NoÃ© JimÃ©nez

List of Publications by Year
in descending order

89 papers	1,739 citations	394390 19 h-index	289230 40 g-index
98 all docs	98 docs citations	98 times ranked	1135 citing authors

#	Article	IF	Citations
1	Acoustic Holograms for Bilateral Blood-Brain Barrier Opening in a Mouse Model. IEEE Transactions on Biomedical Engineering, 2022, 69, 1359-1368.	4.2	23
2	Thermal holographic patterns for ultrasound hyperthermia. Applied Physics Letters, 2022, 120, .	3.3	16
3	Optical Drills by Dynamic High-Order Bessel Beam Mixing. Physical Review Applied, 2022, 17, .	3.8	9
4	Numerical Study of Acoustic Holograms for Deep-Brain Targeting through the Temporal Bone Window. Ultrasound in Medicine and Biology, 2022, 48, 872-886.	1.5	10
5	Ultrasonic Monitoring of Dentin Demineralization. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 570-578.	3.0	5
6	Beamforming for large-area scan and improved SNR in array-based photoacoustic microscopy. Ultrasonics, 2021, 111, 106317.	3.9	9
7	Characterization of Viscoelastic Media Combining Ultrasound and Magnetic-Force Induced Vibrations on an Embedded Soft Magnetic Sphere. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 3540-3548.	3.0	6
8	Subwavelength Acoustic Vortex Beams Using Self-Demodulation. Physical Review Applied, 2021, 15, .	3.8	8
9	Spiral sound-diffusing metasurfaces based on holographic vortices. Scientific Reports, 2021, 11, 10217.	3.3	15
10	Metadiffusers for quasi-perfect and broadband sound diffusion. Applied Physics Letters, 2021, 119, .	3.3	4
11	Scattering Evaluation of Equivalent Surface Impedances of Acoustic Metamaterials in Large FDTD Volumes Using RLC Circuit Modelling. Applied Sciences (Switzerland), 2021, 11, 8084.	2.5	0
12	Natural sonic crystal absorber constituted of seagrass (Posidonia Oceanica) fibrous spheres. Scientific Reports, 2021, 11, 711.	3.3	10
13	Acoustic Metamaterial Absorbers. Topics in Applied Physics, 2021, , 167-204.	0.8	0
14	The Transfer Matrix Method in Acoustics. Topics in Applied Physics, 2021, , 103-164.	0.8	5
15	Transtemporal Ultrasound Holograms for Thalamic Therapy. , 2021, , .		1
16	Modeling of intensity-modulated focused ultrasound in pediatric brain tumors using acoustic holograms. , 2021, , .		1
17	Ultrasonic Holograms to Enhance Hyperthermia Volumes. , 2021, , .		0
18	Ultrasonic Monitoring of the Dentin Demineralization Dynamics. , 2021, , .		0

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19	Synchronized sine-sweep imaging for uncoupling nonlinear signatures during pulse compression. , 2021, , .		0
20	Perfect Absorption in Mirror-Symmetric Acoustic Metascreens. Physical Review Applied, 2020, 14, .	3.8	29
21	A new elastographic technique using acoustic vortices. , 2020, , .		4
22	Design of acoustic metamaterials made of Helmholtz resonators for perfect absorption by using the complex frequency plane. Comptes Rendus Physique, 2020, 21, 713-749.	0.9	15
23	Transcranial Focusing of Ultrasonic Vortices by Acoustic Holograms. Physical Review Applied, 2020, 14, .	3.8	38
24	First in-vivo Demonstration of Bilateral Blood-Brain Barrier Opening Using Acoustic Holograms in Mice. , 2020, , .		1
25	Multifocal acoustic holograms for deep-brain neuromodulation and BBB opening. , 2020, , .		0
26	Dynamic beamforming for large area scan in array-based photoacoustic microscopy. , 2020, , .		0
27	Aerogel-based metasurfaces for perfect acoustic energy absorption. Applied Physics Letters, 2019, 115, .	3.3	31
28	Experimental validation of deep-subwavelength diffusion by acoustic metadiffusers. Applied Physics Letters, 2019, 115, 081901.	3.3	12
29	Holograms to Focus Arbitrary Ultrasonic Fields through the Skull. Physical Review Applied, 2019, 12, .	3.8	99
30	Monitoring the Setting of Calcium Sulfate Bone-Graft Substitute Using Ultrasonic Backscattering. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1658-1666.	3.0	3
31	On the Evaluation of the Suitability of the Materials Used to 3D Print Holographic Acoustic Lenses to Correct Transcranial Focused Ultrasound Aberrations. Polymers, 2019, 11, 1521.	4.5	10
32	Transcranial acoustic holograms for arbitrary fields generation using focused ultrasound into the brain. Proceedings of Meetings on Acoustics, 2019, , .	0.3	0
33	Magnetic force induced vibration of a ferromagnetic sphere for viscoelastic media characterization. Proceedings of Meetings on Acoustics, 2019, , .	0.3	0
34	Calcium sulfate setting monitoring with ultrasonic backscattering analysis. Proceedings of Meetings on Acoustics, 2019, , .	0.3	0
35	Generating Bessel beams with broad depth-of-field by using phase-only acoustic holograms. Scientific Reports, 2019, 9, 20104.	3.3	42
36	Acoustic Holograms Allow the Generation of Complex Fields Inside the Central Nervous System. , 2019, , .		1

