

C Robert Kao

List of Publications by Year in descending order

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237
papers

6,385
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53794

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#	ARTICLE	IF	CITATIONS
1	Bifunctional Nanocomposites Based on SiO ₂ /NiS ₂ Combination for Electrochemical Sensing and Environmental Catalysis. <i>Electroanalysis</i> , 2022, 34, 111-121.	2.9	3
2	Development of Ag-In Alloy Pastes by Mechanical Alloying for Die Attachment of High-Power Semiconductor Devices. <i>Materials</i> , 2022, 15, 1397.	2.9	7
3	Hydrothermally constructed AgWO ₄ -rGO nanocomposites as an electrode enhancer for ultrasensitive electrochemical detection of hazardous herbicide crisquat. <i>Chemosphere</i> , 2022, 299, 134434.	8.2	18
4	Terminal Reaction Behaviors in Micro Bumps: Comparison of Ti and Cr Adhesion Layers. , 2022, , .		0
5	Effects of Bonding Pressures on Microstructure and Mechanical Properties of Silver-Tin Alloy Powders Synthesized by Ball Milling for High-Power Electronics Packaging. <i>Journal of Materials Research and Technology</i> , 2022, , .	5.8	1
6	Highly Robust Ti Adhesion Layer during Terminal Reaction in Micro-Bumps. <i>Materials</i> , 2022, 15, 4297.	2.9	2
7	Low-temperature transient liquid phase bonding via electroplated Sn/In-Sn metallization. <i>Journal of Materials Research and Technology</i> , 2022, 19, 2510-2515.	5.8	6
8	Development of high copper concentration, low operating temperature, and environmentally friendly electroless copper plating using a copper-glycerin complex solution. <i>Electrochimica Acta</i> , 2022, 425, 140710.	5.2	8
9	Development of Cu-Cu Side-by-Side Interconnection Using Controlled Electroless Cu Plating. , 2022, , .		1
10	Fine-Pitch 30 μm Cu-Cu Bonding by Using Low Temperature Microfluidic Electroless Interconnection. , 2022, , .		3
11	A novel method of low temperature, pressureless interconnection for wafer level scale 3D packaging. , 2022, , .		1
12	Key steps from laboratory towards mass production: Optimization of electroless plating process through numerical simulation. , 2022, , .		1
13	Thermal Compression Cu-Cu bonding using electroless Cu and the evolution of voids within bonding interface. , 2022, , .		3
14	Copper sulfide nano-globules reinforced electrodes for high-performance electrochemical determination of toxic pollutant hydroquinone. <i>New Journal of Chemistry</i> , 2021, 45, 3215-3223.	2.8	14
15	Highly uniform microfluidic electroless interconnections for chip stacking applications. <i>Electrochimica Acta</i> , 2021, 376, 138032.	5.2	17
16	Synchrotron white Laue nanodiffraction study on the allotropic phase transformation between hexagonal and monoclinic Cu ₆ Sn ₅ . <i>Journal of Materials Research and Technology</i> , 2021, 13, 1316-1322.	5.8	5
17	A new spalling mechanism of intermetallics from the adhesion layer in the terminal-stage reaction between Cu and Sn. <i>Intermetallics</i> , 2021, 138, 107342.	3.9	4
18	Numerical Analysis of an Electroless Plating Problem in Gas-Liquid Two-Phase Flow. <i>Fluids</i> , 2021, 6, 371.	1.7	3

