

Abdelkrim Khelif

List of Publications by Year in descending order

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147
papers

6,259
citations

76326

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148
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148
docs citations

148
times ranked

2529
citing authors

#	ARTICLE	IF	CITATIONS
1	Topological surface wave metamaterials for robust vibration attenuation and energy harvesting. <i>Mechanics of Advanced Materials and Structures</i> , 2022, 29, 4759-4767.	2.6	16
2	A perspective on elastic metastructures for energy harvesting. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	30
3	Towards Acoustic Radiation Free Lamb Wave Resonators for High-Resolution Gravimetric Biosensing. <i>IEEE Sensors Journal</i> , 2021, 21, 2725-2733.	4.7	12
4	Reconfigurable locally resonant surface acoustic demultiplexing behavior in ZnO-based phononic crystal. <i>Journal of Applied Physics</i> , 2021, 129, 024901.	2.5	3
5	Acoustic radiation-free surface phononic crystal resonator for in-liquid low-noise gravimetric detection. <i>Microsystems and Nanoengineering</i> , 2021, 7, 8.	7.0	18
6	Investigation of Ultrasonic Opacity Based on Quarter-Wave Mode Resonance Using a Two-Dimensional Silicon Phononic Crystal. <i>Lecture Notes in Networks and Systems</i> , 2021, , 1044-1050.	0.7	0
7	Elastic Metasurfaces for Deep and Robust Subwavelength Focusing and Imaging. <i>Physical Review Applied</i> , 2021, 15, .	3.8	53
8	Nonlinear effects in locally resonant nanostrip phononic metasurface at GHz frequencies. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	5
9	Enhanced acoustic pressure sensors based on coherent perfect absorber-laser effect. <i>Journal of Applied Physics</i> , 2021, 129, .	2.5	8
10	An acoustoelectric-induced tailorable coupled resonator surface acoustic waveguide. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 225301.	2.8	4
11	Experimental realization of a pillared metasurface for flexural wave focusing. <i>APL Materials</i> , 2021, 9, .	5.1	35
12	Shear Horizontal Phononic Metasurface for In-Liquid Gravimetric Biosensing. <i>IEEE Electron Device Letters</i> , 2021, 42, 915-918.	3.9	3
13	Nonreciprocity of Gigahertz Surface Acoustic Wave Based on Mode Conversion in an Inclined Phononic Crystal Heterojunction. <i>Physical Review Applied</i> , 2021, 16, .	3.8	1
14	Nonlinear Coupling of Phononic Resonators Induced by Surface Acoustic Waves. <i>Physical Review Applied</i> , 2021, 16, .	3.8	3
15	Experimental evidence of high spatial confinement of elastic energy in a phononic cantilever. <i>Applied Physics Letters</i> , 2021, 119, 203501.	3.3	0
16	Computation of acoustic properties and design guidelines of periodic Biot-modeled foams. <i>Applied Acoustics</i> , 2020, 168, 107428.	3.3	13
17	Computation of dispersion diagrams for periodic porous materials modeled as equivalent fluids. <i>Mechanical Systems and Signal Processing</i> , 2020, 142, 106749.	8.0	18
18	Experimental Demonstration of a Multichannel Elastic Wave Filter in a Phononic Crystal Slab. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 4594.	2.5	18

