

Xian Chen

List of Publications by Year in descending order

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32
papers

1,501
citations

759233

12
h-index

477307

29
g-index

33
all docs

33
docs citations

33
times ranked

1612
citing authors

#	ARTICLE	IF	CITATIONS
1	Herringbone Buckling Patterns of Compressed Thin Films on Compliant Substrates. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 597-603.	2.2	511
2	Enhanced reversibility and unusual microstructure of a phase-transforming material. Nature, 2013, 502, 85-88.	27.8	337
3	Hysteresis and unusual magnetic properties in the singular Heusler alloy Ni ₄₅ Co ₅ Mn ₄₀ Sn ₁₀ . Applied Physics Letters, 2010, 97, .	3.3	138
4	Study of the cofactor conditions: Conditions of supercompatibility between phases. Journal of the Mechanics and Physics of Solids, 2013, 61, 2566-2587.	4.8	116
5	Giant caloric effect of low-hysteresis metamagnetic shape memory alloys with exceptional cyclic functionality. Acta Materialia, 2017, 133, 217-223.	7.9	98
6	Determination of the stretch tensor for structural transformations. Journal of the Mechanics and Physics of Solids, 2016, 93, 34-43.	4.8	41
7	Quantitative microstructural imaging by scanning Laue x-ray micro- and nanodiffraction. MRS Bulletin, 2016, 41, 445-453.	3.5	38
8	Tuning the hysteresis of a metal-insulator transition via lattice compatibility. Nature Communications, 2020, 11, 3539.	12.8	38
9	Exceptional Resilience of Small-Scale Au ₃₀ Cu ₂₅ Zn ₄₅ under Cyclic Stress-Induced Phase Transformation. Nano Letters, 2016, 16, 7621-7625.	9.1	34
10	Energy-Efficient Elastocaloric Cooling by Flexibly and Reversibly Transferring Interface in Magnetic Shape-Memory Alloys. ACS Applied Materials & Interfaces, 2018, 10, 25438-25445.	8.0	28
11	Tuning crystallographic compatibility to enhance shape memory in ceramics. Physical Review Materials, 2019, 3, .	2.4	14
12	<i>In-situ</i> characterization of highly reversible phase transformation by synchrotron X-ray Laue microdiffraction. Applied Physics Letters, 2016, 108, .	3.3	13
13	A weak compatibility condition for precipitation with application to the microstructure of PbTe-Sb ₂ Te ₃ thermoelectrics. Acta Materialia, 2011, 59, 6124-6132.	7.9	11
14	Real-time data-intensive computing. AIP Conference Proceedings, 2016, , .	0.4	10
15	Power-Source-Free Analysis of Pyroelectric Energy Conversion. Physical Review Applied, 2019, 12, .	3.8	10
16	Data-driven approach for synchrotron X-ray Laue microdiffraction scan analysis. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, 876-888.	0.1	10
17	Two-Tier Compatibility of Superelastic Bicrystal Micropillar at Grain Boundary. Nano Letters, 2020, 20, 8332-8338.	9.1	8
18	Nanomechanics of shape memory alloys. Materials Today Advances, 2021, 10, 100141.	5.2	7

#	ARTICLE	IF	CITATIONS
19	Quantitative surface topography of martensitic microstructure by differential interference contrast microscopy. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 124, 102-114.	4.8	6
20	Dual beam-shear differential interference microscopy for full-field surface deformation gradient characterization. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 145, 104162.	4.8	6
21	Impact of Leakage for Electricity Generation by Pyroelectric Converter. <i>Physical Review Applied</i> , 2020, 14, .	3.8	6
22	Energy Conversion from Heat to Electricity by Highly Reversible Phase-Transforming Ferroelectrics. <i>Physical Review Applied</i> , 2021, 16, .	3.8	4
23	Measuring optical beam shear angle of polarizing prisms beyond the diffraction limit with localization method. <i>Optics Communications</i> , 2019, 435, 227-231.	2.1	3
24	Derived crystal structure of martensitic materials by solid-solid phase transformation. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2020, 76, 521-533.	0.1	3
25	Orientation-dependent superelasticity and fatigue of CuAlMn alloy under in situ micromechanical tensile characterization. <i>Journal of the Mechanics and Physics of Solids</i> , 2022, 160, 104787.	4.8	3
26	Quantitative analysis of compatible microstructure by electron backscatter diffraction. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200112.	3.4	2
27	Low hysteresis and enhanced figure-of-merit of pyroelectric energy conversion at compatible phase transformation. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	2
28	Origins of the transformability of nickel-titanium shape memory alloys. <i>Physical Review Materials</i> , 2020, 4, .	2.4	2
29	Topics in the mathematical design of materials. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200108.	3.4	1
30	In situ characterization of buckling dynamics in silicon microribbon on an elastomer substrate. <i>Extreme Mechanics Letters</i> , 2021, 48, 101397.	4.1	1
31	3D Microstructures of $Sb_{2}Te_{3}$ Precipitates in PbTe Matrix with Prediction by a Weak Compatibility Condition. , 0, , 125-130.		0
32	In situ thermal-microstructure characterization of a phase-transforming alloy satisfying cofactor conditions. <i>Scripta Materialia</i> , 2022, 218, 114831.	5.2	0