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List of Publications by Year
in descending order

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93 papers	3,915 citations	126907 33 h-index	128289 60 g-index
95 all docs	95 docs citations	95 times ranked	1604 citing authors

#	Article	IF	Citations
1	Effects of grain size and partial amorphization on elastocaloric cooling performance of nanostructured NiTi. Scripta Materialia, 2022, 209, 114371.	5.2	30
2	Orientation-dependent superelasticity and fatigue of CuAlMn alloy under in situ micromechanical tensile characterization. Journal of the Mechanics and Physics of Solids, 2022, 160, 104787.	4.8	3
3	Ultrahigh cycle fatigue of nanocrystalline NiTi tubes for elastocaloric cooling. Applied Materials Today, 2022, 26, 101377.	4.3	13
4	Multifunctional nanostructured NiTi alloy with Invar, Elinvar and Rinvar properties. Journal of Alloys and Compounds, 2022, 909, 164682.	5.5	15
5	Compression Behaviors of Different Geometry-Designed NiTi Refrigerants. , 2022, , .		0
6	Continuous Operating Elastocaloric Device: Model and Experiments. , 2022, , .		0
7	Measurement of two-dimensional residual stress in nanocrystalline superelastic NiTi fabricated with pre-strain laser shock peening. Mathematics and Mechanics of Solids, 2022, 27, 1559-1568.	2.4	2
8	An Elastocaloric Air Cooler with Low-Force Bending Actuation. , 2022, , .		0
9	Enhancing cooling performance of NiTi elastocaloric tube refrigerant via internal grooving. Applied Thermal Engineering, 2022, 213, 118657.	6.0	37
10	Fatigue-Resistant Heterogeneous Gradient Nanocrystalline NiTi Shape Memory Alloy Fabricated by Pre-Strain Laser Shock Peening. Shape Memory and Superelasticity, 2022, 8, 107-117.	2.2	4
11	A compact NiTi elastocaloric air cooler with low force bending actuation. Applied Thermal Engineering, 2022, 215, 118942.	6.0	21
12	Nonlocal modeling and analysis of spatiotemporal patterns in non-isothermal phase transformation of NiTi strips. International Journal of Solids and Structures, 2021, 221, 103-116.	2.7	19
13	Grain size-dependent energy partition in phase transition of NiTi shape memory alloys studied by molecular dynamics simulation. International Journal of Solids and Structures, 2021, 221, 31-41.	2.7	37
14	In-plane low thermal expansion of NiTi via controlled cross rolling. Acta Materialia, 2021, 204, 116506.	7.9	22
15	Thermomechanical coupling in cyclic phase transition of shape memory material under periodic stressingâ€"experiment and modeling. Journal of the Mechanics and Physics of Solids, 2021, 149, 104199.	4.8	18
16	Nanocomposite NiTi shape memory alloy with high strength and fatigue resistance. Nature Nanotechnology, 2021, 16, 409-413.	31.5	113
17	Mechanical behaviors of polycrystalline NiTi SMAs of various grain sizes under impact loading. Science China Technological Sciences, 2021, 64, 1401-1411.	4.0	5
18	Superelastic oxide micropillars enabled by surface tensionâ€"modulated 90Â° domain switching with excellent fatigue resistance. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	11

