333. | 5.4 | 38 |
| 29 | High Al-Content AlGaN Transistor With 0.5 A/mm Current Density and Lateral Breakdown Field Exceeding 3.6 MV/cm. IEEE Electron Device Letters, 2018, 39, 256-259. | 2.2 | 46 |
| 30 | All MOCVD grown 250 nm gate length Al<sub>0.70</sub>Ga<sub>0.30</sub>N MESFETs. , 2018, , . | | 1 |
| 31 | X-Band Power and Linearity Performance of Compositionally Graded AlGaN Channel Transistors. IEEE Electron Device Letters, 2018, 39, 1884-1887. | 2.2 | 26 |
| 32 | Ultra-wide band gap materials for high frequency applications. , 2018, , . | | 3 |
| 33 | Rapidly annealed nanoporous graphene materials for electrochemical energy storage. Journal of Materials Chemistry A, 2017, 5, 23720-23726. | 5.2 | 13 |
| 34 | Graphene supercapacitor with both high power and energy density. Nanotechnology, 2017, 28, 445401. | 1.3 | 137 |
| 35 | Topical tissue nano-transfection mediates non-viral stroma reprogramming and rescue. Nature Nanotechnology, 2017, 12, 974-979. | 15.6 | 122 |
| 36 | Nanofabrication: Controllable Large-Scale Transfection of Primary Mammalian Cardiomyocytes on a Nanochannel Array Platform (Small 43/2016). Small, 2016, 12, 5914-5914. | 5.2 | 1 |

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|---|---|---|---|
| 37 | Grapheneâ€Based Electrochemical Microsupercapacitors for Miniaturized Energy Storage Applications. Nanoscience and Technology, 2016, , 271-291. | 1.5 | 3 |
| 38 | Micro-/nanoscale electroporation. Lab on A Chip, 2016, 16, 4047-4062. | 3.1 | 90 |
| 39 | On-Chip Clonal Analysis of Glioma-Stem-Cell Motility and Therapy Resistance. Nano Letters, 2016, 16, 5326-5332. | 4.5 | 44 |
| 40 | 3D nanochannel electroporation for high-throughput cell transfection with high uniformity and dosage control. Nanoscale, 2016, 8, 243-252. | 2.8 | 88 |
| 41 | Nanoporous graphene materials by low-temperature vacuum-assisted thermal process for electrochemical energy storage. Journal of Power Sources, 2015, 284, 146-153. | 4.0 | 42 |
| 42 | Analysis of surface states in ZnO nanowire field effect transistors. Applied Surface Science, 2014, 301, 2-8. | 3.1 | 5 |
| 43 | Temperature Dependence of Electron Transport in ZnO Nanowire Field Effect Transistors. IEEE Transactions on Electron Devices, 2014, 61, 625-630. | 1.6 | 3 |
| 44 | Atomic Carbide Bonding Leading to Superior Graphene Networks. Advanced Materials, 2013, 25, 4668-4672. | 11.1 | 27 |
| 45 | AlGaN/GaN heterostructure field transistor for label-free detection of DNA hybridization. Science Bulletin, 2013, 58, 2601-2605. | 1.7 | 6 |
| 46 | Polarization-Engineered Ga-Face GaN-Based Heterostructures for Normally-Off Heterostructure Field-Effect Transistors. Journal of Electronic Materials, 2013, 42, 10-14. | 1.0 | 4 |
| 47 | Large area single crystal (0001) oriented MoS2. Applied Physics Letters, 2013, 102, . | 1.5 | 200 |
| 48 | Toward single molecule detection in physiological buffer using planar FET biosensors. , 2013, , . | | 0 |
| 49 | Hydrogenated IGZO Thin-Film Transistors Using High-Pressure Hydrogen Annealing. IEEE Transactions on Electron Devices, 2013, 60, 2537-2541. | 1.6 | 60 |
| 50 | ImmunoFET feasibility in physiological salt environments. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 2474-2488. | 1.6 | 17 |
| 51 | Surface Functionalization of Hydrogen-Terminated Si for Biosensing Applications. Journal of Electronic Materials, 2012, 41, 830-836. | 1.0 | 3 |
| 52 | High sensitivity AlGaN/GaN field effect transistor protein sensors operated in the subthreshold regime by a control gate electrode. Applied Physics Letters, 2011, 99, . | 1.5 | 19 |
| 53 | Improved Sensitivity of AlGaN/GaN Field Effect Transistor Biosensors by Optimized Surface Functionalization. IEEE Sensors Journal, 2011, 11, 1726-1735. | 2.4 | 23 |
| 54 | AlGaN/GaN FET for DNA hybridization detection. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 1623-1625. | 0.8 | 12 |

