

Osamu Matsuda

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2747282/publications.pdf>

Version: 2024-02-01

143
papers

2,995
citations

201575

27
h-index

197736

49
g-index

147
all docs

147
docs citations

147
times ranked

2201
citing authors

#	ARTICLE	IF	CITATIONS
1	Specular Acoustic Vibrational Wave Transmissions with the Presence of Phononic Bandgaps. Journal of the Physical Society of Japan, 2022, 91, .	0.7	0
2	Compact acoustic metamaterial based on the 3D Mie resonance of a maze ball with an octahedral structure. Applied Physics Letters, 2022, 120, 161701.	1.5	11
3	Coherent phonon detection gated by transient spin-polarized electrons. Physical Review B, 2021, 103, .	1.1	1
4	Gigahertz Optomechanical Photon-Phonon Transduction between Nanostructure Lines. Nano Letters, 2021, 21, 6261-6267.	4.5	15
5	Optical generation and detection of gigahertz shear acoustic waves in solids assisted by a metallic diffraction grating. Physical Review B, 2020, 101, .	1.1	8
6	Wave-canceling acoustic metarod architected with single material building blocks. Applied Physics Letters, 2020, 116, .	1.5	7
7	Giant extraordinary transmission of acoustic waves through a nanowire. Science Advances, 2020, 6, eaay8507.	4.7	7
8	10.1063/5.0011319.1. , 2020, , .		0
9	Perfect acoustic bandgap metabeam based on a quadruple-mode resonator array. Applied Physics Letters, 2019, 115, .	1.5	12
10	Confinement of acoustic fields in a honeycomb phononic crystal slab. , 2019, , .		0
11	Imaging gigahertz zero-group-velocity Lamb waves. Nature Communications, 2019, 10, 2228.	5.8	43
12	Time-domain Brillouin scattering assisted by diffraction gratings. Physical Review B, 2018, 97, .	1.1	11
13	Time-domain imaging of gigahertz surface waves on an acoustic metamaterial. New Journal of Physics, 2018, 20, 013026.	1.2	25
14	Elucidating gigahertz acoustic modulation of extraordinary optical transmission through a two-dimensional array of nano-holes. Applied Physics Letters, 2017, 110, 091910.	1.5	7
15	Gigahertz Optomechanical Modulation by Split-Ring-Resonator Nanophotonic Meta-Atom Arrays. Nano Letters, 2017, 17, 6684-6689.	4.5	23
16	Active chiral control of GHz acoustic whispering-gallery modes. Applied Physics Letters, 2017, 111, .	1.5	5
17	10.1063/1.4994886.1. , 2017, , .		0
18	Theory for optical detection of picosecond shear acoustic gratings. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 2634.	0.9	8

#	ARTICLE	IF	CITATIONS
19	Extraordinary transmission of gigahertz surface acoustic waves. <i>Scientific Reports</i> , 2016, 6, 33380.	1.6	6
20	Optical tracking of picosecond coherent phonon pulse focusing inside a sub-micron object. <i>Light: Science and Applications</i> , 2016, 5, e16082-e16082.	7.7	24
21	Optical Characterization of Phononic Crystals in the Time Domain. , 2016, , 191-213.		0
22	Wideband fluorescence-based thermometry by neural network recognition: Photothermal application with 10â€‰ns time resolution. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	30
23	Nanoscale mechanical contacts mapped by ultrashort time-scale electron transport. <i>Scientific Reports</i> , 2015, 4, 4790.	1.6	2
24	Time-resolved gigahertz acoustic wave imaging at arbitrary frequencies. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2015, 62, 584-595.	1.7	10
25	Watching surface waves in phononic crystals. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015, 373, 20140364.	1.6	15
26	Imaging of transient surface acoustic waves by full-field photorefractive interferometry. <i>Review of Scientific Instruments</i> , 2015, 86, 053107.	0.6	11
27	Imaging arbitrary acoustic whispering-gallery modes in the gigahertz range with ultrashort light pulses. <i>Optics Letters</i> , 2015, 40, 2157.	1.7	10
28	Effect of excitation point on surface phonon fields in phononic crystals in real- and k-space. <i>Journal of Applied Physics</i> , 2015, 117, .	1.1	5
29	Three-dimensional imaging of biological cells with picosecond ultrasonics. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	58
30	Fundamentals of picosecond laser ultrasonics. <i>Ultrasonics</i> , 2015, 56, 3-20.	2.1	184
31	Imaging acoustic waves in microscopic wedges. <i>New Journal of Physics</i> , 2014, 16, 103029.	1.2	8
32	A method for the frequency control in time-resolved two-dimensional gigahertz surface acoustic wave imaging. <i>AIP Advances</i> , 2014, 4, 017124.	0.6	9
33	Generation and Observation of GHzâ€“THz Acoustic Waves in Thin Films and Microstructures Using Optical Methods. <i>Springer Series in Optical Sciences</i> , 2014, , 129-151.	0.5	2
34	Bulk and surface acoustic wave phenomena in crystals: Observation and interpretation. <i>Wave Motion</i> , 2013, 50, 1197-1217.	1.0	25
35	Ultrafast ellipsometric interferometry for direct detection of coherent phonon strain pulse profiles. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2013, 30, 1911.	0.9	19
36	Complex band structures of two dimensional phononic crystals: Analysis by the finite element method. <i>Journal of Applied Physics</i> , 2013, 114, .	1.1	65

