Keith A Nelson

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1343204/publications.pdf

Version: 2024-02-01

252 papers	16,831 citations	16411 64 h-index	16605 123 g-index
255 all docs	255 docs citations	255 times ranked	11545 citing authors

#	Article	IF	Citations
1	Terahertz-field-induced insulator-to-metal transition in vanadium dioxide metamaterial. Nature, 2012, 487, 345-348.	13.7	1,046
2	Resonant and nonresonant control over matter and light by intense terahertz transients. Nature Photonics, 2013, 7, 680-690.	15.6	803
3	Impulsive stimulated scattering: General importance in femtosecond laser pulse interactions with matter, and spectroscopic applications. Journal of Chemical Physics, 1985, 83, 5391-5399.	1.2	533
4	Generation of 10Î¼J ultrashort terahertz pulses by optical rectification. Applied Physics Letters, 2007, 90, 171121.	1.5	525
5	Generation of high-power terahertz pulses by tilted-pulse-front excitation and their application possibilities. Journal of the Optical Society of America B: Optical Physics, 2008, 25, B6.	0.9	486
6	Time-resolved vibrational spectroscopy in the impulsive limit. Chemical Reviews, 1994, 94, 157-193.	23.0	455
7	Thermal Conductivity Spectroscopy Technique to Measure Phonon Mean Free Paths. Physical Review Letters, 2011, 107, 095901.	2.9	438
8	Observation of bulk Fermi arc and polarization half charge from paired exceptional points. Science, 2018, 359, 1009-1012.	6.0	438
9	Quasi-ballistic thermal transport from nanoscale interfaces observed using ultrafast coherent soft X-ray beams. Nature Materials, 2010, 9, 26-30.	13.3	378
10	Impulsive stimulated light scattering. I. General theory. Journal of Chemical Physics, 1987, 87, 6240-6256.	1.2	332
11	Direct Measurement of Room-Temperature Nondiffusive Thermal Transport Over Micron Distances in a Silicon Membrane. Physical Review Letters, 2013, 110, 025901.	2.9	330
12	Terahertz fieldâ€“induced ferroelectricity in quantum paraelectric SrTiO ₃. Science, 2019, 364, 1079-1082.	6.0	282
13	Optical heterodyne detection of laser-induced gratings. Optics Letters, 1998, 23, 1319.	1.7	264
14	Two-Quantum 2D FT Electronic Spectroscopy of Biexcitons in GaAs Quantum Wells. Science, 2009, 324, 1169-1173.	6.0	262
15	Molecular Orientation and Alignment by Intense Single-Cycle THz Pulses. Physical Review Letters, 2011, 107, 163603.	2.9	261
16	Cleavable comonomers enable degradable, recyclable thermoset plastics. Nature, 2020, 583, 542-547.	13.7	253
17	Optical Generation and Characterization of Acoustic Waves in Thin Films: Fundamentals and Applications. Annual Review of Materials Research, 2000, 30, 117-157.	5.5	241
18	Spatiotemporal Coherent Control of Lattice Vibrational Waves. Science, 2003, 299, 374-377.	6.0	236

#	Article	IF	Citations
19	Optical generation of tunable ultrasonic waves. Journal of Applied Physics, 1982, 53, 1144-1149.	1.1	221
20	Adiabatic shear instability is not necessary for adhesion in cold spray. Acta Materialia, 2018, 158, 430-439.	3.8	213
21	Impact ionization in InSb probed by terahertz pumpâ€"terahertz probe spectroscopy. Physical Review B, 2009, 79, .	1.1	194
22	Laserâ€induced excited state and ultrasonic wave gratings: Amplitude and phase grating contributions to diffraction. Journal of Chemical Physics, 1982, 77, 1144-1152.	1.2	191
23	Impulsive stimulated light scattering. II. Comparison to frequencyâ€domain lightâ€scattering spectroscopy. Journal of Chemical Physics, 1987, 87, 6257-6265.	1.2	173
24	Bose-Einstein Condensation of Long-Lifetime Polaritons in Thermal Equilibrium. Physical Review Letters, 2017, 118, 016602.	2.9	162
25	In-situ observations of single micro-particle impact bonding. Scripta Materialia, 2018, 145, 9-13.	2.6	162
26	Timeâ€resolved observations of coherent molecular vibrational motion and the general occurrence of impulsive stimulated scattering. Journal of Chemical Physics, 1987, 86, 6563-6565.	1.2	161
27	Coherent measurements of high-order electronic correlations in quantum wells. Nature, 2010, 466, 1089-1092.	13.7	161
28	Observation of second sound in graphite at temperatures above 100 K. Science, 2019, 364, 375-379.	6.0	160
29	High strain rate deformation of layered nanocomposites. Nature Communications, 2012, 3, 1164.	5.8	153
30	Laser induced phonons: A probe of intermolecular interactions in molecular solids. Journal of Chemical Physics, 1980, 72, 5202-5218.	1.2	147
31	Terahertz Polaritonics. Annual Review of Materials Research, 2007, 37, 317-350.	4.3	147
32	Nonrelaxational inertial motion in carbon disulfide liquid observed by femtosecond time-resolved impulsive stimulated scattering. The Journal of Physical Chemistry, 1987, 91, 2237-2240.	2.9	144
33	Terahertz Kerr effect. Applied Physics Letters, 2009, 95, .	1.5	132
34	Collective Coherent Control: Synchronization of Polarization in Ferroelectric<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>PbTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>by Shaped THz Fields. Physical Review Letters, 2009, 102, 247603.	2.9	124
35	A review of non-linear terahertz spectroscopy with ultrashort tabletop-laser pulses. Journal of Modern Optics, 2015, 62, 1447-1479.	0.6	119
36	Cooperative photoinduced metastable phase control in strained manganite films. Nature Materials, 2016, 15, 956-960.	13.3	118

