Tao Hu

List of Publications by Year
in descending order

71 papers	5,600 citations	109137 35 h-index	95083 68 g-index
72 all docs	72 docs citations	72 times ranked	5829 citing authors

#	Article	IF	Citations
1	2430% Superplastic strain in a eutectic Au-Sn alloy with micrometer-sized grains maintained by spinodal-like decomposition. Acta Materialia, 2022, 228, 117766.	3.8	10
2	Microstructure evolution and bonding strength of the Al2O3/Al2O3 interface brazed via Ni-Ti intermetallic phases. Journal of the European Ceramic Society, 2020, 40, 1496-1504.	2.8	24
3	Silicon carbide nanoparticles as a photoacoustic and photoluminescent dual-imaging contrast agent for long-term cell tracking. Nanoscale Advances, 2019, 1, 3514-3520.	2.2	15
4	Increasing the Efficacy of Stem Cell Therapy via Triple-Function Inorganic Nanoparticles. ACS Nano, 2019, 13, 6605-6617.	7.3	44
5	Single-phase high-entropy intermetallic compounds (HEICs): bridging high-entropy alloys and ceramics. Science Bulletin, 2019, 64, 856-864.	4.3	87
6	Homogeneous Anodic TiO 2 Nanotube Layers on Tiâ€“6Alâ€“4V Alloy with Improved Adhesion Strength and Corrosion Resistance. Advanced Materials Interfaces, 2019, 6, 1801964.	1.9	3
7	Nucleation of Y-X-O (X=Al, Ti, or Zr) NCs in nano-structured ferritic alloys: A first principles comparative study. Journal of Nuclear Materials, 2019, 518, 140-148.	1.3	18
8	Double-shell structure of Al3(Zr,Sc) precipitate induced by thermomechanical treatment of Alâ€“Zrâ€“Sc alloy cable. Journal of Rare Earths, 2019, 37, 668-672.	2.5	21
9	Formation of coherent, core-shelled nano-particles in dilute Al-Sc-Zr alloys from the first-principles. Journal of Materials Science and Technology, 2019, 35, 930-938.	5.6	56
10	Experimental and DFT characterization of Î·â€² nano-phase and its interfaces in Al Zn Mg Cu alloys. Acta Materialia, 2019, 164, 207-219.	3.8	113
11	Influence of grain boundaries with dispersed nanoscale Al2O3 particles on the strength of Al for a wide range of homologous temperatures. Journal of Alloys and Compounds, 2019, 772, 472-481.	2.8	37
12	Stress-induced Î±â€³ phase in a beta Tiâ€“19Nbâ€“1.5Moâ€“4Zrâ€“8Sn alloy. Materials Characterization, 2018, 140, 247-258.	1.9	18
13	On the electrostatic potential assisted nucleation and growth of precipitates in Al-Cu alloy. Scripta Materialia, 2018, 150, 13-17.	2.6	12
14	A new class of high-entropy perovskite oxides. Scripta Materialia, 2018, 142, 116-120.	2.6	560
15	Correlation of grain boundary extra free volume with vacancy and solute segregation at grain boundaries: a case study for Al. Philosophical Magazine, 2018, 98, 464-483.	0.7	38
16	Enhancing the electrochemical performance of Li-rich layered oxide Li1.13Ni0.3Mn0.57O2 via WO3 doping and accompanying spontaneous surface phase formation. Journal of Power Sources, 2018, 375, 21-28.	4.0	61
17	Role of disordered bipolar complexions on the sulfur embrittlement of nickel general grain boundaries. Nature Communications, 2018, 9, 2764.	5.8	49
18	Strategies to Approach Stabilized Plasticity in Metals with Diminutive Volume: A Brief Review. Crystals, 2016, 6, 92.	1.0	3