#	ARTICLE	IF	CITATIONS
37	Mapping gigahertz vibrations in a plasmonic phononic crystal. <i>New Journal of Physics</i> , 2013, 15, 023013.	1.2	12
38	Broadband evolution of phononic-crystal-waveguide eigenstates in real- and k-spaces. <i>Scientific Reports</i> , 2013, 3, 3351.	1.6	57
39	Complexity of band structures: Finite element calculation of complex band structures for one and two dimensional phononic crystals. , 2013, , .		0
40	Structural Changes at Glass-Transition in $GexSe_{1-x}$ Studied by Raman Scattering. <i>Progress of Theoretical Physics Supplement</i> , 2013, 126, 191-194.	0.2	0
41	Point source in a phononic grating: stop bands give rise to phonon-focusing caustics. <i>New Journal of Physics</i> , 2012, 14, 123015.	1.2	16
42	Focusing and subwavelength imaging of surface acoustic waves in a solid-air phononic crystal. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	30
43	Vibrational modes of GaAs hexagonal nanopillar arrays studied with ultrashort optical pulses. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	22
44	Thermoelastic Model for Impulsive Stimulated Scattering Monitoring the Evolution from Capillary to Rayleigh Type Wave Propagation on the Surface of Viscoelastic Materials Throughout the Glass Transition. <i>International Journal of Thermophysics</i> , 2012, 33, 2145-2158.	1.0	8
45	Ultrafast Vibrations of Gold Nanorings. <i>Nano Letters</i> , 2011, 11, 3893-3898.	4.5	67
46	Visualization of negative refraction of surface acoustic waves by numerical simulations and experiments. , 2011, , .		0
47	Real-time imaging of acoustic rectification. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	31
48	Mapping the band structure of a surface phononic crystal. <i>New Journal of Physics</i> , 2011, 13, 013037.	1.2	23
49	OS02-2-3 Optical tomographic imaging of nanometer ultrasonic pulses propagation. <i>The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics</i> , 2011, 2011.10, _OS02-2-3-.	0.0	0
50	Time resolved imaging of carrier and thermal transport in silicon. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	23
51	Imaging GHz-THz Acoustic Wave Propagation in Thin Films and Microstructures. <i>Journal of the Vacuum Society of Japan</i> , 2010, 53, 336-343.	0.3	1
52	Optical generation of surface acoustic waves guided at the linear boundary between two thin films. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	5
53	Acoustic whispering-gallery modes generated and dynamically imaged with ultrashort optical pulses. <i>Physical Review B</i> , 2010, 81, .	1.1	7
54	Vibrations of microspheres probed with ultrashort optical pulses: erratum. <i>Optics Letters</i> , 2010, 35, 940.	1.7	3

