Daniel Torrent

List of Publications by Year
in descending order

79 papers	3,725 citations	109321 35 h-index	128289 60 g-index
83 all docs	83 docs citations	83 times ranked	1823 citing authors

#	Article	IF	Citations
1	Homogenization of piezoelectric planar Willis materials undergoing antiplane shear. Wave Motion, 2022, 108, 102833.	2.0	10
2	Intelligent on-demand design of phononic metamaterials. Nanophotonics, 2022, 11, 439-460.	6.0	55
3	Non-locality of the Willis coupling in fluid laminates. Wave Motion, 2022, 110, 102892.	2.0	2
4	Far-Field Perfect Imaging with Time-Modulated Gratings. Physical Review Applied, 2022, 17, .	3.8	1
5	Inverse design of topological metaplates for flexural waves with machine learning. Materials and Design, 2021, 199, 109390.	7.0	42
6	Metaclusters for the Full Control of Mechanical Waves. Physical Review Applied, 2021, 15, .	3.8	13
7	Dipolar Localization of Waves in Twisted Phononic Crystal Plates. Physical Review Applied, 2021, 15, .	3.8	25
8	Analytical modeling of one-dimensional resonant asymmetric and reciprocal acoustic structures as Willis materials. New Journal of Physics, 2021, 23, 053020.	2.9	10
9	Edge modes for flexural waves in quasi-periodic linear arrays of scatterers. APL Materials, 2021, 9, .	5.1	17
10	Introduction to Multiple Scattering Theory for Scalar Waves. Topics in Applied Physics, 2021, , 43-64.	0.8	0
11	Broadband Asymmetric Propagation in Pillared Meta-Plates. Crystals, 2020, 10, 702.	2.2	4
12	Strong spatial dispersion in time-modulated dielectric media. Physical Review B, 2020, 102, .	3.2	23
13	Topological states in twisted pillared phononic plates. Extreme Mechanics Letters, 2020, 39, 100777.	4.1	41
14	Generalized elastodynamic model for nanophotonics. Physical Review B, 2020, 102, .	3.2	7
15	Multiple scattering theory of non-Hermitian sonic second-order topological insulators. Communications Physics, 2019, 2, .	5.3	21
16	Mechanical Analogue of a Majorana Bound State. Advanced Materials, 2019, 31, e1904386.	21.0	35
17	Majorana-like Zero Modes in KekulÃ© Distorted Sonic Lattices. Physical Review Letters, 2019, 123, 196601.	7.8	55
18	Engineered Diffraction Gratings for Acoustic Cloaking. Physical Review Applied, 2019, 11, .	3.8	54

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19	Gradient index phononic crystals and metamaterials. Nanophotonics, 2019, 8, 685-701.	6.0	108
20	Valley Hall phases in kagome lattices. Physical Review B, 2019, 99, .	3.2	31
21	Inverse Grating Problem: Efficient Design of Anomalous Flexural Wave Reflectors and Refractors. Physical Review Applied, 2019, 11, .	3.8	33
22	Ultrathin Acoustic Parity-Time Symmetric Metasurface Cloak. Research, 2019, 2019, 8345683.	5.7	37
23	Direct retrieval method of the effective permittivity and permeability of bulk semi-infinite metamaterials by variable-angle spectroscopic ellipsometry. OSA Continuum, 2019, 2, 1762.	1.8	3
24	Loss compensation in time-dependent elastic metamaterials. Physical Review B, 2018, 97, .	3.2	23
25	Nonreciprocal Thermal Material by Spatiotemporal Modulation. Physical Review Letters, 2018, 120, 125501.	7.8	81
26	Robustness of conventional and topologically protected edge states in phononic crystal plates. Physical Review B, 2018, 98, .	3.2	64
27	Acoustic anomalous reflectors based on diffraction grating engineering. Physical Review B, 2018, 98, .	3.2	57
28	Flat bands in metamaterials based on angularly layered metalâ€“dielectric scatterers. Journal Physics D: Applied Physics, 2017, 50, 125103.	2.8	0
29	Invisible omnidirectional lens for flexural waves in thin elastic plates. Journal Physics D: Applied Physics, 2017, 50, 225301.	2.8	16
30	Dynamic homogenization theory for nonlocal acoustic metamaterials. Extreme Mechanics Letters, 2017, 12, 71-76.	4.1	21
31	Multimodal and omnidirectional beam splitters for Lamb modes in elastic plates. AIP Advances, 2016, 6, 121602.	1.3	12
32	Dynamic homogenization of viscoelastic phononic metasolids. AIP Advances, 2016, 6, 121705.	1.3	5
33	Analysis of flexural wave cloaks. AIP Advances, 2016, 6, .	1.3	15
34	Gradient Index Devices for the Full Control of Elastic Waves in Plates. Scientific Reports, 2016, 6, 24437.	3.3	40
35	Transparent Gradient-Index Lens for Underwater Sound Based on Phase Advance. Physical Review Applied, 2015, 4, .	3.8	32
36	Resonant and nonlocal properties of phononic metasolids. Physical Review B, 2015, 92, .	3.2	36

