Erich Gornik

List of Publications by Year in Descending Order

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	Landau level laser. *Nature Photonics*, **2021**, 15, 875-883	33.9	1
118	In-Phase and Anti-Phase Synchronization in a Laser Frequency Comb. *Physical Review Letters*, **2020**, 124, 023901	7.4	29
117	Anatomical Evidence of Acupuncture Meridians in the Human Extracellular Matrix: Results from a Macroscopic and Microscopic Interdisciplinary Multicentre Study on Human Corpses. *Evidence-based Complementary and Alternative Medicine*, **2019**, 2019, 6976892	2.3	6
116	Resonant intersubband plasmon induced current in InGaAs quantum wells on GaAs. *Applied Physics Letters*, **2014**, 104, 122101	3.4	
115	Accurate Temperature Measurements of DMOS Power Transistors up to Thermal Runaway by Small Embedded Sensors. *IEEE Transactions on Semiconductor Manufacturing*, **2012**, 25, 294-302	2.6	22
114	Effect of Elevated Ambient Temperature on Thermal Breakdown Behavior in BCD ESD Protection Devices Subjected to Long Electrical Overstress Pulses. *IEEE Transactions on Device and Materials Reliability*, **2012**, 12, 562-569	1.6	1
113	Large Rashba effect in GaAsSb/InGaAs RTDs at high temperatures. *Journal of the Korean Physical Society*, **2012**, 60, 1762-1766	0.6	1
112	Buffer-Related Degradation Aspects of Single and Double-Heterostructure Quantum Well InAlN/GaN High-Electron-Mobility Transistors. *Japanese Journal of Applied Physics*, **2012**, 51, 054102	1.4	2
111	Application of transient interferometric mapping method for ESD and latch-up analysis. *Microelectronics Reliability*, **2011**, 51, 1592-1596	1.2	2
110	Terahertz waveguide emitter with subwavelength confinement. *Journal of Applied Physics*, **2010**, 107, 013110	2.5	8
109	Experimental and Theoretical Analyses of the Electrical SOA of Rugged p-Channel LDMOS. *IEEE Electron Device Letters*, **2010**, 31, 1440-1442	4.4	7
108	On the differences between 3D filamentation and failure of N & P type drain extended MOS devices under ESD condition **2010**,		3
107	Small embedded sensors for accurate temperature measurements in DMOS power transistors **2010** ,		15
106	Proposal and Performance Analysis of Normally Off $ hbox{n}^{++}$ GaN/InAlN/AlN/GaN HEMTs With 1-nm-Thick InAlN Barrier. *IEEE Transactions on Electron Devices*, **2010**, 57, 2144-2154	2.9	26
105	Avalanche Breakdown Delay in ESD Protection Diodes. *IEEE Transactions on Electron Devices*, **2010**, 57, 2470-2476	2.9	7
104	Enhancement of the Electrical Safe Operating Area of Integrated DMOS Transistors With Respect to High-Energy Short Duration Pulses. *IEEE Transactions on Electron Devices*, **2010**, 57, 3044-3049	2.9	5
103	Single pulse energy capability and failure modes of n- and p-channel LDMOS with thick copper metallization. *Microelectronics Reliability*, **2010**, 50, 1347-1351	1.2	2

102	Filament study of STI type drain extended NMOS device using transient interferometric mapping **2009**,		5
101	Controlled generation of resonant electron-electron scattering induced current in quantum well structures. *Applied Physics Letters*, **2009**, 95, 172108	3.4	1
100	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. *Microelectronics Reliability*, **2009**, 49, 1455-1464	1.2	3
99	Thermal imaging of smart power DMOS transistors in the thermally unstable regime using a compact transient interferometric mapping system. *Microelectronics Reliability*, **2009**, 49, 1346-1351	1.2	10
98	Excitation of terahertz surface plasmon polaritons on etched groove gratings. *Journal of the Optical Society of America B: Optical Physics*, **2009**, 26, 554	1.7	15