#	ARTICLE	IF	CITATIONS
55	Imaging gigahertz surface acoustic waves through the photoelastic effect. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 2632.	0.9	29
56	Interferometric imaging of surface acoustic waves on a glass sphere. Journal of Applied Physics, 2010, 108, 123508.	1.1	7
57	Dynamic visualization of surface acoustic waves on a two-dimensional phononic crystal. Physical Review B, 2009, 80, .	1.1	56
58	Real-time simulations and experiments on ultrahigh frequency surface waves in micro-structured phononic crystals. , 2009, , .		0
59	Vibrations of microspheres probed with ultrashort optical pulses. Optics Letters, 2009, 34, 3740.	1.7	16
60	Real-time imaging of acoustic waves on a bulk acoustic resonator. Applied Physics Letters, 2008, 93, 261101.	1.5	34
61	Coherent control of gigahertz surface acoustic and bulk phonons using ultrafast optical pulses. Applied Physics Letters, 2008, 93, 113101.	1.5	25
62	Coherent shear phonon generation and detection with picosecond laser acoustics. Physical Review B, 2008, 77, .	1.1	60
63	Optical excitation and detection of picosecond acoustic pulses in liquid mercury. Physical Review B, 2008, 78, .	1.1	30
64	A Greenâ€™s function method for surface acoustic waves in functionally graded materials. Journal of the Acoustical Society of America, 2007, 121, 3437.	0.5	14
65	Seeking shear waves in liquids with picosecond ultrasonics. Journal of Physics: Conference Series, 2007, 92, 012026.	0.3	7
66	Tomographic reconstruction of picosecond acoustic strain propagation. Applied Physics Letters, 2007, 90, 041114.	1.5	38
67	SPATIOTEMPORAL MAPPING OF SYMMETRICAL SURFACE ACOUSTIC FIELDS ON CRYSTALS AND PERIODIC MICROSTRUCTURES. , 2007, , .		0
68	Scanning ultrafast Sagnac interferometry for imaging two-dimensional surface wave propagation. Review of Scientific Instruments, 2006, 77, 043713.	0.6	126
69	Imaging Ripples on Phononic Crystals Reveals Acoustic Band Structure and Bloch Harmonics. Physical Review Letters, 2006, 97, 055502.	2.9	77
70	In situ monitoring of the growth of ice films by laser picosecond acoustics. Journal of Applied Physics, 2006, 100, 073506.	1.1	32
71	Time-resolved surface acoustic wave propagation across a single grain boundary. Physical Review B, 2006, 73, .	1.1	25
72	Microscale multiple scattering of coherent surface acoustic wave packets probed with gigahertz time-reversal acoustics. Physical Review E, 2006, 74, 026604.	0.8	3

#	ARTICLE	IF	CITATIONS
73	Publisher's Note: Imaging Ripples on Phononic Crystals Reveals Acoustic Band Structure and Bloch Harmonics [Phys. Rev. Lett.97, 055502 (2006)]. Physical Review Letters, 2006, 97, .	2.9	0
74	6E-5 High Frequency Surface Waves Scattered in Microstructured Phononic Crystals. , 2006, , .		1
75	REAL TIME IMAGING OF SURFACE ACOUSTIC WAVES ON TOPOLOGICAL STRUCTURES. , 2006, , .		0
76	REAL TIME IMAGING TECHNIQUES FOR SURFACE WAVES ON TOPOLOGICAL STRUCTURES. , 2006, , .		0
77	Direct measurement of ultrafast surface displacement in laser picosecond acoustics. European Physical Journal Special Topics, 2005, 125, 361-363.	0.2	0
78	Terahertz Ultrasonic Generation and Detection in GaAs/AlGaAs Quantum Wells. Japanese Journal of Applied Physics, 2005, 44, 4477-4479.	0.8	1
79	Correlation Between Elastic Constants and Magnetic Anisotropy in Co/Pt Superlattice Thin Films. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	0
80	Real Time Imaging of Surface Acoustic Waves on Crystals and Microstructures. Japanese Journal of Applied Physics, 2005, 44, 4292-4296.	0.8	17
81	Acoustic phonon generation and detection in GaAs/Al _{0.3} Ga _{0.7} As quantum wells with picosecond laser pulses. Physical Review B, 2005, 71, .	1.1	66
82	Picosecond acoustics in semiconductor quantum wells (Invited Paper). , 2005, , .		0
83	Nanosecond and picosecond time reversal acoustics. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2737-2740.	0.8	1
84	Acoustic phonon pulse generation and detection in GaAs/Al _{0.3} Ga _{0.7} As quantumwells. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2749-2752.	0.8	3
85	Surface phonon imaging through the photoelastic effect. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2991-2994.	0.8	9
86	Imaging of surface phonons on a sphere. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2979-2982.	0.8	2
87	Laser picosecond acoustics in a two-layer structure with oblique probe light incidence. Ultrasonics, 2004, 42, 653-656.	2.1	9
88	Coherent Shear Phonon Generation and Detection with Ultrashort Optical Pulses. Physical Review Letters, 2004, 93, 095501.	2.9	140
89	Picosecond acoustic phonon pulse generation in nickel and chromium. Physical Review B, 2003, 67, .	1.1	136
90	Real-time imaging of surface acoustic waves in thin films and microstructures on opaque substrates (invited). Review of Scientific Instruments, 2003, 74, 519-522.	0.6	14

