

Vicent Romero-Garca

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

110
papers

2,203
citations

24
h-index

43
g-index

124
ext. papers

2,710
ext. citations

3
avg, IF

5.35
L-index

#	Paper	IF	Citations
110	Ultra-thin metamaterial for perfect and quasi-omnidirectional sound absorption. <i>Applied Physics Letters</i> , 2016 , 109, 121902	3.4	203
109	Rainbow-trapping absorbers: Broadband, perfect and asymmetric sound absorption by subwavelength panels for transmission problems. <i>Scientific Reports</i> , 2017 , 7, 13595	4.9	164
108	Perfect and broadband acoustic absorption by critically coupled sub-wavelength resonators. <i>Scientific Reports</i> , 2016 , 6, 19519	4.9	163
107	Control of acoustic absorption in one-dimensional scattering by resonant scatterers. <i>Applied Physics Letters</i> , 2015 , 107, 244102	3.4	113
106	Quasiperfect absorption by subwavelength acoustic panels in transmission using accumulation of resonances due to slow sound. <i>Physical Review B</i> , 2017 , 95,	3.3	94
105	Use of complex frequency plane to design broadband and sub-wavelength absorbers. <i>Journal of the Acoustical Society of America</i> , 2016 , 139, 3395	2.2	94
104	Evidences of evanescent Bloch waves in phononic crystals. <i>Applied Physics Letters</i> , 2010 , 96, 124102	3.4	65
103	Multi-resonant scatterers in sonic crystals: Locally multi-resonant acoustic metamaterial. <i>Journal of Sound and Vibration</i> , 2013 , 332, 184-198	3.9	62
102	Tunable wideband bandstop acoustic filter based on two-dimensional multiphysical phenomena periodic systems. <i>Journal of Applied Physics</i> , 2011 , 110, 014904	2.5	59
101	Enhancement of sound in chirped sonic crystals. <i>Applied Physics Letters</i> , 2013 , 102, 091906	3.4	53
100	Formation of high-order acoustic Bessel beams by spiral diffraction gratings. <i>Physical Review E</i> , 2016 , 94, 053004	2.4	50
99	Evanescent modes in sonic crystals: Complex dispersion relation and supercell approximation. <i>Journal of Applied Physics</i> , 2010 , 108, 044907	2.5	49
98	Sharp acoustic vortex focusing by Fresnel-spiral zone plates. <i>Applied Physics Letters</i> , 2018 , 112, 204101	3.4	46
97	Extraordinary absorption of sound in porous lamella-crystals. <i>Scientific Reports</i> , 2014 , 4, 4674	4.9	40
96	Unidirectional zero sonic reflection in passive PT-symmetric Willis media. <i>Physical Review B</i> , 2018 , 98,	3.3	39
95	Metadiffusers: Deep-subwavelength sound diffusers. <i>Scientific Reports</i> , 2017 , 7, 5389	4.9	36
94	Second-harmonic generation for dispersive elastic waves in a discrete granular chain. <i>Physical Review E</i> , 2013 , 88, 043203	2.4	36

