Chiara Daraio

List of Publications by Year
in descending order

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229	13,524	20036	30277
papers	citations	63 h-index	107 g-index

230	230	230	9619
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Bifurcation-based acoustic switching and rectification. Nature Materials, 2011, 10, 665-668.	13.3	496
2	Growth of nano-scale hydroxyapatite using chemically treated titanium oxide nanotubes. Biomaterials, 2005, 26, 4938-4943.	5.7	453
3	Significantly accelerated osteoblast cell growth on aligned TiO2 nanotubes. Journal of Biomedical Materials Research - Part A, 2006, 78A, 97-103.	2.1	429
4	Composite 3D-printed metastructures for low-frequency and broadband vibration absorption. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8386-8390.	3.3	311
5	Microstructures to control elasticity in 3D printing. ACM Transactions on Graphics, 2015, 34, 1-13.	4.9	290
6	Harnessing bistability for directional propulsion of soft, untethered robots. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5698-5702.	3.3	276
7	Tunability of solitary wave properties in one-dimensional strongly nonlinear phononic crystals. Physical Review E, 2006, 73, 026610.	0.8	272
8	Untethered soft robotic matter with passive control of shape morphing and propulsion. Science Robotics, 2019, 4, .	9.9	268
9	Anomalous Wave Reflection at the Interface of Two Strongly Nonlinear Granular Media. Physical Review Letters, 2005, 95, 158702.	2.9	260
10	Strongly nonlinear waves in a chain of Teflon beads. Physical Review E, 2005, 72, 016603.	0.8	255
11	Stable propagation of mechanical signals in soft media using stored elastic energy. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9722-9727.	3.3	254
12	Nonreciprocity in acoustic and elastic materials. Nature Reviews Materials, 2020, 5, 667-685.	23.3	243
13	Energy Trapping and Shock Disintegration in a Composite Granular Medium. Physical Review Letters, 2006, 96, 058002.	2.9	242
14	Generation and control of sound bullets with a nonlinear acoustic lens. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7230-7234.	3.3	224
15	Discrete Breathers in One-Dimensional Diatomic Granular Crystals. Physical Review Letters, 2010, 104, 244302.	2.9	224
16	Novel electrical switching behaviour and logic in carbon nanotube Y-junctions. Nature Materials, 2005, 4, 663-666.	13.3	220
17	Wide band-gap seismic metastructures. Extreme Mechanics Letters, 2015, 4, 111-117.	2.0	216
18	Engineered metabarrier as shield from seismic surface waves. Scientific Reports, 2016, 6, 39356.	1.6	191

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19	Experimental realization of on-chip topological nanoelectromechanical metamaterials. Nature, 2018, 564, 229-233.	13.7	168
20	Granular acoustic switches and logic elements. Nature Communications, 2014, 5, 5311.	5.8	162
21	Observation of Nonreciprocal Wave Propagation in a Dynamic Phononic Lattice. Physical Review Letters, 2018, 121, 194301.	2.9	155
22	Structured fabrics with tunable mechanical properties. Nature, 2021, 596, 238-243.	13.7	155
23	Designing perturbative metamaterials from discrete models. Nature Materials, 2018, 17, 323-328.	13.3	150
24	Bistable metamaterial for switching and cascading elastic vibrations. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4603-4606.	3.3	144
25	Pulse propagation in a linear and nonlinear diatomic periodic chain: effects of acoustic frequency band-gap. Acta Mechanica, 2009, 205, 85-103.	1.1	137
26	Unidirectional Transition Waves in Bistable Lattices. Physical Review Letters, 2016, 116, 244501.	2.9	137
27	Mechanical properties of parts fabricated with inkjet 3D printing through efficient experimental design. Materials and Design, 2015, 86, 902-912.	3.3	122
28	Dynamics of periodic mechanical structures containing bistable elastic elements: From elastic to solitary wave propagation. Physical Review E, 2014, 90, 023204.	0.8	120
29	Dissipative Solitary Waves in Granular Crystals. Physical Review Letters, 2009, 102, 024102.	2.9	116
30	Rapid Prototyping of Site-Specific Nanocontacts by Electron and Ion Beam Assisted Direct-Write Nanolithography. Nano Letters, 2004, 4, 2059-2063.	4.5	115
31	Optimal Design of Composite Granular Protectors. Mechanics of Advanced Materials and Structures, 2009, 17, 1-19.	1.5	112
32	Solitary waves on tensegrity lattices. Journal of the Mechanics and Physics of Solids, 2012, 60, 1137-1144.	2.3	109
33	Highly nonlinear solitary waves in heterogeneous periodic granular media. Physica D: Nonlinear Phenomena, 2009, 238, 666-676.	1.3	105
34	Highly nonlinear solitary waves in periodic dimer granular chains. Physical Review E, 2008, 77, 015601.	0.8	103
35	Acoustic Fresnel lenses with extraordinary transmission. Applied Physics Letters, 2014, 105, .	1.5	102
36	Granular crystals: Nonlinear dynamics meets materials engineering. Physics Today, 2015, 68, 44-50.	0.3	101