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19	Low-pressure micro-silver sintering with the addition of indium for high-temperature power chips attachment. Journal of Materials Research and Technology, 2021, 15, 4541-4553.	5.8	17
20	Surface Diffusion and the Interfacial Reaction in Cu/Sn/Ni Micro-Pillars. Journal of Electronic Materials, 2020, 49, 88-95.	2.2	5
21	Low-Cost Sensor-Rich Fluidic Elastomer Actuators Embedded with Paper Electronics. Advanced Intelligent Systems, 2020, 2, 2080073.	6.1	0
22	The real demonstration of High-Quality Carbon Nano-Tubes (CNTs) as the electrical connection for the potential application in a vertical 3D integrated technology. , 2020, , .		3
23	Sintered Micro-Silver Paste Doped with Indium for Die Attachment Applications of Power ICs. , 2020, , .		1
24	Artifact-free microstructures of the Cu-In reaction by using cryogenic broad argon beam ion polishing. Journal of Materials Research and Technology, 2020, 9, 12946-12954.	5.8	9
25	Different interfacial structures of Cu/In obtained by surface activated bonding (SAB) in vacuum and vapor-assisted vacuum ultraviolet (V-VUV) at atmospheric pressure. Materials and Design, 2020, 195, 109065.	7.0	0
26	Phase stabilities and interfacial reactions of the Cu-In binary systems. Journal of Materials Science: Materials in Electronics, 2020, 31, 10161-10169.	2.2	7
27	Prior-to-bond annealing effects on the diamond-to-copper heterogeneous integration using silver-indium multilayer structure. Journal of Materials Science: Materials in Electronics, 2020, 31, 8059-8071.	2.2	6
28	Vertical Interconnections by Electroless Au Deposition on Electroless Ni Immersion Au Surface Finish. Journal of Electronic Materials, 2020, 49, 5003-5008.	2.2	6
29	Foldable Kirigami Paper Electronics. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900891.	1.8	5
30	The Demonstration of Carbon Nanotubes (CNTs) as Flip-Chip Connections in 3-D Integrated Circuits With an Ultralow Connection Resistance. IEEE Transactions on Electron Devices, 2020, 67, 2205-2207.	3.0	7
31	Low-Cost Sensor-Rich Fluidic Elastomer Actuators Embedded with Paper Electronics. Advanced Intelligent Systems, 2020, 2, 2000025.	6.1	17
32	Interconnections of Low-Temperature Solder and Metallizations. , 2020, , .		1
33	Electrical Resistance of Cu-Cu Interconnection Using Electroless Ni(P) and Au Plating. Transactions of the Japan Institute of Electronics Packaging, 2020, 13, E20-013-1-E20-013-3.	0.4	1
34	Low Temperature SLID Bonding Approach in Fine Pitch Chip-stacking Structure with 30 μ m-pitch Interconnections. Transactions of the Japan Institute of Electronics Packaging, 2020, 13, E20-010-1-E20-010-4.	0.4	0
35	Effects of Isothermal Heat Treatment on Microstructure Evolution of Microfluidic Electroless Ni-P Interconnection Structure. , 2020, , .		0
36	Reaction Within Ni/Sn/Cu Microjoints for Chip-Stacking Applications. Journal of Electronic Materials, 2019, 48, 25-31.	2.2	9

