

Chiara Daraio

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218
papers

10,288
citations

54
h-index

92
g-index

230
ext. papers

11,893
ext. citations

6.7
avg, IF

6.78
L-index

#	Paper	IF	Citations
218	Growth of nano-scale hydroxyapatite using chemically treated titanium oxide nanotubes. <i>Biomaterials</i> , 2005 , 26, 4938-43	15.6	411
217	Bifurcation-based acoustic switching and rectification. <i>Nature Materials</i> , 2011 , 10, 665-8	27	408
216	Significantly accelerated osteoblast cell growth on aligned TiO ₂ nanotubes. <i>Journal of Biomedical Materials Research - Part A</i> , 2006 , 78, 97-103	5.4	382
215	Anomalous wave reflection at the interface of two strongly nonlinear granular media. <i>Physical Review Letters</i> , 2005 , 95, 158702	7.4	235
214	Tunability of solitary wave properties in one-dimensional strongly nonlinear phononic crystals. <i>Physical Review E</i> , 2006 , 73, 026610	2.4	234
213	Strongly nonlinear waves in a chain of Teflon beads. <i>Physical Review E</i> , 2005 , 72, 016603	2.4	230
212	Microstructures to control elasticity in 3D printing. <i>ACM Transactions on Graphics</i> , 2015 , 34, 1-13	7.6	213
211	Energy trapping and shock disintegration in a composite granular medium. <i>Physical Review Letters</i> , 2006 , 96, 058002	7.4	212
210	Composite 3D-printed metastructures for low-frequency and broadband vibration absorption. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 8386-90	11.5	209
209	Novel electrical switching behaviour and logic in carbon nanotube Y-junctions. <i>Nature Materials</i> , 2005 , 4, 663-6	27	199
208	Generation and control of sound bullets with a nonlinear acoustic lens. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 7230-4	11.5	194
207	Discrete breathers in one-dimensional diatomic granular crystals. <i>Physical Review Letters</i> , 2010 , 104, 244302	7.4	192
206	Harnessing bistability for directional propulsion of soft, untethered robots. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 5698-5702	11.5	171
205	Stable propagation of mechanical signals in soft media using stored elastic energy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 9722-7	11.5	162
204	Wide band-gap seismic metastructures. <i>Extreme Mechanics Letters</i> , 2015 , 4, 111-117	3.9	157
203	Untethered soft robotic matter with passive control of shape morphing and propulsion. <i>Science Robotics</i> , 2019 , 4,	18.6	150
202	Granular acoustic switches and logic elements. <i>Nature Communications</i> , 2014 , 5, 5311	17.4	124

201	Pulse propagation in a linear and nonlinear diatomic periodic chain: effects of acoustic frequency band-gap. <i>Acta Mechanica</i> , 2009 , 205, 85-103	2.1	123
200	Engineered metabarrier as shield from seismic surface waves. <i>Scientific Reports</i> , 2016 , 6, 39356	4.9	120
199	Rapid Prototyping of Site-Specific Nanocontacts by Electron and Ion Beam Assisted Direct-Write Nanolithography. <i>Nano Letters</i> , 2004 , 4, 2059-2063	11.5	106
198	Dissipative solitary waves in granular crystals. <i>Physical Review Letters</i> , 2009 , 102, 024102	7.4	104
197	Optimal Design of Composite Granular Protectors. <i>Mechanics of Advanced Materials and Structures</i> , 2009 , 17, 1-19	1.8	100
196	Unidirectional Transition Waves in Bistable Lattices. <i>Physical Review Letters</i> , 2016 , 116, 244501	7.4	99
195	Experimental realization of on-chip topological nanoelectromechanical metamaterials. <i>Nature</i> , 2018 , 564, 229-233	50.4	97
194	Highly nonlinear solitary waves in heterogeneous periodic granular media. <i>Physica D: Nonlinear Phenomena</i> , 2009 , 238, 666-676	3.3	95
193	Observation of Nonreciprocal Wave Propagation in a Dynamic Phononic Lattice. <i>Physical Review Letters</i> , 2018 , 121, 194301	7.4	94
192	Mechanical properties of parts fabricated with inkjet 3D printing through efficient experimental design. <i>Materials and Design</i> , 2015 , 86, 902-912	8.1	92
191	Nonreciprocity in acoustic and elastic materials. <i>Nature Reviews Materials</i> , 2020 , 5, 667-685	73.3	92
190	Highly nonlinear solitary waves in periodic dimer granular chains. <i>Physical Review E</i> , 2008 , 77, 015601	2.4	92
189	Bistable metamaterial for switching and cascading elastic vibrations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 4603-4606	11.5	90
188	Controlled Growth of Y-Junction Nanotubes Using Ti-Doped Vapor Catalyst. <i>Nano Letters</i> , 2004 , 4, 213-217.5		90
187	Dynamics of periodic mechanical structures containing bistable elastic elements: from elastic to solitary wave propagation. <i>Physical Review E</i> , 2014 , 90, 023204	2.4	89
186	Solitary waves on tensegrity lattices. <i>Journal of the Mechanics and Physics of Solids</i> , 2012 , 60, 1137-1144	5	88
185	Ultrastructural examination of dentin using focused ion-beam cross-sectioning and transmission electron microscopy. <i>Micron</i> , 2005 , 36, 672-80	2.3	85
184	Granular crystals: Nonlinear dynamics meets materials engineering. <i>Physics Today</i> , 2015 , 68, 44-50	0.9	84

