Rupert Huber

List of Publications by Citations

144 papers	8,527 citations	44 h-index	92 g-index
268 ext. papers	11,036 ext. citations	12.1 avg, IF	5.8 L-index

#	Paper	IF	Citations
144	The 2017 terahertz science and technology roadmap. *Journal Physics D: Applied Physics*, **2017**, 50, 043001	3	724
143	Coherent terahertz control of antiferromagnetic spin waves. *Nature Photonics*, **2011**, 5, 31-34	33.9	578
142	Sub-cycle control of terahertz high-harmonic generation by dynamical Bloch oscillations. *Nature Photonics*, **2014**, 8, 119-123	33.9	560
141	How many-particle interactions develop after ultrafast excitation of an electron-hole plasma. *Nature*, **2001**, 414, 286-9	50.4	438
140	Sub-cycle switch-on of ultrastrong light-matter interaction. *Nature*, **2009**, 458, 178-81	50.4	384
139	Real-time observation of interfering crystal electrons in high-harmonic generation. *Nature*, **2015**, 523, 572-5	50.4	332
138	Coherent structural dynamics and electronic correlations during an ultrafast insulator-to-metal phase transition in VO2. *Physical Review Letters*, **2007**, 99, 116401	7.4	319
137	Generation and field-resolved detection of femtosecond electromagnetic pulses tunable up to 41 THz. *Applied Physics Letters*, **2000**, 76, 3191-3193	3.4	308
136	Phase-locked generation and field-resolved detection of widely tunable terahertz pulses with amplitudes exceeding 100 MV/cm. *Optics Letters*, **2008**, 33, 2767-9	3	301
135	Tracking the ultrafast motion of a single molecule by femtosecond orbital imaging. *Nature*, **2016**, 539, 263-267	50.4	229
134	Resonant internal quantum transitions and femtosecond radiative decay of excitons in monolayer WSe2. *Nature Materials*, **2015**, 14, 889-93	27	224
133	Synthesis of a single cycle of light with compact erbium-doped fibre technology. *Nature Photonics*, **2010**, 4, 33-36	33.9	203
132	Ultrafast multi-terahertz nano-spectroscopy with sub-cycle temporal resolution. *Nature Photonics*, **2014**, 8, 841-845	33.9	171
131	Ultrabroadband detection of multi-terahertz field transients with GaSe electro-optic sensors: Approaching the near infrared. *Applied Physics Letters*, **2004**, 85, 3360-3362	3.4	158
130	Ultrafast insulator-metal phase transition in VO2 studied by multiterahertz spectroscopy. *Physical Review B*, **2011**, 83,	3.3	139
129	Ultrafast transient generation of spin-density-wave order in the normal state of BaFe2As2 driven by coherent lattice vibrations. *Nature Materials*, **2012**, 11, 497-501	27	134
128	Lightwave-driven quasiparticle collisions on a subcycle timescale. *Nature*, **2016**, 533, 225-9	50.4	131

127	Temporal characterization of femtosecond laser-plasma-accelerated electron bunches using terahertz radiation. *Physical Review Letters*, **2006**, 96, 014801	7.4	130
126	Non-thermal separation of electronic and structural orders in a persisting charge density wave. *Nature Materials*, **2014**, 13, 857-61	27	128
125	Direct Observation of Ultrafast Exciton Formation in a Monolayer of WSe. *Nano Letters*, **2017**, 17, 1455-1460	11.5	126
124	Femtosecond photo-switching of interface polaritons in black phosphorus heterostructures. *Nature Nanotechnology*, **2017**, 12, 207-211	28.7	125
123	Nonlinear spin control by terahertz-driven anisotropy fields. *Nature Photonics*, **2016**, 10, 715-718	33.9	116
122	Single-cycle multiterahertz transients with peak fields above 10 MV/cm. *Optics Letters*, **2010**, 35, 2645-7	3	115
121	Ultrafast transition between exciton phases in van der Waals heterostructures. *Nature Materials*, **2019**, 18, 691-696	27	96
120	Lightwave valleytronics in a monolayer of tungsten diselenide. *Nature*, **2018**, 557, 76-80	50.4	95
119	Terahertz Light-Matter Interaction beyond Unity Coupling Strength. *Nano Letters*, **2017**, 17, 6340-6344	11.5	86
118	Femtosecond response of quasiparticles and phonons in superconducting YBa(2)Cu(3)O(7-[]) studied by wideband terahertz spectroscopy. *Physical Review Letters*, **2010**, 105, 067001	7.4	86
117	Subcycle observation of lightwave-driven Dirac currents in a topological surface band. *Nature*, **2018**, 562, 396-400	50.4	83
116	Symmetry-controlled time structure of high-harmonic carrier fields from a solid. *Nature Photonics*, **2017**, 11, 227-231	33.9	78
115	8-fs pulses from a compact Er:fiber system: quantitative modeling and experimental implementation. *Optics Express*, **2009**, 17, 1070-7	3.3	75
114	Terahertz coherent control of optically dark paraexcitons in Cu2O. *Physical Review Letters*, **2008**, 101, 246401	7.4	75
113	Giant magnetic splitting inducing near-unity valley polarization in van der Waals heterostructures. *Nature Communications*, **2017**, 8, 1551	17.4	73
112	Femtosecond formation of coupled phonon-plasmon modes in InP: Ultrabroadband THz experiment and quantum kinetic theory. *Physical Review Letters*, **2005**, 94, 027401	7.4	71
111	Terahertz-Driven Nonlinear Spin Response of Antiferromagnetic Nickel Oxide. *Physical Review Letters*, **2016**, 117, 197201	7.4	70
110	Temporal and spectral fingerprints of ultrafast all-coherent spin switching. *Nature*, **2019**, 569, 383-387	50.4	68

