Xin-Ping Zhang

List of Publications by Citations

89 papers	1,053 citations	18 h-index	29 g-index
155 ext. papers	1,383 ext. citations	3.5 avg, IF	4.32 L-index

#	Paper	IF	Citations
89	Gradient porosity and large pore size NiTi shape memory alloys. *Scripta Materialia*, **2007**, 57, 1020-1023	5.6	76
88	Space-holder engineered porous NiTi shape memory alloys with improved pore characteristics and mechanical properties. *Journal of Alloys and Compounds*, **2009**, 474, L1-L5	5.7	56
87	Synthesis and characterization of sol□el hydroxyapatite coatings deposited on porous NiTi alloys. *Journal of Alloys and Compounds*, **2011**, 509, 4643-4648	5.7	52
86	Influence of veneer and cyclic loading on failure behavior of lithium disilicate glass-ceramic molar crowns. *Dental Materials*, **2014**, 30, 164-71	5.7	51
85	A comparative study on the corrosion behavior of porous and dense NiTi shape memory alloys in NaCl solution. *Electrochimica Acta*, **2011**, 56, 6389-6396	6.7	44
84	A comparative study of the porous TiNi shape-memory alloys fabricated by three different processes. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2006**, 37, 755-761	2.3	44
83	Lightweight NiTi shape memory alloy based composites with high damping capacity and high strength. *Journal of Alloys and Compounds*, **2010**, 490, L15-L19	5.7	42
82	High porosity and high-strength porous NiTi shape memory alloys with controllable pore characteristics. *Journal of Alloys and Compounds*, **2009**, 470, L1-L5	5.7	42
81	Size and Volume Effects on the Strength of Microscale Lead-Free Solder Joints. *Journal of Electronic Materials*, **2009**, 38, 2179-2183	1.9	40
80	Influence of veneer application on fracture behavior of lithium-disilicate-based ceramic crowns. *Dental Materials*, **2012**, 28, 653-60	5.7	37
79	The effect of porosity on phase transformation behavior of porous Ti□0.8at.% Ni shape memory alloys prepared by capsule-free hot isostatic pressing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 438-440, 585-588	5.3	32
78	Size and constraint effects on mechanical and fracture behavior of micro-scale Ni/Sn3.0Ag0.5Cu/Ni solder joints. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 617, 14-23	5.3	29
77	Nano-sized SiC particle reinforced NiTi alloy matrix shape memory composite. *Materials Letters*, **2013**, 100, 74-77	3.3	27
76	Solder Volume Effects on the Microstructure Evolution and Shear Fracture Behavior of Ball Grid Array Structure Sn-3.0Ag-0.5Cu Solder Interconnects. *Journal of Electronic Materials*, **2011**, 40, 2425-2435	1.9	27
75	Control of porosity and superelasticity of porous NiTi shape memory alloys prepared by hot isostatic pressing. *Smart Materials and Structures*, **2005**, 14, S201-S206	3.4	26
74	Creep and fatigue behaviors of the lead-free Sn□AgCu□Bi and Sn60Pb40 solder interconnections at elevated temperatures. *Journal of Materials Science: Materials in Electronics*, **2007**, 18, 665-670	2.1	22
73	Effects of acid-alkali treatment on bioactivity and osteoinduction of porous titanium: An in vitro study. *Materials Science and Engineering C*, **2019**, 94, 200-210	8.3	19