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19	Reducing functional fatigue, transition stress and hysteresis of NiTi micropillars by one-step overstressed plastic deformation. Scripta Materialia, 2021, 201, 113958.	5.2	40
20	Ultrahigh cycle fatigue deformation of polycrystalline NiTi micropillars. Scripta Materialia, 2021, 203, 114108.	5.2	14
21	Tailoring thermal expansion of shape memory alloys through designed reorientation deformation. Acta Materialia, 2021, 218, 117201.	7.9	12
22	Cyclic phase transformation behavior of nanocrystalline NiTi at microscale. Acta Materialia, 2020, 185, 507-517.	7.9	67
23	Effects of grain size on fatigue crack growth behaviors of nanocrystalline superelastic NiTi shape memory alloys. Acta Materialia, 2020, 195, 141-150.	7.9	52
24	Elinvar property of cold-rolled NiTi alloy. Scripta Materialia, 2020, 187, 197-201.	5.2	23
25	Contactless treatment for scoliosis by electromagnetically controlled shape-memory alloy rods: a preliminary study in rabbits. European Spine Journal, 2020, 29, 1147-1158.	2.2	2
26	Deformation behaviors of gradient nanostructured superelastic NiTi shape memory alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 786, 139389.	5.6	23
27	A dual-pillar method for measurement of stress-strain response of material at microscale. Scripta Materialia, 2019, 172, 138-143.	5.2	13
28	Structure-microstructure interactions in compression deformation of NiTi shape memory alloy micropillars. Materials Letters, 2019, 257, 126693.	2.6	4
29	Ultra-high fatigue life of NiTi cylinders for compression-based elastocaloric cooling. Applied Physics Letters, 2019, 115, .	3.3	65
30	Modeling the martensite reorientation and resulting zero/negative thermal expansion of shape memory alloys. Journal of the Mechanics and Physics of Solids, 2019, 127, 295-331.	4.8	34
31	Analytical solution of a mass-spring system containing shape memory alloys: Effects of nonlinearity and hysteresis. International Journal of Solids and Structures, 2019, 171, 189-200.	2.7	6
32	Non-monotonic grain size dependence of phase transformation behavior in NiTi microscale samples. Scripta Materialia, 2019, 165, 50-54.	5.2	7
33	Enhance Fatigue Resistance of Nanocrystalline NiTi by Laser Shock Peening. Shape Memory and Superelasticity, 2019, 5, 436-443.	2.2	18
34	High fatigue life and cooling efficiency of NiTi shape memory alloy under cyclic compression. Scripta Materialia, 2019, 159, 62-67.	5.2	79
35	Reversible elastocaloric effect at ultra-low temperatures in nanocrystalline shape memory alloys. Acta Materialia, 2019, 165, 109-117.	7.9	57
36	Negative and Zero Thermal Expansion NiTi Superelastic Shape Memory Alloy by Microstructure Engineering. Shape Memory and Superelasticity, 2018, 4, 158-164.	2.2	2

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37	Grain size dependence of Youngâ€™s modulus and hardness for nanocrystalline NiTi shape memory alloy. Materials Letters, 2018, 211, 352-355.	2.6	47
38	Nanoscale phase transition behavior of shape memory alloys â€” closed form solution of 1D effective modelling. Journal of the Mechanics and Physics of Solids, 2018, 110, 21-37.	4.8	50
39	Effects of grain size on compressive behavior of NiTi polycrystalline superelastic macro- and micropillars. Materials Letters, 2018, 214, 53-55.	2.6	24
40	Fatigue Crack Growth in Cold-Rolled and Annealed Polycrystalline Superelastic NiTi Alloys. Acta Mechanica Solida Sinica, 2018, 31, 599-607.	1.9	6
41	Grain refinement and amorphization in nanocrystalline NiTi micropillars under uniaxial compression. Scripta Materialia, 2018, 154, 123-126.	5.2	34
42	Grain Size Effects on Wear Resistance of Nanocrystalline NiTi Shape Memory Alloy. Advanced Structured Materials, 2017, , 211-219.	0.5	0
43	Grain Size Effects on Youngâ€™s Modulus and Hardness of Nanocrystalline NiTi Shape Memory Alloy. Advanced Structured Materials, 2017, , 203-210.	0.5	3
44	Thermomechanical responses of nonlinear torsional vibration with NiTi shape memory alloy â€“ Alternative stable states and their jumps. Journal of the Mechanics and Physics of Solids, 2017, 102, 257-276.	4.8	16
45	Grain size effects on stability of nonlinear vibration with nanocrystalline NiTi shape memory alloy. Smart Materials and Structures, 2017, 26, 105033.	3.5	8
46	Modeling of Biofilm Growth on Ager Substrate Using the Extended Finite Element Method. Procedia IUTAM, 2017, 23, 33-41.	1.2	1
47	Computational Study of Stretching Rate Effects on Pattern Formation in NiTi Thin Strips. Advanced Structured Materials, 2017, , 81-92.	0.5	0
48	Phase-field simulations of partial pseudoelastic stress-strain behavior and microstructure evolution of Ni-Mn-Ga. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 669, 428-436.	5.6	5
49	Oxidized nitinol substrate for interference enhanced Raman scattering of monolayer graphene. RSC Advances, 2016, 6, 7093-7100.	3.6	13
50	Probing phenotypic growth in expanding Bacillus subtilis biofilms. Applied Microbiology and Biotechnology, 2016, 100, 4607-4615.	3.6	40
51	Effects of grain size on tensile fatigue life of nanostructured NiTi shape memory alloy. International Journal of Fatigue, 2016, 88, 166-177.	5.7	107
52	Grain size dependence of fracture toughness and crack-growth resistance of superelastic NiTi. Scripta Materialia, 2016, 113, 171-175.	5.2	68
53	On interfacial energy of macroscopic domains in polycrystalline NiTi shape memory alloys. International Journal of Solids and Structures, 2016, 80, 445-455.	2.7	17
54	Jump phenomena of rotational angle and temperature of NiTi wire in nonlinear torsional vibration. International Journal of Solids and Structures, 2015, 56-57, 220-234.	2.7	14