109	Extremely Nonperturbative Nonlinearities in GaAs Driven by Atomically Strong Terahertz Fields in Gold Metamaterials. *Physical Review Letters*, **2014**, 113, 227401	7.4	67
108	Luminescence studies of a Si/SiO2 superlattice. *Journal of Applied Physics*, **2002**, 92, 3564-3568	2.5	67
107	Field-resolved detection of phase-locked infrared transients from a compact Er:fiber system tunable between 55 and 107 THz. *Applied Physics Letters*, **2008**, 93, 251107	3.4	64
106	Attosecond relative timing jitter and 13 fs tunable pulses from a two-branch Er:fiber laser. *Optics Letters*, **2007**, 32, 3504-6	3	63
105	Broadband terahertz study of excitonic resonances in the high-density regime in GaAs□AlxGa1□As quantum wells. *Physical Review B*, **2005**, 72,	3.3	63
104	Nonperturbative interband response of a bulk InSb semiconductor driven off resonantly by terahertz electromagnetic few-cycle pulses. *Physical Review Letters*, **2012**, 109, 147403	7.4	55
103	Ultrabroadband terahertz pulses: generation and field-resolved detection. *Semiconductor Science and Technology*, **2005**, 20, S128-S133	1.8	54
102	Stimulated terahertz emission from intraexcitonic transitions in Cu2O. *Physical Review Letters*, **2006**, 96, 017402	7.4	54
101	Ultrafast Mid-Infrared Nanoscopy of Strained Vanadium Dioxide Nanobeams. *Nano Letters*, **2016**, 16, 1421-7	11.5	50
100	All-passive phase locking of a compact Er:fiber laser system. *Optics Letters*, **2011**, 36, 540-2	3	42
99	Magneto-optic transmittance modulation observed in a hybrid graphene□split ring resonator terahertz metasurface. *Applied Physics Letters*, **2015**, 107, 121104	3.4	35
98	Photo-Dember terahertz emitter excited with an Er:fiber laser. *Applied Physics Letters*, **2011**, 98, 021114	3.4	35
97	12-fs pulses from a continuous-wave-pumped 200-nJ Ti:sapphire amplifier at a variable repetition rate as high as 4 MHz. *Optics Letters*, **2003**, 28, 2118-20	3	35
96	Revealing the dark side of a bright exciton-polariton condensate. *Nature Communications*, **2014**, 5, 4648	17.4	34
95	Light Emission from Gold Nanoparticles under Ultrafast Near-Infrared Excitation: Thermal Radiation, Inelastic Light Scattering, or Multiphoton Luminescence?. *Nano Letters*, **2017**, 17, 7914-7919	11.5	34
94	Mapping of the dark exciton landscape in transition metal dichalcogenides. *Physical Review B*, **2018**, 98,	3.3	33
93	Dielectric Engineering of Electronic Correlations in a van der Waals Heterostructure. *Nano Letters*, **2018**, 18, 1402-1409	11.5	32
92	Shot noise reduced terahertz detection via spectrally postfiltered electro-optic sampling. *Optics Letters*, **2014**, 39, 2435-8	3	31

