

Erich Gornik

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119
papers

1,539
citations

23
h-index

33
g-index

124
ext. papers

1,704
ext. citations

2.9
avg, IF

3.73
L-index

| # | Paper | IF | Citations |
|-----|---|-----|-----------|
| 119 | Analysis of degradation mechanisms in lattice-matched InAlN/GaN high-electron-mobility transistors. <i>Journal of Applied Physics</i> , 2009 , 106, 124503 | 2.5 | 84 |
| 118 | Thermal Excitation of Two-Dimensional Plasma Oscillations. <i>Physical Review Letters</i> , 1982 , 49, 1667-1671 | 7.4 | 53 |
| 117 | Continuous-wave operation of distributed feedback AlAs/GaAs superlattice quantum-cascade lasers. <i>Applied Physics Letters</i> , 2000 , 77, 3328-3330 | 3.4 | 50 |
| 116 | Magnetic-field-enhanced quantum-cascade emission. <i>Applied Physics Letters</i> , 2000 , 76, 19-21 | 3.4 | 49 |
| 115 | Antireflection coating for miniband transport and Fabry-Pérot resonances in GaAs/AlGaAs superlattices. <i>Applied Physics Letters</i> , 2001 , 79, 1486-1488 | 3.4 | 48 |
| 114 | Surface-emitting distributed feedback quantum-cascade lasers. <i>Applied Physics Letters</i> , 2000 , 77, 2086-2088 | 3.4 | 46 |
| 113 | Room-temperature emission of GaAs/AlGaAs superlattice quantum-cascade lasers at 12.6 μm . <i>Applied Physics Letters</i> , 2002 , 80, 1864-1866 | 3.4 | 44 |
| 112 | Analysis of TM-polarized DFB laser structures with metal surface gratings. <i>IEEE Journal of Quantum Electronics</i> , 2000 , 36, 780-786 | 2 | 44 |
| 111 | Quantitative internal thermal energy mapping of semiconductor devices under short current stress using backside laser interferometry. <i>IEEE Transactions on Electron Devices</i> , 2002 , 49, 2070-2079 | 2.9 | 43 |
| 110 | GaAs/AlGaAs distributed feedback quantum cascade lasers. <i>Applied Physics Letters</i> , 2000 , 76, 253-255 | 3.4 | 43 |
| 109 | Terahertz quantum cascade structures: Intra- versus interwell transition. <i>Applied Physics Letters</i> , 2000 , 77, 1928-1930 | 3.4 | 38 |
| 108 | Interferometric study of thermal dynamics in GaAs-based quantum-cascade lasers. <i>Applied Physics Letters</i> , 2003 , 82, 1664-1666 | 3.4 | 36 |
| 107 | Towards functional group-specific detection in high-performance liquid chromatography using mid-infrared quantum cascade lasers. <i>Journal of Chromatography A</i> , 2001 , 934, 123-8 | 4.5 | 34 |
| 106 | Long-wavelength ($\lambda=10\ \mu\text{m}$) quadrupolar-shaped GaAs-AlGaAs microlasers. <i>IEEE Journal of Quantum Electronics</i> , 2000 , 36, 458-464 | 2 | 34 |
| 105 | Scanning heterodyne interferometer setup for the time-resolved thermal and free-carrier mapping in semiconductor devices. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2005 , 54, 2438-2445 | 5.2 | 32 |
| 104 | Electrostatic discharge effects in AlGaN/GaN high-electron-mobility transistors. <i>Applied Physics Letters</i> , 2003 , 83, 4655-4657 | 3.4 | 31 |
| 103 | Mechanism of bias-dependent contrast in scanning-capacitance-microscopy images. <i>Applied Physics Letters</i> , 2001 , 79, 3182-3184 | 3.4 | 30 |