#	Article	IF	Citations
37	Interaction of a Contact Resonance of Microspheres with Surface Acoustic Waves. Physical Review Letters, 2013, 111, 036103.	2.9	116
38	Reconstructing phonon mean-free-path contributions to thermal conductivity using nanoscale membranes. Physical Review B, 2015, 91, .	1.1	111
39	Measuring Phonon Mean Free Path Distributions by Probing Quasiballistic Phonon Transport in Grating Nanostructures. Scientific Reports, 2015, 5, 17131.	1.6	107
40	Coherent Two-Dimensional Terahertz Magnetic Resonance Spectroscopy of Collective Spin Waves. Physical Review Letters, 2017, 118, 207204.	2.9	106
41	Nonlinear Terahertz Metamaterials via Field-Enhanced Carrier Dynamics in GaAs. Physical Review Letters, 2013, 110, 217404.	2.9	105
42	The temperatureâ€dependent distribution of relaxation times in glycerol: Timeâ€domain light scattering study of acoustic and Mountainâ€mode behavior in the 20 MHzâ€“3 GHz frequency range. Journal of Chemical Physics, 1988, 88, 6477-6486.	1.2	100
43	Realâ€time optical characterization of surface acoustic modes of polyimide thinâ€film coatings. Journal of Applied Physics, 1992, 72, 2823-2839.	1.1	97
44	Impulsive stimulated Raman scattering experiments in the polariton regime. Journal of the Optical Society of America B: Optical Physics, 1992, 9, 2179.	0.9	96
45	Laser-induced ultrasonics: A daynamic holographic approach to the measurement of weak absorptions, optoelastic constants acoustic attenuation. Chemical Physics, 1982, 72, 371-379.	0.9	88
46	Optical Generation of Gigahertz-Frequency Shear Acoustic Waves in Liquid Glycerol. Physical Review Letters, 2009, 102, 107402.	2.9	86
47	Generation of high power tunable multicycle teraherz pulses. Applied Physics Letters, 2011, 99, .	1.5	86
48	Onset of nondiffusive phonon transport in transient thermal grating decay. Physical Review B, 2011, 84, .	1.1	85
49	Phase-controlled, heterodyne laser-induced transient grating measurements of thermal transport properties in opaque material. Journal of Applied Physics, 2012, 111, .	1.1	82
50	Invited Article: Single-shot THz detection techniques optimized for multidimensional THz spectroscopy. Review of Scientific Instruments, 2015, 86, 051301.	0.6	82
51	Nonlinear two-dimensional terahertz photon echo and rotational spectroscopy in the gas phase. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11800-11805.	3.3	81
52	Ultrafast extreme ultraviolet holography: dynamic monitoring of surface deformation. Optics Letters, 2007, 32, 286.	1.7	80
53	Non-Contact Measurement of Thermal Diffusivity in Ion-Implanted Nuclear Materials. Scientific Reports, 2015, 5, 16042.	1.6	78
54	Direct measurement of polaritonâ€“polariton interaction strength. Nature Physics, 2017, 13, 870-875.	6.5	77