183	Designing perturbative metamaterials from discrete models. <i>Nature Materials</i> , 2018 , 17, 323-328	27	83
182	Acoustic Fresnel lenses with extraordinary transmission. <i>Applied Physics Letters</i> , 2014 , 105, 114109	3.4	80
181	Localized breathing modes in granular crystals with defects. <i>Physical Review E</i> , 2009 , 80, 066601	2.4	76
180	Tunable vibrational band gaps in one-dimensional diatomic granular crystals with three-particle unit cells. <i>Journal of Applied Physics</i> , 2011 , 109, 074906	2.5	74
179	Interaction of highly nonlinear solitary waves with linear elastic media. <i>Physical Review E</i> , 2011 , 83, 046604	2.4	72
178	Intrinsic energy localization through discrete gap breathers in one-dimensional diatomic granular crystals. <i>Physical Review E</i> , 2010 , 82, 056604	2.4	71
177	Acoustic metamaterial for subwavelength edge detection. <i>Nature Communications</i> , 2015 , 6, 8037	17.4	70
176	Reprogrammable Phononic Metasurfaces. <i>Advanced Materials</i> , 2017 , 29, 1700628	24	70
175	Impact response by a foamlike forest of coiled carbon nanotubes. <i>Journal of Applied Physics</i> , 2006 , 100, 064309	2.5	70
174	Monitoring the hydration of cement using highly nonlinear solitary waves. <i>NDT and E International</i> , 2012 , 52, 76-85	4.1	64
173	Visco-thermal effects in acoustic metamaterials: from total transmission to total reflection and high absorption. <i>New Journal of Physics</i> , 2016 , 18, 033003	2.9	64
172	Stress wave anisotropy in centered square highly nonlinear granular systems. <i>Physical Review Letters</i> , 2012 , 108, 214301	7.4	63
171	Bandgap widening by disorder in rainbow metamaterials. <i>Applied Physics Letters</i> , 2019 , 114, 091903	3.4	62
170	Thin films with ultra-low thermal expansion. <i>Advanced Materials</i> , 2014 , 26, 3076-80	24	62
169	Strain Rate Effects in the Mechanical Response of Polymer-Anchored Carbon Nanotube Foams. <i>Advanced Materials</i> , 2009 , 21, 334-338	24	62
168	Stationary shocks in periodic highly nonlinear granular chains. <i>Physical Review E</i> , 2009 , 80, 056602	2.4	59
167	Multiscale mass-spring models of carbon nanotube foams. <i>Journal of the Mechanics and Physics of Solids</i> , 2011 , 59, 89-102	5	58
166	Directional Wave Propagation in a Highly Nonlinear Square Packing of Spheres. <i>Experimental Mechanics</i> , 2013 , 53, 327-337	2.6	55