72	Processing treatment of a lead-free Sn□Ag□Cu□Bi solder by rapid laser-beam reflowing and the creep property of its soldered connection. *Journal of Materials Processing Technology*, **2007**, 192-193, 539-542	5.3	18
71	Thermal creep and fracture behaviors of the lead-free Sn□Ag□Cu□Bi solder interconnections under different stress levels. *Journal of Materials Science: Materials in Electronics*, **2008**, 19, 393-398	2.1	18
70	Geometry effect on mechanical performance and fracture behavior of micro-scale ball grid array structure Cu/Sn□3.0Ag□0.5Cu/Cu solder joints. *Microelectronics Reliability*, **2015**, 55, 1214-1225	1.2	16
69	Low cycle fatigue performance of ball grid array structure Cu/Sn□3.0Ag□0.5Cu/Cu solder joints. *Microelectronics Reliability*, **2014**, 54, 2911-2921	1.2	15
68	Modeling of Ni4Ti3 precipitation during stress-free and stress-assisted aging of bi-crystalline NiTi shape memory alloys. *Transactions of Nonferrous Metals Society of China*, **2012**, 22, 2578-2585	3.3	15
67	In situ investigation of small fatigue crack growth in poly-crystal and single-crystal aluminium alloys. *Fatigue and Fracture of Engineering Materials and Structures*, **2002**, 25, 141-150	3	15
66	Effect of Pore Size and Porosity on the Biomechanical Properties and Cytocompatibility of Porous NiTi Alloys. *PLoS ONE*, **2015**, 10, e0128138	3.7	15
65	Rapidly solidified and optimally constraint-aged Ni51Ti49 shape memory alloy aiming at making a purpose-designed bio-actuator. *Materials and Design*, **2017**, 118, 99-106	8.1	14
64	Investigation of short fatigue cracks in nickel-based single crystal superalloy SC16 by in-situ SEM fatigue testing. *Scripta Materialia*, **2001**, 44, 2443-2448	5.6	14
63	Phase transformation and damping behavior of lightweight porous TiNiCu alloys fabricated by powder metallurgy process. *Transactions of Nonferrous Metals Society of China*, **2013**, 23, 2029-2036	3.3	13
62	Size and constraint effects on interfacial fracture behavior of microscale solder interconnects. *Microelectronics Reliability*, **2013**, 53, 154-163	1.2	13
61	Undercooling Behavior and Intermetallic Compound Coalescence in Microscale Sn-3.0Ag-0.5Cu Solder Balls and Sn-3.0Ag-0.5Cu/Cu Joints. *Journal of Electronic Materials*, **2012**, 41, 3169-3178	1.9	12
60	Effect of core ceramic grinding on fracture behaviour of bilayered lithium disilicate glass-ceramic under two loading schemes. *Journal of Dentistry*, **2014**, 42, 1436-45	4.8	10
59	Influence of strongly textured microstructure on the all-round shape memory effect of rapidly solidified Ni51Ti49 alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 705, 273-281	5.3	10
58	Joule heating dominated fracture behavior change in micro-scale Cu/Sn-3.0Ag-0.5Cu/Cu(Ni) joints under electro-thermal coupled loads. *Microelectronics Reliability*, **2018**, 82, 224-227	1.2	10
57	Current density dependent shear performance and fracture behavior of micro-scale BGA structure Cu/Sn□3.0Ag□0.5Cu/Cu joints under coupled electromechanical loads. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 15184-15197	2.1	9
56	Influence of minute amount of elements Bi, Ag and In on surface tension and soldering process performance of tin□lead based solders. *Journal of Materials Science: Materials in Electronics*, **2004**, 15, 511-517	2.1	9
55	Phase field simulation of microstructural evolution and thermomigration-induced phase segregation in Cu/Sn58Bi/Cu interconnects under isothermal aging and temperature gradient. *Microelectronics Reliability*, **2019**, 92, 1-11	1.2	9