97	Analysis of degradation mechanisms in lattice-matched InAlN/GaN high-electron-mobility transistors. *Journal of Applied Physics*, **2009**, 106, 124503	2.5	84
96	Avalanche Breakdown Delay in High-Voltage p-n Junctions Caused by Pre-Pulse Voltage From IEC 61000-4-2 ESD Generators. *IEEE Transactions on Device and Materials Reliability*, **2009**, 9, 412-418	1.6	4
95	Improvement of the electrical safe operating area of a DMOS transistor during ESD events **2009**,		8
94	Second breakdown behavior in bipolar ESD protection devices during low current long duration stress and its relation to moving current-tubes **2008**,		6
93	Transient behavior of SCRS during ESD pulses **2008**,		17
92	Independent control of InAs quantum dot density and size on AlxGa1−xAs surfaces. *Journal of Materials Science: Materials in Electronics*, **2008**, 19, 714-719	2.1	6
91	Backside interferometric methods for localization of ESD-induced leakage current and metal shorts. *Microelectronics Reliability*, **2007**, 47, 1539-1544	1.2	3
90	Characterization of planar photonic crystals using a quantum well infrared photodetector. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 2916-2925	1.3	
89	External (transient) latchup phenomenon investigated by optical mapping (TIM) technique **2007**,		4
88	Wannier–Stark level anticrossing in biperiodic superlattices. *Physica Status Solidi (B): Basic Research*, **2006**, 243, 3692-3695	1.3	3
87	Analysis of triggering behaviour of high voltage CMOS LDMOS clamps and SCRs during ESD induced latch-up. *Microelectronics Reliability*, **2006**, 46, 1591-1596	1.2	4
86	A new numerical and experimental analysis tool for ESD devices by means of the transient interferometric technique. *IEEE Electron Device Letters*, **2005**, 26, 916-918	4.4	9
85	Thermally-driven motion of current filaments in ESD protection devices. *Solid-State Electronics*, **2005**, 49, 421-429	1.7	14

84	Grating-coupler assisted infrared spectroscopy on anisotropic multilayer systems: A comparative study. *Infrared Physics and Technology*, **2005**, 46, 291-307	2.7	5
83	Scanning heterodyne interferometer setup for the time-resolved thermal and free-carrier mapping in semiconductor devices. *IEEE Transactions on Instrumentation and Measurement*, **2005**, 54, 2438-2445	5.2	32
82	Dynamics of integrated vertical DMOS transistors under 100-ns TLP stress. *IEEE Transactions on Electron Devices*, **2005**, 52, 1008-1013	2.9	11
81	Automated setup for thermal imaging and electrical degradation study of power DMOS devices. *Microelectronics Reliability*, **2005**, 45, 1688-1693	1.2	1
80	Internal behavior of BCD ESD protection devices under TLP and very-fast TLP stress. *IEEE Transactions on Device and Materials Reliability*, **2004**, 4, 535-541	1.6	4
79	Tuned transition from a quantum well to a quantum wire investigated by magnetophonon resonance. *Journal of Applied Physics*, **2004**, 95, 2509-2517	2.5	
78	Moving current filaments in integrated DMOS transistors under short-duration current stress. *IEEE Transactions on Electron Devices*, **2004**, 51, 1331-1339	2.9	12
77	Tuning of transmission function and tunneling time in finite periodic potentials. *Physica E: Low-Dimensional Systems and Nanostructures*, **2004**, 21, 783-786	3	7
76	Electrical overstress in AlGaN/GaN HEMTs: study of degradation processes. *Solid-State Electronics*, **2004**, 48, 271-276	1.7	17
75	Fast characterisation of InAs quantum dot structures using AFM. *Journal of Crystal Growth*, **2004**, 264, 26-30	1.6	5
74	Transient interferometric mapping of smart power SOI ESD protection devices under TLP and vf-TLP stress. *Microelectronics Reliability*, **2004**, 44, 1687-1692	1.2	6