165	Wave propagation in granular chains with local resonances. <i>Physical Review E</i> , 2015 , 91, 033208	2.4	54
164	Extremely sharp carbon nanocone probes for atomic force microscopy imaging. <i>Applied Physics Letters</i> , 2006 , 88, 153102	3.4	54
163	Electrical tuning of elastic wave propagation in nanomechanical lattices at MHz frequencies. <i>Nature Nanotechnology</i> , 2018 , 13, 1016-1020	28.7	53
162	Spiral-Based Phononic Plates: From Wave Beaming to Topological Insulators. <i>Physical Review Letters</i> , 2018 , 120, 205501	7.4	53
161	Experimental realization of a nonlinear acoustic lens with a tunable focus. <i>Applied Physics Letters</i> , 2014 , 104, 014103	3.4	52
160	Autonomous Deployment of a Solar Panel Using Elastic Origami and Distributed Shape-Memory-Polymer Actuators. <i>Physical Review Applied</i> , 2019 , 11,	4.3	51
159	Granular metamaterials for vibration mitigation. <i>Journal of Applied Physics</i> , 2013 , 114, 093514	2.5	51
158	A plausible mechanism for the evolution of helical forms in nanostructure growth. <i>Journal of Applied Physics</i> , 2007 , 101, 094307	2.5	50
157	Nonlinear coherent structures in granular crystals. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 413003.8	3.8	49
156	Strongly nonlinear wave dynamics in a chain of polymer coated beads. <i>Physical Review E</i> , 2006 , 73, 026612.4	2.4	49
155	Multiple Sharp Bendings of Carbon Nanotubes during Growth to Produce Zigzag Morphology. <i>Nano Letters</i> , 2004 , 4, 1781-1784	11.5	49
154	Shape-morphing architected sheets with non-periodic cut patterns. <i>Soft Matter</i> , 2018 , 14, 9744-9749	3.6	49
153	Highly nonlinear solitary waves in chains of cylindrical particles. <i>Granular Matter</i> , 2012 , 14, 63-69	2.6	48
152	Tailoring the microstructure and mechanical properties of arrays of aligned multiwall carbon nanotubes by utilizing different hydrogen concentrations during synthesis. <i>Carbon</i> , 2011 , 49, 3631-3638 ^{10.4}	10.4	47
151	Harnessing Photochemical Shrinkage in Direct Laser Writing for Shape Morphing of Polymer Sheets. <i>Advanced Materials</i> , 2017 , 29, 1703024	24	46
150	Nonlinear waves in disordered diatomic granular chains. <i>Physical Review E</i> , 2010 , 82, 021301	2.4	45
149	Modeling and in situ identification of material parameters for layered structures based on carbon nanotube arrays. <i>Composite Structures</i> , 2011 , 93, 3013-3018	5.3	45
148	Nonreciprocal Wave Propagation in a Continuum-Based Metamaterial with Space-Time Modulated Resonators. <i>Physical Review Applied</i> , 2019 , 11,	4.3	44

