

Bahram Djafari Rouhani

List of Publications by Year in descending order

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126
papers

7,199
citations

76326

40
h-index

56724

83
g-index

126
all docs

126
docs citations

126
times ranked

2911
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	Topological cavities in phononic plates for robust energy harvesting. <i>Mechanical Systems and Signal Processing</i> , 2022, 162, 108047.	8.0	45
3	Analytical and numerical study of T-shaped plasmonic demultiplexer based on Fano and induced transparency resonances. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 075106.	2.8	8
4	Fundamentals, progress and perspectives on high-frequency phononic crystals. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 193002.	2.8	22
5	A perspective on elastic metastructures for energy harvesting. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	30
6	Intelligent on-demand design of phononic metamaterials. <i>Nanophotonics</i> , 2022, 11, 439-460.	6.0	55
7	Quantization of Acoustic Modes in Dumbbell Nanoparticles. <i>Physical Review Letters</i> , 2022, 128, 048003.	7.8	4
8	Plasmonic Tamm states in periodic stubbed MIM waveguides: analytical and numerical study. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2022, 39, 600.	2.1	5
9	Three port photonic and plasmonic demultiplexers based on Cross and U-shaped stub structures: Application for filtering and sensing. <i>Journal of Applied Physics</i> , 2022, 131, 153102.	2.5	5
10	A Biosensor Based on Bound States in the Continuum and Fano Resonances in a Solidâ€“Liquidâ€“Solid Triple Layer. <i>Crystals</i> , 2022, 12, 707.	2.2	5
11	Lightweight sound-absorbing metastructures with perforated fish-belly panels. <i>International Journal of Mechanical Sciences</i> , 2022, 226, 107396.	6.7	26
12	Non-Hermitian skin effect in a phononic beam based on piezoelectric feedback control. <i>Applied Physics Letters</i> , 2022, 121, .	3.3	16
13	Optical waves in finite layered photonic crystals. , 2021, , 529-568.		0
14	Photonic monomode circuits: comb structures. , 2021, , 219-285.		0
15	Acoustic Tamm states in slender tubes. <i>Materials Today: Proceedings</i> , 2021, 45, 7394-7398.	1.8	4
16	Fibonacci loop structures: bandgaps, power law, scaling law, confined and surface modes. , 2021, , 333-371.		0
17	Induced transparency based subwavelength acoustic demultiplexers. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 175301.	2.8	10
18	Elastic Metasurfaces for Deep and Robust Subwavelength Focusing and Imaging. <i>Physical Review Applied</i> , 2021, 15, .	3.8	53

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19	Propagation and attenuation of Rayleigh and pseudo surface waves in viscoelastic metamaterials. Journal of Applied Physics, 2021, 129, .	2.5	26
20	Vertical Engineering for Large Brillouin Gain in Unreleased Silicon-Based Waveguides. Physical Review Applied, 2021, 15, .	3.8	5
21	Robust edge states of subwavelength chiral phononic plates. Extreme Mechanics Letters, 2021, 44, 101209.	4.1	25
22	Abnormal topological refraction into free medium at subwavelength scale in valley phononic crystal plates. Physical Review B, 2021, 103, .	3.2	15
23	Experimental realization of a pillared metasurface for flexural wave focusing. APL Materials, 2021, 9, .	5.1	35
24	Experimental Evidence of the Existence of Bound States in the Continuum and Fano Resonances in Solid-Liquid Layered Media. Physical Review Applied, 2021, 15, .	3.8	14
25	Optomechanic Coupling in Ag Polymer Nanocomposite Films. Journal of Physical Chemistry C, 2021, 125, 14854-14864.	3.1	13
26	Broadband Rayleigh wave attenuation by gradient metamaterials. International Journal of Mechanical Sciences, 2021, 205, 106592.	6.7	43
27	Temperature biosensor based on triangular lattice phononic crystals. APL Materials, 2021, 9, .	5.1	26
28	Physics of surface vibrational resonances: pillared phononic crystals, metamaterials, and metasurfaces. Reports on Progress in Physics, 2021, 84, 086502.	20.1	94
29	Y-Shaped Demultiplexer Photonic Circuits Based on Detuned Stubs: Application to Radiofrequency Domain. Photonics, 2021, 8, 386.	2.0	4
30	Electromagnetic induced transparency, induced absorption, and Fano resonances in photonic circuits. , 2021, , 155-191.		0
31	Serial loop structures: photonic bandgaps, confined, cavity, and surface modes. , 2021, , 287-331.		0
32	Surface modes in plasmonic stubbed structures. Materials Today: Proceedings, 2021, 45, 7752-7755.	1.8	1
33	Plasmonic Demultiplexer Based on Induced Transparency Resonances: Analytical and Numerical Study. Lecture Notes in Electrical Engineering, 2021, , 239-247.	0.4	5
34	Evanescent Coupling between Aluminum Pillars. , 2021, , .		0
35	Enhanced phonon-plasmon interaction in film-coupled dimer nanoridges mediated by surface acoustic waves. Optics Express, 2021, 29, 43104.	3.4	2
36	Dynamic thermoregulatory photonic crystal fabric for personal thermal management. , 2021, , .		0