#	Article	IF	Citations
55	Study of Lamb acoustic waveguide modes in unsupported polyimide thin films using realâ€time impulsive stimulated thermal scattering. Journal of Applied Physics, 1994, 75, 1534-1556.	1.1	73
56	Optical system for rapid materials characterization with the transient grating technique: Application to nondestructive evaluation of thin films used in microelectronics. Applied Physics Letters, 1997, 71, 225-227.	1.5	73
57	Three-dimensional electronic spectroscopy of excitons in GaAs quantum wells. Journal of Chemical Physics, 2009, 131, 144510.	1.2	73
58	Supersonic impact resilience of nanoarchitected carbon. Nature Materials, 2021, 20, 1491-1497.	13.3	73
59	Melt-driven erosion in microparticle impact. Nature Communications, 2018, 9, 5077.	5.8	71
60	Temperatureâ€dependent molecular dynamics of liquid carbon disulphide: Polarizationâ€selected impulsive stimulated lightâ€scattering data and Kubo line shape analysis. Journal of Chemical Physics, 1991, 94, 859-867.	1.2	70
61	Commensurate Two-Quantum Coherences Induced by Time-Delayed THz Fields. Physical Review Letters, 2012, 109, 123603.	2.9	69
62	Dynamics of supersonic microparticle impact on elastomers revealed by realâ€“time multiâ€“frame imaging. Scientific Reports, 2016, 6, 25577.	1.6	68
63	Theory of nonlinear optical experiments with harmonic oscillators. Journal of Chemical Physics, 1995, 103, 4393-4407.	1.2	65
64	Heterodyned impulsive stimulated Raman scattering of phononâ€“polaritons in LiTaO3 and LiNbO3. Journal of Chemical Physics, 2002, 117, 2882-2896.	1.2	65
65	Picosecondâ€“microsecond structural relaxation dynamics in polypropylene glycol: Impulsive stimulated lightâ€scattering experiments. Journal of Chemical Physics, 1991, 94, 7677-7688.	1.2	64
66	Benzothiazolium Single Crystals: A New Class of Nonlinear Optical Crystals with Efficient THz Wave Generation. Advanced Materials, 2017, 29, 1701748.	11.1	64
67	Melting Can Hinder Impact-Induced Adhesion. Physical Review Letters, 2017, 119, 175701.	2.9	64
68	Direct Visualization of Collective Wavepacket Dynamics. Journal of Physical Chemistry A, 1999, 103, 10260-10267.	1.1	60
69	Impact-bonding with aluminum, silver, and gold microparticles: Toward understanding the role of native oxide layer. Applied Surface Science, 2019, 476, 528-532.	3.1	60
70	Impulsive stimulated light scattering from glassâ€forming liquids. I. Generalized hydrodynamics approach. Journal of Chemical Physics, 1995, 103, 7722-7731.	1.2	59
71	Non-diffusive relaxation of a transient thermal grating analyzed with the Boltzmann transport equation. Journal of Applied Physics, 2013, 114, 104302.	1.1	58
72	Impulsive stimulated light scattered from glassâ€forming liquids. II. Salol relaxation dynamics, nonergodicity parameter, and testing of mode coupling theory. Journal of Chemical Physics, 1995, 103, 7732-7739.	1.2	57

#	Article	IF	Citations
73	High-frequency surface acoustic wave propagation in nanostructures characterized by coherent extreme ultraviolet beams. Applied Physics Letters, 2009, 94, .	1.5	56
74	Time-resolved imaging of near-fields in THz antennas and direct quantitative measurement of field enhancements. Optics Express, 2012, 20, 8551.	1.7	55
75	Mechanical spectra of glass-forming liquids. II. Gigahertz-frequency longitudinal and shear acoustic dynamics in glycerol and DC704 studied by time-domain Brillouin scattering. Journal of Chemical Physics, 2013, 138, 12A544.	1.2	54
76	Nanoscale transient gratings excited and probed by extreme ultraviolet femtosecond pulses. Science Advances, 2019, 5, eaaw5805.	4.7	54
77	Response to Comment on â€œAdiabatic shear instability is not necessary for adhesion in cold sprayâ€. Scripta Materialia, 2019, 162, 515-519.	2.6	54
78	Noncontact determination of transverse isotropic elastic moduli in polyimide thin films using a laser based ultrasonic method. Applied Physics Letters, 1994, 65, 312-314.	1.5	53
79	Terahertz-Driven Luminescence and Colossal Stark Effect in CdSeâ€“CdS Colloidal Quantum Dots. Nano Letters, 2017, 17, 5375-5380.	4.5	53
80	Transient grating measurements of picosecond acoustic pulses in metal films. Applied Physics Letters, 1999, 74, 1344-1346.	1.5	52
81	Direct Visualization of Laser-Driven Focusing Shock Waves. Physical Review Letters, 2011, 106, 214503.	2.9	52
82	Second-order elastic constants of pentaerythritol tetranitrate and cyclotrimethylene trinitramine using impulsive stimulated thermal scattering. Journal of Applied Physics, 2008, 104, .	1.1	50
83	Ultrafast terahertz field control of electronic and structural interactions in vanadium dioxide. Physical Review B, 2018, 98, .	1.1	49
84	Real-space polariton wave packet imaging. Journal of Chemical Physics, 1999, 110, 1317-1320.	1.2	48
85	Photo-excited charge carriers suppress sub-terahertz phonon mode in silicon at room temperature. Nature Communications, 2016, 7, 13174.	5.8	47
86	High-velocity micro-projectile impact testing. Applied Physics Reviews, 2021, 8, .	5.5	46
87	Nanotwinning-assisted dynamic recrystallization at high strains and strain rates. Nature Materials, 2022, 21, 786-794.	13.3	46
88	Thermal, structural, and orientational relaxation of supercooled salol studied by polarization-dependent impulsive stimulated scattering. Journal of Chemical Physics, 2002, 116, 3384-3395.	1.2	45
89	Impulsive stimulated thermal scattering study of structural relaxation in supercooled glycerol. Journal of Chemical Physics, 2000, 112, 6725-6732.	1.2	44
90	Persistent exciton-type many-body interactions in GaAs quantum wells measured using two-dimensional optical spectroscopy. Physical Review B, 2012, 85, .	1.1	44