147	Synthesis and characterization of carbon nanotube-polymer multilayer structures. <i>ACS Nano</i> , 2011 , 5, 7713-21	16.7	44
146	Nondestructive evaluation of orthopaedic implant stability in THA using highly nonlinear solitary waves. <i>Smart Materials and Structures</i> , 2012 , 21, 012002	3.4	42
145	Interaction of highly nonlinear solitary waves with thin plates. <i>International Journal of Solids and Structures</i> , 2012 , 49, 1463-1471	3.1	41
144	Nonlinear resonances and energy transfer in finite granular chains. <i>Physical Review E</i> , 2015 , 91, 023208	2.4	41
143	Damped-driven granular chains: an ideal playground for dark breathers and multibreathers. <i>Physical Review E</i> , 2014 , 89, 032924	2.4	41
142	Highly nonlinear contact interaction and dynamic energy dissipation by forest of carbon nanotubes. <i>Applied Physics Letters</i> , 2004 , 85, 5724-5726	3.4	40
141	Tuning frequency band gaps of tensegrity mass-spring chains with local and global prestress. <i>International Journal of Solids and Structures</i> , 2018 , 155, 47-56	3.1	39
140	Atomic force microscopy imaging and electrical recording of lipid bilayers supported over microfabricated silicon chip nanopores: lab-on-a-chip system for lipid membranes and ion channels. <i>Langmuir</i> , 2007 , 23, 1375-80	4	39
139	Programming temporal morphing of self-actuated shells. <i>Nature Communications</i> , 2020 , 11, 237	17.4	38
138	Traveling waves in 2D hexagonal granular crystal lattices. <i>Granular Matter</i> , 2014 , 16, 531-542	2.6	38
137	Accordion-like metamaterials with tunable ultra-wide low-frequency band gaps. <i>New Journal of Physics</i> , 2018 , 20, 073051	2.9	37
136	Multi-branching carbon nanotubes via self-seeded catalysts. <i>Nano Letters</i> , 2006 , 6, 324-8	11.5	37
135	Highly nonlinear waves\sensor technology for highway infrastructures 2008 ,		36
134	Vacancy-mediated mechanism of nitrogen substitution in carbon nanotubes. <i>Physical Review B</i> , 2004 , 69,	3.3	36
133	Structured fabrics with tunable mechanical properties. <i>Nature</i> , 2021 , 596, 238-243	50.4	36
132	Solitary waves in a chain of repelling magnets. <i>Journal of Applied Physics</i> , 2014 , 115, 184901	2.5	35
131	Entanglement and the nonlinear elastic behavior of forests of coiled carbon nanotubes. <i>Physical Review Letters</i> , 2008 , 100, 086807	7.4	35
130	Intrinsically Polar Elastic Metamaterials. <i>Advanced Materials</i> , 2017 , 29, 1700540	24	34

129	Thin and Thermally Stable Periodic Metastructures. <i>Experimental Mechanics</i> , 2013 , 53, 1735-1742	2.6	34
128	Site-specific quantification of bone quality using highly nonlinear solitary waves. <i>Journal of Biomechanical Engineering</i> , 2012 , 134, 101001	2.1	34
127	Control of carbon nanotube morphology by change of applied bias field during growth. <i>Applied Physics Letters</i> , 2004 , 85, 5373-5375	3.4	34
126	Highly nonlinear solitary wave propagation in Y-shaped granular crystals with variable branch angles. <i>Physical Review E</i> , 2012 , 85, 036602	2.4	33
125	Plant nanobionic materials with a giant temperature response mediated by pectin-Ca ²⁺ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 4541-5	11.5	32
124	ElasticPlastic Wave Propagation in Uniform and Periodic Granular Chains. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015 , 82,	2.7	32
123	Highly nonlinear pulse splitting and recombination in a two-dimensional granular network. <i>Physical Review E</i> , 2010 , 82, 036603	2.4	32
122	Room temperature solvent-free synthesis of monodisperse magnetite nanocrystals. <i>Journal of Nanoscience and Nanotechnology</i> , 2006 , 6, 852-6	1.3	32
121	Architected Lattices for Simultaneous Broadband Attenuation of Airborne Sound and Mechanical Vibrations in All Directions. <i>Physical Review Applied</i> , 2018 , 10,	4.3	32
120	Energy equipartition in two-dimensional granular systems with spherical intruders. <i>Physical Review E</i> , 2013 , 87,	2.4	31
119	Biomimetic temperature-sensing layer for artificial skins. <i>Science Robotics</i> , 2017 , 2,	18.6	30
118	Highly porous microlattices as ultrathin and efficient impact absorbers. <i>International Journal of Impact Engineering</i> , 2018 , 120, 138-149	4	30
117	Wave mitigation in ordered networks of granular chains. <i>Journal of the Mechanics and Physics of Solids</i> , 2014 , 73, 103-117	5	29
116	Pressure-activated microsyringe composite scaffold of poly(L-lactic acid) and carbon nanotubes for bone tissue engineering. <i>Journal of Applied Polymer Science</i> , 2013 , 129, 528-536	2.9	29
115	Defect modes in one-dimensional granular crystals. <i>Physical Review E</i> , 2012 , 85, 037601	2.4	29
114	Hybridization of Guided Surface Acoustic Modes in Unconsolidated Granular Media by a Resonant Metasurface. <i>Physical Review Applied</i> , 2018 , 9,	4.3	29
113	Design of Engineered Elastomeric Substrate for Stretchable Active Devices and Sensors. <i>Advanced Functional Materials</i> , 2018 , 28, 1705132	15.6	29
112	Continuum limits of bistable spring models of carbon nanotube arrays accounting for material damage. <i>Mechanics Research Communications</i> , 2012 , 45, 58-63	2.2	28