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| 102 | In-Phase and Anti-Phase Synchronization in a Laser Frequency Comb. <i>Physical Review Letters</i> , 2020 , 124, 023901 | 7.4 | 29 |
| 101 | Spectroscopy in the gas phase with GaAs/AlGaAs quantum-cascade lasers. <i>Applied Optics</i> , 2000 , 39, 6926-6930 | 3.0 | 28 |
| 100 | Proposal and Performance Analysis of Normally Off $\text{In}^{\text{++}}$ GaN/InAlN/AlN/GaN HEMTs With 1-nm-Thick InAlN Barrier. <i>IEEE Transactions on Electron Devices</i> , 2010 , 57, 2144-2154 | 2.9 | 26 |
| 99 | Quantitative scanning capacitance spectroscopy. <i>Applied Physics Letters</i> , 2003 , 83, 4253-4255 | 3.4 | 25 |
| 98 | Single-shot thermal energy mapping of semiconductor devices with the nanosecond resolution using holographic interferometry. <i>IEEE Electron Device Letters</i> , 2002 , 23, 606-608 | 4.4 | 24 |
| 97 | Self-aligned coupled cavity GaAs/AlGaAs midinfrared quantum-cascade laser. <i>Applied Physics Letters</i> , 2000 , 77, 1077-1079 | 3.4 | 24 |
| 96 | Intersubband transport in quantum wells in strong magnetic fields mediated by single- and two-electron scattering. <i>Physical Review Letters</i> , 2002 , 88, 226803 | 7.4 | 23 |
| 95 | Thermal and free carrier concentration mapping during ESD event in smart Power ESD protection devices using an improved laser interferometric technique. <i>Microelectronics Reliability</i> , 2000 , 40, 1365-1370 | 1.2 | 23 |
| 94 | Optimization of the emission characteristics of light emitting diodes by surface plasmons and surface waveguide modes. <i>Applied Physics Letters</i> , 2000 , 77, 2295-2297 | 3.4 | 23 |
| 93 | Strained InGaAs/AlGaAs/GaAs-quantum cascade lasers. <i>Applied Physics Letters</i> , 2000 , 76, 3361-3363 | 3.4 | 23 |
| 92 | Accurate Temperature Measurements of DMOS Power Transistors up to Thermal Runaway by Small Embedded Sensors. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2012 , 25, 294-302 | 2.6 | 22 |
| 91 | Metal-organic chemical vapor deposition and nanoscale characterization of zirconium oxide thin films. <i>Thin Solid Films</i> , 2002 , 414, 199-204 | 2.2 | 19 |
| 90 | Extraction of spatio-temporal distribution of power dissipation in semiconductor devices using nanosecond interferometric mapping technique. <i>Applied Physics Letters</i> , 2002 , 81, 2881-2883 | 3.4 | 19 |
| 89 | Quantum cascade lasers with monolithic air-semiconductor Bragg reflectors. <i>Applied Physics Letters</i> , 2000 , 77, 1241-1243 | 3.4 | 18 |
| 88 | Transient behavior of SCRS during ESD pulses 2008 , | | 17 |
| 87 | Electrical overstress in AlGaIn/GaN HEMTs: study of degradation processes. <i>Solid-State Electronics</i> , 2004 , 48, 271-276 | 1.7 | 17 |
| 86 | Scanning capacitance microscopy with ZrO ₂ as dielectric material. <i>Journal of Applied Physics</i> , 2002 , 92, 2144-2148 | 2.5 | 17 |
| 85 | Wannier-Stark states in finite superlattices. <i>Physical Review Letters</i> , 2002 , 89, 136803 | 7.4 | 17 |

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| 84 | Two-dimensional plasmons and far infrared emission. <i>Surface Science</i> , 1984 , 142, 412-422 | 1.8 | 17 |
| 83 | Small embedded sensors for accurate temperature measurements in DMOS power transistors 2010 | | 15 |
| 82 | Excitation of terahertz surface plasmon polaritons on etched groove gratings. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2009 , 26, 554 | 1.7 | 15 |
| 81 | Thermally-driven motion of current filaments in ESD protection devices. <i>Solid-State Electronics</i> , 2005 , 49, 421-429 | 1.7 | 14 |
| 80 | Moving current filaments in integrated DMOS transistors under short-duration current stress. <i>IEEE Transactions on Electron Devices</i> , 2004 , 51, 1331-1339 | 2.9 | 12 |
| 79 | A capacitance ultrasonic transducer for high-temperature applications. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2004 , 51, 896-907 | 3.2 | 12 |
| 78 | Scanning capacitance microscopy investigations of focused ion beam damage in silicon. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2003 , 19, 178-182 | 3 | 12 |
| 77 | GaAs/AlGaAs quantum cascade laser λ source for gas absorption spectroscopy. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000 , 7, 37-39 | 3 | 12 |
| 76 | Dynamics of integrated vertical DMOS transistors under 100-ns TLP stress. <i>IEEE Transactions on Electron Devices</i> , 2005 , 52, 1008-1013 | 2.9 | 11 |
| 75 | Room-temperature operation of electrically pumped quantum-cascade microcylinder lasers. <i>Applied Physics Letters</i> , 2002 , 80, 4094-4096 | 3.4 | 11 |
| 74 | Study of triggering inhomogeneities in gg-nMOS ESD protection devices via thermal mapping using backside laser interferometry. <i>Microelectronics Reliability</i> , 2000 , 40, 1359-1364 | 1.2 | 11 |
| 73 | A study of backside laser-probe signals in MOSFETs. <i>Microelectronic Engineering</i> , 1996 , 31, 87-94 | 2.5 | 11 |
| 72 | Thermal imaging of smart power DMOS transistors in the thermally unstable regime using a compact transient interferometric mapping system. <i>Microelectronics Reliability</i> , 2009 , 49, 1346-1351 | 1.2 | 10 |
| 71 | Sequential resonant tunnelling through Landau levels in GaAs/AlAs superlattices. <i>Semiconductor Science and Technology</i> , 1997 , 12, 1422-1424 | 1.8 | 10 |
| 70 | Narrow electron injector for ballistic electron spectroscopy. <i>Applied Physics Letters</i> , 2001 , 78, 3639-3641 | 3.4 | 10 |
| 69 | A new numerical and experimental analysis tool for ESD devices by means of the transient interferometric technique. <i>IEEE Electron Device Letters</i> , 2005 , 26, 916-918 | 4.4 | 9 |
| 68 | Thermal distribution during destructive pulses in ESD protection devices using a single-shot two-dimensional interferometric method. <i>IEEE Transactions on Device and Materials Reliability</i> , 2003 , 3, 197-201 | 1.6 | 9 |
| 67 | Terahertz waveguide emitter with subwavelength confinement. <i>Journal of Applied Physics</i> , 2010 , 107, 013110 | 2.5 | 8 |