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|---|---|---|---|
| 55 | Edge-field effects on gate capacitance, threshold voltage and low-field mobility in AlGaN/GaN HEMTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2448-2450. | 0.8 | 0 |
| 56 | AlGaN/GaN HFET biosensors working at subthreshold regime for sensitivity enhancement. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2489-2491. | 0.8 | 7 |
| 57 | Analysis of trapping effects in AlGaN/GaN HEMTs based on near zero bias output conductance. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2004-2006. | 0.8 | 1 |
| 58 | Hydrogen sensing performance dependence on catalytic metal thickness of Pt/AlGaN/GaN Schottky diodes. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1838-1840. | 0.8 | 1 |
| 59 | Operation of Pt/AlGaN/GaN-Heterojunction Field-Effect-Transistor Hydrogen Sensors With Low Detection Limit and High Sensitivity. IEEE Electron Device Letters, 2008, 29, 1193-1195. | 2.2 | 30 |
| 60 | Electrical Detection of Biological Conjugation by AlGaN/GaN Heterostructure Field Effect Transistors. , 2008, , . | | 0 |
| 61 | Thermodynamic and Kinetic Analysis of Hydrogen Sensing in Pt/AlGaN/GaN Schottky Diodes at High Temperatures. IEEE Sensors Journal, 2008, 8, 903-909. | 2.4 | 27 |
| 62 | Extraction of effective trap density and gate length in AlGaN/GaN HEMTs based on pulsed I-V characteristics. , 2007, , . | | 0 |
| 63 | AlGaN/GaN Heterostructure Field Effect Transistors for High Temperature Hydrogen Sensing with Enhanced Sensitivity. , 2007, , . | | 0 |
| 64 | Compositional Study of Copper-Germanium Ohmic Contact to n-GaN. Journal of Electronic Materials, 2007, 36, 420-425. | 1.0 | 4 |
| 65 | Passivation of Surface and Interface States in AlGaN/GaN HEMT Structures by Annealing. Journal of Electronic Materials, 2007, 36, 1149-1155. | 1.0 | 12 |
| 66 | Temperature-dependent microwave noise performances of AlGaN/GaN HEMTs with post-gate annealing. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2659-2662. | 0.8 | 3 |
| 67 | FABRICATION OF SELF-ALIGNED T-GATE AlGaN/GaN HIGH ELECTRON MOBILITY TRANSISTORS. International Journal of High Speed Electronics and Systems, 2004, 14, 805-809. | 0.3 | 0 |
| 68 | Quasi-enhancement mode AlGaN/GaN HEMTs on sapphire substrate. Solid-State Electronics, 2003, 47, 2081-2084. | 0.8 | 5 |
| 69 | A combined model for Si-based resonant interband tunneling diodes grown on SOI. , 0, , . | | 0 |
| 70 | Trap behavior in AlGaN/GaN HEMTs by post-gateannealing. , 0, , . | | 0 |
| 71 | Fabrication of self-aligned T-gate AlGaN/GaN high electron mobility transistors. , 0, , . | | 0 |
| 72 | Growth, fabrication and characterization of In/sub 0.52/Al/sub 0.48/As/In/sub 0.53/Ga/sub 0.47/As/InAs/sub 0.3/P/sub 0.7/ composite channel HEMTs. , 0, , . | | 0 |

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|---|---|---|---|
| 73 | Characterization of Post-Gate Annealing Impact on Traps in AlGaN/GaN Schottky Diodes by Capacitance and Conductance Dispersion. , 0, , . | | 0 |
| 74 | GaN Power pâ€“n Diodes on Hydride Vapor Epitaxy GaN Substrates with Nearâ€Unity Ideality Factor and <0.5â€‰mÎ©â€‰cm 2 Specific Onâ€Resistance. Physica Status Solidi - Rapid Research Letters, 0, , 2100599. | 1.2 | 2 |