111	Mechanical Autonomous Stochastic Heat Engine. <i>Physical Review Letters</i> , 2016 , 117, 010602	7.4	27
110	Solitary wave-based delamination detection in composite plates using a combined granular crystal sensor and actuator. <i>Smart Materials and Structures</i> , 2015 , 24, 125004	3.4	27
109	Amplitude-dependent attenuation of compressive waves in curved granular crystals constrained by elastic guides. <i>Acta Mechanica</i> , 2012 , 223, 549-562	2.1	27
108	Interaction of traveling waves with mass-with-mass defects within a Hertzian chain. <i>Physical Review E</i> , 2013 , 87, 042911	2.4	27
107	Nonlinear repulsive force between two solids with axial symmetry. <i>Physical Review E</i> , 2011 , 83, 066605	2.4	27
106	Effect of density variation and non-covalent functionalization on the compressive behavior of carbon nanotube arrays. <i>Nanotechnology</i> , 2011 , 22, 425705	3.4	26
105	Energy Absorption Properties of Periodic and Stochastic 3D Lattice Materials. <i>Advanced Theory and Simulations</i> , 2019 , 2, 1900081	3.5	25
104	Deployable micro-traps to sequester motile bacteria. <i>Scientific Reports</i> , 2017 , 7, 45897	4.9	24
103	Architected lattices with adaptive energy absorption. <i>Extreme Mechanics Letters</i> , 2019 , 33, 100557	3.9	24
102	Shock formation and rate effects in impacted carbon nanotube foams. <i>Carbon</i> , 2015 , 84, 390-398	10.4	24
101	Universal energy transport law for dissipative and diffusive phase transitions. <i>Physical Review B</i> , 2016 , 93,	3.3	24
100	Guided Impact Mitigation in 2D and 3D Granular Crystals. <i>Procedia Engineering</i> , 2015 , 103, 52-59		24
99	Highly nonlinear solitary waves in chains of hollow spherical particles. <i>Granular Matter</i> , 2013 , 15, 149-155	5.6	24
98	Tunable phononic crystals based on cylindrical Hertzian contact. <i>Applied Physics Letters</i> , 2012 , 101, 171903	3.4	23
97	Actuators for the generation of highly nonlinear solitary waves. <i>Review of Scientific Instruments</i> , 2011 , 82, 034902	1.7	23
96	Hysteresis loops and multi-stability: From periodic orbits to chaotic dynamics (and back) in diatomic granular crystals. <i>Europhysics Letters</i> , 2013 , 101, 44003	1.6	23
95	Nonlinear Periodic Phononic Structures and Granular Crystals. <i>Springer Series in Solid-state Sciences</i> , 2013 , 217-251	0.4	23
94	Robotic surfaces with reversible, spatiotemporal control for shape morphing and object manipulation. <i>Science Robotics</i> , 2021 , 6,	18.6	23