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| 66 | Improvement of the electrical safe operating area of a DMOS transistor during ESD events 2009 , | | 8 |
| 65 | Focussed ion beam induced damage in silicon studied by scanning capacitance microscopy. <i>Semiconductor Science and Technology</i> , 2003 , 18, 195-198 | 1.8 | 8 |
| 64 | Landau-level population inversion in crossed electric and quantizing magnetic fields. <i>Physical Review B</i> , 1986 , 34, 7459-7462 | 3.3 | 8 |
| 63 | Experimental and Theoretical Analyses of the Electrical SOA of Rugged p-Channel LDMOS. <i>IEEE Electron Device Letters</i> , 2010 , 31, 1440-1442 | 4.4 | 7 |
| 62 | Avalanche Breakdown Delay in ESD Protection Diodes. <i>IEEE Transactions on Electron Devices</i> , 2010 , 57, 2470-2476 | 2.9 | 7 |
| 61 | Tuning of transmission function and tunneling time in finite periodic potentials. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 21, 783-786 | 3 | 7 |
| 60 | Anatomical Evidence of Acupuncture Meridians in the Human Extracellular Matrix: Results from a Macroscopic and Microscopic Interdisciplinary Multicentre Study on Human Corpses. <i>Evidence-based Complementary and Alternative Medicine</i> , 2019 , 2019, 6976892 | 2.3 | 6 |
| 59 | Second breakdown behavior in bipolar ESD protection devices during low current long duration stress and its relation to moving current-tubes 2008 , | | 6 |
| 58 | Independent control of InAs quantum dot density and size on AlxGa1-xAs surfaces. <i>Journal of Materials Science: Materials in Electronics</i> , 2008 , 19, 714-719 | 2.1 | 6 |
| 57 | Transient interferometric mapping of smart power SOI ESD protection devices under TLP and vf-TLP stress. <i>Microelectronics Reliability</i> , 2004 , 44, 1687-1692 | 1.2 | 6 |
| 56 | Resonant tunneling mediated by resonant emission of intersubband plasmons. <i>Physical Review Letters</i> , 2001 , 86, 2850-3 | 7.4 | 6 |
| 55 | Filament study of STI type drain extended NMOS device using transient interferometric mapping 2009 , | | 5 |
| 54 | Enhancement of the Electrical Safe Operating Area of Integrated DMOS Transistors With Respect to High-Energy Short Duration Pulses. <i>IEEE Transactions on Electron Devices</i> , 2010 , 57, 3044-3049 | 2.9 | 5 |
| 53 | Fast characterisation of InAs quantum dot structures using AFM. <i>Journal of Crystal Growth</i> , 2004 , 264, 26-30 | 1.6 | 5 |
| 52 | A dual-beam Michelson interferometer for investigation of trigger dynamics in ESD protection devices under very fast TLP stress. <i>Microelectronics Reliability</i> , 2003 , 43, 1557-1561 | 1.2 | 5 |
| 51 | Grating-coupler assisted infrared spectroscopy on anisotropic multilayer systems: A comparative study. <i>Infrared Physics and Technology</i> , 2005 , 46, 291-307 | 2.7 | 5 |
| 50 | Monolithic integration of vertical-cavity laser diodes and resonant photodetectors with hybrid Si3N4-SiO2 top Bragg mirrors. <i>IEEE Photonics Technology Letters</i> , 2000 , 12, 119-121 | 2.2 | 5 |
| 49 | Self-consistent Determination of the Confinement Potential in Various Etched Quantum Wire Structures. <i>Japanese Journal of Applied Physics</i> , 1995 , 34, 4458-4461 | 1.4 | 5 |