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37	Reprogrammable Phononic Metasurfaces. Advanced Materials, 2017, 29, 1700628.	11.1	100
38	Ultrastructural examination of dentin using focused ion-beam cross-sectioning and transmission electron microscopy. Micron, 2005, 36, 672-680.	1.1	97
39	Nonreciprocal Wave Propagation in a Continuum-Based Metamaterial with Space-Time Modulated Resonators. Physical Review Applied, 2019, 11, .	1.5	97
40	Controlled Growth of Y-Junction Nanotubes Using Ti-Doped Vapor Catalyst. Nano Letters, 2004, 4, 213-217.	4.5	95
41	Bandgap widening by disorder in rainbow metamaterials. Applied Physics Letters, 2019, 114, .	1.5	94
42	Autonomous Deployment of a Solar Panel Using Elastic Origami and Distributed Shape-Memory-Polymer Actuators. Physical Review Applied, 2019, 11, .	1.5	90
43	Interaction of highly nonlinear solitary waves with linear elastic media. Physical Review E, 2011, 83, 046606.	0.8	87
44	Acoustic metamaterial for subwavelength edge detection. Nature Communications, 2015, 6, 8037.	5.8	86
45	Localized breathing modes in granular crystals with defects. Physical Review E, 2009, 80, 066601.	0.8	85
46	Electrical tuning of elastic wave propagation in nanomechanical lattices at MHz frequencies. Nature Nanotechnology, 2018, 13, 1016-1020.	15.6	85
47	Thin Films with Ultraâ€low Thermal Expansion. Advanced Materials, 2014, 26, 3076-3080.	11.1	83
48	Tunable vibrational band gaps in one-dimensional diatomic granular crystals with three-particle unit cells. Journal of Applied Physics, 2011, 109, .	1.1	82
49	Monitoring the hydration of cement using highly nonlinear solitary waves. NDT and E International, 2012, 52, 76-85.	1.7	82
50	Spiral-Based Phononic Plates: From Wave Beaming to Topological Insulators. Physical Review Letters, 2018, 120, 205501.	2.9	82
51	Visco-thermal effects in acoustic metamaterials: from total transmission to total reflection and high absorption. New Journal of Physics, 2016, 18, 033003.	1.2	81
52	Intrinsic energy localization through discrete gap breathers in one-dimensional diatomic granular crystals. Physical Review E, 2010, 82, 056604.	0.8	77
53	Impact response by a foamlike forest of coiled carbon nanotubes. Journal of Applied Physics, 2006, 100, 064309.	1.1	72
54	Shape-morphing architected sheets with non-periodic cut patterns. Soft Matter, 2018, 14, 9744-9749.	1.2	72

