

# Klaus Reimann

## List of Publications by Year in descending order

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130  
papers

4,801  
citations

126708

33  
h-index

95083

68  
g-index

132  
all docs

132  
docs citations

132  
times ranked

4059  
citing authors

#	ARTICLE	IF	CITATIONS
1	Generation of single-cycle THz transients with high electric-field amplitudes. Optics Letters, 2005, 30, 2805.	1.7	486
2	Band gaps, crystal-field splitting, spin-orbit coupling, and exciton binding energies in ZnO under hydrostatic pressure. Solid State Communications, 1995, 94, 251-254.	0.9	484
3	Generation, shaping, and characterization of intense femtosecond pulses tunable from 3 to 20 $\mu\text{m}$ . Journal of the Optical Society of America B: Optical Physics, 2000, 17, 2086.	0.9	302
4	Table-top sources of ultrashort THz pulses. Reports on Progress in Physics, 2007, 70, 1597-1632.	8.1	232
5	Observation of the Resonant Optical Stark Effect in a Semiconductor. Physical Review Letters, 1985, 55, 1335-1337.	2.9	172
6	Ultrafast Spatiotemporal Dynamics of Terahertz Generation by Ionizing Two-Color Femtosecond Pulses in Gases. Physical Review Letters, 2010, 105, 053903.	2.9	168
7	Direct field-resolved detection of terahertz transients with amplitudes of megavolts per centimeter. Optics Letters, 2003, 28, 471.	1.7	159
8	Phase-Resolved Nonlinear Response of a Two-Dimensional Electron Gas under Femtosecond Intersubband Excitation. Physical Review Letters, 2004, 92, 047402.	2.9	139
9	Ultrafast terahertz response of multilayer graphene in the nonperturbative regime. Physical Review B, 2014, 89, .	1.1	132
10	Internal motions of a quasiparticle governing its ultrafast nonlinear response. Nature, 2007, 450, 1210-1213.	13.7	127
11	Nonlinear Terahertz Response of n-Type GaAs. Physical Review Letters, 2006, 96, 187402.	2.9	115
12	Coherent Ballistic Motion of Electrons in a Periodic Potential. Physical Review Letters, 2010, 104, 146602.	2.9	114
13	Ultrafast two-dimensional terahertz spectroscopy of elementary excitations in solids. New Journal of Physics, 2013, 15, 025039.	1.2	113
14	Experimental determination of the electronic band structure of SnO <sub>2</sub> . Solid State Communications, 1998, 105, 649-652.	0.9	97
15	Effects of the isotopic composition on the fundamental gap of CuCl. Physical Review B, 1998, 57, 15183-15190.	1.1	89
16	Phase-resolved two-dimensional spectroscopy based on collinear n-wave mixing in the ultrafast time domain. Journal of Chemical Physics, 2009, 130, 164503.	1.2	87
17	Two-Dimensional Terahertz Correlation Spectra of Electronic Excitations in Semiconductor Quantum Wells. Journal of Physical Chemistry B, 2011, 115, 5448-5455.	1.2	87
18	Optical dephasing of coherent intersubband transitions in a quasi-two-dimensional electron gas. Physical Review B, 2004, 69, .	1.1	81