73	Hot electron spectroscopy of the GaAs/AlAs/GaAs band structure. *Semiconductor Science and Technology*, **2004**, 19, S102-S103	1.8	1
72	A capacitance ultrasonic transducer for high-temperature applications. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2004**, 51, 896-907	3.2	12
71	Error analysis in phase extraction in a 2D holographic imaging of semiconductor devices **2004**,		3
70	Study of internal behavior in a vertical DMOS transistor under short high current stress by an interferometric mapping method. *Microelectronics Reliability*, **2003**, 43, 545-548	1.2	2
69	Scanning capacitance microscopy investigations of focused ion beam damage in silicon. *Physica E: Low-Dimensional Systems and Nanostructures*, **2003**, 19, 178-182	3	12
68	A dual-beam Michelson interferometer for investigation of trigger dynamics in ESD protection devices under very fast TLP stress. *Microelectronics Reliability*, **2003**, 43, 1557-1561	1.2	5
67	Electrostatic discharge effects in AlGaN/GaN high-electron-mobility transistors. *Applied Physics Letters*, **2003**, 83, 4655-4657	3.4	31

66	Interferometric study of thermal dynamics in GaAs-based quantum-cascade lasers. *Applied Physics Letters*, **2003**, 82, 1664-1666	3.4	36
65	Focussed ion beam induced damage in silicon studied by scanning capacitance microscopy. *Semiconductor Science and Technology*, **2003**, 18, 195-198	1.8	8
64	Thermal distribution during destructive pulses in ESD protection devices using a single-shot two-dimensional interferometric method. *IEEE Transactions on Device and Materials Reliability*, **2003**, 3, 197-201	1.6	9
63	Quantitative scanning capacitance spectroscopy. *Applied Physics Letters*, **2003**, 83, 4253-4255	3.4	25
62	Single-shot nanosecond thermal imaging of semiconductor devices using absorption measurements. *IEEE Transactions on Device and Materials Reliability*, **2003**, 3, 85-88	1.6	3
61	Hot-electron spectroscopy in parallel magnetic fields. *Applied Physics Letters*, **2003**, 82, 3922-3924	3.4	1
60	Quantitative internal thermal energy mapping of semiconductor devices under short current stress using backside laser interferometry. *IEEE Transactions on Electron Devices*, **2002**, 49, 2070-2079	2.9	43
59	LO-phonon assisted hot electron transport in biased superlattices. *Physica B: Condensed Matter*, **2002**, 314, 409-412	2.8	
58	Magnetophonon resonance in the confinement of an n-GaAs/AlGaAs-heterojunction, tuned to a quasi-one-dimensional quantum wire. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 12, 446-449	3	2
57	Optics with ballistic electrons: anti-reflection coatings for GaAs/AlGaAs superlattices. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 12, 285-288	3	4
56	High performance single mode GaAs quantum cascade lasers. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 13, 840-843	3	4
55	Narrow electron injector for hot electron spectroscopy. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 13, 728-731	3	
54	Negative magnetoresistance of SiGe quantum wells doped with boron. *Physica E: Low-Dimensional Systems and Nanostructures*, **2002**, 13, 741-743	3	
53	Single mode GaAs quantum cascade laser. *Microelectronic Engineering*, **2002**, 63, 179-184	2.5	
52	Metal-organic chemical vapor deposition and nanoscale characterization of zirconium oxide thin films. *Thin Solid Films*, **2002**, 414, 199-204	2.2	19
51	Device Simulation and Backside Laser Interferometry: Powerful Tools for ESD Protection Development. *Microelectronics Reliability*, **2002**, 42, 1267-1274	1.2	4