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19	High-Entropy Metal Diborides: A New Class of High-Entropy Materials and a New Type of Ultrahigh Temperature Ceramics. Scientific Reports, 2016, 6, 37946.	1.6	721
20	Grain boundary complexions in multicomponent alloys: Challenges and opportunities. Current Opinion in Solid State and Materials Science, 2016, 20, 268-277.	5.6	64
21	Deformation of a ceramic/metal interface at the nanoscale. Nanoscale, 2016, 8, 10541-10547.	2.8	11
22	Stabilization of nanocrystalline alloys at high temperatures via utilizing high-entropy grain boundary complexions. Scripta Materialia, 2016, 124, 160-163.	2.6	97
23	Synthesis of NiCo2S4-based nanostructured electrodes supported on nickel foams with superior electrochemical performance. Journal of Materials Science, 2016, 51, 1903-1913.	1.7	77
24	Coupling of dislocations and precipitates: Impact on the mechanical behavior of ultrafine grained Alâ€“Znâ€“Mg alloys. Acta Materialia, 2016, 103, 153-164.	3.8	189
25	Disordered dislocation configuration in submicrometer Al crystal subjected to plane strain bending. Scripta Materialia, 2016, 113, 35-38.	2.6	1
26	Metal/ceramic Interface Structures and Segregation Behavior in Aluminum-based Composites. Microscopy and Microanalysis, 2015, 21, 1053-1054.	0.2	20
27	Stabilized plasticity in ultrahigh strength, submicron Al crystals. Acta Materialia, 2015, 94, 46-58.	3.8	28
28	Influence of length-scales on spatial distribution and interfacial characteristics of B4C in a nanostructured Al matrix. Acta Materialia, 2015, 89, 327-343.	3.8	119
29	Metal/ceramic interface structures and segregation behavior in aluminum-based composites. Acta Materialia, 2015, 95, 254-263.	3.8	64
30	A comparative analysis of solubility, segregation, and phase formation in atomized and cryomilled Alâ€“Fe alloy powders. Journal of Materials Science, 2015, 50, 4683-4697.	1.7	20
31	On the thermal stability of ultrafine-grained Al stabilized by in-situ amorphous Al2O3 network. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 648, 61-71.	2.6	55
32	Microstructure and Strengthening Mechanisms in an Ultrafine Grained Al-Mg-Sc Alloy Produced by Powder Metallurgy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 6329-6343.	1.1	51
33	Mechanical behavior and strengthening mechanisms in ultrafine grain precipitation-strengthened aluminum alloy. Acta Materialia, 2014, 62, 141-155.	3.8	1,131
34	Microstructural evolution of cryomilled Ti/Al mixture during high-pressure torsion. Journal of Materials Research, 2014, 29, 578-585.	1.2	8
35	Distinct Hardening Behavior of Ultrafine-Grained Al-Zn-Mg-Cu Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4762-4765.	1.1	15
36	Improving the tensile ductility and uniform elongation of high-strength ultrafine-grained Al alloys by lowering the grain boundary misorientation angle. Scripta Materialia, 2014, 78-79, 25-28.	2.6	83

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37	Structure and properties of TiC/Ti coatings fabricated on NiTi by plasma immersion ion implantation and deposition. Vacuum, 2013, 89, 238-243.	1.6	13
38	Structure and corrosion resistance of Ti/TiC coatings fabricated by plasma immersion ion implantation and deposition on nickelâ€“titanium. Surface and Coatings Technology, 2013, 229, 151-155.	2.2	31
39	Precipitation phenomena in an ultrafine-grained Al alloy. Acta Materialia, 2013, 61, 2163-2178.	3.8	201
40	Surface nano-architectures and their effects on the mechanical properties and corrosion behavior of Ti-based orthopedic implants. Surface and Coatings Technology, 2013, 233, 13-26.	2.2	65
41	Effects of Carbon and Nitrogen Plasma Immersion Ion Implantation on In vitro and In vivo Biocompatibility of Titanium Alloy. ACS Applied Materials & Interfaces, 2013, 5, 1510-1516.	4.0	81
42	Quasi-static deformation and final fracture behaviour of aluminium alloy 5083: influence of cryomilling. Philosophical Magazine, 2013, 93, 899-921.	0.7	7
43	Production of Three-Dimensional Hierarchical Nano Ti-Based Metals Scaffolds for Bone Tissue Grafts. , 2012, , 69-82.		0
44	Ex situ and in situ evaluation of carbon ion-implanted stainless steel bipolar plates in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2012, 199, 207-213.	4.0	23
45	Dual Ti and C ion-implanted stainless steel bipolar plates in polymer electrolyte membrane fuel cells. Surface and Coatings Technology, 2012, 206, 2914-2921.	2.2	16
46	Degradation behaviour of pure magnesium in simulated body fluids with different concentrations of. Corrosion Science, 2011, 53, 1522-1528.	3.0	133
47	Plasma-Modified Biomaterials for Self-Antimicrobial Applications. ACS Applied Materials & Interfaces, 2011, 3, 2851-2860.	4.0	61
48	Surface Treatments of Nearly Equiatomic NiTi Alloy (Nitinol) for Surgical Implants. , 2011, , .		1
49	Controllable degradation of biomedical magnesium by chromium and oxygen dual ion implantation. Materials Letters, 2011, 65, 2171-2173.	1.3	49
50	Hydrogen release from titanium hydride in foaming of orthopedic NiTi scaffolds. Acta Biomaterialia, 2011, 7, 1387-1397.	4.1	31
51	Relationship between osseointegration and superelastic biomechanics in porous NiTi scaffolds. Biomaterials, 2011, 32, 330-338.	5.7	103
52	Porous magnetic manganese oxide nanostructures: Synthesis and their application in water treatment. Journal of Colloid and Interface Science, 2011, 359, 68-74.	5.0	70
53	Ultra-sensitive detection of cysteine by gold nanorod assembly. Biosensors and Bioelectronics, 2010, 25, 2078-2083.	5.3	97
54	Activation of mitogen-activated protein kinases cellular signal transduction pathway in mammalian cells induced by silicon carbide nanowires. Biomaterials, 2010, 31, 7856-7862.	5.7	14

