

Martin Mittendorff

List of Publications by Year in descending order

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74
papers

1,822
citations

279798

23
h-index

265206

42
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74
all docs

74
docs citations

74
times ranked

2498
citing authors

#	ARTICLE	IF	CITATIONS
1	CMOS Integrated Antenna-Coupled Field-Effect Transistors for the Detection of Radiation From 0.2 to 4.3 THz. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 3834-3843.	4.6	232
2	Ultrafast graphene-based broadband THz detector. Applied Physics Letters, 2013, 103, .	3.3	174
3	Graphene-Based Waveguide-Integrated Terahertz Modulator. ACS Photonics, 2017, 4, 316-321.	6.6	96
4	Carrier dynamics in Landau-quantized graphene featuring strong Auger scattering. Nature Physics, 2015, 11, 75-81.	16.7	79
5	Anisotropy of Excitation and Relaxation of Photogenerated Charge Carriers in Graphene. Nano Letters, 2014, 14, 1504-1507.	9.1	77
6	Carrier dynamics and transient photobleaching in thin layers of black phosphorus. Applied Physics Letters, 2015, 107, .	3.3	77
7	Nonlinear Terahertz Absorption of Graphene Plasmons. Nano Letters, 2016, 16, 2734-2738.	9.1	77
8	Transient Increase of the Energy Gap of Superconducting NbN Thin Films Excited by Resonant Narrow-Band Terahertz Pulses. Physical Review Letters, 2013, 110, 267003.	7.8	68
9	1550-nm ErAs:In(Al)GaAs large area photoconductive emitters. Applied Physics Letters, 2012, 101, .	3.3	65
10	Time-resolved spectroscopy on epitaxial graphene in the infrared spectral range: relaxation dynamics and saturation behavior. Journal of Physics Condensed Matter, 2013, 25, 054202.	1.8	59
11	Absorption saturation in optically excited graphene. Applied Physics Letters, 2012, 101, .	3.3	54
12	Mid-infrared time-resolved photoconduction in black phosphorus. 2D Materials, 2016, 3, 041006.	4.4	52
13	Electrical tunability of terahertz nonlinearity in graphene. Science Advances, 2021, 7, .	10.3	52
14	Universal phase relation between longitudinal and transverse fields observed in focused terahertz beams. New Journal of Physics, 2012, 14, 103049.	2.9	47
15	2D THz Optoelectronics. Advanced Optical Materials, 2021, 9, 2001500.	7.3	42
16	Microscopic Description of Intraband Absorption in Graphene: The Occurrence of Transient Negative Differential Transmission. Physical Review Letters, 2014, 113, 035502.	7.8	40
17	Slow Noncollinear Coulomb Scattering in the Vicinity of the Dirac Point in Graphene. Physical Review Letters, 2016, 117, 087401.	7.8	40
18	Gouy phase shift of a tightly focused, radially polarized beam. Optica, 2016, 3, 35.	9.3	32

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19	Ultra-fast transistor-based detectors for precise timing of near infrared and THz signals. Optics Express, 2013, 21, 17941.	3.4	31
20	Terahertz photoresponse of black phosphorus. Optics Express, 2017, 25, 12666.	3.4	29
21	Broadband THz detection from 0.1 to 22 THz with large area field-effect transistors. Optics Express, 2015, 23, 20732.	3.4	26
22	Carrier Dynamics in Graphene: Ultrafast Many-Particle Phenomena. Annalen Der Physik, 2017, 529, 1700038.	2.4	26
23	Large area photoconductive terahertz emitter for 1.55 μ m excitation based on an InGaAs heterostructure. Nanotechnology, 2013, 24, 214007.	2.6	25
24	Universal ultrafast detector for short optical pulses based on graphene. Optics Express, 2015, 23, 28728.	3.4	23
25	Suppressed Auger scattering and tunable light emission of Landau-quantized massless Kane electrons. Nature Photonics, 2019, 13, 783-787.	31.4	23
26	Optical Gating of Black Phosphorus for Terahertz Detection. Nano Letters, 2017, 17, 5811-5816.	9.1	21
27	Field-effect transistors as electrically controllable nonlinear rectifiers for the characterization of terahertz pulses. APL Photonics, 2018, 3, .	5.7	21
28	Optical Control of Plasmonic Hot Carriers in Graphene. ACS Photonics, 2019, 6, 302-307.	6.6	20
29	Terahertz generation and detection with InGaAs-based large-area photoconductive devices excited at 1.55 μ m. Applied Physics Letters, 2013, 103, .	3.3	18
30	Time-resolved electronic capture in n -type germanium doped with antimony. Physical Review B, 2014, 89, .	3.2	18
31	Intraband carrier dynamics in Landau-quantized multilayer epitaxial graphene. New Journal of Physics, 2014, 16, 123021.	2.9	17
32	Tunable Ultrafast Thermal Relaxation in Graphene Measured by Continuous-Wave Photomixing. Physical Review Letters, 2016, 117, 257401.	7.8	16
33	THz Autocorrelators for ps Pulse Characterization Based on Schottky Diodes and Rectifying Field-Effect Transistors. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 922-929.	3.1	15
34	Nonlinear optical control of chiral charge pumping in a topological Weyl semimetal. Physical Review B, 2020, 102, .	3.2	15
35	Lifetime-limited, subnanosecond terahertz germanium photoconductive detectors. Applied Physics Letters, 2015, 106, .	3.3	14
36	Role of Transient Reflection in Graphene Nonlinear Infrared Optics. ACS Photonics, 2016, 3, 1069-1075.	6.6	14