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37	Aharonov-Bohm-effect induced transparency and reflection in mesoscopic rings side coupled to a quantum wire. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 116, 113770.	2.7	19
38	Robust Fano resonance in a topological mechanical beam. <i>Physical Review B</i> , 2020, 101, .	3.2	57
39	Impact of SiO ₂ Particles in Polyethylene Textile Membrane for Indoor Personal Heating. <i>Nanomaterials</i> , 2020, 10, 1968.	4.1	10
40	Comparison of density of states and scattering parameters in coaxial photonic crystals: Theory and experiment. <i>Physical Review B</i> , 2020, 102, .	3.2	17
41	Coupling of Integrated Waveguide and Optomechanic Cavity for Microwave Phonon Excitation in Si Nanobeams. <i>Photonics</i> , 2020, 7, 67.	2.0	2
42	Active control of the transmission of Lamb waves through an elastic metamaterial. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	6
43	Broadband Asymmetric Propagation in Pillared Meta-Plates. <i>Crystals</i> , 2020, 10, 702.	2.2	4
44	Graphene-Based One-Dimensional Terahertz Phononic Crystal: Band Structures and Surface Modes. <i>Nanomaterials</i> , 2020, 10, 2205.	4.1	4
45	Scaling Law, Confined and Surface Modes in Photonic Fibonacci Stub Structures: Theory and Experiment. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7767.	2.5	4
46	Acoustic demultiplexer based on Fano and induced transparency resonances in slender tubes. <i>EPJ Applied Physics</i> , 2020, 90, 10902.	0.7	14
47	Polymer photonic crystal membrane for thermo-regulating textile. <i>Scientific Reports</i> , 2020, 10, 9855.	3.3	14
48	Asymmetric topological state in an elastic beam based on symmetry principle. <i>International Journal of Mechanical Sciences</i> , 2020, 186, 105897.	6.7	35
49	Surface Acoustic Waves-Localized Plasmon Interaction in Pillared Phononic Crystals. <i>Physical Review Applied</i> , 2020, 13, .	3.8	9
50	Elastic stubbed metamaterial plate with torsional resonances. <i>Ultrasonics</i> , 2020, 106, 106142.	3.9	17
51	Topological states in twisted pillared phononic plates. <i>Extreme Mechanics Letters</i> , 2020, 39, 100777.	4.1	41
52	Bound in continuum states and induced transparency in mesoscopic demultiplexer with two outputs. <i>Chinese Physics B</i> , 2020, 29, 127301.	1.4	3
53	Exceptional Point Enhances Sensitivity of Optomechanical Mass Sensors. <i>Physical Review Applied</i> , 2019, 12, .	3.8	69
54	Polarization-dependent and valley-protected Lamb waves in asymmetric pillared phononic crystals. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 505302.	2.8	16

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55	Topological valley, pseudospin, and pseudospin-valley protected edge states in symmetric pillared phononic crystals. <i>Physical Review B</i> , 2019, 100, .	3.2	35
56	Conversion between surface acoustic waves and guided modes of a quasi-periodic structured nanobeam. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 32LT01.	2.8	13
57	Gradient index phononic crystals and metamaterials. <i>Nanophotonics</i> , 2019, 8, 685-701.	6.0	108
58	Y-shaped magnonic demultiplexer using induced transparency resonances. <i>AIP Advances</i> , 2019, 9, 035011.	1.3	12
59	Photonic demultiplexer based on electromagnetically induced transparency resonances. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 075101.	2.8	17
60	Phononic and photonic crystals for sensing applications. <i>Advances in Applied Mechanics</i> , 2019, 52, 105-145.	2.3	22
61	Love waves dispersion by phononic pillars for nano-particle mass sensing. <i>Applied Physics Letters</i> , 2019, 114, .	3.3	27
62	Trapped-mode-induced Fano resonance and acoustical transparency in a one-dimensional solid-fluid phononic crystal. <i>Physical Review B</i> , 2018, 97, .	3.2	44
63	Rayleigh Waves in Phononic Crystal Made of Multilayered Pillars: Confined Modes, Fano Resonances, and Acoustically Induced Transparency. <i>Physical Review Applied</i> , 2018, 9, .	3.8	45
64	Dynamical effective parameters of elastic superlattice with strong acoustic contrast between the constituents. <i>Low Temperature Physics</i> , 2018, 44, 1280-1284.	0.6	2
65	Double-Negative Pillared Elastic Metamaterial. <i>Physical Review Applied</i> , 2018, 10, .	3.8	28
66	Acoustic analogue of electromagnetically induced transparency and Autler-Townes splitting in pillared metasurfaces. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 494004.	2.8	17
67	Compact Waveguide and Guided Beam Pattern Based on the Whispering-Gallery Mode of a Hollow Pillar in a Phononic Crystal Plate. <i>Physical Review Applied</i> , 2018, 10, .	3.8	7
68	Robustness of conventional and topologically protected edge states in phononic crystal plates. <i>Physical Review B</i> , 2018, 98, .	3.2	64
69	Rigorous simulation of nonlinear optomechanical coupling in micro- and nano-structured resonant cavities. <i>International Journal of Optomechanics</i> , 2018, 12, 11-19.	6.6	3
70	Invisible omnidirectional lens for flexural waves in thin elastic plates. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 225301.	2.8	16
71	Phononic crystal plate with hollow pillars connected by thin bars. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 035301.	2.8	32
72	Plasmonic-induced transparency in a MIM waveguide with two side-coupled cavities. <i>Applied Physics A: Materials Science and Processing</i> , 2017, 123, 1.	2.3	10