#	ARTICLE	IF	CITATIONS
91	Laser picosecond acoustics with oblique probe light incidence. Review of Scientific Instruments, 2003, 74, 895-897.	0.6	21
92	Direct access to the dispersion relations of multiple anisotropic surface acoustic modes by Fourier image analysis. Applied Physics Letters, 2003, 83, 1340-1342.	1.5	19
93	Electron dynamics in chromium probed with 20-fs optical pulses. Physical Review B, 2003, 68, .	1.1	24
94	Ultrafast imaging of transient displacements using Sagnac interferometry. , 2003, , .		0
95	Photothermal probing of inhomogeneously modulated transparent thin films. Journal of Applied Physics, 2002, 91, 5002-5009.	1.1	27
96	Cantilever Dynamics in Ultrasonic Force Microscopy. Japanese Journal of Applied Physics, 2002, 41, 3545-3546.	0.8	10
97	Watching Ripples on Crystals. Physical Review Letters, 2002, 88, 185504.	2.9	118
98	Reflection and transmission of light in multilayers perturbed by picosecond strain pulse propagation. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 3028.	0.9	91
99	Hysteresis of the cantilever shift in ultrasonic force microscopy. Applied Physics Letters, 2002, 80, 2386-2388.	1.5	17
100	Real-time imaging and dispersion of surface phonons in isotropic and anisotropic materials. Physica B: Condensed Matter, 2002, 316-317, 29-34.	1.3	8
101	Wavelength selective photoexcitation of picosecond acoustic-phonon pulses in a triple GaAs/Al _{0.3} Ga _{0.7} As quantum well structure. Physica B: Condensed Matter, 2002, 316-317, 205-208.	1.3	11
102	Ultrafast acoustic phonon pulse generation in chromium. Physica B: Condensed Matter, 2002, 316-317, 304-307.	1.3	8
103	Spatiotemporal mapping of surface acoustic waves in isotropic and anisotropic materials. Ultrasonics, 2002, 40, 55-59.	2.1	19
104	Laser picosecond acoustics in multilayer structures. Ultrasonics, 2002, 40, 753-756.	2.1	2
105	Ultrafast carrier diffusion in gallium arsenide probed with picosecond acoustic pulses. Physical Review B, 2001, 64, .	1.1	126
106	Stiffness transition and connectivity in amorphous chalcogenide semiconductors. Springer Proceedings in Physics, 2001, , 228-229.	0.1	0
107	Reversible photoinduced structural changes in GeSe ₂ glass at low-temperature. Springer Proceedings in Physics, 2001, , 113-114.	0.1	0
108	Relaxation process of band-edge exciton in layered crystalline GeSe ₂ . Journal of Luminescence, 2000, 87-89, 617-619.	1.5	0

#	ARTICLE	IF	CITATIONS
109	Laser picosecond acoustics in isotropic and anisotropic materials. <i>Ultrasonics</i> , 2000, 38, 470-474.	2.1	58
110	Raman scattering investigation of the structure of amorphous silicon in a-Si/SiO ₂ superlattice films. <i>European Physical Journal Special Topics</i> , 2000, 10, Pr7-259-Pr7-262.	0.2	6
111	Resonant Raman scattering in crystalline GeSe ₂ . <i>Physical Review B</i> , 2000, 61, 15569-15572.	1.1	12
112	Raman-spectroscopy studies on rigidity percolation and fragility in Ge ^x (S,Se) glasses. <i>Journal of Non-Crystalline Solids</i> , 2000, 266-269, 872-875.	1.5	21
113	Effect of thermal annealing on dynamics of photoluminescence in a-GeSe ₂ films. <i>Journal of Non-Crystalline Solids</i> , 2000, 266-269, 904-907.	1.5	4
114	Temperature dependence of photoluminescence intensity and decay in GeSe ₂ glass. <i>Journal of Non-Crystalline Solids</i> , 2000, 266-269, 908-912.	1.5	0
115	A study of network dimensionality in chalcogenide glass by low frequency Raman scattering. <i>Physica B: Condensed Matter</i> , 1999, 263-264, 330-332.	1.3	4
116	Rigidity percolation and structure of Ge ^x Se system. <i>Physica B: Condensed Matter</i> , 1999, 263-264, 313-316.	1.3	7
117	Temperature Dependence of Photoluminescence in Mn-Doped ZnS Retrieved after the Pressure-Induced Structural Phase Transition. <i>Physica Status Solidi A</i> , 1999, 175, 715-724.	1.7	5
118	Relaxation process of photo-excited states in GeSe ₂ glass investigated by time-resolved photoluminescence. <i>Journal of Non-Crystalline Solids</i> , 1998, 227-230, 829-832.	1.5	5
119	Photo-induced crystallization in amorphous GeSe ₂ studied by Raman scattering. <i>Journal of Non-Crystalline Solids</i> , 1998, 227-230, 728-731.	1.5	8
120	Structural changes during photo-induced and thermal crystallization processes in evaporated amorphous GeSe ₂ films by Raman scattering. <i>Journal of Non-Crystalline Solids</i> , 1998, 232-234, 554-559.	1.5	11
121	A Raman scattering investigation of the structure of glassy and liquid Ge _x Se _{1-x} . <i>Journal of Non-Crystalline Solids</i> , 1998, 232-234, 702-707.	1.5	43
122	Reversible mesoscopic structural transformations in vacuum evaporated amorphous Ge ₃₀ Se ₇₀ film studied by Raman scattering. <i>Journal of Non-Crystalline Solids</i> , 1998, 238, 91-97.	1.5	14
123	Relation of structural and elastic crossover length investigated by low-frequency Raman scattering in Ge _x Se _{1-x} glasses. <i>Physical Review B</i> , 1998, 57, 10228-10231.	1.1	21
124	Direct deposition of silicon and silicon-oxide films using low-energy Si focused ion beams. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1997, 127-128, 893-896.	0.6	6
125	Structural Changes at Glass-Transition in Ge _x Se _{1-x} Studied by Raman Scattering. <i>Progress of Theoretical Physics Supplement</i> , 1997, 126, 191-194.	0.2	4
126	Photoemission and inverse-photoemission study of the electronic structure of p- and n-type amorphous Ge _{1-x} Se _x -Bi films. <i>Journal of Non-Crystalline Solids</i> , 1996, 198-200, 688-691.	1.5	9

