

Nicholas Boechler

List of Publications by Year in descending order

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32
papers

1,661
citations

516710

16
h-index

395702

33
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36
all docs

36
docs citations

36
times ranked

1572
citing authors

#	ARTICLE	IF	CITATIONS
1	Bifurcation-based acoustic switching and rectification. <i>Nature Materials</i> , 2011, 10, 665-668.	27.5	496
2	Discrete Breathers in One-Dimensional Diatomic Granular Crystals. <i>Physical Review Letters</i> , 2010, 104, 244302.	7.8	224
3	GST-on-silicon hybrid nanophotonic integrated circuits: a non-volatile quasi-continuously reprogrammable platform. <i>Optical Materials Express</i> , 2018, 8, 1551.	3.0	166
4	The role of polymer mechanochemistry in responsive materials and additive manufacturing. <i>Nature Reviews Materials</i> , 2021, 6, 84-98.	48.7	151
5	Interaction of a Contact Resonance of Microspheres with Surface Acoustic Waves. <i>Physical Review Letters</i> , 2013, 111, 036103.	7.8	116
6	Mechanochromic Stretchable Electronics. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 29918-29924.	8.0	72
7	Complex Contact-Based Dynamics of Microsphere Monolayers Revealed by Resonant Attenuation of Surface Acoustic Waves. <i>Physical Review Letters</i> , 2016, 116, 198001.	7.8	46
8	A self-assembled metamaterial for Lamb waves. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	40
9	Additive manufacturing with a flex activated mechanophore for nondestructive assessment of mechanochemical reactivity in complex object geometries. <i>Polymer</i> , 2018, 152, 4-8.	3.8	36
10	Nonlinear Periodic Phononic Structures and Granular Crystals. <i>Springer Series in Solid-state Sciences</i> , 2013, , 217-251.	0.3	34
11	Dynamics of a monolayer of microspheres on an elastic substrate. <i>Physical Review B</i> , 2015, 92, .	3.2	27
12	Hysteresis loops and multi-stability: From periodic orbits to chaotic dynamics (and back) in diatomic granular crystals. <i>Europhysics Letters</i> , 2013, 101, 44003.	2.0	27
13	Laser-induced transient grating setup with continuously tunable period. <i>Review of Scientific Instruments</i> , 2015, 86, 123101.	1.3	23
14	Spatial Laplace transform for complex wavenumber recovery and its application to the analysis of attenuation in acoustic systems. <i>Journal of Applied Physics</i> , 2016, 120, .	2.5	23
15	Mechano-Activated Objects with Multidirectional Shape Morphing Programmed via 3D Printing. <i>ACS Applied Polymer Materials</i> , 2020, 2, 2504-2508.	4.4	20
16	Shear to longitudinal mode conversion via second harmonic generation in a two-dimensional microscale granular crystal. <i>Wave Motion</i> , 2017, 68, 22-30.	2.0	18
17	Vibrational dynamics of a two-dimensional microgranular crystal. <i>Physical Review B</i> , 2017, 96, .	3.2	17
18	Discrete breathers in a mass-in-mass chain with Hertzian local resonators. <i>Physical Review E</i> , 2017, 95, 022904.	2.1	16

#	ARTICLE	IF	CITATIONS
19	Resonant attenuation of surface acoustic waves by a disordered monolayer of microspheres. Applied Physics Letters, 2016, 108, .	3.3	15
20	Mechanoactivation of Color and Autonomous Shape Change in 3D-Printed Ionic Polymer Networks. ACS Applied Materials & Interfaces, 2021, 13, 19263-19270.	8.0	15
21	Topology optimization of nonlinear periodically microstructured materials for tailored homogenized constitutive properties. Composite Structures, 2021, 266, 113729.	5.8	15
22	Longitudinal eigenvibration of multilayer colloidal crystals and the effect of nanoscale contact bridges. Nanoscale, 2019, 11, 5655-5665.	5.6	11
23	Acoustic wave propagation in disordered microscale granular media under compression. Granular Matter, 2017, 19, 1.	2.2	8
24	Contact-based and spheroidal vibrational modes of a hexagonal monolayer of microspheres on a substrate. Wave Motion, 2018, 76, 122-133.	2.0	8
25	Reduced strain mechanochemical activation onset in microstructured materials. Polymer Chemistry, 2020, 11, 1122-1126.	3.9	8
26	Wrinkles Riding Waves in Soft Layered Materials. Advanced Materials Interfaces, 2019, 6, 1801609.	3.7	6
27	Nanocontact Tailoring via Microlensing Enables Giant Postfabrication Mesoscopic Tuning in a Self-Assembled Ultrasonic Metamaterial. Advanced Functional Materials, 2020, 30, 1909217.	14.9	6
28	Microscale Concert Hall Acoustics to Produce Uniform Ultrasound Stimulation for Targeted Sonogenetics in hsTRPA1-transfected Cells. Advanced NanoBiomed Research, 2022, 2, .	3.6	6
29	Laser-Induced Spallation of Microsphere Monolayers. Langmuir, 2016, 32, 7730-7734.	3.5	4
30	Temperature-controlled spatiotemporally modulated phononic crystal for achieving nonreciprocal acoustic wave propagation. Journal of the Acoustical Society of America, 2022, 151, 3669-3675.	1.1	3
31	Growing phenotype-controlled phononic materials from plant cells scaffolds. Applied Materials Today, 2021, 22, 100934.	4.3	2
32	Wrinkles: Wrinkles Riding Waves in Soft Layered Materials (Adv. Mater. Interfaces 1/2019). Advanced Materials Interfaces, 2019, 6, 1970004.	3.7	1