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19	Observation of topological gravity-capillary waves in a water wave crystal. <i>New Journal of Physics</i> , 2019, 21, 083031.	2.9	18
20	Dipole states and coherent interaction in surface-acoustic-wave-coupled phononic resonators. <i>Nature Communications</i> , 2019, 10, 4583.	12.8	20
21	Design and experimental validation of a temperature-driven adaptive phononic crystal slab. <i>Smart Materials and Structures</i> , 2019, 28, 035007.	3.5	19
22	Ultrasonic insulation using a Helmholtz-like phononic crystal with a slight filling factor. , 2019, , .		1
23	A perfect Fresnel acoustic reflector implemented by a Fano-resonant metascreen. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	27
24	Selective Band Gap to Suppress the Spurious Acoustic Mode in Film Bulk Acoustic Resonator Structures. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2018, 140, .	1.6	6
25	Resonant Beam Steering and Carpet Cloaking Using an Acoustic Transformational Metascreen. <i>Physical Review Applied</i> , 2018, 10, .	3.8	21
26	Extensive tailorability of sound absorption using acoustic metamaterials. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	17
27	Evidence of a broadband gap in a phononic crystal strip. <i>Ultrasonics</i> , 2017, 78, 51-56.	3.9	16
28	Design and experimental validation of an adaptive phononic crystal using highly dissipative polymeric material interface. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0
29	Subwavelength sound screening by coupling space-coiled Fabry-Perot resonators. <i>Europhysics Letters</i> , 2017, 119, 36001.	2.0	1
30	Surface-Wave Coupling to Single Phononic Subwavelength Resonators. <i>Physical Review Applied</i> , 2017, 8, .	3.8	22
31	Extraordinary nonlinear transmission modulation in a doubly resonant acousto-optical structure. <i>Optica</i> , 2017, 4, 1245.	9.3	15
32	Notice of Removal: Coupling of mechanical resonators under surface acoustic wave excitation. , 2017, , .		0
33	Guiding and confinement of interface acoustic waves in solid-fluid pillar-based phononic crystals. <i>AIP Advances</i> , 2016, 6, 121703.	1.3	7
34	Guidance of surface elastic waves along a linear chain of pillars. <i>AIP Advances</i> , 2016, 6, .	1.3	23
35	Density-near-zero using the acoustically induced transparency of a Fano acoustic resonator. <i>Europhysics Letters</i> , 2016, 116, 46004.	2.0	9
36	Preface to Special Topic: Selected Articles from Phononics 2015: The Third International Conference on Phononic Crystals/Metamaterials, Phonon Transport and Phonon Coupling, 31 May-5 June 2015, Paris, France. <i>AIP Advances</i> , 2016, 6, 121501.	1.3	2

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37	Solid-fluid interaction in a pillar-based phononic crystal. , 2016, , .		0
38	Complete band gap in a pillar-based piezoelectric phononic crystal slab. , 2016, , .		0
39	Evidence of a large elastic band gap in a one-dimensional phononic crystal. , 2016, , .		0
40	How diffraction limits ultrasonic screening in phononic plate composed of a periodic array of resonant slits. Comptes Rendus Physique, 2016, 17, 518-523.	0.9	1
41	Mapping acoustic field distributions of VHF to SHF SAW transducers using a Scanning Electron Microscope. , 2016, , .		1
42	Computational Problems and Numerical Techniques for the Analysis of Phononic Crystals. , 2016, , 85-107.		2
43	Future Prospects of Phononic Crystals and Phononic Metamaterials. , 2016, , 239-245.		2
44	Acoustically induced transparency using Fano resonant periodic arrays. Journal of Applied Physics, 2015, 118, .	2.5	43
45	Ultra-wide acoustic band gaps in pillar-based phononic crystal strips. Journal of Applied Physics, 2015, 118, .	2.5	49
46	Experimental evidence of high-frequency complete elastic bandgap in pillar-based phononic slabs. Applied Physics Letters, 2014, 105, .	3.3	25
47	Subwavelength waveguiding of surface phonons in pillars-based phononic crystal. AIP Advances, 2014, 4, .	1.3	33
48	Physics of band-gap formation and its evolution in the pillar-based phononic crystal structures. Journal of Applied Physics, 2014, 116, .	2.5	43
49	Superlensing effect for surface acoustic waves in a pillar-based phononic crystal with negative refractive index. Applied Physics Letters, 2014, 105, .	3.3	40
50	Experimental evidence of ultrasonic opacity using the coupling of resonant cavities in a phononic membrane. Applied Physics Letters, 2013, 103, .	3.3	11
51	Locally Resonant Structures for Low Frequency Surface Acoustic Band Gap Applications. Springer Series in Materials Science, 2013, , 43-59.	0.6	4
52	Evidence of Ultrasonic Band Gap in Aluminum Phononic Crystal Beam. Journal of Vibration and Acoustics, Transactions of the ASME, 2013, 135, .	1.6	11
53	Local resonances in phononic crystals and in random arrangements of pillars on a surface. Journal of Applied Physics, 2013, 114, 104503.	2.5	66
54	Broadband evolution of phononic-crystal-waveguide eigenstates in real- and k-spaces. Scientific Reports, 2013, 3, 3351.	3.3	57

