

AurÃ©lien Merkel

List of Publications by Year in descending order

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Version: 2024-02-01

27
papers

1,077
citations

516215

16
h-index

525886

27
g-index

27
all docs

27
docs citations

27
times ranked

770
citing authors

#	ARTICLE	IF	CITATIONS
1	Perfect and broadband acoustic absorption by critically coupled sub-wavelength resonators. Scientific Reports, 2016, 6, 19519.	1.6	228
2	Control of acoustic absorption in one-dimensional scattering by resonant scatterers. Applied Physics Letters, 2015, 107, .	1.5	147
3	Experimental Evidence of Rotational Elastic Waves in Granular Phononic Crystals. Physical Review Letters, 2011, 107, 225502.	2.9	108
4	Limits of slow sound propagation and transparency in lossy, locally resonant periodic structures. New Journal of Physics, 2014, 16, 093017.	1.2	87
5	Ultrathin acoustic absorbing metasurface based on deep learning approach. Smart Materials and Structures, 2021, 30, 085003.	1.8	57
6	Unidirectional zero sonic reflection in passive $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mi} \text{mathvariant="script"} \rangle \text{PT} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -symmetric Willis media. Physical Review B, 2018, 98, .	1.1	56
7	Dispersion of elastic waves in three-dimensional noncohesive granular phononic crystals: Properties of rotational modes. Physical Review E, 2010, 82, 031305.	0.8	49
8	Nonlocal acoustic metasurface for ultrabroadband sound absorption. Physical Review B, 2021, 103, .	1.1	49
9	Broadband tunable lossy metasurface with independent amplitude and phase modulations for acoustic holography. Smart Materials and Structures, 2020, 29, 105038.	1.8	33
10	Enhanced micropolar model for wave propagation in ordered granular materials. International Journal of Solids and Structures, 2017, 106-107, 91-105.	1.3	30
11	Perfect Absorption in Mirror-Symmetric Acoustic Metascreens. Physical Review Applied, 2020, 14, .	1.5	29
12	Dynamic Nonreciprocity in Loss-Compensated Piezophononic Media. Physical Review Applied, 2018, 9, .	1.5	28
13	Elastic waves in phononic monolayer granular membranes. New Journal of Physics, 2011, 13, 073042.	1.2	27
14	Janus acoustic metascreen with nonreciprocal and reconfigurable phase modulations. Nature Communications, 2021, 12, 7089.	5.8	21
15	Elastic waves in noncohesive frictionless granular crystals. Ultrasonics, 2010, 50, 133-138.	2.1	17
16	Directional asymmetry of the nonlinear wave phenomena in a three-dimensional granular phononic crystal under gravity. Physical Review E, 2014, 90, 023206.	0.8	16
17	Design of acoustic metamaterials made of Helmholtz resonators for perfect absorption by using the complex frequency plane. Comptes Rendus Physique, 2020, 21, 713-749.	0.3	15
18	Bifunctional superlens for simultaneous flexural and acoustic wave superfocusing. Applied Physics Letters, 2020, 116, .	1.5	14

#	ARTICLE	IF	CITATIONS
19	Ultrasonic nodal chains in topological granular metamaterials. Communications Physics, 2019, 2, .	2.0	12
20	Zero-phase propagation in realistic plate-type acoustic metamaterials. Applied Physics Letters, 2019, 115, .	1.5	11
21	Analytical modeling of one-dimensional resonant asymmetric and reciprocal acoustic structures as Willis materials. New Journal of Physics, 2021, 23, 053020.	1.2	10
22	Doping of a plate-type acoustic metamaterial. Physical Review B, 2020, 102, .	1.1	9
23	Nonreciprocal and even Willis couplings in periodic thermoacoustic amplifiers. Physical Review B, 2021, 104, .	1.1	9
24	PT symmetric sonic crystals: From asymmetric echoes to supersonic speeds. Europhysics Letters, 2018, 124, 34001.	0.7	5
25	Experimental evidence of a hiding zone in a density-near-zero acoustic metamaterial. Journal of Applied Physics, 2021, 129, 145101.	1.1	5
26	Testing a bead-rod contact with a nonlinear resonance method. Journal of Sound and Vibration, 2019, 441, 84-95.	2.1	3
27	Non-locality of the Willis coupling in fluid laminates. Wave Motion, 2022, 110, 102892.	1.0	2