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37	Effects of Aspect Ratio on Microstructural Evolution of Ni/Sn/Ni Microjoints. Journal of Electronic Materials, 2019, 48, 9-16.	2.2	13
38	Bonding of Copper Pillars Using Electroless Cu Plating. , 2019, , .		6
39	A Single Process for Homogeneous and Heterogeneous Bonding in Flexible Electronics : Ethanol-Assisted Vacuum Ultraviolet (E-VUV) Irradiation Process. , 2019, , .		1
40	A Single Bonding Process for Diverse Organic-Inorganic Integration in IoT Devices. , 2019, , .		0
41	Mechanical Reliability Assessment of Cu ₆ Sn ₅ Intermetallic Compound and Multilayer Structures in Cu/Sn Interconnects for 3D IC Applications. , 2019, , .		1
42	Organic-Inorganic Solid-State Hybridization with High-Strength and Anti-Hydrolysis Interface. Scientific Reports, 2019, 9, 504.	3.3	6
43	Creep Behaviors Along Characteristic Crystal Orientations of Sn and Sn-1.8Ag by Using Nanoindentation. Jom, 2019, 71, 2998-3011.	1.9	8
44	Micropillar Mechanics of Sn-Based Intermetallic Compounds. , 2019, , 873-899.		1
45	Abnormal Cu ₃ Sn growth through grain boundary penetration in space-confined Ni-Sn-Cu diffusion couples. Journal of Alloys and Compounds, 2019, 799, 108-112.	5.5	7
46	Phase formation and microstructure evolution in Cu/In/Cu joints. Microelectronics Reliability, 2019, 95, 18-27.	1.7	17
47	Mechanical characterizations of single-crystalline (Cu, Ni) ₆ Sn ₅ through uniaxial micro-compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 753, 22-30.	5.6	10
48	Interfacial Reactions of Cu and In for Low-Temperature Processes. , 2019, , .		2
49	Hydrolysis-Tolerant Hybrid Bonding in Ambient Atmosphere for 3D Integration. , 2019, , .		0
50	Low Temperature and Pressureless Microfluidic Electroless Bonding Process for Vertical Interconnections. , 2019, , .		3
51	Polyimide-Polyetheretherketone and Tin-Polyimide Direct Bonding via Ethanol-Assisted Vacuum Ultraviolet Irradiation. Transactions of the Japan Institute of Electronics Packaging, 2019, 12, E19-012-1-E19-012-8.	0.4	2
52	Self-assembly of reduced Au atoms for vertical interconnections in three dimensional integrated circuits. Scripta Materialia, 2019, 159, 119-122.	5.2	13
53	Pronounced effects of Zn additions on Cu-Sn microjoints for chip-stacking applications. Journal of Alloys and Compounds, 2018, 750, 570-576.	5.5	16
54	Materials Merging Mechanism of Microfluidic Electroless Interconnection Process. Journal of the Electrochemical Society, 2018, 165, D273-D281.	2.9	19

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55	Micropillar Mechanics of Sn-Based Intermetallic Compounds. , 2018, , 1-28.		1
56	Enhancement of nano-silver chip attachment by using transient liquid phase reaction with indium. Journal of Alloys and Compounds, 2018, 762, 586-597.	5.5	29
57	Organic/inorganic interfacial microstructures achieved by fast atom beam bombardment and vacuum ultraviolet irradiation. , 2018, , .		3
58	Analyses and design for electrochemical migration suppression by alloying indium into silver. Journal of Materials Science: Materials in Electronics, 2018, 29, 13878-13888.	2.2	11
59	Effects of plating conditions on electroless Ni-P plating in the microchannel. , 2018, , .		1
60	Microstructure Evolution of Cu/In/Cu Joints After Solid-Liquid Interdiffusion. , 2018, , .		1
61	High Reliability Sintered Silver-Indium Bonding with Anti-Oxidation Property for High Temperature Applications. , 2018, , .		5
62	Bonding of copper pillars using electroless Au plating. , 2018, , .		2
63	Micromechanical behavior of single crystalline Ni ₃ Sn ₄ in micro joints for chip-stacking applications. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 685, 123-130.	5.6	10
64	Effects of surface diffusion and reaction-induced volume shrinkage on morphological evolutions of micro joints. Materials Chemistry and Physics, 2017, 191, 13-19.	4.0	20
65	Chip-to-Chip Direct Interconnections by Using Controlled Flow Electroless Ni Plating. Journal of Electronic Materials, 2017, 46, 4321-4325.	2.2	22
66	Micromechanical behavior of single-crystalline Cu ₆ Sn ₅ by picoindentation. Journal of Materials Science, 2017, 52, 7166-7174.	3.7	12
67	Fast Atom Beam- and Vacuum-Ultraviolet-Activated Sites for Low-Temperature Hybrid Integration. Langmuir, 2017, 33, 8413-8419.	3.5	12
68	Critical Factors Affecting Structural Transformations in 3D IC Micro Joints. , 2017, , .		3
69	Grain Boundary Penetration of Various Types of Ni Layer by Molten Metals. Journal of Electronic Materials, 2017, 46, 4147-4151.	2.2	0
70	Development of Die Attachment Technology for Power IC Module by Introducing Indium into Sintered Nano-Silver Joint. , 2017, , .		7
71	Bonding of copper pillars using electroless Ni plating. , 2016, , .		3
72	Choice of Intermetallic Compounds for Structural Applications in Near Submicron Joints. , 2016, , .		2

