

Stefan Malzer

List of Publications by Year in descending order

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116
papers

1,693
citations

361296

20
h-index

315616

38
g-index

119
all docs

119
docs citations

119
times ranked

1600
citing authors

#	ARTICLE	IF	CITATIONS
1	Light-field-driven electronics in the mid-infrared regime: Schottky rectification. Science Advances, 2022, 8, .	4.7	6
2	An efficient Terahertz rectifier on the graphene/SiC materials platform. Scientific Reports, 2019, 9, 11205.	1.6	20
3	Extreme Events through Prevailing Backscattering and Their Suppression by a Focusing Nonlinearity. Physical Review X, 2018, 8, .	2.8	2
4	Terahertz generation with ballistic photodiodes under pulsed operation. Semiconductor Science and Technology, 2018, 33, 114015.	1.0	4
5	Fiber-Coupled 2-D n-i-pn-i-p Superlattice Photomixer Array. IEEE Transactions on Antennas and Propagation, 2017, 65, 3474-3480.	3.1	10
6	Analytical study of free-space coupling of THz radiation for a new radioastronomy receiver concept. , 2017, , .		1
7	Study of free-space coupling into mm-wave whispering-gallery mode resonators for a radioastronomy receiver. , 2017, , .		1
8	Maximization of the optical intra-cavity power of whispering-gallery mode resonators via coupling prism. Optics Express, 2016, 24, 26503.	1.7	9
9	Array of Dielectric Rod Waveguide antennas for millimeter-wave power generation. , 2015, , .		8
10	Measurements of the Electric Field of Zero-Point Optical Phonons in GaAs Quantum Wells Support the Urbach Rule for Zero-Temperature Lifetime Broadening. Physical Review Letters, 2015, 114, 047402.	2.9	16
11	Dielectric Rod Waveguide Antenna as THz Emitter for Photomixing Devices. IEEE Transactions on Antennas and Propagation, 2015, 63, 882-890.	3.1	46
12	Ultra-wideband Dielectric Rod Waveguide antenna as photomixer-based THz emitter. , 2014, , .		1
13	Quasi-freestanding epitaxial graphene transistor with silicon nitride top gate. Journal Physics D: Applied Physics, 2014, 47, 305103.	1.3	5
14	On the finite semiconductor thickness effect applied to large area emitters devices for THz radiation. , 2014, , .		0
15	From Arrays of THz Antennas to Large-Area Emitters. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 532-544.	2.0	15
16	Broadband THz detection and homodyne mixing using GaAs high-electron-mobility transistor rectifiers. Proceedings of SPIE, 2013, , .	0.8	5
17	New antenna topology coupled to a new waveguide structure for THz radiation and propagation. , 2013, , .		0
18	Arrays and New Antenna Topologies for Increasing THz Power Generation Using Photomixers. Journal of Infrared, Millimeter, and Terahertz Waves, 2013, 34, 97-108.	1.2	11

#	ARTICLE	IF	CITATIONS
19	Emission of the THz waves from large area mesas of superconducting Bi ₂ Sr ₂ CaCu ₂ O ₈ + δ by the injection of spin polarized current. Physica C: Superconductivity and Its Applications, 2013, 491, 7-10.	0.6	13
20	Continuous-Wave Sub-THz Photonic Generation With Ultra-Narrow Linewidth, Ultra-High Resolution, Full Frequency Range Coverage and High Long-Term Frequency Stability. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 461-471.	2.0	45
21	Arrayed free space continuous-wave terahertz photomixers. Optics Letters, 2013, 38, 3673.	1.7	8
22	Silicon Nitride as Top Gate Dielectric for Epitaxial Graphene. Materials Science Forum, 2013, 740-742, 149-152.	0.3	1
23	Interferometer measurements of terahertz waves from Bi ₂ Sr ₂ CaCu ₂ O ₈ + δ mesas. Superconductor Science and Technology, 2012, 25, 125004.	1.8	40
24	Ultra-narrow linewidth CW sub-THz generation using GS based OFCG and n-i-pn-i-p superlattice photomixers. Electronics Letters, 2012, 48, 1425.	0.5	16
25	Gain Enhancement by Dielectric Horns in the Terahertz Band. IEEE Transactions on Antennas and Propagation, 2011, 59, 3164-3170.	3.1	12
26	Tunable, continuous-wave Terahertz photomixer sources and applications. Journal of Applied Physics, 2011, 109, .	1.1	393
27	Modulational instability and solitons in excitonic semiconductor waveguides. Physical Review B, 2011, 83, .	1.1	11
28	Polarization sensitive lateral photoconductivity in GaAs/AlGaAs quantum well based structures on low-temperature grown GaAs(001). Applied Physics Letters, 2010, 97, .	1.5	4
29	Fiber optic based system for polarization sensitive spectroscopy of semiconductor quantum structures. Review of Scientific Instruments, 2010, 81, 083901.	0.6	5
30	Efficient μ V tunneling diodes with ErAs recombination centers. Semiconductor Science and Technology, 2010, 25, 115004.	1.0	14
31	Continuous wave terahertz emitter arrays for spectroscopy and imaging applications. Proceedings of SPIE, 2010, , .	0.8	6
32	Coherent superposition of terahertz beams from a phased linear photomixer array. , 2009, , .		1
33	Temperature dependence of indirect-exciton luminescence in in-plane magnetic field. Journal of Luminescence, 2008, 128, 1873-1875.	1.5	0
34	Coupled whispering gallery mode resonators in the Terahertz frequency range. Optics Express, 2008, 16, 7336.	1.7	48
35	Coherent superposition of terahertz beams. Proceedings of SPIE, 2008, , .	0.8	7
36	Interference between two coherently driven monochromatic terahertz sources. Applied Physics Letters, 2008, 92, 221107.	1.5	9