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55	Robotic surfaces with reversible, spatiotemporal control for shape morphing and object manipulation. Science Robotics, 2021, 6, .	9.9	70
56	Granular metamaterials for vibration mitigation. Journal of Applied Physics, 2013, 114, .	1.1	69
57	Multiscale mass-spring models of carbon nanotube foams. Journal of the Mechanics and Physics of Solids, 2011, 59, 89-102.	2.3	68
58	Experimental realization of a nonlinear acoustic lens with a tunable focus. Applied Physics Letters, 2014, 104, .	1.5	68
59	Stress Wave Anisotropy in Centered Square Highly Nonlinear Granular Systems. Physical Review Letters, 2012, 108, 214301.	2.9	67
60	Wave propagation in granular chains with local resonances. Physical Review E, 2015, 91, 033208.	0.8	67
61	Harnessing Photochemical Shrinkage in Direct Laser Writing for Shape Morphing of Polymer Sheets. Advanced Materials, 2017, 29, 1703024.	11.1	66
62	Strain Rate Effects in the Mechanical Response of Polymerâ€Anchored Carbon Nanotube Foams. Advanced Materials, 2009, 21, 334-338.	11.1	65
63	Tuning frequency band gaps of tensegrity mass-spring chains with local and global prestress. International Journal of Solids and Structures, 2018, 155, 47-56.	1.3	65
64	Programming temporal morphing of self-actuated shells. Nature Communications, 2020, 11, 237.	5.8	65
65	Extremely sharp carbon nanocone probes for atomic force microscopy imaging. Applied Physics Letters, 2006, 88, 153102.	1.5	64
66	Directional Wave Propagation in a Highly Nonlinear Square Packing of Spheres. Experimental Mechanics, 2013, 53, 327-337.	1.1	64
67	Nonlinear coherent structures in granular crystals. Journal of Physics Condensed Matter, 2017, 29, 413003.	0.7	64
68	Stationary shocks in periodic highly nonlinear granular chains. Physical Review E, 2009, 80, 056602.	0.8	63
69	Energy Absorption Properties of Periodic and Stochastic 3D Lattice Materials. Advanced Theory and Simulations, 2019, 2, 1900081.	1.3	62
70	Nondestructive evaluation of orthopaedic implant stability in THA using highly nonlinear solitary waves. Smart Materials and Structures, 2012, 21, 012002.	1.8	58
71	Accordion-like metamaterials with tunable ultra-wide low-frequency band gaps. New Journal of Physics, 2018, 20, 073051.	1.2	58
72	A plausible mechanism for the evolution of helical forms in nanostructure growth. Journal of Applied Physics, 2007, 101, 094307.	1.1	56

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73	Strongly nonlinear wave dynamics in a chain of polymer coated beads. Physical Review E, 2006, 73, 026612.	0.8	55
74	Nonlinear resonances and energy transfer in finite granular chains. Physical Review E, 2015, 91, 023208.	0.8	54
75	Intrinsically Polar Elastic Metamaterials. Advanced Materials, 2017, 29, 1700540.	11.1	54
76	Architected Lattices for Simultaneous Broadband Attenuation of Airborne Sound and Mechanical Vibrations in All Directions. Physical Review Applied, 2018, 10, .	1.5	53
77	Multiple Sharp Bendings of Carbon Nanotubes during Growth to Produce Zigzag Morphology. Nano Letters, 2004, 4, 1781-1784.	4.5	52
78	Architected lattices with adaptive energy absorption. Extreme Mechanics Letters, 2019, 33, 100557.	2.0	52
79	Nonlinear waves in disordered diatomic granular chains. Physical Review E, 2010, 82, 021301.	0.8	51
80	Tailoring the microstructure and mechanical properties of arrays of aligned multiwall carbon nanotubes by utilizing different hydrogen concentrations during synthesis. Carbon, 2011, 49, 3631-3638.	5.4	51
81	Highly nonlinear solitary waves in chains of cylindrical particles. Granular Matter, 2012, 14, 63-69.	1.1	51
82	Modeling and in situ identification of material parameters for layered structures based on carbon nanotube arrays. Composite Structures, 2011, 93, 3013-3018.	3.1	50
83	Interaction of highly nonlinear solitary waves with thin plates. International Journal of Solids and Structures, 2012, 49, 1463-1471.	1.3	49
84	Traveling waves in 2D hexagonal granular crystal lattices. Granular Matter, 2014, 16, 531-542.	1.1	48
85	Biomimetic temperature-sensing layer for artificial skins. Science Robotics, 2017, 2, .	9.9	48
86	Design of Engineered Elastomeric Substrate for Stretchable Active Devices and Sensors. Advanced Functional Materials, 2018, 28, 1705132.	7.8	47
87	Synthesis and Characterization of Carbon Nanotubeâ€“Polymer Multilayer Structures. ACS Nano, 2011, 5, 7713-7721.	7.3	46
88	Solitary waves in a chain of repelling magnets. Journal of Applied Physics, 2014, 115, .	1.1	46
89	Thin and Thermally Stable Periodic Metastructures. Experimental Mechanics, 2013, 53, 1735-1742.	1.1	45
90	Damped-driven granular chains: An ideal playground for dark breathers and multibreathers. Physical Review E, 2014, 89, 032924.	0.8	44