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19	High-Field Terahertz Bulk Photovoltaic Effect in Lithium Niobate. <i>Physical Review Letters</i> , 2014, 112, 146602.	2.9	69
20	Terahertz-induced interband tunneling of electrons in GaAs. <i>Physical Review B</i> , 2010, 82, .	1.1	66
21	Ultrafast Coherent Electron Transport in Semiconductor Quantum Cascade Structures. <i>Physical Review Letters</i> , 2002, 89, 047402.	2.9	58
22	Above-room-temperature mid-infrared lasing from vertical-cavity surface-emitting PbTe quantum-well lasers. <i>Applied Physics Letters</i> , 2001, 78, 862-864.	1.5	55
23	Optical Phonon Sidebands of Electronic Intersubband Absorption in Strongly Polar Semiconductor Heterostructures. <i>Physical Review Letters</i> , 2005, 94, 037403.	2.9	54
24	Epitaxial Bragg mirrors for the mid-infrared and their applications. <i>Progress in Quantum Electronics</i> , 2001, 25, 193-228.	3.5	53
25	Ultrashort-pulse wave-front autocorrelation. <i>Optics Letters</i> , 2003, 28, 2399.	1.7	53
26	A Mechanistic Perspective on Plastically Flexible Coordination Polymers. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 5557-5561.	7.2	50
27	Homogeneous broadening and excitation-induced dephasing of intersubband transitions in a quasi-two-dimensional electron gas. <i>Physical Review B</i> , 2001, 63, .	1.1	49
28	Determination of the orientation of CuCl nanocrystals in a NaCl matrix. <i>Solid State Communications</i> , 1995, 94, 189-191.	0.9	48
29	Strong Correlation of Electronic and Lattice Excitations in $\text{AlGaAs}$ Semiconductor Quantum Wells Revealed by Two-Dimensional Terahertz Spectroscopy. <i>Physical Review Letters</i> , 2011, 107, 067401.	2.9	46
30	Measuring optical frequencies in the 0–40 THz range with non-synchronized electro-optic sampling. <i>Nature Photonics</i> , 2007, 1, 577-580.	15.6	41
31	Free excitons with $n=2$ in bulk GaN. <i>Applied Physics Letters</i> , 1997, 71, 948-949.	1.5	38
32	Electron-phonon renormalization of the absorption edge of the cuprous halides. <i>Physical Review B</i> , 2002, 65, .	1.1	38
33	Two-photon absorption in CuCl and CuBr under hydrostatic pressure. <i>Physical Review B</i> , 1994, 49, 11021-11027.	1.1	37
34	Ultra-broadband terahertz pulses generated in the organic crystal DSTMS. <i>Optics Letters</i> , 2015, 40, 3404.	1.7	36
35	Strong Amplification of Coherent Acoustic Phonons by Intraminiband Currents in a Semiconductor Superlattice. <i>Physical Review Letters</i> , 2016, 116, 075504.	2.9	34
36	Electron-phonon interaction at the direct gap of the copper halides. <i>Solid State Communications</i> , 1996, 98, 27-30.	0.9	32

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37	Ultrafast Dynamics of Intersubband Excitations in a Quasi-Two-Dimensional Hole Gas. <i>Physical Review Letters</i> , 2001, 86, 1122-1125.	2.9	31
38	Two-dimensional terahertz spectroscopy of condensed-phase molecular systems. <i>Journal of Chemical Physics</i> , 2021, 154, 120901.	1.2	30
39	Focus on nonlinear terahertz studies. <i>New Journal of Physics</i> , 2014, 16, 045016.	1.2	27
40	Ultrafast phase-resolved pump-probe measurements on a quantum cascade laser. <i>Applied Physics Letters</i> , 2008, 93, 151106.	1.5	26
41	Nonlinear terahertz spectroscopy of semiconductor nanostructures. <i>Applied Physics A: Materials Science and Processing</i> , 2004, 78, 435-440.	1.1	25
42	Coherent charge transport in semiconductor quantum cascade structures. <i>Journal of Physics Condensed Matter</i> , 2004, 16, R25-R48.	0.7	25
43	Two-Phonon Quantum Coherences in Indium Antimonide Studied by Nonlinear Two-Dimensional Terahertz Spectroscopy. <i>Physical Review Letters</i> , 2016, 116, 177401.	2.9	25
44	Time-Resolved Two-Photon Emission in Cu <sub>2</sub> O. <i>Europhysics Letters</i> , 1987, 3, 853-857.	0.7	24
45	Phase-resolved two-dimensional terahertz spectroscopy including off-resonant interactions beyond the $\hbar\omega < i> \hbar\omega < /i> (3)$ limit. <i>Journal of Chemical Physics</i> , 2016, 144, 184202.	1.2	23
46	Determination of Valence Band Parameters in ZnTe. <i>Physica Status Solidi (B): Basic Research</i> , 1984, 125, 653-657.	0.7	22
47	Determination of the Pressure Dependence of Band Structure Parameters by Two-Photon Spectroscopy. <i>Physica Status Solidi (B): Basic Research</i> , 1996, 198, 71-80.	0.7	22
48	Optical deformation-potential scattering of holes in multiple quantum well structures. <i>Physical Review B</i> , 2001, 65, .	1.1	21
49	Ultrafast optical nonlinearity of low-temperature-grown GaInAs/AlInAs quantum wells at wavelengths around 1.55 $\mu$ m. <i>Applied Physics Letters</i> , 2002, 80, 1936-1938.	1.5	21
50	Terahertz radiative coupling and damping in multilayer graphene. <i>New Journal of Physics</i> , 2014, 16, 013027.	1.2	21
51	Two-photon spectroscopy of SnO <sub>2</sub> under hydrostatic pressure. <i>Solid State Communications</i> , 1999, 110, 697-700.	0.9	20
52	Focus: Phase-resolved nonlinear terahertz spectroscopy – From charge dynamics in solids to molecular excitations in liquids. <i>Journal of Chemical Physics</i> , 2015, 142, 212301.	1.2	20
53	Resonant Second-Order Nonlinear Terahertz Response of Gallium Arsenide. <i>Physical Review Letters</i> , 2018, 121, 266602.	2.9	20
54	Field-Induced Tunneling Ionization and Terahertz-Driven Electron Dynamics in Liquid Water. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 7717-7722.	2.1	20