#	Article	IF	Citations
91	Material hardness at strain rates beyond 106 sâ˜'1 via high velocity microparticle impact indentation. Scripta Materialia, 2020, 177, 198-202.	2.6	44
92	Ultrasonic and hypersonic properties of molten KNO3â€"Ca(NO3)2 mixture. Journal of Chemical Physics, 1989, 91, 6052-6061.	1.2	43
93	Coherent optical control over collective vibrations traveling at lightlike speeds. Journal of Chemical Physics, 2001, 114, 1443-1446.	1.2	43
94	Generation of multicycle terahertz phonon-polariton waves in a planar waveguide by tilted optical pulse fronts. Applied Physics Letters, 2009, 95, 103304.	1.5	43
95	Direct time-resolved measurement of anharmonic lattice vibrations in ferroelectric crystals. Journal of Chemical Physics, 1997, 107, 9691-9694.	1.2	42
96	Narrow-band acoustic attenuation measurements in vitreous silica at frequencies between 20 and 400 GHz. Applied Physics Letters, 2011, 98, .	1.5	42
97	Particle size effects in metallic microparticle impact-bonding. Acta Materialia, 2020, 194, 40-48.	3.8	42
98	Optical control over two-dimensional lattice vibrational trajectories in crystalline quartz. Journal of Chemical Physics, 1998, 108, 10248-10255.	1.2	41
99	High-precision film thickness determination using a laser-based ultrasonic technique. Applied Physics Letters, 1998, 73, 169-171.	1.5	41
100	Fiber laser pumped high average power single-cycle terahertz pulse source. Applied Physics Letters, 2008, 93, .	1.5	41
101	Lifetime of sub-THz coherent acoustic phonons in a GaAs-AlAs superlattice. Applied Physics Letters, 2013, 102, .	1.5	41
102	Direct observation of large electronâ€"phonon interaction effect on phonon heat transport. Nature Communications, 2020, 11, 6040.	5.8	41
103	Dual echelon femtosecond single-shot spectroscopy. Review of Scientific Instruments, 2014, 85, 083115.	0.6	40
104	Thermal transport in suspended silicon membranes measured by laser-induced transient gratings. AIP Advances, 2016, 6, .	0.6	40
105	Surface acoustic modes in thin films on anisotropic substrates. Journal of Applied Physics, 1999, 86, 2818-2824.	1.1	39
106	Mechanical spectra of glass-forming liquids. I. Low-frequency bulk and shear moduli of DC704 and 5-PPE measured by piezoceramic transducers. Journal of Chemical Physics, 2013, 138, 12A543.	1.2	39
107	Excimer formation in pyrene molecular crystal: Femtosecond dynamics of an oriented bimolecular reaction. Journal of Chemical Physics, 1987, 87, 7346-7347.	1.2	37
108	Integrated diffractive terahertz elements. Applied Physics Letters, 2003, 82, 674-676.	1.5	37

#	Article	IF	Citations
109	Molecular influence in high-strain-rate microparticle impact response of poly(urethane urea) elastomers. Polymer, 2017, 123, 30-38.	1.8	37
110	Transient grating measurement of surface acoustic waves in thin metal films with extreme ultraviolet radiation. Applied Physics Letters, 2006, 89, 091108.	1.5	36
111	Observation of second sound in graphite over 200â€‰K. Nature Communications, 2022, 13, 285.	5.8	36
112	THz-frequency magnon-phonon-polaritons in the collective strong-coupling regime. Journal of Applied Physics, 2019, 125, .	1.1	35
113	Site-specific study of jetting, bonding, and local deformation during high-velocity metallic microparticle impact. Acta Materialia, 2021, 202, 159-169.	3.8	35
114	Femtosecond time-resolved spectroscopy of polarization dynamics in KNbO3. Ferroelectrics, 1991, 120, 79-87.	0.3	34
115	Optical measurement of the elastic moduli and thermal diffusivity of a Câ€“N film. Journal of Materials Research, 1995, 10, 41-48.	1.2	34
116	Experimental and theoretical analysis of THz-frequency, direction-dependent, phonon polariton modes in a subwavelength, anisotropic slab waveguide. Optics Express, 2010, 18, 26351.	1.7	34
117	Automated multidimensional coherent optical spectroscopy with multiple phaseâ€related femtosecond pulses. Journal of Chemical Physics, 1995, 102, 9133-9136.	1.2	33
118	Stable switching among high-order modes in polariton condensates. Physical Review B, 2018, 97, .	1.1	32
119	Surface oxide and hydroxide effects on aluminum microparticle impact bonding. Acta Materialia, 2020, 197, 28-39.	3.8	32
120	Femtosecond Coherent Spectroscopy. Advances in Chemical Physics, 2007, , 1-35.	0.3	31
121	Examining thermal transport through a frequency-domain representation of time-domain thermoreflectance data. Review of Scientific Instruments, 2014, 85, 124903.	0.6	31
122	High-velocity micro-particle impact on gelatin and synthetic hydrogel. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 86, 71-76.	1.5	31
123	Hard X-ray transient grating spectroscopy on bismuth germanate. Nature Photonics, 2021, 15, 499-503.	15.6	31
124	Microparticle impact-bonding modes for mismatched metals: From co-deformation to splatting and penetration. Acta Materialia, 2020, 199, 480-494.	3.8	31
125	Extended two-temperature model for ultrafast thermal response of band gap materials upon impulsive optical excitation. Journal of Chemical Physics, 2015, 143, 194705.	1.2	30
126	Interferometric analysis of laser-driven cylindrically focusing shock waves in a thin liquid layer. Scientific Reports, 2016, 6, 24.	1.6	30