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91	Highly nonlinear contact interaction and dynamic energy dissipation by forest of carbon nanotubes. Applied Physics Letters, 2004, 85, 5724-5726.	1.5	43
92	Atomic Force Microscopy Imaging and Electrical Recording of Lipid Bilayers Supported over Microfabricated Silicon Chip Nanopores:Â Lab-on-a-Chip System for Lipid Membranes and Ion Channels. Langmuir, 2007, 23, 1375-1380.	1.6	43
93	Room Temperature Solvent-Free Synthesis of Monodisperse Magnetite Nanocrystals. Journal of Nanoscience and Nanotechnology, 2006, 6, 852-856.	0.9	42
94	Entanglement and the Nonlinear Elastic Behavior of Forests of Coiled Carbon Nanotubes. Physical Review Letters, 2008, 100, 086807.	2.9	42
95	Elasticâ€“Plastic Wave Propagation in Uniform and Periodic Granular Chains. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	1.1	42
96	Site-Specific Quantification of Bone Quality Using Highly Nonlinear Solitary Waves. Journal of Biomechanical Engineering, 2012, 134, 101001.	0.6	41
97	Plant nanobionic materials with a giant temperature response mediated by pectin-Ca ²⁺. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4541-4545.	3.3	41
98	Hybridization of Guided Surface Acoustic Modes in Unconsolidated Granular Media by a Resonant Metasurface. Physical Review Applied, 2018, 9, .	1.5	41
99	Mechanical Autonomous Stochastic Heat Engine. Physical Review Letters, 2016, 117, 010602.	2.9	40
100	Highly nonlinear waves' sensor technology for highway infrastructures. Proceedings of SPIE, 2008, , .	0.8	39
101	Highly nonlinear solitary wave propagation in Y-shaped granular crystals with variable branch angles. Physical Review E, 2012, 85, 036602.	0.8	39
102	Highly porous microlattices as ultrathin and efficient impact absorbers. International Journal of Impact Engineering, 2018, 120, 138-149.	2.4	39
103	Design and impact response of 3D-printable tensegrity-inspired structures. Materials and Design, 2019, 182, 107966.	3.3	39
104	Control of carbon nanotube morphology by change of applied bias field during growth. Applied Physics Letters, 2004, 85, 5373-5375.	1.5	38
105	Multibranching Carbon Nanotubes via Self-Seeded Catalysts. Nano Letters, 2006, 6, 324-328.	4.5	38
106	Highly nonlinear pulse splitting and recombination in a two-dimensional granular network. Physical Review E, 2010, 82, 036603.	0.8	38
107	Vacancy-mediated mechanism of nitrogen substitution in carbon nanotubes. Physical Review B, 2004, 69, .	1.1	37
108	Universal energy transport law for dissipative and diffusive phase transitions. Physical Review B, 2016, 93, .	1.1	37

