

# David A Reis

## List of Publications by Year in descending order

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Version: 2024-02-01

50  
papers

5,931  
citations

159525

30  
h-index

197736

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.   | 6.5  | 1,249     |
| 2  | High-harmonic generation from an atomically thin semiconductor. Nature Physics, 2017, 13, 262-265.   | 6.5  | 514       |
| 3  | High-harmonic generation from solids. Nature Physics, 2019, 15, 10-16.   | 6.5  | 374       |
| 4  | Solid-state harmonics beyond the atomic limit. Nature, 2016, 534, 520-523.   | 13.7 | 366       |
| 5  | Anisotropic high-harmonic generation in bulk crystals. Nature Physics, 2017, 13, 345-349.  | 6.5  | 345       |
| 6  | Ultrafast Bond Softening in Bismuth: Mapping a Solid's Interatomic Potential with X-rays. Science, 2007, 315, 633-636.                               | 6.0  | 341       |
| 7  | Atomic-Scale Visualization of Inertial Dynamics. Science, 2005, 308, 392-395.  | 6.0  | 324       |
| 8  | High-harmonic generation from Bloch electrons in solids. Physical Review A, 2015, 91, .  | 1.0  | 271       |
| 9  | Enhanced high-harmonic generation from an all-dielectric metasurface. Nature Physics, 2018, 14, 1006-1010.   | 6.5  | 215       |
| 10 | Generation and propagation of high-order harmonics in crystals. Physical Review A, 2012, 85, .   | 1.0  | 165       |
| 11 | Probing Impulsive Strain Propagation with X-Ray Pulses. Physical Review Letters, 2001, 86, 3072-3075.  | 2.9  | 160       |
| 12 | Fourier-transform inelastic X-ray scattering from time- and momentum-dependent phonon-phonon correlations. Nature Physics, 2013, 9, 790-794.         | 6.5  | 149       |
| 13 | Effect of lattice anharmonicity on high-amplitude phonon dynamics in photoexcited bismuth. Physical Review B, 2005, 72, .                            | 1.1  | 132       |
| 14 | Femtosecond x-ray diffraction reveals a liquid-liquid phase transition in phase-change materials. Science, 2019, 364, 1062-1067.                     | 6.0  | 120       |
| 15 | X-Ray Second Harmonic Generation. Physical Review Letters, 2014, 112, 163901.  | 2.9  | 116       |
| 16 | Strong-field and attosecond physics in solids. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 204030.                        | 0.6  | 108       |
| 17 | Single-cycle terahertz pulses with $>0.2 \text{ V/\AA}$ ... field amplitudes via coherent transition radiation. Applied Physics Letters, 2011, 99, . | 1.5  | 74        |
| 18 | Phonon dispersion relations and softening in photoexcited bismuth from first principles. Physical Review B, 2007, 75, .                              | 1.1  | 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.  | 4.5  | 59        |
| 20 | The origin of incipient ferroelectricity in lead telluride. Nature Communications, 2016, 7, 12291.  | 5.8  | 58        |
| 21 | Optical Probing of Ultrafast Electronic Decay in Bi and Sb with Slow Phonons. Physical Review Letters, 2013, 110, 047401.   | 2.9  | 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. | 2.9  | 48        |
| 23 | Strong-field physics in three-dimensional topological insulators. Physical Review A, 2021, 103, .   | 1.0  | 45        |
| 24 | Observation of backward high-harmonic emission from solids. Optics Express, 2018, 26, 12210.  | 1.7  | 44        |
| 25 | Evidence for photo-induced monoclinic metallic VO <sub>2</sub> under high pressure. Applied Physics Letters, 2014, 104, .   | 1.5  | 42        |
| 26 | Visualization of Atomic-Scale Motions in Materials via Femtosecond X-Ray Scattering Techniques. Annual Review of Materials Research, 2017, 47, 425-449.   | 4.3  | 39        |