93	Propagating and evanescent properties of double-point defects in sonic crystals. <i>New Journal of Physics</i> , 2010 , 12, 083024	2.9	32
92	Wave focusing using symmetry matching in axisymmetric acoustic gradient index lenses. <i>Applied Physics Letters</i> , 2013 , 103, 264106	3.4	30
91	Hole distribution in phononic crystals: design and optimization. <i>Journal of the Acoustical Society of America</i> , 2009 , 125, 3774-83	2.2	28
90	Acoustic Bessel-like beam formation by an axisymmetric grating. <i>Europhysics Letters</i> , 2014 , 106, 24005	1.6	27
89	Tunable acoustic waveguides in periodic arrays made of rigid square-rod scatterers: theory and experimental realization. <i>Journal Physics D: Applied Physics</i> , 2013 , 46, 305108	3	27
88	Three-dimensional multiresonant lossy sonic crystal for broadband acoustic attenuation: Application to train noise reduction. <i>Applied Acoustics</i> , 2019 , 146, 1-8	3.1	27
87	Complex dispersion relation of surface acoustic waves at a lossy metasurface. <i>Applied Physics Letters</i> , 2017 , 110, 051902	3.4	25
86	Optimally graded porous material for broadband perfect absorption of sound. <i>Journal of Applied Physics</i> , 2019 , 126, 175101	2.5	24
85	Design, Manufacture and Characterization of an Acoustic Barrier Made of Multi-Phenomena Cylindrical Scatterers Arranged in a Fractal-Based Geometry. <i>Archives of Acoustics</i> , 2012 , 37, 455-462		24
84	Optimization of sonic crystal attenuation properties by ev-MOGA multiobjective evolutionary algorithm. <i>Structural and Multidisciplinary Optimization</i> , 2009 , 39, 203-215	3.6	23
83	Broadband quasi perfect absorption using chirped multi-layer porous materials. <i>AIP Advances</i> , 2016 , 6, 121605	1.5	20
82	Enhancement of sound by soft reflections in exponentially chirped crystals. <i>AIP Advances</i> , 2014 , 4, 1244025		19
81	Acoustic modeling of micro-lattices obtained by additive manufacturing. <i>Applied Acoustics</i> , 2020 , 164, 107244	3.1	18
80	Theoretical and experimental evidence of level repulsion states and evanescent modes in sonic crystal stubbed waveguides. <i>New Journal of Physics</i> , 2012 , 14, 023049	2.9	17
79	Band gap creation using quasicrystalline structures based on sonic crystals. <i>Applied Physics Letters</i> , 2006 , 88, 174104	3.4	17
78	Perfect Absorption of Sound by Rigidly-Backed High-Porous Materials. <i>Acta Acustica United With Acustica</i> , 2018 , 104, 396-409	1.5	17
77	Interpretation of the Acoustic Black Hole effect based on the concept of critical coupling. <i>Journal of Sound and Vibration</i> , 2020 , 471, 115199	3.9	16
76	Aerogel-based metasurfaces for perfect acoustic energy absorption. <i>Applied Physics Letters</i> , 2019 , 115, 061901	3.4	15

75	Level repulsion and evanescent waves in sonic crystals. <i>Physical Review B</i> , 2011 , 84,	3.3	15
74	Targeted band gap creation using mixed sonic crystal arrays including resonators and rigid scatterers. <i>Applied Physics Letters</i> , 2007 , 90, 244104	3.4	15
73	Limits of flexural wave absorption by open lossy resonators: reflection and transmission problems. <i>New Journal of Physics</i> , 2019 , 21, 053003	2.9	14
72	Evanescent waves and deaf bands in sonic crystals. <i>AIP Advances</i> , 2011 , 1, 041601	1.5	14
71	Overlapping of acoustic bandgaps using fractal geometries. <i>Europhysics Letters</i> , 2010 , 92, 24007	1.6	14
70	Perfect Absorption in Mirror-Symmetric Acoustic Metascreens. <i>Physical Review Applied</i> , 2020 , 14,	4.3	14
69	Analytical model to predict the effect of a finite impedance surface on the propagation properties of 2D Sonic Crystals. <i>Journal Physics D: Applied Physics</i> , 2011 , 44, 265501	3	13
68	Formation of collimated sound beams by three-dimensional sonic crystals. <i>Journal of Applied Physics</i> , 2012 , 111, 104910	2.5	13
67	Iridescent Perfect Absorption in Critically-Coupled Acoustic Metamaterials Using the Transfer Matrix Method. <i>Applied Sciences (Switzerland)</i> , 2017 , 7, 618	2.6	12
66	Multimodal reduction of acoustic radiation of thin plates by using a single piezoelectric patch with a negative capacitance shunt. <i>Applied Acoustics</i> , 2019 , 145, 320-327	3.1	12
65	Stealth Acoustic Materials. <i>Physical Review Applied</i> , 2019 , 11,	4.3	11
64	Numerical resolution of the hyperbolic heat equation using smoothed mathematical functions instead of Heaviside and Dirac delta distributions. <i>International Communications in Heat and Mass Transfer</i> , 2013 , 46, 7-12	5.8	11
63	Broadband Transmission Loss Using the Overlap of Resonances in 3D Sonic Crystals. <i>Crystals</i> , 2016 , 6, 51	2.3	11
62	General method to retrieve all effective acoustic properties of fully-anisotropic fluid materials in three dimensional space. <i>Journal of Applied Physics</i> , 2019 , 125, 025114	2.5	10
61	Experimental validation of deep-subwavelength diffusion by acoustic metadiffusers. <i>Applied Physics Letters</i> , 2019 , 115, 081901	3.4	10
60	Bright and gap solitons in membrane-type acoustic metamaterials. <i>Physical Review E</i> , 2017 , 96, 022214	2.4	10
59	Folded metaporous material for sub-wavelength and broadband perfect sound absorption. <i>Applied Physics Letters</i> , 2020 , 117, 251902	3.4	10
58	3D-printed sound absorbing metafluid inspired by cereal straws. <i>Scientific Reports</i> , 2019 , 9, 8496	4.9	9