54	Morphological characterization and distribution of autocatalytic-grown Ni4Ti3 precipitates in a NiTi single crystal. *Journal of Alloys and Compounds*, **2013**, 577, S215-S218	5.7	8
53	Three-dimensional phase field simulation of the morphology and growth kinetics of Ni4Ti3precipitates in a NiTi alloy. *Modelling and Simulation in Materials Science and Engineering*, **2014**, 22, 055018	2	7
52	Three-dimensional characterization and distribution of fabrication defects in bilayered lithium disilicate glass-ceramic molar crowns. *Dental Materials*, **2017**, 33, e178-e185	5.7	6
51	Size effects on the interfacial reaction and microstructural evolution of Sn-ball/Sn3.0Ag0.5Cu-paste/Cu joints in board-level hybrid BGA interconnection at critical reflowing temperature. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 7651-7660	2.1	6
50	Electromigration induced microstructure evolution and damage in asymmetric Cu/Sn-58Bi/Cu solder interconnect under current stressing. *Transactions of Nonferrous Metals Society of China*, **2014**, 24, 1619-1628	3.3	6
49	Early Interfacial Reaction and Formation of Intermetallic Compounds in the Sn-3.5Ag/Cu Soldering System. *Journal of Electronic Materials*, **2011**, 40, 189-194	1.9	6
48	Study of the Influence of Elastic Anisotropy of Cu on Thermo-Mechanical Behavior and Cu Protrusion of Through Silicon Vias Using Combined Phase Field and Finite Element Methods. *IEEE Transactions on Device and Materials Reliability*, **2019**, 19, 322-332	1.6	5
47	Optimization of Automated Crystal Orientation Mapping in a TEM for Ni4Ti3 Precipitation in All-Round SMA. *Shape Memory and Superelasticity*, **2016**, 2, 286-297	2.8	5
46	A Three-Dimensional Printable Liquid Metal-Like Ag Nanoparticle Ink for Making a Super-Stretchable and Highly Cyclic Durable Strain Sensor. *ACS Applied Materials & Interfaces*, **2021**, 13, 18021-18032	9.5	5
45	Creep behavior of micro-scale Cu/Sn3.0Ag0.5Cu/Cu joints under electro-thermo-mechanical coupled loads. *Journal of Materials Science: Materials in Electronics*, **2016**, 27, 13022-13033	2.1	5
44	The Melting Characteristics and Interfacial Reactions of Sn-ball/Sn-3.0Ag-0.5Cu-paste/Cu Joints During Reflow Soldering. *Journal of Electronic Materials*, **2017**, 46, 1504-1515	1.9	4
43	Two-step constrained aging treatment enabled superior two-way shape memory effect and elevated R-phase transformation temperatures in a rapidly solidified Ni51Ti49 alloy. *Journal of Alloys and Compounds*, **2019**, 785, 1180-1188	5.7	4
42	An abnormal two-way shape memory effect in a rapidly solidified Ni51Ti49 alloy induced by low temperature constrained aging. *Scripta Materialia*, **2018**, 149, 117-120	5.6	4
41	Environmental effects on deformation mechanism and dislocation microstructure in fatigued copper single crystal. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 396, 403-408	5.3	4
40	Study of accelerated shear creep behavior and fracture process of micro-scale ball grid array (BGA) structure Cu/Sn3.0Ag0.5Cu/Cu joints under coupled electro-thermo-mechanical loads. *Journal of Materials Science: Materials in Electronics*, **2020**, 31, 15575-15588	2.1	4
39	Effects of pore size and porosity on cytocompatibility and osteogenic differentiation of porous titanium. *Journal of Materials Science: Materials in Medicine*, **2021**, 32, 72	4.5	4
38	Anisotropic Negative Thermal Expansion Behavior of the As-Fabricated Ti-Rich and Equiatomic TiNi Alloys Induced by Preferential Grain Orientation. *Shape Memory and Superelasticity*, **2018**, 4, 218-223	2.8	3
37	Microstructural evolution and change in macroscopic physical properties of microscale flip chip Cu/Sn58Bi/Cu joints under the coupling effect of electric current stressing and elastic stress. *Journal of Materials Research*, **2019**, 34, 2775-2788	2.5	3

36	Premelting behavior and interfacial reaction of the Sn/Cu and Sn/Ag soldering systems during the reflow process. *Journal of Materials Science: Materials in Electronics*, **2012**, 23, 1543-1551	2.1	3
35	Improvement of Microstructure and Mechanical Properties of a Low Alloy Cast Steel Processed by Direct Quenching□Partitioning□Tempering Technique. *Steel Research International*, **2015**, 86, 429-435	1.6	2
34	Phase field simulation of coherent precipitation of Ni4Ti3particles during stress-assisted aging of a porous NiTi alloy. *Modelling and Simulation in Materials Science and Engineering*, **2015**, 23, 055008	2	2
33	Effect of activators and surfactants in halogen-free fluxes on wettability of Sn-0.7Cu-0.05Ni solder on Cu substrate **2013**,		2
32	Microstructure Simulation and Thermo-Mechanical Behavior Analysis of Copper Filled Through Silicon Vias Using Coupled Phase Field and Finite Element Methods **2017**,		2
31	Microstructural Characterization and Transformation Behavior of Porous Ni50.8Ti49.2. *Materials Today: Proceedings*, **2015**, 2, S833-S836	1.4	2
30	**2012**,		2
29	Hierarchical phase separation behavior in a Ni-Si-Fe alloy. *Acta Materialia*, **2020**, 195, 327-340	8.4	2
28	Superior strength and strengthening mechanism of die attachment joints by using bimodal-sized Cu nanoparticle paste capable of low-temperature pressureless sintering. *Journal of Materials Science: Materials in Electronics*, **2021**, 32, 3391-3401	2.1	2
27	Effects of Sb addition on the microstructure and mechanical performance of Sn58Bi based alloys and the solder joints **2018**,		2
26	Fabrication of oxidation-resistant submicron copper particles and the conductive ink as well as its sintering behavior on the flexible substrate **2018**,		2
25	Morphological evolution and growth kinetics of Kirkendall voids in binary alloy system during deformation process□Phase field crystal simulation study. *Transactions of Nonferrous Metals Society of China*, **2017**, 27, 599-607	3.3	1
24	Unique interfacial reaction and so-induced change in mechanical performance of Sn□3.0Ag□0.5Cu/Cu solder joints formed during undercooled and eutectic liquid soldering processes. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 4770-4781	2.1	1
23	Creep behavior of Cu/Sn-3.0Ag-0.5Cu/Cu solder joints under tensile stress coupled with DC current stressing **2015**,		1
22	Quantitative FIB/SEM three-dimensional characterization of a unique Ni4Ti3 network in a porous Ni50.8Ti49.2 alloy undergoing a two-step martensitic transformation. *Materials Characterization*, **2020**, 169, 110595	3.9	1
21	Reversible Negative Thermal Expansion Response and Phase Transformation Behavior of a Ti-Rich Ti54Ni46 Alloy Prepared by Rapid Solidification. *Minerals, Metals and Materials Series*, **2018**, 189-193	0.3	1
20	Functional Stability of the Ni51Ti49 Two-Way Shape Memory Alloy as Artificial Anal Sphincter During Thermo-Mechanical Cycling. *Minerals, Metals and Materials Series*, **2018**, 201-205	0.3	1
19	**2018**,		1