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55	Strong Local-Field Enhancement of the Nonlinear Soft-Mode Response in a Molecular Crystal. <i>Physical Review Letters</i> , 2017, 119, 097404.	2.9	19
56	Two- and three-photon spectroscopy of solids under high pressure. <i>High Pressure Research</i> , 1996, 15, 73-93.	0.4	18
57	High-Field Transport in an Electron-Hole Plasma: Transition from Ballistic to Drift Motion. <i>Physical Review Letters</i> , 2011, 107, 256602.	2.9	18
58	Carrier-wave Rabi flopping on radiatively coupled shallow donor transitions in $n$ -type GaAs. <i>Physical Review B</i> , 2008, 77, .	1.1	17
59	Simultaneous ultrafast probing of intramolecular vibrations and photoinduced charge carriers in rubrene using broadband time-domain THz spectroscopy. <i>Physical Review B</i> , 2007, 75, .	1.1	15
60	Nonlinear Magneto-Optical Properties of Colossal Magnetoresistive Manganites. <i>Physical Review Letters</i> , 2001, 86, 6002-6005.	2.9	14
61	Terahertz Driven Amplification of Coherent Optical Phonons in GaAs Coupled to a Metasurface. <i>Physical Review Letters</i> , 2019, 122, 107402.	2.9	13
62	Spatial distribution of electric-field enhancement across the gap of terahertz bow-tie antennas. <i>Optics Express</i> , 2020, 28, 24389.	1.7	13
63	Two-photon spectroscopy in the low- and high-pressure phases of AgGaS <sub>2</sub> . <i>Solid State Communications</i> , 1995, 96, 279-283.	0.9	12
64	Terahertz Polaron Oscillations of Electrons Solvated in Liquid Water. <i>Physical Review Letters</i> , 2021, 126, 097401.	2.9	12
65	High Pressure Luminescence of Zincblende and Wurtzite GaN. <i>Physica Status Solidi (B): Basic Research</i> , 1999, 211, 57-61.	0.7	11
66	Ultrafast hole burning in intersubband absorption lines of GaN <sup>+</sup> /AlN superlattices. <i>Applied Physics Letters</i> , 2006, 89, 151103.	1.5	11
67	Investigation of mixed-mode polariton dispersion in AgGaS <sub>2</sub> . <i>Physica Status Solidi (B): Basic Research</i> , 1982, 114, 553-559.	0.7	10
68	Nonresonant coherent control: Intersubband excitations manipulated by a nonresonant terahertz pulse. <i>Physical Review B</i> , 2015, 92, .	1.1	10
69	Violet laser emission in copper halides. <i>Journal of Applied Physics</i> , 1994, 76, 4897-4899.	1.1	9
70	Rabi oscillations of intersubband transitions in GaAs/AlGaAs MQWs. <i>Semiconductor Science and Technology</i> , 2004, 19, S285-S286.	1.0	9
71	Nonlinear electron transport in an electron-hole plasma. <i>Physical Review B</i> , 2012, 85, .	1.1	9
72	Ein mechanistischer Blick auf plastisch flexible Koordinationspolymere. <i>Angewandte Chemie</i> , 2020, 132, 5602-5607.	1.6	9