93	Dark breathers in granular crystals. <i>Physical Review E</i> , 2013 , 87, 042202	2.4	22
92	Frequency bands of strongly nonlinear homogeneous granular systems. <i>Physical Review E</i> , 2013 , 88, 012206	2.4	22
91	Effects of weak disorder on stress-wave anisotropy in centered square nonlinear granular crystals. <i>Physical Review E</i> , 2012 , 86, 031305	2.4	21
90	Wave transmission in time- and space-variant helicoidal phononic crystals. <i>Physical Review E</i> , 2014 , 90, 053201	2.4	20
89	Highly nonlinear solitary waves in chains of ellipsoidal particles. <i>Physical Review E</i> , 2011 , 84, 026610	2.4	20
88	Dynamic Nanofragmentation of Carbon Nanotubes. <i>Nano Letters</i> , 2004 , 4, 1915-1918	11.5	20
87	Local to extended transitions of resonant defect modes. <i>Physical Review Letters</i> , 2014 , 113, 185503	7.4	19
86	Wave propagation in square granular crystals with spherical interstitial intruders. <i>Physical Review E</i> , 2012 , 86, 061306	2.4	19
85	Synthesis of low-melting metal oxide and sulfide nanowires and nanobelts. <i>Journal of Electronic Materials</i> , 2006 , 35, 941-946	1.9	19
84	Growth of aligned carbon nanotubes on carbon microfibers by dc plasma-enhanced chemical vapor deposition. <i>Applied Physics Letters</i> , 2006 , 88, 033103	3.4	19
83	Microlattice Metamaterials for Tailoring Ultrasonic Transmission with Elastoacoustic Hybridization. <i>Physical Review Applied</i> , 2016 , 6,	4.3	19
82	Effect of morphology on the strain recovery of vertically aligned carbon nanotube arrays: An in situ study. <i>Carbon</i> , 2013 , 63, 303-316	10.4	18
81	Rate-independent dissipation and loading direction effects in compressed carbon nanotube arrays. <i>Nanotechnology</i> , 2013 , 24, 255707	3.4	18
80	Laser-based excitation of nonlinear solitary waves in a chain of particles. <i>Physical Review E</i> , 2011 , 84, 026601	2.4	18
79	Frequency- and Amplitude-Dependent Transmission of Stress Waves in Curved One-Dimensional Granular Crystals Composed of Diatomic Particles. <i>Experimental Mechanics</i> , 2013 , 53, 469-483	2.6	17
78	Hydrogen evolution on hydrophobic aligned carbon nanotube arrays. <i>ACS Nano</i> , 2009 , 3, 3903-8	16.7	17
77	Direct observation of impact propagation and absorption in dense colloidal monolayers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 12150-12155	11.5	16
76	Three-way electrical gating characteristics of metallic Y-junction carbon nanotubes. <i>Applied Physics Letters</i> , 2006 , 88, 243113	3.4	16

75	Synthesis and Patterning Methods for Nanostructures Useful for Biological Applications. <i>Fundamental Biomedical Technologies</i> , 2012 , 27-44		16
74	Design and impact response of 3D-printable tensegrity-inspired structures. <i>Materials and Design</i> , 2019 , 182, 107966	8.1	15
73	Strain-rate-dependent model for the dynamic compression of elastoplastic spheres. <i>Physical Review E</i> , 2014 , 89, 032203	2.4	15
72	An Experimental Technique for the Dynamic Characterization of Soft Complex Materials. <i>Experimental Mechanics</i> , 2014 , 54, 1319-1328	2.6	15
71	Exponential stress mitigation in structured granular composites. <i>Extreme Mechanics Letters</i> , 2014 , 1, 23-28	3.9	15
70	Sharp Carbon-Nanotube Tips and Carbon-Nanotube Soldering Irons. <i>Advanced Materials</i> , 2009 , 21, 2305-2308	2.08	15
69	Nonlinear viscoelasticity of freestanding and polymer-anchored vertically aligned carbon nanotube foams. <i>Journal of Applied Physics</i> , 2012 , 111, 074314	2.5	15
68	Iron silicide root formation in carbon nanotubes grown by microwave PECVD. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 24215-9	3.4	15
67	A Flexible Spiraling-Metasurface as a Versatile Haptic Interface. <i>Advanced Materials Technologies</i> , 2020 , 5, 2000181	6.8	14
66	Propagation of highly nonlinear solitary waves in a curved granular chain. <i>Granular Matter</i> , 2013 , 15, 357-366	3.66	14
65	Nonlinear phononic crystals based on chains of disks alternating with toroidal structures. <i>Applied Physics Letters</i> , 2011 , 98, 161901	3.4	14
64	Stress relaxation in polymeric microlattice materials. <i>Materials and Design</i> , 2017 , 130, 433-441	8.1	13
63	Tuning of Surface-Acoustic-Wave Dispersion via Magnetically Modulated Contact Resonances. <i>Physical Review Applied</i> , 2019 , 11,	4.3	13
62	Locally addressable material properties in 3D micro-architectures. <i>Extreme Mechanics Letters</i> , 2019 , 28, 31-36	3.9	13
61	Mesoscopic approach to granular crystal dynamics. <i>Physical Review E</i> , 2012 , 85, 016604	2.4	13
60	Acoustic Non-Reciprocity in Lattices With Nonlinearity, Internal Hierarchy, and Asymmetry: Computational Study. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2019 , 141,	1.6	12
59	Nonlinear excitations in magnetic lattices with long-range interactions. <i>New Journal of Physics</i> , 2019 , 21, 063032	2.9	12
58	Multiscale Mass-Spring Model for High-Rate Compression of Vertically Aligned Carbon Nanotube Foams. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2014 , 81,	2.7	12