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37	Atomic scale structure and optical emission of $\text{Al}_x\text{Ga}_{1-x}\text{As}/\text{GaAs}$ quantum wells. <i>Physical Review B</i> , 2007, 75, .	1.1	10
38	Enhancement of optical absorption and photocurrent of 6H-SiC by laser surface nanostructuring. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	51
39	Efficient terahertz emission from ballistic transport enhanced n-i-p-n-i-p superlattice photomixers. <i>Applied Physics Letters</i> , 2007, 90, 212115.	1.5	59
40	Formation of subwavelength periodic structures on tungsten induced by ultrashort laser pulses. <i>Optics Letters</i> , 2007, 32, 1932.	1.7	96
41	Self-organized tungsten nanopikes grown on subwavelength ripples induced by femtosecond laser pulses. <i>Optics Express</i> , 2007, 15, 15741.	1.7	48
42	Connection of anisotropic conductivity to tip-induced space-charge layers in scanning tunneling spectroscopy of p -doped GaAs. <i>Physical Review B</i> , 2007, 76, .	1.1	23
43	Optical Landau state mapping with in-plane electric fields. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007, 4, 279-287.	0.8	2
44	Diamagnetic shift of disorder-localized excitons in narrow $\text{GaAs}/\text{AlGaAs}$ quantum wells. <i>Physical Review B</i> , 2006, 74, .	1.1	16
45	Highly collimated and directional continuous-wave Terahertz emission by photomixing in semiconductor device arrays. , 2006, , .		14
46	TE- and TM-polarization-resolved spectroscopy on quantum wells under normal incidence. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2006, 32, 241-244.	1.3	4
47	Photoluminescence of n-doped double quantum well "electron subbands under influence of in-plane magnetic fields. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2006, 34, 284-287.	1.3	2
48	A monolithically integrated intensity-independent polarization-sensitive switch operating at $1.3\frac{1}{4}\mu\text{m}$ based on ordering in InGaAsP . <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2006, 32, 554-557.	1.3	2
49	Ballistic transport in semiconductor nanostructures: From quasi-classical oscillations to novel THz-emitters. <i>Pramana - Journal of Physics</i> , 2006, 67, 199-205.	0.9	0
50	Spin lifetimes and strain-controlled spin precession of drifting electrons in GaAs. <i>Europhysics Letters</i> , 2006, 75, 597-603.	0.7	35
51	Depth Resolved Scanning Tunneling Spectroscopy of Shallow Acceptors in Gallium Arsenide. <i>Japanese Journal of Applied Physics</i> , 2006, 45, 2193-2196.	0.8	11
52	Probing Semiconductor Gap States with Resonant Tunneling. <i>Physical Review Letters</i> , 2006, 96, 066403.	2.9	35
53	Fabrication of genuine single-quantum-dot light-emitting diodes. <i>Applied Physics Letters</i> , 2006, 88, 121115.	1.5	37
54	Compact, low-cost, and high-resolution interrogation unit for optical sensors. <i>Applied Physics Letters</i> , 2006, 89, 201113.	1.5	22