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109	Energy equipartition in two-dimensional granular systems with spherical intruders. Physical Review E, 2013, 87, .	0.8	36
110	Solitary wave-based delamination detection in composite plates using a combined granular crystal sensor and actuator. Smart Materials and Structures, 2015, 24, 125004.	1.8	34
111	Nonlinear Periodic Phononic Structures and Granular Crystals. Springer Series in Solid-state Sciences, 2013, , 217-251.	0.3	34
112	Frequency bands of strongly nonlinear homogeneous granular systems. Physical Review E, 2013, 88, 012206.	0.8	33
113	Wave mitigation in ordered networks of granular chains. Journal of the Mechanics and Physics of Solids, 2014, 73, 103-117.	2.3	33
114	Shock formation and rate effects in impacted carbon nanotube foams. Carbon, 2015, 84, 390-398.	5.4	33
115	Surface wave non-reciprocity via time-modulated metamaterials. Journal of the Mechanics and Physics of Solids, 2020, 145, 104181.	2.3	33
116	Pressureâ€activated microsyringe composite scaffold of poly(<scp>L</scp>â€lactic acid) and carbon nanotubes for bone tissue engineering. Journal of Applied Polymer Science, 2013, 129, 528-536.	1.3	32
117	Interaction of traveling waves with mass-with-mass defects within a Hertzian chain. Physical Review E, 2013, 87, 042911.	0.8	32
118	Defect modes in one-dimensional granular crystals. Physical Review E, 2012, 85, 037601.	0.8	31
119	Continuum limits of bistable spring models of carbon nanotube arrays accounting for material damage. Mechanics Research Communications, 2012, 45, 58-63.	1.0	31
120	Dark breathers in granular crystals. Physical Review E, 2013, 87, 042202.	0.8	30
121	Deployable micro-traps to sequester motile bacteria. Scientific Reports, 2017, 7, 45897.	1.6	30
122	Effect of density variation and non-covalent functionalization on the compressive behavior of carbon nanotube arrays. Nanotechnology, 2011, 22, 425705.	1.3	29
123	Nonlinear repulsive force between two solids with axial symmetry. Physical Review E, 2011, 83, 066605.	0.8	29
124	Amplitude-dependent attenuation of compressive waves in curved granular crystals constrained by elastic guides. Acta Mechanica, 2012, 223, 549-562.	1.1	29
125	Guided Impact Mitigation in 2D and 3D Granular Crystals. Procedia Engineering, 2015, 103, 52-59.	1.2	28
126	Actuators for the generation of highly nonlinear solitary waves. Review of Scientific Instruments, 2011, 82, 034902.	0.6	27

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127	Highly nonlinear solitary waves in chains of hollow spherical particles. Granular Matter, 2013, 15, 149-155.	1.1	27
128	Hysteresis loops and multi-stability: From periodic orbits to chaotic dynamics (and back) in diatomic granular crystals. Europhysics Letters, 2013, 101, 44003.	0.7	27
129	Mechanical cloak via data-driven aperiodic metamaterial design. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2122185119.	3.3	27
130	Tunable phononic crystals based on cylindrical Hertzian contact. Applied Physics Letters, 2012, 101, .	1.5	26
131	A micromechanical-based model of stimulus responsive liquid crystal elastomers. International Journal of Solids and Structures, 2021, 219-220, 92-105.	1.3	26
132	Highly nonlinear solitary waves in chains of ellipsoidal particles. Physical Review E, 2011, 84, 026610.	0.8	25
133	Wave propagation in square granular crystals with spherical interstitial intruders. Physical Review E, 2012, 86, 061306.	0.8	25
134	Wave transmission in time- and space-variant helicoidal phononic crystals. Physical Review E, 2014, 90, 053201.	0.8	25
135	Local to Extended Transitions of Resonant Defect Modes. Physical Review Letters, 2014, 113, 185503.	2.9	25
136	Synthesis and Patterning Methods for Nanostructures Useful for Biological Applications. Fundamental Biomedical Technologies, 2012, , 27-44.	0.2	25
137	Effects of weak disorder on stress-wave anisotropy in centered square nonlinear granular crystals. Physical Review E, 2012, 86, 031305.	0.8	22
138	Effect of morphology on the strain recovery of vertically aligned carbon nanotube arrays: An in situ study. Carbon, 2013, 63, 303-316.	5.4	22
139	Rate-independent dissipation and loading direction effects in compressed carbon nanotube arrays. Nanotechnology, 2013, 24, 255707.	1.3	22
140	Strain-rate-dependent model for the dynamic compression of elastoplastic spheres. Physical Review E, 2014, 89, 032203.	0.8	22
141	Rayleigh wave propagation in nonlinear metasurfaces. Journal of Sound and Vibration, 2022, 520, 116599.	2.1	22
142	Synthesis of low-melting metal oxide and sulfide nanowires and nanobelts. Journal of Electronic Materials, 2006, 35, 941-946.	1.0	21
143	Growth of aligned carbon nanotubes on carbon microfibers by dc plasma-enhanced chemical vapor deposition. Applied Physics Letters, 2006, 88, 033103.	1.5	21
144	Microlattice Metamaterials for Tailoring Ultrasonic Transmission with Elastoacoustic Hybridization. Physical Review Applied, 2016, 6, .	1.5	21