91	Nonadiabatic switching of a photonic band structure: Ultrastrong light-matter coupling and slow-down of light. *Physical Review B*, **2012**, 85,	3.3	31
90	Ultrabroadband 50-130 THz pulses generated via phase-matched difference frequency mixing in LiIO(3). *Optics Express*, **2007**, 15, 5775-81	3.3	31
89	Nanoscale Near-Field Tomography of Surface States on (BiSb)Te. *Nano Letters*, **2018**, 18, 7515-7523	11.5	31
88	Twist-tailoring Coulomb correlations in van der Waals homobilayers. *Nature Communications*, **2020**, 11, 2167	17.4	27
87	Coherent cyclotron motion beyond Kohn□s theorem. *Nature Physics*, **2016**, 12, 119-123	16.2	26
86	Electric and magnetic terahertz nonlinearities resolved on the sub-cycle scale. *New Journal of Physics*, **2013**, 15, 065003	2.9	26
85	Phase-locked multi-terahertz electric fields exceeding 13 MV/cm at a 190 kHz repetition rate. *Optics Letters*, **2017**, 42, 4367-4370	3	25
84	Rapid-scan acousto-optical delay line with 34 kHz scan rate and 15 as precision. *Optics Letters*, **2013**, 38, 2907-10	3	25
83	Phase II trial of oral vinorelbine in combination with cisplatin followed by consolidation therapy with oral vinorelbine in advanced NSCLC. *Lung Cancer*, **2005**, 48, 129-35	5.9	25
82	Structure and electronic properties of SiO2/Si multilayer superlattices: Si K edge and L3,2 edge x-ray absorption fine structure study. *Journal of Applied Physics*, **2002**, 92, 3000-3006	2.5	25
81	Sub-cycle atomic-scale forces coherently control a single-molecule switch. *Nature*, **2020**, 585, 58-62	50.4	24
80	Quantifying Nanoscale Electromagnetic Fields in Near-Field Microscopy by Fourier Demodulation Analysis. *ACS Photonics*, **2020**, 7, 344-351	6.3	22
79	Printed array of thin-dielectric metal-oxide-metal (MOM) tunneling diodes. *Journal of Applied Physics*, **2011**, 110, 044316	2.5	19
78	Tunable non-integer high-harmonic generation in a topological insulator. *Nature*, **2021**, 593, 385-390	50.4	19
77	Subcycle contact-free nanoscopy of ultrafast interlayer transport in atomically thin heterostructures. *Nature Photonics*, **2021**, 15, 594-600	33.9	18
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75	. *IEEE Journal of Selected Topics in Quantum Electronics*, **2013**, 19, 8401608-8401608	3.8	15
74	Reststrahl band-assisted photocurrents in epitaxial graphene layers. *Physical Review B*, **2013**, 88,	3.3	14

73	Femtosecond THz studies of intra-excitonic transitions. *Physica Status Solidi (B): Basic Research*, **2008**, 245, 1041-1048	1.3	13
72	Femtosecond buildup of Coulomb screening in a photoexcited electron□hole plasma. *Physica B: Condensed Matter*, **2002**, 314, 248-254	2.8	13
71	Quantitative sampling of atomic-scale electromagnetic waveforms. *Nature Photonics*, **2021**, 15, 143-147	33.9	13
70	Momentum-Resolved Observation of Exciton Formation Dynamics in Monolayer WS. *Nano Letters*, **2021**, 21, 5867-5873	11.5	11
69	Amplitude and Phase Resolved Detection of Tunable Femtosecond Pulses with Frequency Components beyond 100 THz. *Springer Series in Chemical Physics*, **2001**, 215-217	0.3	9
68	Advances in Solid State Physics. *Advances in Solid State Physics*, **2006**,		9
67	Ultrafast transient increase of oxygen octahedral rotations in a perovskite. *Physical Review Research*, **2019**, 1,	3.9	8
66	Super-resolution lightwave tomography of electronic bands in quantum materials. *Science*, **2020**, 370, 1204-1207	33.3	8
65	Non-adiabatic stripping of a cavity field from deep-strongly coupled electrons. *Nature Photonics*, **2020**, 14, 675-679	33.9	8
64	Ultrabroadband etalon-free detection of infrared transients by van-der-Waals contacted sub-10-□m GaSe detectors. *Optics Express*, **2018**, 26, 19059-19066	3.3	7
63	Interlayer Excitons in Transition-Metal Dichalcogenide Heterobilayers. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1900308	1.3	7
62	Switching ultrastrong light□matter coupling on a subcycle scale. *Journal of Applied Physics*, **2011**, 109, 102418	2.5	7
61	Femtosecond Buildup of a Many-Body Resonance Observed via Two-Dimensional THz Time-Domain Spectroscopy. *Physica Status Solidi (B): Basic Research*, **2002**, 234, 207-214	1.3	7
60	Femtosecond buildup of Coulomb screening in photoexcited GaAs probed via ultrabroadband THz spectroscopy. *Journal of Luminescence*, **2001**, 94-95, 555-558	3.8	7
59	Ultrafast terahertz saturable absorbers using tailored intersubband polaritons. *Nature Communications*, **2020**, 11, 4290	17.4	7
58	Tailored nanoantennas for directional Raman studies of individual carbon nanotubes. *Physical Review B*, **2015**, 91,	3.3	6
57	Ultrafast two-dimensional field spectroscopy of terahertz intersubband saturable absorbers. *Optics Express*, **2019**, 27, 2248-2257	3.3	6
56	Ultrafast electron diffraction from nanophotonic waveforms via dynamical Aharonov-Bohm phases. *Science Advances*, **2020**, 6,	14.3	6