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55	Stress-induced nanoscale phase transition in superelastic NiTi by in situ X-ray diffraction. Acta Materialia, 2015, 90, 272-281.	7.9	177
56	Phase transition induced interfacial debonding in shape memory alloy fiberâ€“matrix system. International Journal of Solids and Structures, 2015, 75-76, 199-210.	2.7	8
57	Effect of deformation frequency on temperature and stress oscillations in cyclic phase transition of NiTi shape memory alloy. Journal of the Mechanics and Physics of Solids, 2014, 67, 100-128.	4.8	139
58	Effects of grain size on phase transition behavior of nanocrystalline shape memory alloys. Science China Technological Sciences, 2014, 57, 671-679.	4.0	97
59	Effects of grain size on the rate-dependent thermomechanical responses of nanostructured superelastic NiTi. Acta Materialia, 2014, 76, 186-197.	7.9	189
60	Oliverâ€“Pharr indentation method in determining elastic moduli of shape memory alloysâ€”A phase transformable material. Journal of the Mechanics and Physics of Solids, 2013, 61, 2015-2033.	4.8	108
61	Rate dependent damping of single crystal CuAlNi shape memory alloy. Materials Letters, 2013, 109, 287-290.	2.6	37
62	Modeling of rate-dependent phase transition in bacterial flagellar filament. Materials Research Bulletin, 2013, 48, 5019-5025.	5.2	1
63	Stress hysteresis and temperature dependence of phase transition stress in nanostructured NiTiâ€”Effects of grain size. Applied Physics Letters, 2013, 103, 021902.	3.3	200
64	On anomalous depth-dependency of the hardness of NiTi shape memory alloys in spherical nanoindentation. Journal of Materials Research, 2013, 28, 2031-2039.	2.6	14
65	Temperature Variation in NiTi Shape Memory Alloy During Cyclic Phase Transition. Journal of Materials Engineering and Performance, 2012, 21, 2505-2508.	2.5	31
66	On equilibrium domains in superelastic NiTi tubes â€” helix versus cylinder. International Journal of Solids and Structures, 2012, 49, 1063-1076.	2.7	11
67	Loading rate dependency of maximum nanoindentation depth in nano-grained NiTi shape memory alloy. Materials Letters, 2011, 65, 464-466.	2.6	32
68	On non-monotonic rate dependence of stress hysteresis of superelastic shape memory alloy bars. International Journal of Solids and Structures, 2011, 48, 1688-1695.	2.7	81
69	Depth dependency of indentation hardness during solid-state phase transition of shape memory alloys. Applied Physics Letters, 2011, 99, .	3.3	33
70	Macroscopic equilibrium domain structure and geometric compatibility in elastic phase transition of thin plates. International Journal of Mechanical Sciences, 2010, 52, 198-211.	6.7	70
71	Experimental study on rate dependence of macroscopic domain and stress hysteresis in NiTi shape memory alloy strips. International Journal of Mechanical Sciences, 2010, 52, 1660-1670.	6.7	166
72	Rate-dependent domain spacing in a stretched NiTi strip. International Journal of Solids and Structures, 2010, 47, 2775-2783.	2.7	118