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145	Dynamic Nanofragmentation of Carbon Nanotubes. Nano Letters, 2004, 4, 1915-1918.	4.5	20
146	Frequency- and Amplitude-Dependent Transmission of Stress Waves in Curved One-Dimensional Granular Crystals Composed of Diatomic Particles. Experimental Mechanics, 2013, 53, 469-483.	1.1	20
147	Temperature-induced shape morphing of bi-metallic structures. International Journal of Solids and Structures, 2020, 190, 22-32.	1.3	20
148	Photosynthesis-assisted remodeling of three-dimensional printed structures. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	20
149	Hydrogen Evolution on Hydrophobic Aligned Carbon Nanotube Arrays. ACS Nano, 2009, 3, 3903-3908.	7.3	19
150	Laser-based excitation of nonlinear solitary waves in a chain of particles. Physical Review E, 2011, 84, 026601.	0.8	19
151	Stress relaxation in polymeric microlattice materials. Materials and Design, 2017, 130, 433-441.	3.3	19
152	Direct observation of impact propagation and absorption in dense colloidal monolayers. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12150-12155.	3.3	19
153	Tuning of Surface-Acoustic-Wave Dispersion via Magnetically Modulated Contact Resonances. Physical Review Applied, 2019, 11, .	1.5	19
154	A Flexible Spiralingâ€Metasurface as a Versatile Haptic Interface. Advanced Materials Technologies, 2020, 5, 2000181.	3.0	19
155	Enhancement of Deep-Subwavelength Band Gaps in Flat Spiral-Based Phononic Metamaterials Using the Trampoline Phenomena. Journal of Applied Mechanics, Transactions ASME, 2020, 87, .	1.1	19
156	Iron Silicide Root Formation in Carbon Nanotubes Grown by Microwave PECVD. Journal of Physical Chemistry B, 2005, 109, 24215-24219.	1.2	18
157	Three-way electrical gating characteristics of metallic Y-junction carbon nanotubes. Applied Physics Letters, 2006, 88, 243113.	1.5	18
158	An Experimental Technique for the Dynamic Characterization of Soft Complex Materials. Experimental Mechanics, 2014, 54, 1319-1328.	1.1	18
159	Metamaterials with engineered failure load and stiffness. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23960-23965.	3.3	18
160	Propagation of highly nonlinear solitary waves in a curved granular chain. Granular Matter, 2013, 15, 357-366.	1.1	17
161	Nonlinear excitations in magnetic lattices with long-range interactions. New Journal of Physics, 2019, 21, 063032.	1.2	17
162	Acoustic Non-Reciprocity in Lattices With Nonlinearity, Internal Hierarchy, and Asymmetry: Computational Study. Journal of Vibration and Acoustics, Transactions of the ASME, 2019, 141, .	1.0	17

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163	Locally addressable material properties in 3D micro-architectures. Extreme Mechanics Letters, 2019, 28, 31-36.	2.0	17
164	Nonlinear viscoelasticity of freestanding and polymer-anchored vertically aligned carbon nanotube foams. Journal of Applied Physics, 2012, 111, 074314.	1.1	16
165	Sharp Carbonâ€Nanotube Tips and Carbonâ€Nanotube Soldering Irons. Advanced Materials, 2009, 21, 2305-2308.	11.1	15
166	Nonlinear phononic crystals based on chains of disks alternating with toroidal structures. Applied Physics Letters, 2011, 98, 161901.	1.5	15
167	Exponential stress mitigation in structured granular composites. Extreme Mechanics Letters, 2014, 1, 23-28.	2.0	15
168	Multiscale Mass-Spring Model for High-Rate Compression of Vertically Aligned Carbon Nanotube Foams. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	15
169	Mesoscopic approach to granular crystal dynamics. Physical Review E, 2012, 85, 016604.	0.8	14
170	Tunable, synchronized frequency down-conversion in magnetic lattices with defects. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170137.	1.6	14
171	Strongly Nonlinear Waves in 3D Phononic Crystals. AIP Conference Proceedings, 2004, , .	0.3	13
172	Influence of Controlled Viscous Dissipation on the Propagation of Strongly Nonlinear Waves in Stainless Steel Based Phononic Crystals. AIP Conference Proceedings, 2006, , .	0.3	12
173	Directed ratchet transport in granular chains. Physical Review E, 2013, 88, 052202.	0.8	12
174	Characterization of Vertically Aligned Carbon Nanotube Forests Grown on Stainless Steel Surfaces. Nanomaterials, 2019, 9, 444.	1.9	12
175	Nonlinear localized modes in two-dimensional hexagonally-packed magnetic lattices. New Journal of Physics, 2021, 23, 043008.	1.2	12
176	Coupling of highly nonlinear waves with linear elastic media. Proceedings of SPIE, 2009, , .	0.8	11
177	In situ synthesis of metal oxides in carbon nanotube arrays and mechanical properties of the resulting structures. Carbon, 2012, 50, 4432-4440.	5.4	11
178	Anomalous impact and strain responses in helical carbon nanotube foams. RSC Advances, 2015, 5, 29306-29311.	1.7	11
179	Effect of glycerol on the mechanical and temperature-sensing properties of pectin films. Applied Physics Letters, 2019, 115, .	1.5	11
180	Prestrain-induced bandgap tuning in 3D-printed tensegrity-inspired lattice structures. Extreme Mechanics Letters, 2021, 44, 101236.	2.0	11