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55	Surface acoustic wave guiding in a diffractionless high aspect ratio transducer. Applied Physics Letters, 2013, 102, .	3.3	6
56	Phononic bandgaps in silicon plate with metallic pillars. Electronics Letters, 2012, 48, 1147-1148.	1.0	3
57	All-angle negative refraction for surface acoustic waves in pillar-based two-dimensional phononic structures. New Journal of Physics, 2012, 14, 123030.	2.9	25
58	Selected examples in nano-sciences and nano-technologies at FEMTO-ST. International Journal of Nanotechnology, 2012, 9, 887.	0.2	0
59	Surface acoustic waves in pillars-based two-dimensional phononic structures with different lattice symmetries. Journal of Applied Physics, 2012, 112, .	2.5	34
60	VHF phononic band gap band pass filters using coupled resonator acoustic waveguides (CRAW). , 2011, , .		0
61	VHF phononic band gap band pass filters using coupled resonator acoustic waveguides (CRAW). , 2011, , .		1
62	Experimental observation of locally-resonant and Bragg band gaps for surface guided waves in a phononic crystal of pillars. Physical Review B, 2011, 83, .	3.2	219
63	In-plane confinement and waveguiding of surface acoustic waves through line defects in pillars-based phononic crystal. AIP Advances, 2011, 1, .	1.3	12
64	Is there really a sound line limit for surface waves in phononic crystals?. , 2011, , .		0
65	Elastic filter based on coupled resonator waveguides in phononic crystal slabs. Proceedings of SPIE, 2010, , .	0.8	0
66	Locally resonant surface acoustic wave band gaps in a two-dimensional phononic crystal of pillars on a surface. Physical Review B, 2010, 81, .	3.2	212
67	Acoustic confinement and waveguiding with a line-defect structure in phononic crystal slabs. Journal of Applied Physics, 2010, 108, 084515.	2.5	41
68	Polarization state and level repulsion in two-dimensional phononic crystals and waveguides in the presence of material anisotropy. Journal Physics D: Applied Physics, 2010, 43, 185401.	2.8	43
69	Support loss suppression in micromechanical resonators by the use of phononic band gap structures. , 2010, , .		13
70	Octave omnidirectional band gap in a three-dimensional phononic crystal. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 1621-1625.	3.0	27
71	Simultaneous two-dimensional phononic and photonic band gaps in opto-mechanical crystal slabs. Optics Express, 2010, 18, 9164.	3.4	100
72	Polarization States in 2D Phononic Crystals and Phononic Crystal Waveguides. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 341-347.	0.2	0

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73	Improving surface acousto-optical interaction by high aspect ratio electrodes. Journal of Applied Physics, 2009, 106, .	2.5	7
74	A high-quality factor piezoelectric-on-substrate phononic crystal micromechanical resonator. , 2009, , .		1
75	Highly selective electroplated nickel mask for lithium niobate dry etching. Journal of Applied Physics, 2009, 105, .	2.5	42
76	Energy storage and dispersion of surface acoustic waves trapped in a periodic array of mechanical resonators. Journal of Applied Physics, 2009, 105, .	2.5	45
77	Evanescent Bloch waves and the complex band structure of phononic crystals. Physical Review B, 2009, 80, .	3.2	162
78	Photonic and Phononic Band Gap Properties of Lithium Niobate. Springer Series in Materials Science, 2009, , 307-336.	0.6	3
79	Two-dimensional phononic crystal slab defect mode micromechanical resonators. Proceedings of SPIE, 2009, , .	0.8	0
80	Evanescent Bloch waves in phononic crystals. Proceedings of SPIE, 2009, , .	0.8	3
81	Ultrasonic and hypersonic phononic crystals. Proceedings of SPIE, 2008, , .	0.8	1
82	The OmniSaw device concept (OmniSAW: Omnidirectional band gap for surface acoustic wave). , 2008, , .		2
83	Band structure of evanescent waves in phononic crystals. , 2008, , .		0
84	Subwavelength focusing of surface acoustic waves generated by an annular interdigital transducer. Applied Physics Letters, 2008, 92, .	3.3	53
85	Lithium niobate surface structuration for phononic crystal fabrication. , 2008, , .		1
86	Evidence of large high frequency complete phononic band gaps in silicon phononic crystal plates. Applied Physics Letters, 2008, 92, .	3.3	194
87	P3J-1 Direct Observation of Surface Acoustic Wave Interaction with a Phononic Crystal. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	0
88	Complete phononic bandgaps and bandgap maps in two-dimensional silicon phononic crystal plates. Electronics Letters, 2007, 43, 898.	1.0	96
89	Design guidelines of 1-3 piezoelectric composites dedicated to ultrasound imaging transducers, based on frequency band-gap considerations. Journal of the Acoustical Society of America, 2007, 122, 786-793.	1.1	10
90	Scattering of surface acoustic waves by a phononic crystal revealed by heterodyne interferometry. Applied Physics Letters, 2007, 91, 083517.	3.3	46

