

Zhiheng

List of Publications by Year in descending order

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50
papers

242
citations

1040056

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1058476

14
g-index

51
all docs

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docs citations

51
times ranked

149
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | MicroStructural Hierarchy Descriptor (1/4SHD)â€“property correlations of silicon carbide ceramics. Journal of the European Ceramic Society, 2022, 42, 801-819. | 5.7 | 1 |
| 2 | 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 |
| 3 | Polybenzimidazole Confined in Semi-Interpenetrating Networks of Crosslinked Poly (Arylene Ether) Tj ETQq1 1 0.784314 rgBT /Overlo | 4.1 | 7 |
| 4 | Excavating Anomalous Capacity Increase of Liâ€“S Pouch Cells by Electrochemical Oscillation Formation. ACS Applied Materials & Interfaces, 2022, 14, 22197-22205. | 8.0 | 2 |
| 5 | A rechargeable Liâ€“CO ₂ battery based on the preservation of dimethyl sulfoxide. Journal of Materials Chemistry A, 2022, 10, 13821-13828. | 10.3 | 13 |
| 6 | 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 |
| 7 | Structural hierarchy from wavelet zoom and invariant construction. Discover Materials, 2021, 1, 1. | 2.8 | 2 |
| 8 | Simulation on TSV Protrusion from Atomic to Micron Scales. , 2021, , . | | 0 |
| 9 | Phase-Field-Crystal Model: A Tool for Probing Atoms in TSV. Springer Series in Advanced Microelectronics, 2021, , 107-130. | 0.3 | 0 |
| 10 | Atomic Scale Kinetics of TSV Protrusion. Springer Series in Advanced Microelectronics, 2021, , 131-155. | 0.3 | 0 |
| 11 | 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 |
| 12 | Linkages between grain structure and protrusion of TSV in 3D packaging. , 2019, , . | | 3 |
| 13 | 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 |
| 14 | Mechanisms of copper protrusion in through-silicon-via structures at the nanoscale. Japanese Journal of Applied Physics, 2019, 58, 016502. | 1.5 | 5 |
| 15 | Effect of C60 on the phase transition behavior of a lipid bilayer under high pressure. RSC Advances, 2018, 8, 655-661. | 3.6 | 6 |
| 16 | Protrusion of Cu-TSV under different strain states. , 2018, , . | | 0 |
| 17 | Materials and Processing of TSV. Springer Series in Advanced Microelectronics, 2017, , 47-69. | 0.3 | 3 |
| 18 | Microstructural and Reliability Issues of TSV. Springer Series in Advanced Microelectronics, 2017, , 71-99. | 0.3 | 5 |

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|----|--|-----|-----------|
| 19 | On reproducing the copper extrusion of through-silicon-vias from the atomic scale. , 2017, , . | | 3 |
| 20 | An atomistic study of copper extrusion in through-silicon-via using phase field crystal models. , 2016, , . | | 2 |
| 21 | A wavelet analysis on digital microstructure in microbumps. , 2015, , . | | 0 |
| 22 | 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 |
| 23 | 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 |
| 24 | Microstructure-based multiphysics modeling for semiconductor integration and packaging. Science Bulletin, 2014, 59, 1696-1708. | 1.7 | 2 |
| 25 | 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 |
| 26 | Size and geometry effects on microstructural evolution in Sn microbumps during isothermal aging. , 2013, , . | | 1 |
| 27 | Linkages Between Microstructure and Mechanical Properties of Ultrafine Interconnects. Journal of Electronic Materials, 2013, 42, 263-271. | 2.2 | 2 |
| 28 | Microstructural design in ultrafine interconnects under current stressing. , 2013, , . | | 0 |
| 29 | Multiscale Microstructures and Microstructural Effects on the Reliability of Microbumps in Three-Dimensional Integration. Materials, 2013, 6, 4707-4736. | 2.9 | 0 |
| 30 | Effects of microstructure on vacancy and stress distributions in micro joints under current stressing. , 2012, , . | | 0 |
| 31 | The geometrical effects in a model coupled with microstructural evolution and mechanical behavior for small-scale solder joints. , 2012, , . | | 1 |
| 32 | The influences of grain size distributions on thermal-stresses in Cu-TSV. , 2012, , . | | 3 |
| 33 | A comparative study of microstructure during solidification within ultrafine interconnects of different sizes and geometries. , 2012, , . | | 0 |
| 34 | An atomistic scale study on solidification in ultrafine interconnects. , 2012, , . | | 0 |
| 35 | Effect of microstructure on thermal-mechanical stress in 3D copper TSV structures. , 2011, , . | | 2 |
| 36 | Towards quantitative microstructural modeling for 3D electronic packaging. , 2011, , . | | 0 |

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|----|--|-----|-----------|
| 37 | 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 |
| 38 | Modeling of interfacial intermetallic compounds in the application of very fine lead-free solder interconnections. Microsystem Technologies, 2009, 15, 101-107. | 2.0 | 11 |
| 39 | A computational interface for thermodynamic calculations software MTDATA. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2008, 32, 129-134. | 1.6 | 11 |
| 40 | 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 |
| 41 | Microstructural considerations for ultrafine lead free solder joints. Microelectronics Reliability, 2007, 47, 1997-2006. | 1.7 | 23 |
| 42 | Reliability issues in Pb-free solder joint miniaturization. Journal of Electronic Materials, 2006, 35, 1761-1772. | 2.2 | 38 |
| 43 | 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 |
| 44 | 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 |
| 45 | Impacts of Pb-free legislation on European HDP. , 2005, , . | | 0 |
| 46 | 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 |
| 47 | Inter-dependence of processing and alloy composition on the reliability of Sn-based lead free solders in fine pitch FCOB interconnection. , 0, , . | | 3 |
| 48 | Materials behaviour and intermetallics characteristics in the reaction between SnAgCu and Sn-Pb solder alloys. , 0, , . | | 0 |
| 49 | Characterisation of intermetallics and mechanical behaviour in the reaction between SnAgCu and Sn-Pb solder alloys. , 0, , . | | 1 |
| 50 | Microstructural Considerations for Ultrafine Lead Free Solder Joints. , 0, , . | | 0 |