

Zhiheng

List of Publications by Year in descending order

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50
papers

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1040056

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51
all docs

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docs citations

51
times ranked

149
citing authors

#	ARTICLE	IF	CITATIONS
1	Reliability issues in Pb-free solder joint miniaturization. Journal of Electronic Materials, 2006, 35, 1761-1772.	2.2	38
2	Microstructural considerations for ultrafine lead free solder joints. Microelectronics Reliability, 2007, 47, 1997-2006.	1.7	23
3	The effect of microstructural and geometrical features on the reliability of ultrafine flip chip microsolder joints. Journal of Electronic Materials, 2004, 33, 1227-1235.	2.2	16
4	Effects of the microstructure of copper through-silicon vias on their thermally induced linear elastic mechanical behavior. Electronic Materials Letters, 2014, 10, 281-292.	2.2	15
5	A rechargeable Li ⁺ /CO ₂ battery based on the preservation of dimethyl sulfoxide. Journal of Materials Chemistry A, 2022, 10, 13821-13828.	10.3	13
6	Effect of solder bump geometry on the microstructure of Sn ⁺ 3.5 wt% Ag on electroless nickel immersion gold during solder dipping. Journal of Materials Research, 2005, 20, 649-658.	2.6	11
7	A computational interface for thermodynamic calculations software MTDATA. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 129-134.	1.6	11
8	Modeling of interfacial intermetallic compounds in the application of very fine lead-free solder interconnections. Microsystem Technologies, 2009, 15, 101-107.	2.0	11
9	Biodegradable Copolymers from CO ₂ , Epoxides, and Anhydrides Catalyzed by Organoborane/Tertiary Amine Pairs: High Selectivity and Productivity. Macromolecules, 2022, 55, 6120-6130.	4.8	10
10	A generalized computational interface for combined thermodynamic and kinetic modeling. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2011, 35, 391-395.	1.6	8
11	Materials behaviour and intermetallics characteristics in the reaction between SnAgCu and Sn ⁺ Pb solder alloys. Journal of Materials Science, 2007, 42, 4076-4086.	3.7	7
12	Effects of Stress and Electromigration on Microstructural Evolution in Microbumps of Three-Dimensional Integrated Circuits. IEEE Transactions on Device and Materials Reliability, 2014, 14, 995-1004.	2.0	7
13	Polybenzimidazole Confined in Semi-Interpenetrating Networks of Crosslinked Poly (Arylene Ether) Tj ETQq1 1 0.784314 rgBI /Overlo	4.1	7
14	Effect of C60 on the phase transition behavior of a lipid bilayer under high pressure. RSC Advances, 2018, 8, 655-661.	3.6	6
15	Processing-Structure-Protrusion Relationship of 3-D Cu TSVs: Control at the Atomic Scale. IEEE Journal of the Electron Devices Society, 2019, 7, 1270-1276.	2.1	6
16	Microstructural and Reliability Issues of TSV. Springer Series in Advanced Microelectronics, 2017, , 71-99.	0.3	5
17	Mechanisms of copper protrusion in through-silicon-via structures at the nanoscale. Japanese Journal of Applied Physics, 2019, 58, 016502.	1.5	5
18	Microstructural Evolution and Protrusion Simulations of Cu-TSVs Under Different Loading Conditions. Journal of Electronic Packaging, Transactions of the ASME, 2020, 142, .	1.8	4

#	ARTICLE	IF	CITATIONS
19	Inter-dependence of processing and alloy composition on the reliability of Sn-based lead free solders in fine pitch FCOB interconnection. , 0, , .		3
20	The influences of grain size distributions on thermal-stresses in Cu-TSV. , 2012, , .		3
21	A Method for Quantification of the Effects of Size and Geometry on the Microstructure of Miniature Interconnects. Journal of Electronic Materials, 2014, 43, 618-629.	2.2	3
22	Materials and Processing of TSV. Springer Series in Advanced Microelectronics, 2017, , 47-69.	0.3	3
23	On reproducing the copper extrusion of through-silicon-vias from the atomic scale. , 2017, , .		3
24	Linkages between grain structure and protrusion of TSV in 3D packaging. , 2019, , .		3
25	Simulation of TSV Protrusion in 3DIC Integration by Directly Loading on Coarse-Grained Phase-Field Crystal Model. Electronics (Switzerland), 2022, 11, 221.	3.1	3
26	Modeling the interdependence of processing and alloy composition on the evolution of microstructure in Sn-based lead-free solders in fine pitch flip chip. IEEE Transactions on Components and Packaging Technologies, 2006, 29, 98-104.	1.3	2
27	Effect of microstructure on thermal-mechanical stress in 3D copper TSV structures. , 2011, , .		2
28	Linkages Between Microstructure and Mechanical Properties of Ultrafine Interconnects. Journal of Electronic Materials, 2013, 42, 263-271.	2.2	2
29	Microstructure-based multiphysics modeling for semiconductor integration and packaging. Science Bulletin, 2014, 59, 1696-1708.	1.7	2
30	An atomistic study of copper extrusion in through-silicon-via using phase field crystal models. , 2016, , .		2
31	Structural hierarchy from wavelet zoom and invariant construction. Discover Materials, 2021, 1, 1.	2.8	2
32	Excavating Anomalous Capacity Increase of Liâ€S Pouch Cells by Electrochemical Oscillation Formation. ACS Applied Materials & Interfaces, 2022, 14, 22197-22205.	8.0	2
33	Characterisation of intermetallics and mechanical behaviour in the reaction between SnAgCu and Sn-Pb solder alloys. , 0, , .		1
34	The geometrical effects in a model coupled with microstructural evolution and mechanical behavior for small-scale solder joints. , 2012, , .		1
35	Size and geometry effects on microstructural evolution in Sn microbumps during isothermal aging. , 2013, , .		1
36	MicroStructural Hierarchy Descriptor (Î¼SHD)â€™property correlations of silicon carbide ceramics. Journal of the European Ceramic Society, 2022, 42, 801-819.	5.7	1

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37	Materials behaviour and intermetallics characteristics in the reaction between SnAgCu and Sn-Pb solder alloys. , 0, , .		0
38	Impacts of Pb-free legislation on European HDP. , 2005, , .		0
39	Microstructural Considerations for Ultrafine Lead Free Solder Joints. , 0, , .		0
40	Towards quantitative microstructural modeling for 3D electronic packaging. , 2011, , .		0
41	Effects of microstructure on vacancy and stress distributions in micro joints under current stressing. , 2012, , .		0
42	A comparative study of microstructure during solidification within ultrafine interconnects of different sizes and geometries. , 2012, , .		0
43	An atomistic scale study on solidification in ultrafine interconnects. , 2012, , .		0
44	Microstructural design in ultrafine interconnects under current stressing. , 2013, , .		0
45	Multiscale Microstructures and Microstructural Effects on the Reliability of Microbumps in Three-Dimensional Integration. Materials, 2013, 6, 4707-4736.	2.9	0
46	A wavelet analysis on digital microstructure in microbumps. , 2015, , .		0
47	Protrusion of Cu-TSV under different strain states. , 2018, , .		0
48	Simulation on TSV Protrusion from Atomic to Micron Scales. , 2021, , .		0
49	Phase-Field-Crystal Model: A Tool for Probing Atoms in TSV. Springer Series in Advanced Microelectronics, 2021, , 107-130.	0.3	0
50	Atomic Scale Kinetics of TSV Protrusion. Springer Series in Advanced Microelectronics, 2021, , 131-155.	0.3	0