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73	Pillar-type acoustic metasurface. <i>Physical Review B</i> , 2017, 96, .	3.2	44
74	Tunable Fano resonances of Lamb modes in a pillared metasurface. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 425304.	2.8	31
75	Superluminal and negative delay times in isotropic-anisotropic one-dimensional photonic crystal. <i>Journal of Applied Physics</i> , 2017, 122, 183106.	2.5	7
76	Phononic Crystal Made of Multilayered Ridges on a Substrate for Rayleigh Waves Manipulation. <i>Crystals</i> , 2017, 7, 372.	2.2	19
77	Phononic Crystal Plate with Hollow Pillars Actively Controlled by Fluid Filling. <i>Crystals</i> , 2016, 6, 64.	2.2	59
78	Multimodal and omnidirectional beam splitters for Lamb modes in elastic plates. <i>AIP Advances</i> , 2016, 6, 121602.	1.3	12
79	Phoxonic crystals and cavity optomechanics. <i>Comptes Rendus Physique</i> , 2016, 17, 555-564.	0.9	30
80	Elastoplasmonic interaction in metal-insulator-metal localized surface plasmon systems. <i>Physical Review B</i> , 2016, 94, .	3.2	15
81	Tunable waveguide and cavity in a phononic crystal plate by controlling whispering-gallery modes in hollow pillars. <i>Physical Review B</i> , 2016, 93, .	3.2	100
82	Gradient Index Devices for the Full Control of Elastic Waves in Plates. <i>Scientific Reports</i> , 2016, 6, 24437.	3.3	40
83	Simultaneous control of the S and A Lamb modes by graded phononic crystal plates. <i>Journal of Applied Physics</i> , 2015, 117, .	2.5	55
84	Electromagnetically induced absorption in detuned stub waveguides: a simple analytical and experimental model. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 505901.	1.8	30
85	Negative effective mass density of acoustic metamaterial plate decorated with low frequency resonant pillars. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	57
86	Effective medium theory for elastic metamaterials in thin elastic plates. <i>Physical Review B</i> , 2014, 90, .	3.2	41
87	Simultaneous sensing of light and sound velocities of fluids in a two-dimensional phoXonic crystal with defects. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	71
88	Modeling light-sound interaction in nanoscale cavities and waveguides. <i>Nanophotonics</i> , 2014, 3, 413-440.	6.0	82
89	Optomechanical interactions in two-dimensional Si and GaAs phoXonic cavities. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 015005.	1.8	33
90	A one-dimensional optomechanical crystal with a complete phononic band gap. <i>Nature Communications</i> , 2014, 5, 4452.	12.8	138