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37	Ultrafast Processes in Graphene: From Fundamental Manybody Interactions to Device Applications. <i>Annalen Der Physik</i> , 2017, 529, 1700022.	2.4	10
38	Symmetry-Breaking Supercollisions in Landau-Quantized Graphene. <i>Physical Review Letters</i> , 2017, 119, 067405.	7.8	10
39	Terahertz Stimulated Emission from Silicon Doped by Hydrogenlike Acceptors. <i>Physical Review X</i> , 2014, 4, .	8.9	9
40	Dynamics of non-equilibrium charge carriers in p-germanium doped by gallium. <i>Physica Status Solidi (B): Basic Research</i> , 2017, 254, 1600803.	1.5	8
41	Probing the free-carrier absorption in multi-layer black phosphorus. <i>Applied Physics Letters</i> , 2018, 113, .	3.3	7
42	Interface-Dominated Topological Transport in Nanograined Bulk Bi ₂ Te ₃ . <i>Small</i> , 2021, 17, e2103281.	10.0	7
43	Broadband THz detection and homodyne mixing using GaAs high-electron-mobility transistor rectifiers. <i>Proceedings of SPIE</i> , 2013, , .	0.8	5
44	Black phosphorus frequency mixer for infrared optoelectronic signal processing. <i>APL Photonics</i> , 2019, 4, 034502.	5.7	5
45	Phase sensitive monitoring of electron bunch form and arrival time in superconducting linear accelerators. <i>Applied Physics Letters</i> , 2012, 100, 141103.	3.3	4
46	Compact quasi-optical Schottky detector with fast voltage response. , 2014, , .		4
47	Unconventional double-banded saturation of carrier occupation in optically excited graphene due to many-particle interactions. <i>Nature Communications</i> , 2017, 8, 15042.	12.8	4
48	Plasmonic Terahertz Nonlinearity in Graphene Disks. <i>Advanced Photonics Research</i> , 2022, 3, 2100218.	3.6	3
49	Efficient Auger scattering in Landau-quantized graphene. , 2015, , .		2
50	Observation of strong magneto plasmonic nonlinearity in bilayer graphene discs. <i>JPhys Photonics</i> , 2021, 3, 01LT01.	4.6	2
51	Plasmonic Terahertz Nonlinearity in Graphene Disks. <i>Advanced Photonics Research</i> , 2022, 3, .	3.6	2
52	The role of electrons during the martensitic phase transformation in NiTi-based shape memory alloys. <i>Materials Today Physics</i> , 2022, 24, 100671.	6.0	2
53	The THz user facility FELBE at the radiation source ELBE of Helmholtz-Zentrum Dresden-Rossendorf. , 2013, , .		1
54	Symmetry effects in broadband, room-temperature field effect transistor THz detectors. , 2015, , .		1

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55	Terahertz detection in 2D materials. , 2018, , .		1
56	Time-resolved electronic capture in germanium doped with hydrogen-like impurity centers. , 2012, , .		0
57	InGaAs-based large area photoconductive emitters for 1.55 μm excitation. , 2013, , .		0
58	Longitudinal fields in focused terahertz beams. , 2013, , .		0
59	Fast relaxation of free carriers in compensated n- and p-type germanium. , 2013, , .		0
60	Ultrafast graphene-based THz detection at room temperature. , 2013, , .		0
61	Towards a life-time-limited 8-octave-infrared photoconductive germanium detector. Journal of Physics: Conference Series, 2015, 647, 012070.	0.4	0
62	Characterization of Graphene Photothermoelectric Detector via Two-wave Mixing Technique. , 2015, , .		0
63	Long-lived Anisotropy of Photoexcited Graphene Electrons. , 2016, , .		0
64	Tracing the Gouy phase shift of focused, radially polarized THz pulses. , 2016, , .		0
65	Low-energy carrier dynamics in graphene and other 2D materials. , 2018, , .		0
66	Far-Infrared Nonlinear Optics in Multilayer Epitaxial Graphene. , 2016, , .		0
67	THz Photoresponse of Thin Layers of Black Phosphorus. , 2016, , .		0
68	Intrinsic Speed of a Black Phosphorus Photoconductive Detector. , 2016, , .		0
69	Nonlinear Plasmonic THz Absorption in Graphene Ribbons. , 2016, , .		0
70	Broadband Third-Harmonic Generation in Black Phosphorus. , 2017, , .		0
71	Terahertz detection mechanisms in black phosphorus. , 2017, , .		0
72	Mid-Infrared Pump-Probe Measurements of Carrier Dynamics in Black Phosphorus. , 2017, , .		0

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73	A Black Phosphorus Optoelectronic Mixer. , 2017, , .		0
74	Magnetically Tuned THz Nonlinearity in Bilayer Graphene Disc Arrays. , 2020, , .		0