57	Directed ratchet transport in granular chains. <i>Physical Review E</i> , 2013 , 88, 052202	2.4	11
56	Strongly Nonlinear Waves in 3D Phononic Crystals. <i>AIP Conference Proceedings</i> , 2004 ,	0	11
55	Temperature-induced shape morphing of bi-metallic structures. <i>International Journal of Solids and Structures</i> , 2020 , 190, 22-32	3.1	11
54	Characterization of Vertically Aligned Carbon Nanotube Forests Grown on Stainless Steel Surfaces. <i>Nanomaterials</i> , 2019 , 9,	5.4	10
53	Wave propagation in one-dimensional microscopic granular chains. <i>Physical Review E</i> , 2016 , 94, 052907	2.4	10
52	In situ synthesis of metal oxides in carbon nanotube arrays and mechanical properties of the resulting structures. <i>Carbon</i> , 2012 , 50, 4432-4440	10.4	10
51	Coupling of highly nonlinear waves with linear elastic media 2009 ,		10
50	Influence of Controlled Viscous Dissipation on the Propagation of Strongly Nonlinear Waves in Stainless Steel Based Phononic Crystals. <i>AIP Conference Proceedings</i> , 2006 ,	0	10
49	Surface wave non-reciprocity via time-modulated metamaterials. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 145, 104181	5	10
48	A micromechanical-based model of stimulus responsive liquid crystal elastomers. <i>International Journal of Solids and Structures</i> , 2021 , 219-220, 92-105	3.1	10
47	Anomalous impact and strain responses in helical carbon nanotube foams. <i>RSC Advances</i> , 2015 , 5, 29306-29311	3.7	10
46	Tunable, synchronized frequency down-conversion in magnetic lattices with defects. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	8
45	Control of microstructural heterogeneities in carbon nanotube foams. <i>Carbon</i> , 2013 , 52, 193-200	10.4	8
44	Metamaterials with engineered failure load and stiffness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 23960-23965	11.5	8
43	Extreme stiffness tunability through the excitation of nonlinear defect modes. <i>Physical Review E</i> , 2016 , 93, 010901	2.4	7
42	Nonlinear vibrational-state excitation and piezoelectric energy conversion in harmonically driven granular chains. <i>Physical Review E</i> , 2016 , 93, 052203	2.4	7
41	Rate-sensitive strain localization and impact response of carbon nanotube foams with microscale heterogeneous bands. <i>Carbon</i> , 2016 , 101, 184-190	10.4	7
40	Acoustic properties of porous microlattices from effective medium to scattering dominated regimes. <i>Journal of the Acoustical Society of America</i> , 2018 , 144, 319	2.2	7

39	Geometry-Induced Mechanical Properties of Carbon Nanotube Foams. <i>Advanced Engineering Materials</i> , 2014 , 16, 1026-1031	3-5	7
38	Effect of fluid medium on mechanical behavior of carbon nanotube foam. <i>Applied Physics Letters</i> , 2014 , 104, 221910	3-4	7
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