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73	Direct comparison of the pressure-induced band-gap shifts in cubic and hexagonal GaN. Journal of Applied Physics, 1998, 84, 2971-2973.	1.1	8
74	Coherent nonlinear dynamics of intersubband excitations in a two-dimensional electron gas. Physica B: Condensed Matter, 2002, 314, 244-247.	1.3	8
75	A table-top source of strong pulses. Nature Photonics, 2008, 2, 596-597.	15.6	8
76	Optical stark effect of excitons in semiconductors. Journal of Luminescence, 1987, 38, 235-238.	1.5	7
77	Radiative coupling of intersubband transitions in GaAs/AlGaAs multiple quantum wells. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 32, 262-265.	1.3	7
78	Ultrafast coherent electron transport in GaAs/AlGaAs quantum cascade structures. Physica B: Condensed Matter, 2002, 314, 314-322.	1.3	6
79	Harnessing terahertz polarization. Nature Photonics, 2009, 3, 495-496.	15.6	5
80	Time-resolved photoluminescence from $n$ -doped GaN/Al <sub>0.18</sub> Ga <sub>0.82</sub> N short-period superlattices probes carrier kinetics and long-term structural stability. Journal of Applied Physics, 2019, 125, .	1.1	5
81	Mono-cycle terahertz pulses from intersubband shift currents in asymmetric semiconductor quantum wells. Optica, 2021, 8, 1638.	4.8	5
82	Phonon-Induced Relocation of Valence Charge in Boron Nitride Observed by Ultrafast X-Ray Diffraction. Physical Review Letters, 2022, 128, 136402.	2.9	5
83	Optical determination of the size distribution of CuCl nanocrystals in NaCl. Journal of Crystal Growth, 1999, 196, 135-140.	0.7	4
84	Coupling of intersubband transitions to zone-folded acoustic phonons in a GaN/AlN superlattice. Physical Review B, 2012, 85, .	1.1	4
85	Two-color two-dimensional terahertz spectroscopy: A new approach for exploring even-order nonlinearities in the nonperturbative regime. Journal of Chemical Physics, 2021, 154, 154203.	1.2	4
86	Ultrafast nonlinear phonon response of few-layer hexagonal boron nitride. Physical Review B, 2021, 104, .	1.1	4
87	Mid-infrared beam splitter for ultrashort pulses. Optics Letters, 2017, 42, 2918.	1.7	3
88	Ultrafast carrier dynamics in a $\text{GaN}/\text{AlN}$ superlattice. Physical Review B, 2018, 97, .	1.1	3
89	Frequency Upshift of the Transverse Optical Phonon Resonance in GaAs by Femtosecond Electron-Hole Excitation. Physical Review Letters, 2020, 125, 027401.	2.9	3
90	Femtosecond intersubband dynamics of electrons in AlGaIn/GaN-based high-electron-mobility transistors. Semiconductor Science and Technology, 2004, 19, S463-S464.	1.0	2