#	Article	IF	Citations
127	The liquidâ€“glass transition in LiCl/H2O: Impulsive stimulated light scattering experiments and modeâ€coupling analysis. Journal of Chemical Physics, 1992, 97, 3557-3572.	1.2	28
128	Generation of coherent phonons by coherent extreme ultraviolet radiation in a transient grating experiment. Applied Physics Letters, 2018, 113, .	1.5	28
129	Structural and orientational relaxation in supercooled liquid triphenylphosphite. Journal of Chemical Physics, 1992, 96, 5448-5459.	1.2	27
130	Impulsive stimulated thermal scattering study of Î± relaxation dynamics and the Debyeâ€“Waller factor anomaly in Ca0.4K0.6(NO3)1.4. Journal of Chemical Physics, 1996, 104, 5429-5436.	1.2	27
131	Nanoscale photothermal and photoacoustic transients probedwith extreme ultraviolet radiation. Applied Physics Letters, 2004, 85, 564-566.	1.5	27
132	Molecular dependencies of dynamic stiffening and strengthening through high strain rate microparticle impact of polyurethane and polyurea elastomers. Applied Physics Letters, 2019, 115, .	1.5	27
133	Bridging the gap to mesoscale radiation materials science with transient grating spectroscopy. Physical Review B, 2016, 94, .	1.1	26
134	Toward broadband mechanical spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8710-8715.	3.3	26
135	Anharmonic phonon-polariton excitation through impulsive stimulated Raman scattering and detection through wave vector overtone spectroscopy: Theory and comparison to experiments on lithium tantalate. Journal of Chemical Physics, 1999, 111, 3559-3571.	1.2	25
136	Generation of ultrahigh-frequency tunable acoustic waves. Applied Physics Letters, 2005, 87, 081907.	1.5	25
137	Optical generation and detection of gigahertz-frequency longitudinal and shear acoustic waves in liquids: Theory and experiment. Journal of Applied Physics, 2012, 112, .	1.1	25
138	Chemically assisted femtosecond laser machining for applications in LiNbO3 and LiTaO3. Applied Physics A: Materials Science and Processing, 2013, 112, 615-622.	1.1	25
139	Shear properties of glycerol by interface wave laser ultrasonics. Journal of Applied Physics, 2006, 99, 013511.	1.1	24
140	Thermal conductivity of nanoparticle suspensions in insulating media measured with a transient optical grating and a hotwire. Journal of Applied Physics, 2008, 103, 083529.	1.1	23
141	Laser-induced transient grating setup with continuously tunable period. Review of Scientific Instruments, 2015, 86, 123101.	0.6	23
142	Variational approach to extracting the phonon mean free path distribution from the spectral Boltzmann transport equation. Physical Review B, 2016, 93, .	1.1	22
143	Two-Dimensional Spectroscopy at Terahertz Frequencies. Topics in Current Chemistry, 2018, 376, 6.	3.0	22
144	On the physical origins of the negative index of refraction. New Journal of Physics, 2005, 7, 213-213.	1.2	21

#	Article	IF	Citations
145	All-optical fluorescence blinking control in quantum dots with ultrafast mid-infrared pulses. Nature Nanotechnology, 2021, 16, 1355-1361.	15.6	21
146	Nonlinear Acoustics at GHz Frequencies in a Viscoelastic Fragile Glass Former. Physical Review Letters, 2015, 114, 065701.	2.9	20
147	Laser-induced versus shock wave induced transformation of highly ordered pyrolytic graphite. Applied Physics Letters, 2015, 106, .	1.5	20
148	Rapid and precise determination of zero-field splittings by terahertz time-domain electron paramagnetic resonance spectroscopy. Chemical Science, 2017, 8, 7312-7323.	3.7	20
149	Long mean free paths of room-temperature THz acoustic phonons in a high thermal conductivity material. Physical Review B, 2019, 100, .	1.1	20
150	Real-Time Observation of a Coherent Lattice Transformation into a High-Symmetry Phase. Physical Review X, 2018, 8, .	2.8	19
151	Single-bubble and multibubble cavitation in water triggered by laser-driven focusing shock waves. Physical Review E, 2018, 97, 053112.	0.8	19
152	Enantioselective orientation of chiral molecules induced by terahertz pulses with twisted polarization. Physical Review Research, 2021, 3, .	1.3	19
153	Picosecond photoexcitation of acoustic waves in locally canted gold films. Applied Physics Letters, 2008, 92, .	1.5	18
154	Applications of Transient Grating Spectroscopy to Radiation Materials Science. Jom, 2015, 67, 1840-1848.	0.9	18
155	Vibrational dynamics of a two-dimensional microgranular crystal. Physical Review B, 2017, 96, .	1.1	17
156	Moduli determination in polyimide film bilayer systems: Prospects for depth profiling using impulsive stimulated thermal scattering. Journal of Applied Physics, 1995, 77, 4431-4444.	1.1	16
157	Dynamics of a Persistent Insulator-to-Metal Transition in Strained Manganite Films. Physical Review Letters, 2019, 123, 267201.	2.9	16
158	Laser-driven high-velocity microparticle launcher in atmosphere and under vacuum. International Journal of Impact Engineering, 2020, 137, 103465.	2.4	16
159	Nanoscale Transient Magnetization Gratings Created and Probed by Femtosecond Extreme Ultraviolet Pulses. Nano Letters, 2021, 21, 2905-2911.	4.5	16
160	Phase mask based interferometer: Operation principle, performance, and application to thermoelastic phenomena. Review of Scientific Instruments, 2004, 75, 2906-2920.	0.6	15
161	Measurement of shorter-than-skin-depth acoustic pulses in a metal film via transient reflectivity. Applied Physics Letters, 2013, 103, .	1.5	15
162	Time-domain Brillouin scattering for the determination of laser-induced temperature gradients in liquids. Review of Scientific Instruments, 2017, 88, 074904.	0.6	15