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| 48 | Avalanche Breakdown Delay in High-Voltage p-n Junctions Caused by Pre-Pulse Voltage From IEC 61000-4-2 ESD Generators. <i>IEEE Transactions on Device and Materials Reliability</i> , 2009 , 9, 412-418 | 1.6 | 4 |
| 47 | External (transient) latchup phenomenon investigated by optical mapping (TIM) technique 2007 , | | 4 |
| 46 | Analysis of triggering behaviour of high voltage CMOS LDMOS clamps and SCRs during ESD induced latch-up. <i>Microelectronics Reliability</i> , 2006 , 46, 1591-1596 | 1.2 | 4 |
| 45 | Internal behavior of BCD ESD protection devices under TLP and very-fast TLP stress. <i>IEEE Transactions on Device and Materials Reliability</i> , 2004 , 4, 535-541 | 1.6 | 4 |
| 44 | Optics with ballistic electrons: anti-reflection coatings for GaAs/AlGaAs superlattices. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 12, 285-288 | 3 | 4 |
| 43 | High performance single mode GaAs quantum cascade lasers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 13, 840-843 | 3 | 4 |
| 42 | Device Simulation and Backside Laser Interferometry Powerful Tools for ESD Protection Development. <i>Microelectronics Reliability</i> , 2002 , 42, 1267-1274 | 1.2 | 4 |
| 41 | Experimental and simulation analysis of a BCD ESD protection element under the DC and TLP stress conditions. <i>Microelectronics Reliability</i> , 2002 , 42, 1281-1286 | 1.2 | 4 |
| 40 | Effect of pulse risetime on trigger homogeneity in single finger grounded gate nMOSFET electrostatic discharge protection devices. <i>Microelectronics Reliability</i> , 2001 , 41, 1385-1390 | 1.2 | 4 |
| 39 | Landau Emission. <i>Modern Problems in Condensed Matter Sciences</i> , 1991 , 27, 911-996 | | 4 |
| 38 | On the differences between 3D filamentation and failure of N & P type drain extended MOS devices under ESD condition 2010 , | | 3 |
| 37 | Transient interferometric mapping of carrier plasma during external transient latch-up phenomena in latch-up test structures and I/O cells processed in CMOS technology. <i>Microelectronics Reliability</i> , 2009 , 49, 1455-1464 | 1.2 | 3 |
| 36 | Backside interferometric methods for localization of ESD-induced leakage current and metal shorts. <i>Microelectronics Reliability</i> , 2007 , 47, 1539-1544 | 1.2 | 3 |
| 35 | Wannier-Stark level anticrossing in biperiodic superlattices. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 3692-3695 | 1.3 | 3 |
| 34 | Single-shot nanosecond thermal imaging of semiconductor devices using absorption measurements. <i>IEEE Transactions on Device and Materials Reliability</i> , 2003 , 3, 85-88 | 1.6 | 3 |
| 33 | Error analysis in phase extraction in a 2D holographic imaging of semiconductor devices 2004 , | | 3 |
| 32 | Bulk and surface degradation mode in 0.35 μ m technology gg-nMOS ESD protection devices. <i>Microelectronics Reliability</i> , 2000 , 40, 1467-1472 | 1.2 | 3 |
| 31 | Improved performance of GaAs-AlGaAs superlattice quantum cascade lasers beyond $\lambda = 13 \mu$ m. <i>IEEE Photonics Technology Letters</i> , 2000 , 12, 1144-1146 | 2.2 | 3 |