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91	Waveguiding inside the complete band gap of a phononic crystal slab. Physical Review E, 2007, 76, 056601.	2.1	100
92	Complete band gaps and deaf bands of triangular and honeycomb water-steel phononic crystals. Journal of Applied Physics, 2007, 101, 044903.	2.5	75
93	P4L-3 Anisotropic Wave-Surface Shaped Annular Interdigital Transducer. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	2
94	P0-11 Experimental Study of Complete Band Gaps and Waveguiding Inside Phononic Crystal Slabs. , 2007, , .		0
95	Comprehensive characterization of Surface acoustic wave trapping in a periodic array of high aspect ratio electrodes. Frequency Control Symposium and Exhibition, Proceedings of the IEEE International, 2007, , .	0.0	0
96	Modulation of the extraordinary optical transmission by surface acoustic waves. Physical Review B, 2007, 76, .	3.2	19
97	3E-3 Dispersion and Polarization of Surface Waves Trapped in High Aspect Ratio Electrode Arrays. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	0
98	Complete band gaps in two-dimensional phononic crystal slabs. Physical Review E, 2006, 74, 046610.	2.1	358
99	Lithium niobate phononic crystal for surface acoustic waves. , 2006, , .		2
100	Evidence for complete surface wave band gap in a piezoelectric phononic crystal. Physical Review E, 2006, 73, 065601.	2.1	274
101	6E-2 Surface Acoustic Wave Trapping in a Periodic Array of High Aspect Ratio Electrodes. , 2006, , .		1
102	Raman-like light scattering from acoustic phonons in photonic crystal fiber. Optics Express, 2006, 14, 4141.	3.4	96
103	Stimulated Brillouin scattering from multi-GHz-guided acoustic phonons in nanostructured photonic crystal fibres. Nature Physics, 2006, 2, 388-392.	16.7	263
104	Domains Inversion in LiNbO ₃ Using Electron Beam Irradiation for Phononic Crystals. Applications of Ferroelectrics, IEEE International Symposium on, 2006, , .	0.0	0
105	Full Band-Gap Silicon Phononic Crystals for Surface Acoustic Waves. , 2006, , 185.		1
106	Elastic band gaps for surface modes in an ultrasonic lithium niobate phononic crystal. , 2006, 6182, 234.		10
107	Surface acoustic wave trapping in a periodic array of mechanical resonators. Applied Physics Letters, 2006, 89, 083515.	3.3	60
108	Theoretical analysis of damping effects of guided elastic waves at solid-fluid interfaces. Journal of Applied Physics, 2006, 99, 054907.	2.5	18

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109	4G-2 Acoustic Wave Band Gaps in Triangular and Honeycomb Lattice 2D Ultrasonic Crystals. , 2006, , .		0
110	Acoustic channel drop tunneling in a phononic crystal. Applied Physics Letters, 2005, 87, 261912.	3.3	93
111	Equality of the energy and group velocities of bulk acoustic waves in piezoelectric media. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 1869-1871.	3.0	10
112	Experimental study of guiding and filtering of acoustic waves in a two dimensional ultrasonic crystal. Zeitschrift Fur Kristallographie - Crystalline Materials, 2005, 220, 836-840.	0.8	15
113	Interaction of waveguide and localized modes in a phononic crystal. Europhysics Letters, 2005, 71, 570-575.	2.0	47
114	Full band gap for surface acoustic waves in a piezoelectric phononic crystal. Physical Review E, 2005, 71, 036607.	2.1	208
115	Phononic band-gap guidance of acoustic modes in photonic crystal fibers. Physical Review B, 2005, 71, .	3.2	80
116	Guided elastic waves along a rod defect of a two-dimensional phononic crystal. Physical Review E, 2004, 69, 067601.	2.1	67
117	Tunable filtering and demultiplexing in phononic crystals with hollow cylinders. Physical Review E, 2004, 69, 046608.	2.1	263
118	Transmission and dispersion modes in phononic crystals with hollow cylinders: application to waveguide structure. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2711-2715.	0.8	10
119	Fast FEM/BEM simulation of SAW devices via asymptotic waveform evaluation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 359-363.	3.0	18
120	Dyadic Green's functions of a laminar plate. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 1157-1164.	3.0	8
121	Guiding and bending of acoustic waves in highly confined phononic crystal waveguides. Applied Physics Letters, 2004, 84, 4400-4402.	3.3	423
122	Trapping and guiding of acoustic waves by defect modes in a full-band-gap ultrasonic crystal. Physical Review B, 2003, 68, .	3.2	269
123	Coupling characteristics of localized phonons in photonic crystal fibers. Journal of Applied Physics, 2003, 94, 7944.	2.5	27
124	Out-of-plane propagation of elastic waves in two-dimensional phononic band-gap materials. Physical Review E, 2003, 67, 065602.	2.1	56
125	Two-dimensional phononic crystal with tunable narrow pass band: Application to a waveguide with selective frequency. Journal of Applied Physics, 2003, 94, 1308-1311.	2.5	178
126	Transmission and dispersion relations of perfect and defect-containing waveguide structures in phononic band gap materials. Physical Review B, 2003, 68, .	3.2	178