18	**2013**,		1
17	Processing and electrical properties of sodium citrate capped silver nanoparticle based inks for flexible electronics **2017**,		1
16	Microstructures and shear properties of mixed assembly BGA structure SnAgCu/SnBi(Ag)/Cu joints in board-level packaging **2017**,		1
15	Size and geometry effects on the electromigration behavior of flip-chip Sn3.5Ag solder joints **2015**,		1
14	Interaction effect between electromigration and microstructure evolution in Cu/Sn-58Bi/Cu solder interconnect **2014**,		1
13	Interaction effect between electromigration and microstructure evolution in BGA structure Cu/Sn-58Bi/Cu solder interconnects **2014**,		1
12	Theoretical study on the dislocation structure of parent□martensite interface in a magnetic shape memory alloy. *Journal of Materials Science*, **2014**, 49, 4648-4655	4.3	1
11	Influence of thickness of interfacial IMC layer and solder mask layer on mechanical reliability of micro-scale BGA structure interconnects **2012**,		1
10	Influence of pre-existing void in the solder joint on electromigration behavior of Cu/Sn58Bi/Cu joints **2013**,		1
9	The effects of the decreasing joint size on interfacial microstructure and shear behavior of micro-scale BGA structure Cu/Sn□3.0Ag□0.5Cu/Cu joints under coupled electromechanical loads. *Journal of Materials Science: Materials in Electronics*, **2022**, 33, 1464-1479	2.1	1
8	Ingenious Method for Rapid Fabrication of a Highly Conductive Hybrid Film of Printed Cu Nanoparticle Layers Plated by Ag Nanoplates on a PET Substrate at Room Temperature. *ACS Applied Electronic Materials*, **2021**, 3, 4640-4648	4	1
7	Phase Field Simulation of Segregation of the Bi-Riched Phase in Cu/Sn-Bi/Cu Solder Interconnects under Electric Current Stressing **2016**,		1
6	Effects of size distributions of copper nanoparticles on the pressureless bonding performance of the copper paste for die attachment **2019**,		1
5	Phase field modeling of grain boundary migration and preferential grain growth driven by electric current stressing. *Journal of Applied Physics*, **2018**, 124, 175109	2.5	1
4	Effect of some N-heterocyclic inhibitors in the soldering flux on the corrosion behavior of eutectic Sn□8Bi alloy and its solder paste **2018**,		1
3	Preparation of a low temperature sintering silver nanoparticle ink and fabrication of conductive patterns on PET substrate **2018**,		1
2	Investigation of the Interaction Effect between the Microstructure Evolution and the Thermo-mechanical Behavior of Cu-filled Through Silicon Via. *IEEE Transactions on Device and Materials Reliability*, **2022**, 1-1	1.6	1
1	Quantitative investigation of the all round shape memory effect in a Ni51Ti49 alloy by TEM orientation imaging **2016**, 1070-1071		