

Vitali F Nesterenko

List of Publications by Year in descending order

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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	Dynamics of Heterogeneous Materials. , 2001, , .		584
2	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
3	Dynamic response of conventional and hot isostatically pressed Ti-6Al-4V alloys: experiments and modeling. Mechanics of Materials, 2001, 33, 425-439.	3.2	233
4	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
5	Multiscale tunability of solitary wave dynamics in tensegrity metamaterials. Applied Physics Letters, 2014, 105, .	3.3	128
6	Observation of Two-Wave Structure in Strongly Nonlinear Dissipative Granular Chains. Physical Review Letters, 2007, 98, 164301.	7.8	68
7	Highly nonlinear contact interaction and dynamic energy dissipation by forest of carbon nanotubes. Applied Physics Letters, 2004, 85, 5724-5726.	3.3	43
8	Short-pulse dynamics in strongly nonlinear dissipative granular chains. Physical Review E, 2008, 78, 051303.	2.1	31
9	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
10	Waves in strongly nonlinear discrete systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170130.	3.4	27
11	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
12	Shock (Blast) Mitigation by "Soft" Condensed Matter. Materials Research Society Symposia Proceedings, 2002, 759, 1.	0.1	22
13	Dynamic Nanofragmentation of Carbon Nanotubes. Nano Letters, 2004, 4, 1915-1918.	9.1	20
14	Dynamic behavior of HIPed Ti-6Al-4V. International Journal of Impact Engineering, 2007, 34, 771-783.	5.0	19
15	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
16	Response of hot isostatically pressed Ti-6Al-4V targets to normal impact by conical and blunt projectiles. International Journal of Impact Engineering, 2003, 28, 137-160.	5.0	16
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	Analysis and characterization by electron backscatter diffraction of microstructural evolution in the adiabatic shear bands in Fe-Cr-Ni alloys. Journal of Materials Research, 2009, 24, 2617-2627.	2.6	13

#	ARTICLE	IF	CITATIONS
19	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
20	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
21	The role of dissipation on wave shape and attenuation in granular chains. Physics Procedia, 2010, 3, 465-471.	1.2	10
22	Dynamic behavior of particulate/porous energetic materials. AIP Conference Proceedings, 2012, , .	0.4	10
23	Processing and mechanical properties of novel Al-W composites with ordered mesostructure. Journal of Composite Materials, 2016, 50, 4015-4022.	2.4	10
24	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
25	Dynamic fragmentation of Al-W granular rings with different mesostructures. Journal of Applied Physics, 2017, 121, .	2.5	9
26	Nonlinear Impulses in Particulate Materials. , 2001, , 1-136.		8
27	Dynamic deformation of strongly nonlinear toroidal rubber elements. Journal of Applied Physics, 2013, 114, .	2.5	8
28	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
29	Periodic waves in a Hertzian chain. Physics Procedia, 2010, 3, 457-463.	1.2	6
30	Modeling shear instability and fracture in dynamically deformed Al/W granular composites. AIP Conference Proceedings, 2012, , .	0.4	6
31	Attenuation of short stress pulses in strongly nonlinear dissipative metamaterial. Journal of Applied Physics, 2015, 117, .	2.5	6
32	Multiple scales of shock waves in dissipative laminate materials. Physical Review E, 2016, 94, 033002.	2.1	6
33	Collapse of Hollow Cylinders of PTFE and Aluminum Particles Mixtures Using Hopkinson Bar. AIP Conference Proceedings, 2006, , .	0.4	5
34	Design and Ballistic Testing of TiAl ₆ 4V Matrix Composites. Journal of Composite Materials, 2007, 41, 2313-2323.	2.4	5
35	Processing and dynamic testing of Al/W granular composites. AIP Conference Proceedings, 2012, , .	0.4	5
36	Strongly Nonlinear Discrete Metamaterials: Origin of new Wave Dynamics. Physics Procedia, 2015, 70, 815-818.	1.2	4

#	ARTICLE	IF	CITATIONS
37	Nature of short, high-amplitude compressive stress pulses in a periodic dissipative laminate. Physical Review E, 2015, 92, 062917.	2.1	3
38	Cavity collapse in highly heterogeneous granular mixtures with different grain size and porosity. Journal of Applied Physics, 2019, 126, .	2.5	2
39	Modified Arzt-Ashby-easterling model for powder consolidation. Metals and Materials International, 1998, 4, 336-344.	0.2	2
40	The Fragmentation of Al-W Granular Composites Under Explosive Loading. Materials Research Society Symposia Proceedings, 2013, 1521, 1.	0.1	1
41	Shear localization in 4340 steel with different microstructure using thick wall cylinder method. AIP Conference Proceedings, 2018, , .	0.4	1
42	Behavior of short and long high amplitude pulses on an Al-W composite with cylindrical inclusions. AIP Conference Proceedings, 2018, , .	0.4	1
43	Pressure Assisted Crystallization of MnAl Thin Films. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	0
44	“Ripples” in an Aluminum Pool?. Physics Teacher, 2018, 56, 281-285.	0.3	0
45	Nonlinear wave dynamics of tensegrity metamaterials. , 2019, , .		0