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55	Surface hardening of NiTi shape memory alloy induced by surface nanocrystallization via surface mechanical attrition treatment. , 2010, , .		0
56	Influence of Test Solutions on In Vitro Studies of Biomedical Magnesium Alloys. Journal of the Electrochemical Society, 2010, 157, C238.	1.3	110
57	Corrosion products and mechanism on NiTi shape memory alloy in physiological environment. Journal of Materials Research, 2010, 25, 350-358.	1.2	53
58	One-Step Synthesis of Monodisperse and Hierarchically Mesostructured Silica Particles with a Thin Shell. Langmuir, 2010, 26, 13556-13563.	1.6	51
59	Surface-Enhanced Raman Scattering Sensor Based on Silver Dendritic Nanostructures. Sensor Letters, 2010, 8, 395-398.	0.4	6
60	One-step, non-contact pattern transfer by direct-current plasma immersion ion implantation. Journal Physics D: Applied Physics, 2009, 42, 195201.	1.3	2
61	Electrochemical Stability of Orthopedic Porous NiTi Shape Memory Alloys Treated by Different Surface Modification Techniques. Journal of the Electrochemical Society, 2009, 156, C187.	1.3	12
62	Comparison of oxidation resistance of copper treated by beam-line ion implantation and plasma immersion ion implantation. Materials Chemistry and Physics, 2009, 116, 519-522.	2.0	7
63	Three-Dimensional Quasi-Direct-Current Plasma Immersion Ion Implantation Into Biomedical Nickelâ€“Titanium Shape Memory Alloy Rod. IEEE Transactions on Plasma Science, 2009, 37, 2245-2249.	0.6	3
64	Mechanical properties of Al2O3/Al bi-layer coated AZ91 magnesium alloy. Thin Solid Films, 2009, 517, 5357-5360.	0.8	25
65	Corrosion products on biomedical magnesium alloy soaked in simulated body fluids. Journal of Materials Research, 2009, 24, 2711-2719.	1.2	57
66	Bioactive SrTiO₃ Nanotube Arrays: Strontium Delivery Platform on Ti-Based Osteoporotic Bone Implants. ACS Nano, 2009, 3, 3228-3234.	7.3	198
67	Fabrication and Surface Modification of Porous Nano-Structured NiTi Orthopedic Scaffolds for Bone Implants. Materials Research Society Symposia Proceedings, 2009, 1181, 7.	0.1	1
68	A Biomimetic Hierarchical Scaffold: Natural Growth of Nanotitanates on Three-Dimensional Microporous Ti-Based Metals. Nano Letters, 2008, 8, 3803-3808.	4.5	124
69	In vitro biocompatibility of titanium-nickel alloy with titanium oxide film by H2O2 oxidation. Transactions of Nonferrous Metals Society of China, 2007, 17, 553-557.	1.7	17
70	In situ synthesis of nanostructured titania film on NiTi shape memory alloy by Fenton's oxidation method. Transactions of Nonferrous Metals Society of China, 2007, 17, 902-906.	1.7	12
71	Effects of H2O2 pretreatment on surface characteristics and bioactivity of NaOH-treated NiTi shape memory alloy. Transactions of Nonferrous Metals Society of China, 2006, 16, 1295-1300.	1.7	3