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91	Optomechanic interaction in a corrugated phoxonic nanobeam cavity. <i>Physical Review B</i> , 2014, 89, .	3.2	46
92	Defect-Controlled Hypersound Propagation in Hybrid Superlattices. <i>Physical Review Letters</i> , 2013, 111, 164301.	7.8	42
93	Theoretical and experimental evidence of Fano-like resonances in simple monomode photonic circuits. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	39
94	Acousto-optic couplings in two-dimensional phoxonic crystal cavities. <i>Applied Physics Letters</i> , 2012, 101, 061109.	3.3	91
95	Engineering the Hypersonic Phononic Band Gap of Hybrid Bragg Stacks. <i>Nano Letters</i> , 2012, 12, 3101-3108.	9.1	63
96	Magnonic circuits and crystals. <i>Surface Science Reports</i> , 2011, 66, 29-75.	7.2	32
97	Two-dimensional phononic crystals: Examples and applications. <i>Surface Science Reports</i> , 2010, 65, 229-291.	7.2	462
98	Enhanced acousto-optic interactions in a one-dimensional phoxonic cavity. <i>Physical Review B</i> , 2010, 82, .	3.2	96
99	Modeling of two-dimensional nanoscale Y-bent plasmonic waveguides with cavities for demultiplexing of the telecommunication wavelengths. <i>New Journal of Physics</i> , 2009, 11, 103020.	2.9	99
100	Microstubs resonators integrated to bent Y-branch waveguide. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2008, 6, 26-31.	2.0	5
101	Transmission gaps and Fano resonances in an acoustic waveguide: analytical model. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 255212.	1.8	73
102	Sonic band gaps in one-dimensional phononic crystals with a symmetric stub. <i>Physical Review B</i> , 2008, 77, .	3.2	8
103	Low-frequency gaps in a phononic crystal constituted of cylindrical dots deposited on a thin homogeneous plate. <i>Physical Review B</i> , 2008, 78, .	3.2	307
104	Two types of modes in finite size one-dimensional coaxial photonic crystals: General rules and experimental evidence. <i>Physical Review E</i> , 2007, 76, 026607.	2.1	25
105	Electromagnetic wave propagation in quasi-periodic photonic circuits. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 246217.	1.8	14
106	Surface electromagnetic waves in Fibonacci superlattices: Theoretical and experimental results. <i>Physical Review B</i> , 2006, 74, .	3.2	38
107	Propagation and localization of acoustic waves in Fibonacci phononic circuits. <i>Journal of Physics Condensed Matter</i> , 2005, 17, 4245-4262.	1.8	36
108	Propagation and localization of electromagnetic waves in quasiperiodic serial loop structures. <i>Physical Review E</i> , 2005, 72, 056601.	2.1	34

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109	Stopping and filtering waves in phononic circuits. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 37-44.	1.8	32
110	Photon, electron, magnon, phonon and plasmon mono-mode circuits. <i>Surface Science Reports</i> , 2004, 54, 1-156.	7.2	99
111	Experimental and theoretical evidence for the existence of photonic bandgaps and selective transmissions in serial loop structures. <i>Journal of Applied Physics</i> , 2004, 95, 1102-1113.	2.5	73
112	Transmission and filtering in photonic circuits: effects of absorption and amplification. <i>Progress in Surface Science</i> , 2003, 74, 389-404.	8.3	9
113	Evidence of Fano-Like Interference Phenomena in Locally Resonant Materials. <i>Physical Review Letters</i> , 2002, 88, 225502.	7.8	314
114	Theoretical analysis of the density of states and phase times: Application to resonant electromagnetic modes in finite superlattices. <i>Physical Review B</i> , 2001, 63, .	3.2	54
115	Surface states in one-dimensional photonic band gap structures. <i>Vacuum</i> , 2001, 63, 177-183.	3.5	37
116	Resonant tunnelling of acoustic waves between two slender tubes. <i>Europhysics Letters</i> , 1999, 46, 467-470.	2.0	15
117	Large magnonic band gaps and defect modes in one-dimensional comblike structures. <i>Physical Review B</i> , 1999, 59, 8709-8719.	3.2	46
118	Defect modes in one-dimensional comblike photonic waveguides. <i>Physical Review B</i> , 1999, 59, 13446-13452.	3.2	58
119	Electromagnetic waves in finite superlattices with buffer and cap layers. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1999, 16, 1703.	1.5	12
120	Acoustic spectral gaps and discrete transmisson in slender tubes. <i>Solid State Communications</i> , 1998, 106, 659-663.	1.9	55
121	Giant gaps in photonic band structures. <i>Physical Review B</i> , 1998, 57, R9388-R9391.	3.2	79
122	Theory of surface and interface transverse elastic waves inN-layer superlattices. <i>Physical Review B</i> , 1996, 54, 14728-14741.	3.2	63
123	Acoustic band structure of periodic elastic composites. <i>Physical Review Letters</i> , 1993, 71, 2022-2025.	7.8	2,336
124	Surface and interface elastic waves in superlattices: Transverse localized and resonant modes. <i>Physical Review B</i> , 1993, 48, 10987-10997.	3.2	68
125	Acoustic resonances of adsorbed wires and channels. <i>Journal of Physics Condensed Matter</i> , 1993, 5, 8177-8194.	1.8	19
126	Asymmetric Design for a Highâ€Performance Indoor Radiative Heating Fabric. <i>Advanced Materials Technologies</i> , 0, , 2101738.	5.8	1