55	Quantitative terahertz emission nanoscopy with multiresonant near-field probes. *Optics Letters*, **2021**, 46, 3572-3575	3	6
54	How fast do charged particles get dressed?. *Physica Status Solidi (B): Basic Research*, **2003**, 238, 455-461	1.3	5
53	Tailored Subcycle Nonlinearities of Ultrastrong Light-Matter Coupling. *Physical Review Letters*, **2021** , 126, 177404	7.4	5
52	Ultrashort pulse characterization with a terahertz streak camera. *Optics Letters*, **2011**, 36, 4458-60	3	4
51	Ultrafast insulator-metal transition in VO2: interplay between coherent lattice motion and electronic correlations. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2009**, 6, 149-151		4
50	. *IEEE Journal on Selected Areas in Communications*, **2005**, 23, 1330-1334	14.2	4
49	Ultrafast THz spectroscopy of correlated electrons: from excitons to Cooper pairs. *Physica Status Solidi (B): Basic Research*, **2006**, 243, 2414-2422	1.3	4
48	THz quantum optics with dark excitons in Cu2O: from stimulated emission to nonlinear population control. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2009**, 6, 156-161		3
47	Surface plasmon coupling in hexagonal textured metallic microcavity. *Applied Physics Letters*, **2006**, 89, 131123	3.4	3
46	How fast electrons and photons mix: Sub-cycle switching of intersubband cavity polaritons. *Journal of Physics: Conference Series*, **2009**, 193, 012060	0.3	2
45	Ultrafast Formation of Quasiparticles in Semiconductors: How Bare Charges Get Dressed **2004**, 231-249		2
44	**2016**,		2
43	High-harmonic generation in solids **2016**,		2
42	Tuning Spontaneous Emission through Waveguide Cavity Effects in Semiconductor Nanowires. *Nano Letters*, **2019**, 19, 7287-7292	11.5	1
41	Mapping spin-orbit activated interchannel coupling. *Europhysics Letters*, **2014**, 106, 13001	1.6	1
40	Nonlinear response of semiconductors driven by intense THz pulses **2012**,		1
39	Ultrafast terahertz spin dynamics: from phonon-induced spin order to coherent magnon control **2013**,		1
38	A Multi-Terahertz View of Ultrafast Charge Density Wave Dynamics in TiSe2 **2013**,		1