57	High-order Acoustic Bessel Beam Generation by Spiral Gratings. <i>Physics Procedia</i> , 2015 , 70, 245-248		9
56	Interactive multimodal transcription of text images using a web-based demo system 2009 ,		9
55	Acoustic wave propagation in effective graded fully anisotropic fluid layers. <i>Journal of the Acoustical Society of America</i> , 2019 , 146, 3400	2.2	9
54	Broadband reduction of the specular reflections by using sonic crystals: A proof of concept for noise mitigation in aerospace applications. <i>Aerospace Science and Technology</i> , 2018 , 73, 300-308	4.9	9
53	Sound Absorption and Diffusion by 2D Arrays of Helmholtz Resonators. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 1690	2.6	8
52	Acoustic characterization of silica aerogel clamped plates for perfect absorption. <i>Journal of Non-Crystalline Solids</i> , 2018 , 499, 283-288	3.9	8
51	Nonlinear focusing of ultrasonic waves by an axisymmetric diffraction grating embedded in water. <i>Applied Physics Letters</i> , 2015 , 107, 204103	3.4	8
50	Experimental evidence of absolute bandgaps in phononic crystal pipes. <i>Applied Physics Letters</i> , 2020 , 116, 201902	3.4	8
49	Graded and Anisotropic Porous Materials for Broadband and Angular Maximal Acoustic Absorption. <i>Materials</i> , 2020 , 13,	3.5	7
48	Analytical modeling of one-dimensional resonant asymmetric and reciprocal acoustic structures as Willis materials. <i>New Journal of Physics</i> , 2021 , 23, 053020	2.9	7
47	Second-Harmonic Generation in Membrane-Type Nonlinear Acoustic Metamaterials. <i>Crystals</i> , 2016 , 6, 86	2.3	7
46	Zero-phase propagation in realistic plate-type acoustic metamaterials. <i>Applied Physics Letters</i> , 2019 , 115, 134101	3.4	6
45	Acoustically penetrable sonic crystals based on fluid-like scatterers. <i>Journal Physics D: Applied Physics</i> , 2015 , 48, 025501	3	6
44	Enhanced transmission band in periodic media with loss modulation. <i>Applied Physics Letters</i> , 2014 , 105, 204104	3.4	6
43	Unlocked evanescent waves in periodic structures. <i>Optics Letters</i> , 2013 , 38, 1890-2	3	6
42	Molding the Acoustic Attenuation in Quasi-Ordered Structures: Experimental Realization. <i>Applied Physics Express</i> , 2012 , 5, 087301	2.4	6
41	Design of acoustic metamaterials made of Helmholtz resonators for perfect absorption by using the complex frequency plane. <i>Comptes Rendus Physique</i> , 2020 , 21, 713-749	1.4	6
40	Dark Solitons in Acoustic Transmission Line Metamaterials. <i>Applied Sciences (Switzerland)</i> , 2018 , 8, 1186	2.6	5