#	Article	IF	Citations
163	Effect of optically induced potential on the energy of trapped exciton polaritons below the condensation threshold. Physical Review B, 2019, 100, .	1.1	15
164	Terahertz-Driven Stark Spectroscopy of CdSe and CdSeâ€“CdS Coreâ€“Shell Quantum Dots. Nano Letters, 2019, 19, 8125-8131.	4.5	15
165	Generation and detection of 50 GHz surface acoustic waves by extreme ultraviolet pulses. Applied Physics Letters, 2021, 119, .	1.5	15
166	Unifying first-principles theoretical predictions and experimental measurements of size effects in thermal transport in SiGe alloys. Physical Review Materials, 2017, 1, .	0.9	15
167	Improved sample cell design for optical studies of glassâ€forming liquids in the 0â€“530 K range. Review of Scientific Instruments, 1990, 61, 3623-3624.	0.6	14
168	Dis-Bond Detection and the Possibility of Interfacial Stiffness Measurement with Real-Time Impulsive Stimulated Thermal Scattering. Journal of Adhesion, 1995, 50, 1-24.	1.8	14
169	Direct visualization of phonon-polariton focusing and amplitude enhancement. Journal of Chemical Physics, 2002, 117, 2897-2901.	1.2	14
170	Gas-pressure chemical vapor transport growth of millimeter-sized c-BAs single crystals with moderate thermal conductivity. Applied Physics Letters, 2018, 112, .	1.5	14
171	Room Temperature Terahertz Electroabsorption Modulation by Excitons in Monolayer Transition Metal Dichalcogenides. Nano Letters, 2020, 20, 5214-5220.	4.5	14
172	Lifetime of high-order thickness resonances of thin silicon membranes. Ultrasonics, 2015, 56, 116-121.	2.1	13
173	Spinâ€“lattice relaxation in triplet states of isolated molecules and pure crystals in zero field. Journal of Chemical Physics, 1978, 69, 4319-4321.	1.2	12
174	How two-dimensional brick layer J-aggregates differ from linear ones: Excitonic properties and line broadening mechanisms. Journal of Chemical Physics, 2016, 144, 134310.	1.2	12
175	Acoustical breakdown of materials by focusing of laser-generated Rayleigh surface waves. Applied Physics Letters, 2017, 111, .	1.5	12
176	Realâ€time probing of twoâ€photon absorption with phase related pulses. Journal of Chemical Physics, 1994, 100, 6160-6165.	1.2	11
177	Terahertz reflection response measurement using a phonon polariton wave. Journal of Applied Physics, 2009, 105, 054902.	1.1	11
178	Experimental Evidence of Non-Diffusive Thermal Transport in Si and GaAs. Materials Research Society Symposia Proceedings, 2011, 1347, 1.	0.1	11
179	High-Resolution, Low-Noise Imaging in THz Polaritonics. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 239-247.	2.0	11
180	High-Strain-Rate Behavior of a Viscoelastic Gel Under High-Velocity Microparticle Impact. Experimental Mechanics, 2020, 60, 1179-1186.	1.1	11

#	Article	IF	Citations
181	Anomalous polariton dynamics in LiTaO3 polariton dynamics in LiTaO3. Ferroelectrics, 1993, 150, 103-118.	0.3	10
182	Photoacoustic determination of the speed of sound in single crystal cyclotrimethylene trinitramine at acoustic frequencies from 0.5 to 15 GHz. Journal of Applied Physics, 2011, 110, 113513.	1.1	10
183	Propagation of THz acoustic wave packets in GaN at room temperature. Applied Physics Letters, 2018, 112, .	1.5	10
184	Imaging of photoacoustic-mediated permeabilization of giant unilamellar vesicles (GUVs). Scientific Reports, 2021, 11, 2775.	1.6	10
185	The effect of substrate temperature on the critical velocity in microparticle impact bonding. Applied Physics Letters, 2021, 119, .	1.5	10
186	Green's functions of the Boltzmann transport equation with the full scattering matrix for phonon nanoscale transport beyond the relaxation-time approximation. Physical Review B, 2021, 104, .	1.1	10
187	Impulsive stimulated thermal scattering studies of thermally induced cure in thin films of PMDA/ODA. Journal of Polymer Science, Part B: Polymer Physics, 1996, 34, 861-872.	2.4	9
188	Non-equilibrium transient thermal grating relaxation in metal. Journal of Applied Physics, 2011, 109, 073517.	1.1	9
189	Î±-Scale decoupling of the mechanical relaxation and diverging shear wave propagation length scale in triphenylphosphite. Journal of Chemical Physics, 2012, 136, 174509.	1.2	9
190	In situ observations of jetting in the divergent rebound regime for high-velocity metallic microparticle impact. Applied Physics Letters, 2020, 117, .	1.5	9
191	Crystalline-like ordering of 8CB liquid crystals revealed by time-domain Brillouin scattering. Journal of Chemical Physics, 2020, 152, 014202.	1.2	9
192	Nonlinear rotational spectroscopy reveals many-body interactions in water molecules. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	9
193	Femtosecond impulsive stimulated Raman scattering studies of LiTaO₃. Ferroelectrics, 1993, 144, 1-16.	0.3	8
194	Testing of mode-coupling theory through impulsive stimulated thermal scattering. Transport Theory and Statistical Physics, 1995, 24, 1053-1073.	0.4	8
195	ULTRAFAST X-RAY DIFFRACTION:Watching Matter Rearrange. Science, 1999, 286, 1310-1311.	6.0	8
196	Noninvasive Real-Time Evaluation of the Anisotropic Thermal Diffusivity in Thin Polymer Films for Electronics Packaging. Materials Research Society Symposia Proceedings, 1993, 323, 441.	0.1	7
197	Single-Pulse and multiple-pulse femtosecond spectroscopy of ferroelectric materials. Ferroelectrics, 1995, 164, 1-13.	0.3	7
198	Examination of order-disorder and soft modes in perovskite ferroelectrics by impulsive stimulated Raman scattering. Ferroelectrics, 1995, 164, 253-264.	0.3	7