#	ARTICLE	IF	CITATIONS
127	Temperature dependence of Raman spectra in amorphous, crystalline and liquid GeSe ₂ . Journal of Non-Crystalline Solids, 1996, 198-200, 753-757.	1.5	16
128	Laser spot size dependence of photo-induced crystallization process in amorphous GeSe ₂ film. Journal of Non-Crystalline Solids, 1996, 198-200, 740-743.	1.5	18
129	Photoluminescence study of glassy Ge(S _x Se _{1-x}) ₂ . Journal of Non-Crystalline Solids, 1996, 198-200, 732-735.	1.5	18
130	A model calculation of the characteristic Raman modes in the tetrahedral network structures of GeSe ₂ . Physica B: Condensed Matter, 1996, 219-220, 520-522.	1.3	10
131	Composition Modulation in Quantum Wire Structures on Vicinal (110) GaAs Studied by Photoluminescence. Japanese Journal of Applied Physics, 1995, 34, 1342-1344.	0.8	9
132	Electronic and thermal processes during the photo-induced crystallization of amorphous GeSe ₂ . Journal of Non-Crystalline Solids, 1995, 192-193, 524-528.	1.5	7
133	An inverse-photo-emission study on the photo-dissolution of Ag and Cu metals in amorphous GeSe ₂ . Journal of Physics Condensed Matter, 1994, 6, L207-L214.	0.7	8
134	Formation and photoluminescence of quantum wire structures on vicinal (110) GaAs substrates by MBE. Journal of Crystal Growth, 1993, 127, 1041-1044.	0.7	42
135	Inverse-photoemission study of the conduction bands in amorphous GeSe ₂ . Physical Review B, 1993, 47, 15509-15514.	1.1	22
136	Medium-range structure and relaxation in chalcogenide glasses investigated by Raman scattering. , 1993, , 47-58.		8
137	Spectral and Spatial Behavior of Raman Scattering and Photoluminescence from Porous Silicon. Japanese Journal of Applied Physics, 1992, 31, L997-L1000.	0.8	23
138	A comparison between the Raman modes of the tetrahedral network in amorphous and layered crystalline GeSe ₂ . Journal of Non-Crystalline Solids, 1992, 150, 197-201.	1.5	15
139	Disorder in GeSe ₂ small crystals and medium-range structure in amorphous GeSe ₂ . Journal of Non-Crystalline Solids, 1992, 150, 202-206.	1.5	9
140	Photoluminescence and Raman scattering spectra from porous silicon. Superlattices and Microstructures, 1992, 12, 77-80.	1.4	2
141	Raman spectra of tetrahedral vibrations in crystalline germanium dichalcogenides, GeS ₂ and GeSe ₂ , in high and low temperature forms. Solid State Communications, 1991, 79, 905-910.	0.9	48
142	Resonant Raman study on crystalline GeSe ₂ in relation to amorphous states. Solid State Communications, 1990, 75, 303-308.	0.9	28
143	Raman and photoluminescence investigations of ZnSe-ZnS strained-layer superlattices. Solid State Communications, 1988, 67, 779-782.	0.9	17