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91	Wavefront autocorrelation of femtosecond laser beams. , 2004, 5333, 122.		2
92	Deformation Measurements of High-Speed MEMS With Combined Two-Wavelength Single-Pulse Digital Holography and Single Phase Reconstruction Using Subpicosecond Pulses. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 1351-1358.	1.9	2
93	Terahertz driven amplification of coherent optical phonons in GaAs coupled to metallic dog-bone resonators. EPJ Web of Conferences, 2019, 205, 05007.	0.1	2
94	Two-Color Two-Dimensional Terahertz Spectroscopy on Intersubband Transitions of Coupled Quantum Wells. , 2010, , .		2
95	Nonlinear magneto-optical properties of Pr <sub>1-x</sub> Ca <sub>x</sub> MnO <sub>3</sub> and Nd <sub>1-x</sub> Sr <sub>x</sub> MnO <sub>3</sub> . Journal of Applied Physics, 2002, 91, 7505.	1.1	1
96	Phonon sidebands of intersubband absorption in AlGaIn/GaN high-electron-mobility transistors. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 32, 562-565.	1.3	1
97	Impact of piezoelectric fields on coherent zone-folded phonons in GaAs/AlAs superlattices. Physical Review B, 2019, 100, .	1.1	1
98	Nonlinear Terahertz and Midinfrared Response of n-Type GaAs. , 2008, , 237-249.		1
99	Frequency counter for optical frequencies up to 40 THz. , 2007, , .		1
100	Amplification of Coherent Sub-Terahertz Phonons by Interaction with Drift Currents in a Semiconductor Superlattice. , 2016, , .		1
101	Excitation of tunable plasmons in silicon using microwave transmission through a metallic aperture. Applied Physics Letters, 2022, 120, 162103.	1.5	1
102	Coherent polaron dynamics of electrons solvated in polar liquids. , 0, , .		1
103	Lead-salt-based VCSELs for the 3- to 6- $\mu$ m range. , 2001, , .		0
104	Above-room-temperature operation of IV-VI microcavity lasers. Physica E: Low-Dimensional Systems and Nanostructures, 2002, 13, 888-891.	1.3	0
105	Coherent vs. incoherent charge transport in semiconductor quantum cascade structures. , 2004, 5352, 333.		0
106	Nonlinear THz response of n-type GaAs. , 2009, , .		0
107	Nonlinear terahertz spectroscopy. Proceedings of SPIE, 2010, , .	0.8	0
108	High field transport of photo-injected electrons in GaAs: Transition from ballistic to drift motion. , 2011, , .		0

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109	One- and two-dimensional nonlinear THz spectroscopy on semiconductor nanostructures. Proceedings of SPIE, 2011, , .	0.8	0
110	Nonlinear THz spectroscopy of graphene. , 2012, , .		0
111	Ultrafast nonlinear terahertz studies of high-field charge transport in semiconductors. Proceedings of SPIE, 2012, , .	0.8	0
112	Nonlinear Terahertz Spectroscopy on Multilayer Graphene. , 2017, , 269-293.		0
113	Multidimensional Terahertz Spectroscopy. , 2018, , 197-206.		0
114	Soft-mode driven dynamics in ferroelectrics -new insight from ultrafast terahertz and x-ray experiments. EPJ Web of Conferences, 2019, 205, 04001.	0.1	0
115	Millijoule few-cycle 5 $\mu$ m source at 1 kHz repetition rate for generating broadband pulses from the mid-to far-infrared. EPJ Web of Conferences, 2019, 205, 01014.	0.1	0
116	Nonlinear THz Spectroscopy on n-Type GaAs. , 2006, , .		0
117	Ultrafast Nonlinear Terahertz Spectroscopy of n-Type GaAs. , 2007, , .		0
118	High-Order Optical Nonlinearities from Collinear Time-Resolved Two-Dimensional Spectroscopy. , 2009, , .		0
119	High-precision Contouring of Rapidly Oscillating Optical Surfaces with Two-wavelength Single-shot Digital Holography. , 2009, , .		0
120	Bloch Oscillations and Zener Tunneling in Bulk GaAs. , 2009, , .		0
121	Ultrafast Coherent High-Field Electron Transport in GaAs. , 2010, , .		0
122	Two-dimensional THz Spectroscopy of Graphene. , 2012, , .		0
123	High-field terahertz shift current in lithium niobate. , 2014, , .		0
124	Terahertz harmonics in multi-layer graphene in the nonperturbative regime. , 2014, , .		0
125	Ultrafast Terahertz Response of Lithium Niobate in the Nonperturbative Regime. , 2014, , .		0
126	Control of Coherent Intersubband Excitations by a Nonresonant THz Pulse. , 2015, , .		0



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127	Two-Phonon Quantum Coherences in InSb Studied by Two-Dimensional Terahertz Spectroscopy. , 2016, , .		0
128	Strong Local-Field Enhancement of the Nonlinear Softmode Response in Aspirin. , 2017, , .		0
129	Ultrafast carrier dynamics in AlGaIn/GaN superlattices by time-dependent reflectivity measurements (Conference Presentation). , 2018, , .		0
130	Underdamped longitudinal soft modes in ionic crystallitesâ€™ lattice and charge motions observed by ultrafast x-ray diffraction. Structural Dynamics, 2022, 9, 024501.	0.9	0