| 27 | Interferometry of dipole phase in high harmonics from solids. Nature Photonics, 2019, 13, 96-100.   | 15.6 | 36        |
| 28 | Orientation dependence of temporal and spectral properties of high-order harmonics in solids. Physical Review A, 2017, 96, .  | 1.0  | 35        |
| 29 | Phonon spectroscopy with sub-meV resolution by femtosecond x-ray diffuse scattering. Physical Review B, 2015, 92, .   | 1.1  | 34        |
| 30 | Polarization Flipping of Even-Order Harmonics in Monolayer Transition-Metal Dichalcogenides. Ultrafast Science, 2021, 2021, .   | 5.8  | 34        |
| 31 | Free-carrier relaxation and lattice heating in photoexcited bismuth. Physical Review B, 2013, 87, .   | 1.1  | 30        |
| 32 | Coherent order parameter dynamics in $\text{SmTe}_3$ . Physical Review B, 2019, 99, .   | 1.1  | 29        |
| 33 | Ultrafast resonant soft x-ray diffraction dynamics of the charge density wave in TbTe <sub>3</sub> . Physical Review B, 2016, 93, .   | 1.1  | 27        |
| 34 | Direct Measurement of Anharmonic Decay Channels of a Coherent Phonon. Physical Review Letters, 2018, 121, 125901.   | 2.9  | 25        |
| 35 | Picosecond laser-pump, x-ray probe spectroscopy of GaAs. Review of Scientific Instruments, 2002, 73, 4150-4156.   | 0.6  | 22        |
| 36 | Carrier-induced disordering dynamics in InSb studied with density functional perturbation theory. Physical Review B, 2008, 77, .  | 1.1  | 20        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 37 | Attosecond synchronization of extreme ultraviolet high harmonics from crystals. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 144003. | 0.6 | 20        |
| 38 | Thermal transport in a semiconductor heterostructure measured by time-resolved x-ray diffraction. Physical Review B, 2008, 78, .                               | 1.1 | 19        |
| 39 | Control of two-phonon correlations and the mechanism of high-wavevector phonon generation by ultrafast light pulses. Physical Review B, 2016, 94, .            | 1.1 | 17        |
| 40 | Ultrafast formation of domain walls of a charge density wave in $\text{SmTe}$ . Physical Review B, 2021, 103, .  | 1.1 | 16        |
| 41 | Beating absorption in solid-state high harmonics. Communications Physics, 2020, 3, .   | 2.0 | 14        |
| 42 | Measurements of nonequilibrium interatomic forces using time-domain x-ray scattering. Physical Review B, 2021, 103, .  | 1.1 | 12        |
| 43 | Resonant squeezing and the anharmonic decay of coherent phonons. Physical Review B, 2016, 93, .  | 1.1 | 11        |
| 44 | Generation of structured coherent extreme ultraviolet beams from an MgO crystal. Optics Express, 2021, 29, 24161.  | 1.7 | 10        |
| 45 | Observation of a Novel Lattice Instability in Ultrafast Photoexcited SnSe. Physical Review X, 2022, 12, .  | 2.8 | 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.               | 1.7 | 9         |
| 47 | Dynamically Tunable Terahertz Emission Enabled by Anomalous Optical Phonon Responses in Lead Telluride. ACS Photonics, 2021, 8, 3633-3640.                     | 3.2 | 7         |
| 48 | Direct Observation of Coherent Longitudinal and Shear Acoustic Phonons in TaAs Using Ultrafast X-Ray Diffraction. Physical Review Letters, 2022, 128, 155301.  | 2.9 | 7         |
| 49 | Observation of photo-induced plasmon-phonon coupling in PbTe via ultrafast x-ray scattering. Structural Dynamics, 2022, 9, 024301.                             | 0.9 | 3         |
| 50 | Probing laser-induced structural changes using coherent phonon detection. , 2008, , .  |     | 0         |