#	Article	IF	Citations
199	Generation and detection of tunable phonon polaritons using a single transmission grating. Applied Physics Letters, 2008, 92, .	1.5	7
200	Single-Shot Multi-Frame Imaging of Cylindrical Shock Waves in a Multi-Layered Assembly. Scientific Reports, 2019, 9, 3689.	1.6	7
201	Pressure-Thresholded Response in Cylindrically Shocked Cyclotrimethylene Trinitramine (RDX). Journal of Physical Chemistry A, 2020, 124, 3301-3313.	1.1	7
202	Interferometric and fluorescence analysis of shock wave effects on cell membrane. Communications Physics, 2020, 3, .	2.0	7
203	Thermal transport exceeding bulk heat conduction due to nonthermal micro/nanoscale phonon populations. Applied Physics Letters, 2020, 116, .	1.5	7
204	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
205	Finite-difference time-domain (FDTD) simulations of electromagnetic wave propagation using a spreadsheet. Computer Applications in Engineering Education, 2005, 13, 213-221.	2.2	6
206	Phonon polariton generation and detection using near-field heterodyne transient grating method. Applied Physics Letters, 2007, 90, 171117.	1.5	5
207	Thermal conductivity in self-assembled CoFe2O4/BiFeO3 vertical nanocomposite films. Applied Physics Letters, 2018, 113, .	1.5	5
208	Two-Dimensional Spectroscopy at Terahertz Frequencies. Topics in Current Chemistry Collections, 2019, , 275-320.	0.2	5
209	Multi-frame interferometric imaging with a femtosecond stroboscopic pulse train for observing irreversible phenomena. Review of Scientific Instruments, 2020, 91, 033711.	0.6	5
210	Time-domain soft mode spectroscopy. Ferroelectrics, 1991, 117, 1-9.	0.3	4
211	Impulsive stimulated scattering study of the coupled acoustic and soft modes in KD2PO4. Ferroelectrics, 1992, 135, 197-218.	0.3	4
212	Impulsive stimulated scattering spectroscopy of surface acoustic waves. Ferroelectrics, 1994, 151, 275-280.	0.3	4
213	Machine learning to analyze images of shocked materials for precise and accurate measurements. Journal of Applied Physics, 2017, 122, 104902.	1.1	4
214	Macroscopic Ionic Flow in a Superionic Conductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow><mml:mi>Na</mml:mi></mml:mrow><mml:mrow><mml:mo>+</mml:mo></mml:mr <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î²</mml:mi></mml:mrow></mml:math> -Alumina Driven by Single-Cycle Terahertz Pulses. Physical Review Letters, 2020, 124, 147401.	2.9	4
215	Nonlinear Optical Absorption in Nanoscale Films Revealed through Ultrafast Acoustics. Nano Letters, 2022, 22, 4362-4367.	4.5	4
216	Preliminary observation of nonrelaxational inertial motion in CS2 liquid by femtosecond time-resolved impulsive stimulated scattering. AIP Conference Proceedings, 1987, , .	0.3	3