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| 30 | Application of transient interferometric mapping method for ESD and latch-up analysis. <i>Microelectronics Reliability</i> , 2011 , 51, 1592-1596 | 1.2 | 2 |
| 29 | Buffer-Related Degradation Aspects of Single and Double-Heterostructure Quantum Well InAlN/GaN High-Electron-Mobility Transistors. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 054102 | 1.4 | 2 |
| 28 | Single pulse energy capability and failure modes of n- and p-channel LDMOS with thick copper metallization. <i>Microelectronics Reliability</i> , 2010 , 50, 1347-1351 | 1.2 | 2 |
| 27 | Magnetophonon resonance in the confinement of an n-GaAs/AlGaAs-heterojunction, tuned to a quasi-one-dimensional quantum wire. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 12, 446-449 | 3 | 2 |
| 26 | Study of internal behavior in a vertical DMOS transistor under short high current stress by an interferometric mapping method. <i>Microelectronics Reliability</i> , 2003 , 43, 545-548 | 1.2 | 2 |
| 25 | Thermal and free carrier laser interferometric mapping and failure analysis of anti-serial smart power ESD protection structures. <i>Microelectronics Reliability</i> , 2001 , 41, 1501-1506 | 1.2 | 2 |
| 24 | Effect of Elevated Ambient Temperature on Thermal Breakdown Behavior in BCD ESD Protection Devices Subjected to Long Electrical Overstress Pulses. <i>IEEE Transactions on Device and Materials Reliability</i> , 2012 , 12, 562-569 | 1.6 | 1 |
| 23 | Large Rashba effect in GaAsSb/InGaAs RTDs at high temperatures. <i>Journal of the Korean Physical Society</i> , 2012 , 60, 1762-1766 | 0.6 | 1 |
| 22 | Controlled generation of resonant electron-electron scattering induced current in quantum well structures. <i>Applied Physics Letters</i> , 2009 , 95, 172108 | 3.4 | 1 |
| 21 | Hot electron spectroscopy of the GaAs/AlAs/GaAs band structure. <i>Semiconductor Science and Technology</i> , 2004 , 19, S102-S103 | 1.8 | 1 |
| 20 | Hot-electron spectroscopy in parallel magnetic fields. <i>Applied Physics Letters</i> , 2003 , 82, 3922-3924 | 3.4 | 1 |
| 19 | Automated setup for thermal imaging and electrical degradation study of power DMOS devices. <i>Microelectronics Reliability</i> , 2005 , 45, 1688-1693 | 1.2 | 1 |
| 18 | Determination of the 2D-Electron Gas Density in a Quantum Well from C_{II} and C_{IV} Measurements. <i>Physica Status Solidi A</i> , 2001 , 183, 391-397 | | 1 |
| 17 | Intersubband and interminiband GaAs/AlGaAs quantum cascade lasers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000 , 7, 1-7 | 3 | 1 |
| 16 | Magneto-optical Terahertz emission from plasmons in parabolic quantum wells. <i>Semiconductor Science and Technology</i> , 2000 , 15, 315-321 | 1.8 | 1 |
| 15 | Landau level laser. <i>Nature Photonics</i> , 2021 , 15, 875-883 | 33.9 | 1 |
| 14 | Resonant intersubband plasmon induced current in InGaAs quantum wells on GaAs. <i>Applied Physics Letters</i> , 2014 , 104, 122101 | 3.4 | |
| 13 | Characterization of planar photonic crystals using a quantum well infrared photodetector. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 2916-2925 | 1.3 | |

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| 12 | Tuned transition from a quantum well to a quantum wire investigated by magnetophonon resonance. <i>Journal of Applied Physics</i> , 2004 , 95, 2509-2517 | 2.5 |
| 11 | LO-phonon assisted hot electron transport in biased superlattices. <i>Physica B: Condensed Matter</i> , 2002 , 314, 409-412 | 2.8 |
| 10 | Narrow electron injector for hot electron spectroscopy. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 13, 728-731 | 3 |
| 9 | Negative magnetoresistance of SiGe quantum wells doped with boron. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 13, 741-743 | 3 |
| 8 | Single mode GaAs quantum cascade laser. <i>Microelectronic Engineering</i> , 2002 , 63, 179-184 | 2.5 |
| 7 | Tunneling spectroscopy of voltage tunable quantum wires. <i>Superlattices and Microstructures</i> , 2000 , 27, 453-462 | 2.8 |
| 6 | Transport spectroscopy of quantum wires and superlattices. <i>Thin Solid Films</i> , 2000 , 367, 267-276 | 2.2 |
| 5 | Intersubband and interminiband GaAs/AlGaAs quantum cascade lasers at 10 μ m. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000 , 7, 709-712 | 3 |
| 4 | A novel device layout for tunneling spectroscopy of low-dimensional electron systems. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000 , 6, 343-347 | 3 |
| 3 | GaAs/AlGaAs microresonator quantum cascade lasers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000 , 7, 29-32 | 3 |
| 2 | Wavelength-graded horizontal cavity laser array with postgrowth adjustment of wavelength. <i>IEEE Photonics Technology Letters</i> , 2000 , 12, 1138-1140 | 2.2 |
| 1 | Hydraulic driving unit and control system for artificial hearts. <i>Artificial Organs</i> , 1985 , 9, 192-9 | 2.6 |