37	Single-cycle multi-terahertz spectroscopy: observing the build-up of phonon–plasmon coupling in photoexcited InP. *Journal of Modern Optics*, **2005**, 52, 965-972	1.1	1
36	Ultrabroadband detection of multi-THz field transients with GaSe electro-optic sensors. *Springer Series in Chemical Physics*, **2005**, 753-755	0.3	1
35	Harmonic Sideband Generation in Monolayer Transition Metal Dichalcogenides **2017**,		1
34	Broadband and High-Sensitivity Time-Resolved THz System Using Grating-Assisted Tilted-Pulse-Front Phase Matching. *Advanced Optical Materials*,2101136	8.1	1
33	Ultrafast Spin Precession and Transport Controlled and Probed with Terahertz Radiation. *Springer Proceedings in Physics*, **2015**, 324-326	0.2	1
32	THz Spin Dynamics: Phonon-Induced Spin Order. *Springer Proceedings in Physics*, **2015**, 327-330	0.2	1
31	Proximity control of interlayer exciton-phonon hybridization in van der Waals heterostructures. *Nature Communications*, **2021**, 12, 1719	17.4	1
30	Ultrafast optical modulation of magneto-optical terahertz effects occurring in a graphene-loaded resonant metasurface **2016**,		1
29	Terahertz Microscopy Down to the Atomic Scale **2018**,		1
28	Strong-Field Terahertz Excitations in Semiconductors **2018**, 33-39		1
27	Field-resolved high-order sub-cycle nonlinearities in a terahertz semiconductor laser.. *Light: Science and Applications*, **2021**, 10, 246	16.7	1
26	Microcavity design for low threshold polariton condensation with ultrashort optical pulse excitation. *Journal of Applied Physics*, **2015**, 117, 205702	2.5	0
25	Watching bare charges get dressed in an ultrabroadband THz experiment. *Springer Series in Chemical Physics*, **2003**, 365-367	0.3	0
24	Multibranch pulse synthesis and electro-optic detection of subcycle multi-terahertz electric fields. *Optics Letters*, **2019**, 44, 5521-5524	3	0
23	Lightwave control of the valley pseudospin in a monolayer of tungsten diselenide. *EPJ Web of Conferences*, **2019**, 205, 05011	0.3	
22	Electron–hole collisions in an atomically thin semiconductor. *Journal of Physics: Conference Series*, **2019**, 1220, 012001	0.3	
21	Nanoscience: Single-molecule instant replay. *Nature*, **2016**, 539, 170-171	50.4	
20	Ultrafast Infrared Nanoscopy with Sub-Cycle Temporal Resolution. *Microscopy and Microanalysis*, **2015**, 21, 2163-2164	0.5	

19	Sub-cycle switching of a photonic bandstructure via ultrastrong light-matter coupling. *EPJ Web of Conferences*, **2013**, 41, 09009	0.3
18	Transient Spin Density Wave Order Induced in the Normal State of BaFe2As2by Coherent Lattice Oscillations. *EPJ Web of Conferences*, **2013**, 41, 03012	0.3
17	Non-perturbative four-wave mixing in InSb with intense off-resonant multi-THz pulses. *EPJ Web of Conferences*, **2013**, 41, 04004	0.3
16	Ultrafast low-energy dynamics of graphite studied by nonlinear multi-THz spectroscopy. *EPJ Web of Conferences*, **2013**, 41, 04023	0.3
15	Femtosecond quantum optics with semiconductor nanostructures **2012**, 487-527	
14	Towards Intersubband Polaritonics: How Fast Can Light and Electrons Mate? **2010**, 85-96	
13	Ultrabroadband Terahertz Studies of Correlated Electrons **2010**, 593-613	
12	Faserlaser erzeugt einzelne Lichtschwingung. *Physik in Unserer Zeit*, **2010**, 41, 60-61	0.1
11	Hexagonal Lattice Photonic Crystal in Active Metallic Microcavity. *Materials Research Society Symposia Proceedings*, **2003**, 797, 52	
10	Active textured metallic microcavity. *Physica E: Low-Dimensional Systems and Nanostructures*, **2003**, 17, 446-448	3
9	Femtosecond formation of phonon-plasmon coupled modes studied by ultrabroadband THz spectroscopy. *Springer Series in Chemical Physics*, **2005**, 729-731	0.3
8	Ultrafast Formation of Coupled Phonon-Plasmon Modes in InP Observed with Femtosecond Terahertz Spectroscopy **2006**, 29-32	
7	Stimulated Terahertz Emission from Excitons in Cu2O. *Springer Series in Chemical Physics*, **2007**, 769-771	0.3
6	Phase-Locked Multi-THz High-Harmonic Generation by Dynamical Bloch Oscillations in Bulk Semiconductors. *Springer Proceedings in Physics*, **2015**, 721-724	0.2
5	Ultrabroadband Er:fiber Systems and Applications. *Springer Series in Chemical Physics*, **2009**, 735-737	0.3
4	Femtosecond Formation of Ultrastrong Light-Matter Interaction. *Springer Series in Chemical Physics*, **2009**, 295-297	0.3
3	Intense THz Pulses and 11-fs Electro-optic Sampling with a Multi-Branch Er:fiber/Ti:sapphire Hybrid Amplifier. *Springer Series in Chemical Physics*, **2009**, 672-674	0.3
2	THz Slow Motion of an Ultrafast Insulator-Metal Transition in VO2: Coherent Structural Dynamics and Electronic Correlations. *Springer Series in Chemical Physics*, **2009**, 179-181	0.3

1 Terahertz Nonlinear Response and Coherent Population Control of Dark Excitons in Cu2O. *Springer Series in Chemical Physics*, **2009**, 663-665 0.3