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37	Simultaneous control of the S and A Lamb modes by graded phononic crystal plates. Journal of Applied Physics, 2015, 117, .	2.5	55
38	Effective medium theory for elastic metamaterials in thin elastic plates. Physical Review B, 2014, 90, .	3.2	41
39	Omnidirectional refractive devices for flexural waves based on graded phononic crystals. Journal of Applied Physics, 2014, 116, .	2.5	37
40	Gradient index lenses for flexural waves based on thickness variations. Applied Physics Letters, 2014, 105, .	3.3	107
41	Extraordinary absorption by a thin dielectric slab backed with a metasurface. Physical Review B, 2014, 89, .	3.2	6
42	Radial Photonic Crystal Shells and Their Application as Resonant and Radiating Elements. IEEE Transactions on Antennas and Propagation, 2013, 61, 755-767.	5.1	16
43	Low-Qwhispering gallery modes in anisotropic metamaterial shells. Physical Review B, 2013, 88, .	3.2	2
44	Acoustic Cloaking via Homogenization. Springer Series in Materials Science, 2013, , 219-239.	0.6	0
45	Elastic analog of graphene: Dirac cones and edge states for flexural waves in thin plates. Physical Review B, 2013, 87, .	3.2	140
46	Negative mass density and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Ï</mml:mi></mml:math>-near-zero quasi-two-dimensional metamaterials: Design and applications. Physical Review B, 2013, 88, .	3.2	64
47	Omnidirectional broadband insulating device for flexural waves in thin plates. Journal of Applied Physics, 2013, 114, .	2.5	32
48	Negative and density-near-zero acoustic metamaterials based on quasi-two-dimensional phononic crystals.. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0
49	Homogenization theory for periodic distributions of elastic cylinders embedded in a viscous fluid. Journal of the Acoustical Society of America, 2012, 132, 2896-2908.	1.1	16
50	Double-negative acoustic metamaterials based on quasi-two-dimensional fluid-like shells. New Journal of Physics, 2012, 14, 103052.	2.9	24
51	Reduced acoustic cloaks based on temperature gradients. Applied Physics Letters, 2012, 101, 084103.	3.3	14
52	Omnidirectional broadband acoustic absorber based on metamaterials. Applied Physics Letters, 2012, 100, .	3.3	143
53	Anisotropic metamaterials as sensing devices in acoustics and electromagnetism. Proceedings of SPIE, 2012, , .	0.8	3
54	Radial Photonic Crystal for detection of frequency and position of radiation sources. Scientific Reports, 2012, 2, 558.	3.3	15

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55	Quasi-two-dimensional acoustic metamaterial with negative bulk modulus. Physical Review B, 2012, 85, .	3.2	71
56	Acoustic Analogue of Graphene: Observation of Dirac Cones in Acoustic Surface Waves. Physical Review Letters, 2012, 108, 174301.	7.8	135
57	Noise control by sonic crystal barriers made of recycled materials. Journal of the Acoustical Society of America, 2011, 129, 1173-1183.	1.1	91
58	Experimental realization of broadband tunable resonators based on anisotropic metafluids. Applied Physics Letters, 2011, 98, .	3.3	23
59	Multiple scattering formulation of two-dimensional acoustic and electromagnetic metamaterials. New Journal of Physics, 2011, 13, 093018.	2.9	38
60	Broadband acoustic cloaks based on the homogenization of layered materials. Wave Motion, 2011, 48, 497-504.	2.0	25
61	Noise Reduction by Perfect Absorbers Based on Acoustic Metamaterials. , 2011, , .		2
62	Multidisciplinary approach to cylindrical anisotropic metamaterials. New Journal of Physics, 2011, 13, 103034.	2.9	12
63	Acoustic metamaterials based on the homogenization of periodic scatterers. Proceedings of SPIE, 2011, , .	0.8	0
64	Sonic gradient index lens for aqueous applications. Applied Physics Letters, 2010, 97, .	3.3	133
65	Sound focusing by gradient index sonic lenses. Applied Physics Letters, 2010, 97, .	3.3	175
66	Acoustic resonances in two-dimensional radial sonic crystal shells. New Journal of Physics, 2010, 12, 073034.	2.9	55
67	Anisotropic Mass Density by Radially Periodic Fluid Structures. Physical Review Letters, 2010, 105, 174301.	7.8	105
68	Quenching of acoustic bandgaps by flow noise. Applied Physics Letters, 2009, 94, .	3.3	38
69	Radial Wave Crystals: Radially Periodic Structures from Anisotropic Metamaterials for Engineering Acoustic or Electromagnetic Waves. Physical Review Letters, 2009, 103, 064301.	7.8	82
70	Acoustic transparency in two-dimensional sonic crystals. New Journal of Physics, 2009, 11, 013039.	2.9	8
71	Sound scattering by anisotropic metafluids based on two-dimensional sonic crystals. Physical Review B, 2009, 79, .	3.2	18
72	Acoustic cloaking in two dimensions: a feasible approach. New Journal of Physics, 2008, 10, 063015.	2.9	343

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73	Anisotropic mass density by two-dimensional acoustic metamaterials. New Journal of Physics, 2008, 10, 023004.	2.9	163
74	Evidence of two-dimensional magic clusters in the scattering of sound. Physical Review B, 2007, 75, .	3.2	14
75	Directional acoustic source by scattering acoustical elements. Applied Physics Letters, 2007, 90, 224107.	3.3	20
76	Acoustic Properties of Fluidlike Metamaterials Based on Sonic Crystals. , 2007, , 1103.		0
77	Acoustic metamaterials for new two-dimensional sonic devices. New Journal of Physics, 2007, 9, 323-323.	2.9	213
78	Effective parameters of clusters of cylinders embedded in a nonviscous fluid or gas. Physical Review B, 2006, 74, .	3.2	94
79	Homogenization of Two-Dimensional Clusters of Rigid Rods in Air. Physical Review Letters, 2006, 96, 204302.	7.8	120