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181	Geometryâ€Induced Mechanical Properties of Carbon Nanotube Foams. Advanced Engineering Materials, 2014, 16, 1026-1031.	1.6	10
182	Wave propagation in one-dimensional microscopic granular chains. Physical Review E, 2016, 94, 052907.	0.8	10
183	Neural networks for trajectory evaluation in direct laser writing. International Journal of Advanced Manufacturing Technology, 2020, 107, 2563-2577.	1.5	9
184	Epidemic management and control through risk-dependent individual contact interventions. PLoS Computational Biology, 2022, 18, e1010171.	1.5	9
185	Control of microstructural heterogeneities in carbon nanotube foams. Carbon, 2013, 52, 193-200.	5.4	8
186	Extreme stiffness tunability through the excitation of nonlinear defect modes. Physical Review E, 2016, 93, 010901.	0.8	8
187	Nonlinear vibrational-state excitation and piezoelectric energy conversion in harmonically driven granular chains. Physical Review E, 2016, 93, 052203.	0.8	8
188	Rate-sensitive strain localization and impact response of carbon nanotube foams with microscale heterogeneous bands. Carbon, 2016, 101, 184-190.	5.4	8
189	Acoustic properties of porous microlattices from effective medium to scattering dominated regimes. Journal of the Acoustical Society of America, 2018, 144, 319-329.	0.5	8
190	Compliant morphing structures from twisted bulk metallic glass ribbons. Journal of the Mechanics and Physics of Solids, 2020, 145, 104129.	2.3	8
191	Experimental realization of phonon demultiplexing in three-dimensions. Applied Physics Letters, 2021, 118, .	1.5	8
192	Effect of fluid medium on mechanical behavior of carbon nanotube foam. Applied Physics Letters, 2014, 104, 221910.	1.5	7
193	Dynamic Behavior of Vertically Aligned Carbon Nanotube Foams With Patterned Microstructure. Advanced Engineering Materials, 2015, 17, 1470-1479.	1.6	7
194	Structure and Biomechanics during Xylem Vessel Transdifferentiation in Arabidopsis thaliana. Plants, 2020, 9, 1715.	1.6	7
195	Biological matrix composites from cultured plant cells. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119523119.	3.3	7
196	Modeling microscale instabilities in compressed carbon nanotube bundles using multistable spring models. Composite Structures, 2013, 96, 745-750.	3.1	6
197	Analytical and Experimental Analysis of Bandgaps in Nonlinear one Dimensional Periodic Structures. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 209-219.	0.1	6
198	Effective continuum models for the buckling of non-periodic architected sheets that display quasi-mechanism behaviors. Journal of the Mechanics and Physics of Solids, 2022, 166, 104934.	2.3	6

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199	Selfâ€Assembled Recyclable Hierarchical Bucky Aerogels. Advanced Engineering Materials, 2015, 17, 990-994.	1.6	5
200	Poroelastic microlattices for underwater wave focusing. Extreme Mechanics Letters, 2021, 49, 101499.	2.0	5
201	An Experimental Investigation of Acoustic Band Gaps and Localization in Granular Elastic Chains. , 2009, , .		4
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