39	Angular Band Gaps in Sonic Crystals: Evanescent Waves and Spatial Complex Dispersion Relation. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2013 , 135,	1.6	5
38	Asymmetric propagation using enhanced self-demodulation in a chirped phononic crystal. <i>AIP Advances</i> , 2016 , 6, 121601	1.5	5
37	The finite-element time-domain method for elastic band-structure calculations. <i>Computer Physics Communications</i> , 2019 , 238, 77-87	4.2	5
36	Natural sonic crystal absorber constituted of seagrass (<i>Posidonia Oceanica</i>) fibrous spheres. <i>Scientific Reports</i> , 2021 , 11, 711	4.9	5
35	Underwater metamaterial absorber with impedance-matched composite.. <i>Science Advances</i> , 2022 , 8, eabm4206	14.3	5
34	Analysis of the wave propagation properties of a periodic array of rigid cylinders perpendicular to a finite impedance surface. <i>Europhysics Letters</i> , 2011 , 96, 44003	1.6	4
33	Doping of a plate-type acoustic metamaterial. <i>Physical Review B</i> , 2020 , 102,	3.3	4
32	Rapid additive manufacturing of optimized anisotropic metaporous surfaces for broadband absorption. <i>Journal of Applied Physics</i> , 2021 , 129, 115102	2.5	4
31	Complex Dispersion Relation Recovery from 2D Periodic Resonant Systems of Finite Size. <i>Applied Sciences (Switzerland)</i> , 2019 , 9, 478	2.6	3
30	Introduction to Multiple Scattering Theory 2019 , 143-182		3
29	Analytical validation of COMSOL Multiphysics for theoretical models of Radiofrequency ablation including the Hyperbolic Bioheat transfer equation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 3214-7	0.9	3
28	A phenomenological model for sonic crystals based on artificial neural networks. <i>Journal of the Acoustical Society of America</i> , 2006 , 120, 636-641	2.2	3
27	Interferometric method of determining the refraction index of two-dimensional sonic crystals. <i>Physical Review B</i> , 2007 , 75,	3.3	3
26	Stealth and equiluminous materials for scattering cancellation and wave diffusion. <i>Waves in Random and Complex Media</i> , 1-19	1.9	3
25	Second-Harmonic Generation in Acoustic Waveguides Loaded with an Array of Side Holes. <i>Acta Acustica United With Acustica</i> , 2018 , 104, 235-242	1.5	2
24	Fabrication and Characterization of 3D Printed Thin Plates for Acoustic Metamaterials Applications. <i>IEEE Sensors Journal</i> , 2019 , 19, 10365-10372	4	2
23	High optimization process for increasing the attenuation properties of acoustic metamaterials by means of the creation of defects. <i>Applied Physics Letters</i> , 2008 , 93, 223502	3.4	2
22	Nonreciprocal and even Willis couplings in periodic thermoacoustic amplifiers. <i>Physical Review B</i> , 2021 , 104,	3.3	2

21	Perfect, broadband, and sub-wavelength absorption with asymmetric absorbers: Realization for duct acoustics with 3D printed porous resonators. <i>Journal of Sound and Vibration</i> , 2022 , 523, 116687	3.9	2
20	PERIODIC SYSTEMS AS ROAD TRAFFIC NOISE REDUCING DEVICES: PROTOTYPE AND STANDARDIZATION. <i>Environmental Engineering and Management Journal</i> , 2015 , 14, 2759-2769	0.6	2
19	High-amplitude sound propagation in acoustic transmission-line metamaterial. <i>Applied Physics Letters</i> , 2021 , 118, 104102	3.4	2
18	Experimental evidence of a hiding zone in a density-near-zero acoustic metamaterial. <i>Journal of Applied Physics</i> , 2021 , 129, 145101	2.5	2
17	Localized interface modes in one-dimensional hyperuniform acoustic materials. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 315303	3	2
16	Spiral sound-diffusing metasurfaces based on holographic vortices. <i>Scientific Reports</i> , 2021 , 11, 10217	4.9	2
15	Optimal absorption of flexural energy in thin plates by critically coupling a locally resonant grating. <i>Waves in Random and Complex Media</i> , 1-23	1.9	2
14	Metadiffusers for quasi-perfect and broadband sound diffusion. <i>Applied Physics Letters</i> , 2021 , 119, 044101	4	2
13	The Plane Wave Expansion Method 2019 , 107-141		1
12	Asymmetric Metaporous Treatment: Optimization for Perfect Sound Absorption, 3D Printing, and Characterization with Air Flow 2021 ,		1
11	Control of bending wave reflection at beam terminations by thermally tunable subwavelength resonators. <i>Journal of Sound and Vibration</i> , 2022 , 116918	3.9	1
10	Acoustic Metamaterials for Industrial Applications 2019 , 183-205		0
9	The Transfer Matrix Method in Acoustics. <i>Topics in Applied Physics</i> , 2021 , 103-164	0.5	0
8	Wave transport in 1D stealthy hyperuniform phononic materials made of non-resonant and resonant scatterers. <i>APL Materials</i> , 2021 , 9, 101101	5.7	0
7	Slow Sound and Critical Coupling to Design Deep Subwavelength Acoustic Metamaterials for Perfect Absorption and Efficient Diffusion 2019 , 47-72		
6	Mathematical Techniques for the Design of Band Gap Materials 2007 , 1939		
5	Non-locality of the Willis coupling in fluid laminates. <i>Wave Motion</i> , 2022 , 102892	1.8	
4	Sound Wave Propagation in Sonic Crystals. <i>Topics in Applied Physics</i> , 2021 , 65-102	0.5	

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1 Scattering Evaluation of Equivalent Surface Impedances of Acoustic Metamaterials in Large FDTD Volumes Using RLC Circuit Modelling. *Applied Sciences (Switzerland)*, **2021**, 11, 8084

2.6