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127	Theory of acoustic scattering by supported ridges at a solid-liquid interface. <i>Physical Review E</i> , 2002, 65, 036601.	2.1	1
128	Phononic crystal with low filling fraction and absolute acoustic band gap in the audible frequency range: A theoretical and experimental study. <i>Physical Review E</i> , 2002, 65, 056608.	2.1	138
129	Evidence of Fano-Like Interference Phenomena in Locally Resonant Materials. <i>Physical Review Letters</i> , 2002, 88, 225502.	7.8	314
130	Transmittivity through straight and stublike waveguides in a two-dimensional phononic crystal. <i>Physical Review B</i> , 2002, 65, .	3.2	128
131	Stopping of acoustic waves by sonic polymer-fluid composites. <i>Physical Review E</i> , 2001, 63, 066605.	2.1	70
132	Surface shear horizontal waves associated with a periodic array of wires deposited on a substrate. <i>European Physical Journal B</i> , 2001, 21, 437-445.	1.5	5
133	Second-order sound field during megasonic cleaning of patterned silicon wafers: Application to ridges and trenches. <i>Journal of Applied Physics</i> , 2001, 90, 4211-4218.	2.5	18
134	Generally polarized acoustic waves trapped by high aspect ratio electrode gratings at the surface of a piezoelectric material. <i>Journal of Applied Physics</i> , 2001, 90, 2492-2497.	2.5	28
135	Theoretical calculation of the acoustic force on a patterned silicon wafer during megasonic cleaning. <i>Journal of Applied Physics</i> , 2000, 88, 2423-2429.	2.5	21
136	Streaming and removal forces due to second-order sound field during megasonic cleaning of silicon wafers. <i>Journal of Applied Physics</i> , 2000, 88, 6821-6835.	2.5	28
137	Localized and resonant acoustic waves associated with a periodic array of supported wires. <i>Vacuum</i> , 1999, 54, 309-313.	3.5	2
138	Theory of acoustic scattering by a supported wire. <i>Journal of Applied Physics</i> , 1997, 81, 7141-7147.	2.5	4
139	Acoustic scattering by a wire deposited on a planar surface. <i>Surface Science</i> , 1996, 352-354, 1038-1042.	1.9	1
140	Elastic Vibrations of Planar and Deterministic Rough Surfaces. <i>Acta Physica Polonica A</i> , 1996, 89, 129-137.	0.5	3
141	Roughness induced surface acoustic resonances. <i>Progress in Surface Science</i> , 1995, 48, 301-311.	8.3	4
142	Full band gaps for surface acoustic waves in piezoelectric phononic crystals. , 0, , .		3
143	Guiding and filtering acoustic waves in a two-dimensional phononic crystal. , 0, , .		3
144	Fast FEM/BEM computation of SAW harmonic admittance and slowness curves. , 0, , .		4

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145	Hypersonic band gaps in two-dimensional piezoelectric phononic crystal slabs. , 0, , .		0
146	Silicon phononic crystal for surface acoustic waves. , 0, , .		0
147	Channel drop process of elastic wave in a two dimensional phononic crystal. , 0, , .		1