50	Experimental and simulation analysis of a BCD ESD protection element under the DC and TLP stress conditions. *Microelectronics Reliability*, **2002**, 42, 1281-1286	1.2	4
49	Room-temperature emission of GaAs/AlGaAs superlattice quantum-cascade lasers at 12.6 Th. *Applied Physics Letters*, **2002**, 80, 1864-1866	3.4	44

48	Extraction of spatio-temporal distribution of power dissipation in semiconductor devices using nanosecond interferometric mapping technique. *Applied Physics Letters*, **2002**, 81, 2881-2883	3.4	19
47	Intersubband transport in quantum wells in strong magnetic fields mediated by single- and two-electron scattering. *Physical Review Letters*, **2002**, 88, 226803	7.4	23
46	Scanning capacitance microscopy with ZrO2 as dielectric material. *Journal of Applied Physics*, **2002**, 92, 2144-2148	2.5	17
45	Room-temperature operation of electrically pumped quantum-cascade microcylinder lasers. *Applied Physics Letters*, **2002**, 80, 4094-4096	3.4	11
44	Wannier-Stark states in finite superlattices. *Physical Review Letters*, **2002**, 89, 136803	7.4	17
43	Single-shot thermal energy mapping of semiconductor devices with the nanosecond resolution using holographic interferometry. *IEEE Electron Device Letters*, **2002**, 23, 606-608	4.4	24
42	Effect of pulse risetime on trigger homogeneity in single finger grounded gate nMOSFET electrostatic discharge protection devices. *Microelectronics Reliability*, **2001**, 41, 1385-1390	1.2	4
41	Thermal and free carrier laser interferometric mapping and failure analysis of anti-serial smart power ESD protection structures. *Microelectronics Reliability*, **2001**, 41, 1501-1506	1.2	2
40	Determination of the 2D-Electron Gas Density in a Quantum Well from CⅡ and CⅣ Measurements. *Physica Status Solidi A*, **2001**, 183, 391-397		1
39	Towards functional group-specific detection in high-performance liquid chromatography using mid-infrared quantum cascade lasers. *Journal of Chromatography A*, **2001**, 934, 123-8	4.5	34
38	Resonant tunneling mediated by resonant emission of intersubband plasmons. *Physical Review Letters*, **2001**, 86, 2850-3	7.4	6
37	Mechanism of bias-dependent contrast in scanning-capacitance-microscopy images. *Applied Physics Letters*, **2001**, 79, 3182-3184	3.4	30
36	Narrow electron injector for ballistic electron spectroscopy. *Applied Physics Letters*, **2001**, 78, 3639-3641	3.4	10
35	Antireflection coating for miniband transport and Fabry□□ot resonances in GaAs/AlGaAs superlattices. *Applied Physics Letters*, **2001**, 79, 1486-1488	3.4	48
34	Tunneling spectroscopy of voltage tunable quantum wires. *Superlattices and Microstructures*, **2000**, 27, 453-462	2.8	
33	Bulk and surface degradation mode in 0.35□m technology gg-nMOS ESD protection devices. *Microelectronics Reliability*, **2000**, 40, 1467-1472	1.2	3
32	Transport spectroscopy of quantum wires and superlattices. *Thin Solid Films*, **2000**, 367, 267-276	2.2	
31	Intersubband and interminiband GaAs/AlGaAs quantum cascade lasers at 10□m. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 709-712	3	

30	A novel device layout for tunneling spectroscopy of low-dimensional electron systems. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 6, 343-347	3	
29	Intersubband and interminiband GaAs/AlGaAs quantum cascade lasers. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 1-7	3	1
28	GaAs/AlGaAs microresonator quantum cascade lasers. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 29-32	3	
27	GaAs/AlGaAs quantum cascade laser a source for gas absorption spectroscopy. *Physica E: Low-Dimensional Systems and Nanostructures*, **2000**, 7, 37-39	3	12