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55	Ultrafast spectroscopy of impact ionization and avalanche multiplication in GaAs. Applied Physics Letters, 2006, 88, 132113.	1.5	4
56	Using a quantum well heterostructure to study the longitudinal and transverse electric field components of a strongly focused laser beam. Journal of Applied Physics, 2006, 100, 023112.	1.1	15
57	THz collective oscillations of ballistic electrons in wide potential wells: Bridging classical transport with quantum dynamics. Europhysics Letters, 2005, 70, 534-540.	0.7	4
58	Electroluminescence of single-dot nano-LEDs – optical spectroscopy of an electrically tunable few-electron/hole system. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 26, 110-114.	1.3	2
59	Luminescence of indirect excitons in high in-plane magnetic fields. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 30, 1-6.	1.3	4
60	Single quantum dot nano-LEDs - spectroscopy of an electrically controlled few-particle system. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2974-2977.	0.8	0
61	THz-emitter based on ballistic transport in nano-pin diodes. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 965-969.	0.8	3
62	Polarisation-sensitive switch: An integrated intensity-independent solution for 1.3 μm based on the polarisation anisotropy of ordered InGaAsP. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 992-996.	0.8	0
63	THz-photomixer based on quasi-ballistic transport. Semiconductor Science and Technology, 2005, 20, S178-S190.	1.0	58
64	Disorder-driven coherence-incoherence crossover in random GaAs/Al _{0.3} Ga _{0.7} As superlattices. Physical Review B, 2005, 71, .	1.1	5
65	Luminescence of double quantum wells subject to in-plane magnetic fields. Physical Review B, 2005, 72, .	1.1	13
66	Femtosecond spectroscopy of unipolar nanometer-scale high-field transport of holes in Al _{0.08} Ga _{0.92} As. Applied Physics Letters, 2005, 86, 142105.	1.5	4
67	Polarized photovoltage spectroscopy study of InAs [*] GaAs(001) quantum dot ensembles. Applied Physics Letters, 2005, 87, 212101.	1.5	9
68	Ideal delta doping of carbon in GaAs. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 267.	1.6	7
69	Regimes of quantum transport in superlattices in a weak magnetic field. Journal of Physics Condensed Matter, 2004, 16, 2447-2453.	0.7	1
70	Ultrafast high-field transport in GaAs: direct observation of quasi-ballistic electron motion, impact ionization and avalanche multiplication. Semiconductor Science and Technology, 2004, 19, S167-S169.	1.0	3
71	Exotic transport regime in GaAs: absence of intervalley scattering leading to quasi-ballistic, real-space THz oscillations. Semiconductor Science and Technology, 2004, 19, S195-S198.	1.0	5
72	Ultrafast transport of electrons in GaAs: – Direct observation of quasiballistic motion and side valley transfer. Physical Review B, 2004, 70, .	1.1	21

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73	Effect of compensation of electron and hole scattering potentials on the optical band edge of heavily doped GaAs $\hat{\cdot}$ Al $\hat{\cdot}$ Ga $\hat{\cdot}$ As superlattices. Physical Review B, 2004, 70, .	1.1	8
74	Luminescence of coupled quantum wells: Effects of indirect excitons in high in-plane magnetic fields. Physical Review B, 2004, 70, .	1.1	12
75	Influence of gas on cutting silicon with solid state laser. , 2004, , .		4
76	DISORDER INDUCED COHERENCE-INCOHERENCE CROSSOVER IN RANDOM GaAs/AlGaAs SUPERLATTICES. International Journal of Modern Physics B, 2004, 18, 3629-3632.	1.0	1
77	Electron transport through triangular potential barriers with doping-induced disorder. Physical Review B, 2004, 69, .	1.1	1
78	Optical far-IR wave generation - state-of-the-art and advanced device structures. , 2004, , .		4
79	Polarization-resolved electro-absorption in InAs/GaAs quantum dots in waveguide structures modeling of size, shape and In-content. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 554-556.	1.3	11
80	Novel concept for efficient THz-emitters based on quasi-ballistic transport in an asymmetric superlattice. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 629-630.	1.3	5
81	Valence-band structure of self-assembled InAs quantum dots studied by capacitance spectroscopy. Applied Physics Letters, 2003, 82, 2071-2073.	1.5	19
82	Anisotropy of quantum interference in disordered GaAs/Al $\hat{\cdot}$ Ga $\hat{\cdot}$ As superlattices. Physical Review B, 2003, 68, .	1.1	6
83	Enhanced recombination tunneling in GaAs pn junctions containing low-temperature-grown-GaAs and ErAs layers. Applied Physics Letters, 2003, 83, 4035-4037.	1.5	37
84	Influence of disorder on the vertical transport in wide barrier superlattices. Physical Review B, 2002, 65, .	1.1	6
85	THz carrier oscillations in GaAs heterostructures detected via two color femtosecond pump probe spectroscopy. Physica B: Condensed Matter, 2002, 314, 154-157.	1.3	2
86	Electronic structure of InAs self-assembled quantum dots. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 88, 238-242.	1.7	1
87	Stacked layers of InAs self-assembled quantum dots. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 88, 243-246.	1.7	0
88	Optical and electrical spectroscopy of defects in low temperature grown GaAs. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 88, 191-194.	1.7	1
89	Spin transport driven by giant ambipolar diffusion. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 407-411.	1.3	1
90	Ballistic high-field transport in mesoscopic confining potentials observation of THz oscillations in Al $\hat{\cdot}$ Ga $\hat{\cdot}$ As heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 12, 454-457.	1.3	0

