Vitali F Nesterenko

List of Publications by Year
in descending order

45 papers	1,881 citations	516710 16 h-index	345221 36 g-index
45 all docs	45 docs citations	45 times ranked	1292 citing authors

#	Article	IF	Citations
1	Cavity collapse in highly heterogeneous granular mixtures with different grain size and porosity. Journal of Applied Physics, 2019, 126, .	2.5	2
2	Nonlinear wave dynamics of tensegrity metamaterials. , 2019, , .		0
3	â€œRipplesâ€•in an Aluminum Pool?. Physics Teacher, 2018, 56, 281-285.	0.3	0
4	Shear band patterning and post-critical behavior in AISI 4340 steel with different microstructure. International Journal of Impact Engineering, 2018, 112, 144-154.	5.0	10
5	Shear localization in 4340 steel with different microstructure using thick wall cylinder method. AIP Conference Proceedings, 2018, , .	0.4	1
6	Behavior of short and long high amplitude pulses on an Al-W composite with cylindrical inclusions. AIP Conference Proceedings, 2018, , .	0.4	1
7	Waves in strongly nonlinear discrete systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170130.	3.4	27
8	Dynamic fragmentation of Al-W granular rings with different mesostructures. Journal of Applied Physics, 2017, 121, .	2.5	9
9	Dynamic compressive strength and mechanism of failure of Al-W fiber composite tubes with ordered mesostructure. International Journal of Impact Engineering, 2017, 100, 1-6.	5.0	8
10	Multiple scales of shock waves in dissipative laminate materials. Physical Review E, 2016, 94, 033002.	2.1	6
11	Processing and mechanical properties of novel Al-W composites with ordered mesostructure. Journal of Composite Materials, 2016, 50, 4015-4022.	2.4	10
12	Nature of short, high-amplitude compressive stress pulses in a periodic dissipative laminate. Physical Review E, 2015, 92, 062917.	2.1	3
13	Strongly Nonlinear Discrete Metamaterials: Origin of new Wave Dynamics. Physics Procedia, 2015, 70, 815-818.	1.2	4
14	Major Steps in the Discovery of Adiabatic Shear Bands. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4454-4458.	2.2	24
15	Attenuation of short stress pulses in strongly nonlinear dissipative metamaterial. Journal of Applied Physics, 2015, 117, .	2.5	6
16	Multiscale tunability of solitary wave dynamics in tensegrity metamaterials. Applied Physics Letters, 2014, 105, .	3.3	128
17	Propagation of short stress pulses in discrete strongly nonlinear tunable metamaterials. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130186.	3.4	16
18	Dynamic deformation of strongly nonlinear toroidal rubber elements. Journal of Applied Physics, 2013, 114, .	2.5	8

#	Article	IF	Citations
19	The Fragmentation of Al-W Granular Composites Under Explosive Loading. Materials Research Society Symposia Proceedings, 2013, 1521, 1.	0.1	1
20	Dynamic behavior of particulate/porous energetic materials. AIP Conference Proceedings, 2012, , .	0.4	10
21	Modeling shear instability and fracture in dynamically deformed Al/W granular composites. AIP Conference Proceedings, 2012, , .	0.4	6
22	Processing and dynamic testing of Al/W granular composites. AIP Conference Proceedings, 2012, , .	0.4	5
23	Periodic waves in a Hertzian chain. Physics Procedia, 2010, 3, 457-463.	1.2	6
24	The role of dissipation on wave shape and attenuation in granular chains. Physics Procedia, 2010, 3, 465-471.	1.2	10
25	Analysis and characterization by electron backscatter diffraction of microstructural evolution in the adiabatic shear bands in Feâ€“Crâ€“Ni alloys. Journal of Materials Research, 2009, 24, 2617-2627.	2.6	13
26	Pulse propagation in a linear and nonlinear diatomic periodic chain: effects of acoustic frequency band-gap. Acta Mechanica, 2009, 205, 85-103.	2.1	137
27	Effect of strain rate on the compressive mechanical properties of aluminum alloy matrix composite filled with discontinuous carbon fibers. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 485, 681-689.	5.6	18
28	Short-pulse dynamics in strongly nonlinear dissipative granular chains. Physical Review E, 2008, 78, 051303.	2.1	31
29	Design and Ballistic Testing of Tiâ€”6Alâ€”4V Matrix Composites. Journal of Composite Materials, 2007, 41, 2313-2323.	2.4	5
30	Observation of Two-Wave Structure in Strongly Nonlinear Dissipative Granular Chains. Physical Review Letters, 2007, 98, 164301.	7.8	68
31	Dynamic behavior of HIPed Tiâ€“6Alâ€“4V. International Journal of Impact Engineering, 2007, 34, 771-783.	5.0	19
32	Collapse of Hollow Cylinders of PTFE and Aluminum Particles Mixtures Using Hopkinson Bar. AIP Conference Proceedings, 2006, , .	0.4	5
33	Influence of Controlled Viscous Dissipation on the Propagation of Strongly Nonlinear Waves in Stainless Steel Based Phononic Crystals. AIP Conference Proceedings, 2006, , .	0.4	12
34	Highly nonlinear contact interaction and dynamic energy dissipation by forest of carbon nanotubes. Applied Physics Letters, 2004, 85, 5724-5726.	3.3	43
35	Dynamic Nanofragmentation of Carbon Nanotubes. Nano Letters, 2004, 4, 1915-1918.	9.1	20
36	Response of hot isostatically pressed Tiâ€“6Alâ€“4V targets to normal impact by conical and blunt projectiles. International Journal of Impact Engineering, 2003, 28, 137-160.	5.0	16

#	Article	IF	Citations
37	Shock (Blast) Mitigation by â€œSoftâ€•Condensed Matter. Materials Research Society Symposia Proceedings, 2002, 759, 1.	0.1	22
38	Nonlinear Impulses in Particulate Materials. , 2001, , 1-136.		8
39	Pressure Assisted Crystallization of MnAl Thin Films. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	0
40	Dynamic response of conventional and hot isostatically pressed Tiâ€“6Alâ€“4V alloys: experiments and modeling. Mechanics of Materials, 2001, 33, 425-439.	3.2	233
41	Shear localization in dynamic deformation of materials: microstructural evolution and self-organization. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 317, 204-225.	5.6	303
42	Dynamics of Heterogeneous Materials. , 2001, , .		584
43	Experimental observation and computational simulation of dynamic void collapse in single crystal cooper. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 249, 22-29.	5.6	11
44	Dynamic void collapse in crystals: Computational modelling and experiments. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 1151-1174.	0.6	30
45	Modified Arzt-Ashby-easterling model for powder consolidation. Metals and Materials International, 1998, 4, 336-344.	0.2	2