#	Article	IF	Citations
217	Femtosecond Electronic and Nuclear Dynamics in Nonlinear Optical Glasses. Materials Research Society Symposia Proceedings, 1992, 293, 437.	0.1	3
218	Real-Time Thermo-Mechanical Property Evaluation of Thin Films. Materials Research Society Symposia Proceedings, 1993, 324, 317.	0.1	3
219	Photoacoustic measurements to determine acoustic velocities in shocked condensed materials: Application to liquid benzene. Applied Physics Letters, 2008, 92, 101926.	1.5	3
220	Coherent phase contrast imaging of THz phononâ€“polariton tunneling. Applied Physics B: Lasers and Optics, 2010, 99, 433-439.	1.1	3
221	Studies of Perovskite Materials for High-Performance Storage Media, Piezoelectric, and Solar Energy Conversion Devices. , 2010, , .		3
222	The homogenization limit and waveguide gradient index devices demonstrated through direct visualization of THz fields. New Journal of Physics, 2015, 17, 013013.	1.2	3
223	Efficient two-stage dual-beam noncollinear optical parametric amplifier. Applied Physics B: Lasers and Optics, 2018, 124, 1.	1.1	3
224	Subpicosecond excimer-formation dynamics in organic molecular crystals. AIP Conference Proceedings, 1988, , .	0.3	2
225	Fundamental experiments and new horizons in ferroelectricity. Ferroelectrics, 1991, 120, 1-5.	0.3	2
226	Simulation of time-resolved wavevector overtone spectroscopy of anharmonic phonon-polaritons in ferroelectrics. Ferroelectrics, 1997, 194, 55-67.	0.3	2
227	Long-lived photoinduced response observed under extreme photoexcitation densities in a one-dimensional Peierls insulator. Physical Review B, 2018, 98, .	1.1	2
228	Modelling of micro-particles perforations into human tissue surrogate: Numerical and analytical aspects. Extreme Mechanics Letters, 2021, 45, 101299.	2.0	2
229	Tin and zinc microparticle impacts above the critical adhesion velocity. Surface and Coatings Technology, 2022, 432, 128053.	2.2	2
230	Real-Time Thermo-Mechanical and Adhesive Property Evaluation of Thin Films and Multi-Layers. Materials Research Society Symposia Proceedings, 1994, 338, 553.	0.1	1
231	Relaxational Dynamics and Strength in Supercooled Liquids from Impulsive Stimulated Thermal Scattering. Materials Research Society Symposia Proceedings, 1995, 407, 145.	0.1	1
232	Microelectronic Film Thickness Determination Using a Laserbased Ultrasonic Technique. Materials Research Society Symposia Proceedings, 1996, 440, 347.	0.1	1
233	Structural Relaxation of Supercooled Liquids from Impulsive Stimulated Light Scattering. ACS Symposium Series, 1997, , 181-198.	0.5	1
234	A Brief Introduction to Supercooled Liquids. ACS Symposium Series, 1997, , 2-12.	0.5	1

#	Article	IF	Citations
235	Initial Process of the Ferroelectric B 2 Soft Mode of KDP Studied by the Impulsive Stimulated Raman Scattering with Heterodyne Detection. Ferroelectrics, 2002, 272, 57-62.	0.3	1
236	Impact ionization in InSb studied by THz-pump-THz probe spectroscopy. , 2008, , .		1
237	Optical Crystals: Benzothiazolium Single Crystals: A New Class of Nonlinear Optical Crystals with Efficient THz Wave Generation (Adv. Mater. 30/2017). Advanced Materials, 2017, 29, .	11.1	1
238	Radiative contribution to thermal grating decay. Journal of Applied Physics, 2021, 130, 205103.	1.1	1
239	Molecular dynamics in pure and mixed liquids probed by femtosecond time-resolved impulsive stimulated scattering. AIP Conference Proceedings, 1988, , .	0.3	0
240	Intermolecular vibration observed in liquid CS2 at high pressure. AIP Conference Proceedings, 1989, , .	0.3	0
241	Study of Polymer Electrolyte Dynamics by Impulsive Stimulated Light Scattering. Materials Research Society Symposia Proceedings, 1990, 210, 255.	0.1	0
242	Femtosecond Spectroscopy of Ferroelectric Perovskites: Explanation of Anomalous Polariton Dynamics in Lithium Tantalate. Materials Research Society Symposia Proceedings, 1992, 293, 431.	0.1	0
243	Femtosecond Spectroscopy of Chemically Reactive Solids: a Methodology. Materials Research Society Symposia Proceedings, 1992, 296, 129.	0.1	0
244	Non-Contact Real-Time Evaluation of Polyimide Thin Film Thermoelastic Properties Through Impulsive Stimulated Thermal Scattering. Materials Research Society Symposia Proceedings, 1992, 284, 547.	0.1	0
245	Nondestructive Optical Characterization of Radiationhardened Polyimide Films. Materials Research Society Symposia Proceedings, 1996, 439, 659.	0.1	0
246	Phase Transition Dynamics Studied by Coherent Phonon Excitation with Ultrashort Laser Pulses. Ferroelectrics, 2003, 284, 3-13.	0.3	0
247	Terahertz polaritonics: High-field THz coherent control and spectroscopy. , 2006, , .		0
248	TERAHERTZ POLARITONICS: HIGH POWER THZ SIGNAL GENERATION IN FERROELECTRIC CRYSTALS. Integrated Ferroelectrics, 2007, 92, 87-94.	0.3	0
249	Notice of Removal: Generation of acoustic waves by an extreme ultra violet free electron laser in a transient grating experiment. , 2017, , .		0
250	Generating THz fields and Delivering Them to Samples for Maximum Effect. , 2021, , .		0
251	PHONON-POLARITONS: CONTROLLED PROPAGATION AND AMPLIFICATION. , 2002, , .		0
252	Terahertz Field-Induced Reemergence of Quenched Photoluminescence in Quantum Dots. Nano Letters, 2022, , .	4.5	0