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37	ModelizaciÃ³n de cerÃ¡micas y transductores piezoelÃ©ctricos vibrando en espesor mediante matrices de transferencia. Modelling in Science Education and Learning, 2019, 12, 87.	0.2	0
38	Kinks in a Lattice of Repelling Particles. Understanding Complex Systems, 2018, , 261-282.	0.6	4
39	Broadband reduction of the specular reflections by using sonic crystals: A proof of concept for noise mitigation in aerospace applications. Aerospace Science and Technology, 2018, 73, 300-308.	4.8	15
40	Nonlinear waves in a chain of magnetically coupled pendula. Proceedings of Meetings on Acoustics, 2018, , .	0.3	0
41	Transport and Preservation of Liver in a Revolutionary Medical Device. Transplantation, 2018, 102, S789.	1.0	0
42	Modulated-nonlinearity in phononic crystals: From extremely linear to effective cubic nonlinear media. Proceedings of Meetings on Acoustics, 2018, , .	0.3	0
43	Vortex-sound diffusers using spiral metasurfaces. , 2018, , .		0
44	Sharp acoustic vortex focusing by Fresnel-spiral zone plates. Applied Physics Letters, 2018, 112, .	3.3	73
45	Perfect Absorption of Sound by Rigidly-Backed High-Porous Materials. Acta Acustica United With Acustica, 2018, 104, 396-409.	0.8	24
46	Dynamic nonlinear focal shift in amplitude modulated moderately focused acoustic beams. Ultrasonics, 2017, 75, 106-114.	3.9	6
47	Rainbow-trapping absorbers: Broadband, perfect and asymmetric sound absorption by subwavelength panels for transmission problems. Scientific Reports, 2017, 7, 13595.	3.3	258
48	Metadiffusers: Deep-subwavelength sound diffusers. Scientific Reports, 2017, 7, 5389.	3.3	52
49	Quasiperfect absorption by subwavelength acoustic panels in transmission using accumulation of resonances due to slow sound. Physical Review B, 2017, 95, .	3.2	142
50	Nonlinear dispersive waves in repulsive lattices. Physical Review E, 2017, 96, 012208.	2.1	27
51	Metadiffusers: Sound diffusers with deep-subwavelength dimensions. , 2017, , .		0
52	Iridescent Perfect Absorption in Critically-Coupled Acoustic Metamaterials Using the Transfer Matrix Method. Applied Sciences (Switzerland), 2017, 7, 618.	2.5	21
53	Broadband quasi perfect absorption using chirped multi-layer porous materials. AIP Advances, 2016, 6, 121605.	1.3	24
54	Ultra-thin metamaterial for perfect and quasi-omnidirectional sound absorption. Applied Physics Letters, 2016, 109, .	3.3	280