26	Study of triggering inhomogeneities in gg-nMOS ESD protection devices via thermal mapping using backside laser interferometry. *Microelectronics Reliability*, **2000**, 40, 1359-1364	1.2	11
25	Thermal and free carrier concentration mapping during ESD event in smart Power ESD protection devices using an improved laser interferometric technique. *Microelectronics Reliability*, **2000**, 40, 1365-1370	1.2	23
24	Magneto-optical Terahertz emission from plasmons in parabolic quantum wells. *Semiconductor Science and Technology*, **2000**, 15, 315-321	1.8	1
23	Terahertz quantum cascade structures: Intra- versus interwell transition. *Applied Physics Letters*, **2000**, 77, 1928-1930	3.4	38
22	Continuous-wave operation of distributed feedback AlAs/GaAs superlattice quantum-cascade lasers. *Applied Physics Letters*, **2000**, 77, 3328-3330	3.4	50
21	Quantum cascade lasers with monolithic air emiconductor Bragg reflectors. *Applied Physics Letters*, **2000**, 77, 1241-1243	3.4	18
20	Magnetic-field-enhanced quantum-cascade emission. *Applied Physics Letters*, **2000**, 76, 19-21	3.4	49
19	Self-aligned coupled cavity GaAs/AlGaAs midinfrared quantum-cascade laser. *Applied Physics Letters*, **2000**, 77, 1077-1079	3.4	24
18	Optimization of the emission characteristics of light emitting diodes by surface plasmons and surface waveguide modes. *Applied Physics Letters*, **2000**, 77, 2295-2297	3.4	23
17	Spectroscopy in the gas phase with GaAs/AlGaAs quantum-cascade lasers. *Applied Optics*, **2000**, 39, 6926-30	1.7	28
16	Long-wavelength (/spl lambda/=10 /spl mu/m) quadrupolar-shaped GaAs-AlGaAs microlasers. *IEEE Journal of Quantum Electronics*, **2000**, 36, 458-464	2	34
15	Analysis of TM-polarized DFB laser structures with metal surface gratings. *IEEE Journal of Quantum Electronics*, **2000**, 36, 780-786	2	44
14	Surface-emitting distributed feedback quantum-cascade lasers. *Applied Physics Letters*, **2000**, 77, 2086-2088	3.4	46
13	Strained InGaAs/AlGaAs/GaAs-quantum cascade lasers. *Applied Physics Letters*, **2000**, 76, 3361-3363	3.4	23

12	Monolithic integration of vertical-cavity laser diodes and resonant photodetectors with hybrid Si3N4-SiO2 top Bragg mirrors. *IEEE Photonics Technology Letters*, **2000**, 12, 119-121	2.2	5
11	Wavelength-graded horizontal cavity laser array with postgrowth adjustment of wavelength. *IEEE Photonics Technology Letters*, **2000**, 12, 1138-1140	2.2	
10	Improved performance of GaAs-AlGaAs superlattice quantum cascade lasers beyond /spl lambda/=13 /spl mu/m. *IEEE Photonics Technology Letters*, **2000**, 12, 1144-1146	2.2	3
9	GaAs/AlGaAs distributed feedback quantum cascade lasers. *Applied Physics Letters*, **2000**, 76, 253-255	3.4	43
8	Sequential resonant tunnelling through Landau levels in GaAs/AlAs superlattices. *Semiconductor Science and Technology*, **1997**, 12, 1422-1424	1.8	10
7	A study of backside laser-probe signals in MOSFETs. *Microelectronic Engineering*, **1996**, 31, 87-94	2.5	11
6	Self-consistent Determination of the Confinement Potential in Various Etched Quantum Wire Structures. *Japanese Journal of Applied Physics*, **1995**, 34, 4458-4461	1.4	5
5	Landau Emission. *Modern Problems in Condensed Matter Sciences*, **1991**, 27, 911-996		4
4	Landau-level population inversion in crossed electric and quantizing magnetic fields. *Physical Review B*, **1986**, 34, 7459-7462	3.3	8
3	Hydraulic driving unit and control system for artificial hearts. *Artificial Organs*, **1985**, 9, 192-9	2.6	
2	Two-dimensional plasmons and far infrared emission. *Surface Science*, **1984**, 142, 412-422	1.8	17
1	Thermal Excitation of Two-Dimensional Plasma Oscillations. *Physical Review Letters*, **1982**, 49, 1667-1671	7.4	53