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73	Ambient effect on damping peak of NiTi shape memory alloy. Materials Letters, 2010, 64, 1483-1486.	2.6	78
74	Non-local modeling on macroscopic domain patterns in phase transformation of NiTi tubes. Acta Mechanica Solida Sinica, 2009, 22, 407-417.	1.9	5
75	Effects of structural and material length scales on stress-induced martensite macro-domain patterns in tube configurations. International Journal of Solids and Structures, 2009, 46, 3045-3060.	2.7	57
76	Determination of plastic yield stress from spherical indentation slope curve. Materials Letters, 2008, 62, 2260-2262.	2.6	17
77	Wearless scratch on NiTi shape memory alloy due to phase transformational shakedown. Applied Physics Letters, 2008, 92, 121909.	3.3	19
78	EFFECT OF TRANSFORMATION VOLUME STRAIN ON THE SPHERICAL INDENTATION OF SHAPE MEMORY ALLOYS. International Journal of Modern Physics B, 2008, 22, 5957-5964.	2.0	5
79	Nanofretting behaviors of NiTi shape memory alloy. Wear, 2007, 263, 501-507.	3.1	18
80	Analysis of spherical indentation of superelastic shape memory alloys. International Journal of Solids and Structures, 2007, 44, 1-17.	2.7	72
81	Shakedown analysis of shape memory alloy structures. International Journal of Plasticity, 2007, 23, 183-206.	8.8	57
82	Spherical indentation hardness of shape memory alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 425, 278-285.	5.6	29
83	Experimental investigation on macroscopic domain formation and evolution in polycrystalline NiTi microtubing under mechanical force. Journal of the Mechanics and Physics of Solids, 2006, 54, 1568-1603.	4.8	117
84	Role of phase transition in the unusual microwear behavior of superelastic NiTi shape memory alloy. Wear, 2006, 260, 509-522.	3.1	54
85	Determination of transformation stresses of shape memory alloy thin films: A method based on spherical indentation. Applied Physics Letters, 2006, 88, 241912.	3.3	25
86	The role of phase transition in the fretting behavior of NiTi shape memory alloy. Wear, 2005, 259, 309-318.	3.1	33
87	Characteristic of microscopic shape memory effect in a CuAlNi alloy by nanoindentation. Journal of Materials Science, 2005, 40, 1501-1504.	3.7	10
88	Anomalous relationship between hardness and wear properties of a superelastic nickelâ€“titanium alloy. Applied Physics Letters, 2004, 84, 1076-1078.	3.3	97
89	Critical thickness for dislocation generation in epitaxial piezoelectric thin films. Philosophical Magazine, 2003, 83, 3753-3764.	1.6	13
90	The initiation and growth of macroscopic martensite band in nano-grained NiTi microtube under tension. International Journal of Plasticity, 2002, 18, 1481-1498.	8.8	146

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91	Phase transformation in superelastic NiTi polycrystalline micro-tubes under tension and torsionâ€“â€“from localization to homogeneous deformation. International Journal of Solids and Structures, 2002, 39, 3797-3809.	2.7	199
92	A generalized micromechanics constitutive theory of single crystal with thermoelastic martensitic transformation. Science in China Series A: Mathematics, 1998, 41, 878-886.	0.5	6
93	Experimental Study of Stress-Induced Localized Transformation Plastic Zones in Tetragonal Zirconia Polycrystalline Ceramics. Journal of the American Ceramic Society, 1994, 77, 1352-1356.	3.8	21