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55	Localized nonlinear modes in microbubbles under the action of ultrasound. , 2016, , .		1
56	Asymmetric propagation using enhanced self-demodulation in a chirped phononic crystal. AIP Advances, 2016, 6, .	1.3	6
57	Design of sub-wavelength acoustic absorbing panels using accumulation of resonances due to slow sound. , 2016, , .		0
58	Formation of high-order acoustic Bessel beams by spiral diffraction gratings. Physical Review E, 2016, 94, 053004.	2.1	88
59	Nonlinear propagation and control of acoustic waves in phononic superlattices. Comptes Rendus Physique, 2016, 17, 543-554.	0.9	17
60	Time-Domain Simulation of Ultrasound Propagation in a Tissue-Like Medium Based on the Resolution of the Nonlinear Acoustic Constitutive Relations. Acta Acustica United With Acustica, 2016, 102, 876-892.	0.8	22
61	High-order Acoustic Bessel Beam Generation by Spiral Gratings. Physics Procedia, 2015, 70, 245-248.	1.2	17
62	Nonlinear self-collimated sound beams in sonic crystals. Physical Review B, 2015, 92, .	3.2	5
63	Macroscopic acousto-mechanical analogy of a microbubble. Journal of the Acoustical Society of America, 2015, 138, 3600-3606.	1.1	7
64	Nonlinear focusing of ultrasonic waves by an axisymmetric diffraction grating embedded in water. Applied Physics Letters, 2015, 107, .	3.3	13
65	Time-domain simulation of constitutive relations for nonlinear acoustics including relaxation for frequency power law attenuation media modeling. AIP Conference Proceedings, 2015, , .	0.4	0
66	Transcranial Propagation with an Ultrasonic Mono-element Focused Transducer. Physics Procedia, 2015, 63, 103-107.	1.2	0
67	Ultradiscrete kinks with supersonic speed in a layered crystal with realistic potentials. Physical Review E, 2015, 91, 022912.	2.1	42
68	Quodons in Mica. Springer Series in Materials Science, 2015, , .	0.6	13
69	A Supersonic Crowdion in Mica. Springer Series in Materials Science, 2015, , 69-96.	0.6	12
70	On the Nonlinear Effects in Focused Ultrasound Beams with Frequency Power Law Attenuation. Physics Procedia, 2015, 63, 47-53.	1.2	1
71	Nonlinear Ultrasound Simulations Including Complex Frequency Dependent Attenuation. Physics Procedia, 2015, 63, 108-113.	1.2	1
72	Propagation of Intense Acoustic Waves in Sonic Crystals. Physics Procedia, 2015, 70, 271-274.	1.2	1

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73	Acoustic Bessel-like beam formation by an axisymmetric grating. Europhysics Letters, 2014, 106, 24005.	2.0	36
74	Lattice of nonlinear coupled oscillators: An acousto-mechanical analogy of gas microbubble. , 2014, , .		1
75	Texture in state-of-the-art Nb₃Sn multifilamentary superconducting wires. Superconductor Science and Technology, 2014, 27, 025013.	3.5	15
76	Spatio-Temporal Dynamics in a Ring of Coupled Pendula: Analogy with Bubbles. Advances in Dynamics, Patterns, Cognition, 2014, , 251-262.	0.3	8
77	Nonlinear focal shift beyond the geometrical focus in moderately focused acoustic beams. Journal of the Acoustical Society of America, 2013, 134, 1463-1472.	1.1	11
78	Vibration modes in a pendulums ring: Analogy with gas microbubbles surface modes. , 2013, , .		1
79	Moving Excitations in Cation Lattices. Ukrainian Journal of Physics, 2013, 58, 646-656.	0.2	13
80	Modulational instability of microbubbles surface modes. AIP Conference Proceedings, 2012, , .	0.4	2
81	Nonlinear effects in the radiation force generated by amplitude-modulated focused beams. AIP Conference Proceedings, 2012, , .	0.4	1
82	Numerical study of nonlinear, transcranial focused ultrasound wave propagation for blood-brain barrier (BBB) opening. , 2012, , .		0
83	Ultrasonic evaluation of the hydration degree of the orange peel. Postharvest Biology and Technology, 2012, 67, 130-137.	6.0	7
84	Modulational Instability and localized modes for ultrasound contrast microbubbles surface oscillations. , 2011, , .		5
85	Nonlinear focal shift in medium Fresnel-number focused acoustic beams. , 2010, , .		0
86	Sampling and repeatability in the evaluation of hepatitis C virus genetic variability. Journal of General Virology, 2003, 84, 2343-2350.	2.9	18
87	Prephenate Dehydratase from the Aphid Endosymbiont (Buchnera) Displays Changes in the Regulatory Domain That Suggest Its Desensitization to Inhibition by Phenylalanine. Journal of Bacteriology, 2000, 182, 2967-2969.	2.2	15
88	Modeling Acoustically Driven Microbubbles by Macroscopic Discrete-Mechanical Analogues. Modelling in Science Education and Learning, 0, 6, 75.	0.2	5
89	SimulaciÃ³n numÃ©rica de una cerÃ¡mica piezoelÃ©ctrica. Modelling in Science Education and Learning, 0, 6, 131.	0.2	1