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91	Electronic structure of self-assembled InAs quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 13, 208-211.	1.3	3
92	A combined investigation of lateral and vertical Stark effect in InAs self-assembled quantum dots in waveguide structures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 13, 283-288.	1.3	21
93	Intensity-independent high polarization- or wavelength-sensitive opto-electronic switches. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002, 13, 806-810.	1.3	1
94	<title>High-speed low-energy photoconductive receiver with high gain</title>. , 2001, 4288, 67.		0
95	<title>Low-capacitance photoconductive detectors for extremely low optical power fabricated by focused ion-beam doping and overgrowth</title>. , 2001, , .		0
96	n-Channel conductance spectroscopy of deep defects in low temperature grown GaAs. <i>Physica B: Condensed Matter</i> , 2001, 308-310, 1177-1180.	1.3	1
97	Electroluminescence of Self-Assembled InAs Quantum Dots in p-i-n Diodes. <i>Physica Status Solidi (B): Basic Research</i> , 2001, 224, 129-132.	0.7	3
98	Investigation of deep electronic centers in low-temperature grown GaAs using extremely thin layers. <i>Applied Physics Letters</i> , 2000, 77, 2349-2351.	1.5	5
99	Excitonic photoluminescence in symmetric coupled double quantum wells subject to an external electric field. <i>Physical Review B</i> , 1999, 60, 7740-7743.	1.1	28
100	Speeding-up optical nonlinearities in hetero-n-i-p-i-structures by recombination contacts. <i>Physica B: Condensed Matter</i> , 1999, 272, 499-501.	1.3	0
101	Extension of the epitaxial shadow mask MBE technique for the monolithic integration and in situ fabrication of novel device structures. <i>Journal of Crystal Growth</i> , 1999, 201-202, 574-577.	0.7	2
102	Vertical transport and relaxation mechanisms in δ -doping superlattices. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 1998, 2, 349-352.	1.3	1
103	Smart pixel using a vertical cavity surface-emitting laser. <i>Applied Physics Letters</i> , 1997, 71, 3561-3563.	1.5	9
104	Waveguide modulator structures with soft optical confinement grown by the epitaxial shadow mask (ESM) MBE-technique. <i>Journal of Crystal Growth</i> , 1997, 175-176, 960-963.	0.7	1
105	Many body effects and charge carrier kinetics studied by electro-optical experiments in type-I hetero n-i-p-i structures with selective contacts. <i>Solid-State Electronics</i> , 1996, 40, 683-686.	0.8	3
106	Properties and applications of the δ -epitaxial shadow mask molecular beam epitaxy technique TM . <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996, 14, 2175.	1.6	6
107	Optical characterization of low temperature grown GaAs by transmission measurements above the band gap. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1996, 14, 2275.	1.6	11
108	Optical and electrical properties of quantum wells with electrically tunable two-dimensional electron density by selective contacts. <i>Superlattices and Microstructures</i> , 1995, 17, 141-145.	1.4	1

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109	Constructive superposition of field- and carrier induced absorption changes in hetero-n-i-p-i structures. Solid-State Electronics, 1994, 37, 1251-1253.	0.8	1
110	Enhanced absorption modulation in hetero-n-i-p-i structures by constructive superposition of field effect and phase space filling. Applied Physics Letters, 1994, 64, 457-459.	1.5	8
111	Hetero-n-i-p-i band filling modulator with laterally interdigital contacts made by shadow mask molecular beam epitaxy regrowth. Applied Physics Letters, 1993, 62, 152-153.	1.5	21
112	In-situ structured MBE-grown crystals for applications in optoelectronics. , 1993, 1985, 105.		1
113	Optical Nonlinearities in InGaAs and Hetero-n-i-p-i Structures. Physica Status Solidi (B): Basic Research, 1992, 173, 459-472.	0.7	17
114	Photoreflectance spectra of a GaAs/AlGaAs type I hetero-n-i-p-i structure. Superlattices and Microstructures, 1992, 11, 41-46.	1.4	1
115	Influence of grain boundaries on the recombination rate in germanium. Hyperfine Interactions, 1987, 35, 723-727.	0.2	2
116	THz-emitters based on ballistic transport in semiconductor nanostructures. , 0, , .		0