

# David A Reis

## List of Publications by Year in descending order

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Version: 2024-02-01

50  
papers

5,931  
citations

159585

30  
h-index

197818

49  
g-index

51  
all docs

51  
docs citations

51  
times ranked

4456  
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of high-order harmonic generation in a bulk crystal. Nature Physics, 2011, 7, 138-141.	16.7	1,249
2	High-harmonic generation from an atomically thin semiconductor. Nature Physics, 2017, 13, 262-265.	16.7	514
3	High-harmonic generation from solids. Nature Physics, 2019, 15, 10-16.	16.7	374
4	Solid-state harmonics beyond the atomic limit. Nature, 2016, 534, 520-523.	27.8	366
5	Anisotropic high-harmonic generation in bulk crystals. Nature Physics, 2017, 13, 345-349.	16.7	345
6	Ultrafast Bond Softening in Bismuth: Mapping a Solid's Interatomic Potential with X-rays. Science, 2007, 315, 633-636.	12.6	341
7	Atomic-Scale Visualization of Inertial Dynamics. Science, 2005, 308, 392-395.	12.6	324
8	High-harmonic generation from Bloch electrons in solids. Physical Review A, 2015, 91, .	2.5	271
9	Enhanced high-harmonic generation from an all-dielectric metasurface. Nature Physics, 2018, 14, 1006-1010.	16.7	215
10	Generation and propagation of high-order harmonics in crystals. Physical Review A, 2012, 85, .	2.5	165
11	Probing Impulsive Strain Propagation with X-Ray Pulses. Physical Review Letters, 2001, 86, 3072-3075.	7.8	160
12	Fourier-transform inelastic X-ray scattering from time- and momentum-dependent phonon-phonon correlations. Nature Physics, 2013, 9, 790-794.	16.7	149
13	Effect of lattice anharmonicity on high-amplitude phonon dynamics in photoexcited bismuth. Physical Review B, 2005, 72, .	3.2	132
14	Femtosecond x-ray diffraction reveals a liquid-liquid phase transition in phase-change materials. Science, 2019, 364, 1062-1067.	12.6	120
15	X-Ray Second Harmonic Generation. Physical Review Letters, 2014, 112, 163901.	7.8	116
16	Strong-field and attosecond physics in solids. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 204030.	1.5	108
17	Single-cycle terahertz pulses with $>0.2 \text{ V/\AA}$ ... field amplitudes via coherent transition radiation. Applied Physics Letters, 2011, 99, .	3.3	74
18	Phonon dispersion relations and softening in photoexcited bismuth from first principles. Physical Review B, 2007, 75, .	3.2	69

#	ARTICLE	IF	CITATIONS
19	All-Optical Probe of Three-Dimensional Topological Insulators Based on High-Harmonic Generation by Circularly Polarized Laser Fields. Nano Letters, 2021, 21, 8970-8978.	9.1	59
20	The origin of incipient ferroelectricity in lead telluride. Nature Communications, 2016, 7, 12291.	12.8	58
21	Optical Probing of Ultrafast Electronic Decay in Bi and Sb with Slow Phonons. Physical Review Letters, 2013, 110, 047401.	7.8	57
22	Real-Time Manifestation of Strongly Coupled Spin and Charge Order Parameters in Stripe-Ordered $\text{La}_{1.75}\text{Sr}$ Crystals Using Time-Resolved Resonant X-Ray Diffraction. Physical Review Letters, 2013, 110, 127404.	7.8	48
23	Strong-field physics in three-dimensional topological insulators. Physical Review A, 2021, 103, .	2.5	45
24	Observation of backward high-harmonic emission from solids. Optics Express, 2018, 26, 12210.	3.4	44
25	Evidence for photo-induced monoclinic metallic VO <sub>2</sub> under high pressure. Applied Physics Letters, 2014, 104, .	3.3	42
26	Visualization of Atomic-Scale Motions in Materials via Femtosecond X-Ray Scattering Techniques. Annual Review of Materials Research, 2017, 47, 425-449.	9.3	39
27	Interferometry of dipole phase in high harmonics from solids. Nature Photonics, 2019, 13, 96-100.	31.4	36
28	Orientation dependence of temporal and spectral properties of high-order harmonics in solids. Physical Review A, 2017, 96, .	2.5	35
29	Phonon spectroscopy with sub-meV resolution by femtosecond x-ray diffuse scattering. Physical Review B, 2015, 92, .	3.2	34
30	Polarization Flipping of Even-Order Harmonics in Monolayer Transition-Metal Dichalcogenides. Ultrafast Science, 2021, 2021, .	11.2	34
31	Free-carrier relaxation and lattice heating in photoexcited bismuth. Physical Review B, 2013, 87, .	3.2	30
32	Coherent order parameter dynamics in $\text{SmTe}_3$ . Physical Review B, 2019, 99, .	3.2	29
33	Ultrafast resonant soft x-ray diffraction dynamics of the charge density wave in TbTe <sub>3</sub> . Physical Review B, 2016, 93, .	3.2	27
34	Direct Measurement of Anharmonic Decay Channels of a Coherent Phonon. Physical Review Letters, 2018, 121, 125901.	7.8	25
35	Picosecond laser-pump, x-ray probe spectroscopy of GaAs. Review of Scientific Instruments, 2002, 73, 4150-4156.	1.3	22
36	Carrier-induced disordering dynamics in InSb studied with density functional perturbation theory. Physical Review B, 2008, 77, .	3.2	20

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37	Attosecond synchronization of extreme ultraviolet high harmonics from crystals. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 144003.	1.5	20
38	Thermal transport in a semiconductor heterostructure measured by time-resolved x-ray diffraction. Physical Review B, 2008, 78, .	3.2	19
39	Control of two-phonon correlations and the mechanism of high-wavevector phonon generation by ultrafast light pulses. Physical Review B, 2016, 94, .	3.2	17
40	Ultrafast formation of domain walls of a charge density wave in $\text{SmTe}$ . Physical Review B, 2021, 103, .	3.2	16
41	Beating absorption in solid-state high harmonics. Communications Physics, 2020, 3, .	5.3	14
42	Measurements of nonequilibrium interatomic forces using time-domain x-ray scattering. Physical Review B, 2021, 103, .	3.2	12
43	Resonant squeezing and the anharmonic decay of coherent phonons. Physical Review B, 2016, 93, .	3.2	11
44	Generation of structured coherent extreme ultraviolet beams from an MgO crystal. Optics Express, 2021, 29, 24161.	3.4	10
45	Observation of a Novel Lattice Instability in Ultrafast Photoexcited SnSe. Physical Review X, 2022, 12, .	8.9	10
46	Characterization of high-harmonic emission from ZnO up to 11 eV pumped with a Cr:ZnS high-repetition-rate source. Optics Letters, 2019, 44, 259.	3.3	9
47	Dynamically Tunable Terahertz Emission Enabled by Anomalous Optical Phonon Responses in Lead Telluride. ACS Photonics, 2021, 8, 3633-3640.	6.6	7
48	Direct Observation of Coherent Longitudinal and Shear Acoustic Phonons in TaAs Using Ultrafast X-Ray Diffraction. Physical Review Letters, 2022, 128, 155301.	7.8	7
49	Observation of photo-induced plasmon-phonon coupling in PbTe via ultrafast x-ray scattering. Structural Dynamics, 2022, 9, 024301.	2.3	3
50	Probing laser-induced structural changes using coherent phonon detection. , 2008, , .		0