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73	Novel Self-shrinking Mask for Sub-30nm Pattern Fabrication. Scientific Reports, 2016, 6, 29625.	3.3	6
74	Study of Sintered Nano-Silver Die Attachment Materials Doped with Indium. , 2016, , .		5
75	Low-temperature, pressureless Cu-to-Cu bonding by electroless Ni plating. , 2016, , .		4
76	Pattern formation during interfacial reaction in-between liquid Sn and Cu substrates – A simulation study. Acta Materialia, 2016, 113, 245-258.	7.9	22
77	Full intermetallic joints for chip stacking by using thermal gradient bonding. Acta Materialia, 2016, 113, 90-97.	7.9	71
78	Morphological evolution induced by volume shrinkage in micro joints. , 2016, , .		1
79	Au-Sn bonding material for the assembly of power integrated circuit module. Journal of Alloys and Compounds, 2016, 671, 340-345.	5.5	87
80	Interfacial Energy Effect on the Distribution of Ag ₃ Sn in Full Intermetallic Joints. Advanced Engineering Materials, 2015, 17, 1528-1531.	3.5	3
81	Effect of Ag concentration on Ni/Sn-xAg/Ni micro joints under space confinement. , 2015, , .		0
82	Optimal Ag addition for the elimination of voids in Ni/SnAg/Ni micro joints for 3D IC applications. Journal of Alloys and Compounds, 2015, 629, 16-21.	5.5	32
83	Mechanism of volume shrinkage during reaction between Ni and Ag-doped Sn. Materials Letters, 2015, 156, 150-152.	2.6	18
84	Dominant effects of Sn orientation on serrated cathode dissolution and resulting failure in actual solder joints under electromigration. Journal of Alloys and Compounds, 2015, 627, 281-286.	5.5	40
85	Low temperature bonding for high temperature applications by using SnBi solders. Journal of Alloys and Compounds, 2015, 647, 681-685.	5.5	43
86	In situ observations of micromechanical behaviors of intermetallic compounds for structural applications in 3D IC micro joints. , 2015, , .		3
87	Reduction of electromigration damage in SAC305 solder joints by adding Ni nanoparticles through flux doping. Journal of Materials Science, 2015, 50, 6748-6756.	3.7	45
88	Silver as a highly effective bonding layer for lead telluride thermoelectric modules assembled by rapid hot-pressing. Energy Conversion and Management, 2015, 98, 134-137.	9.2	25
89	Development of interconnection materials for Bi ₂ Te ₃ and PbTe thermoelectric module by using SLID technique. , 2015, , .		0
90	Interfacial reactions between PbTe-based thermoelectric materials and Cu and Ag bonding materials. Journal of Materials Chemistry C, 2015, 3, 10590-10596.	5.5	37

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91	Thermal Stress of Surface Oxide Layer on Micro Solder Bumps During Reflow. Journal of Electronic Materials, 2015, 44, 744-750.	2.2	3
92	Inhibition of Gold Embrittlement in Micro-joints for Three-Dimensional Integrated Circuits. Journal of Electronic Materials, 2014, 43, 4262-4265.	2.2	10
93	Interfacial reactions between Cu and Sn, Sn-Ag, Sn-Bi, Sn-Zn solder under space confinement for 3D IC micro joint applications. , 2014, , .		0
94	Effects of silver addition on Cu-Sn microjoints for chip-stacking applications. Journal of Alloys and Compounds, 2014, 605, 193-198.	5.5	42
95	Amorphous Pd layer as a highly effective oxidation barrier for surface finish of electronic terminals. Corrosion Science, 2014, 83, 419-422.	6.6	10
96	Effects of Sn grain orientation on substrate dissolution and intermetallic precipitation in solder joints under electron current stressing. Scripta Materialia, 2014, 80, 37-40.	5.2	56
97	Phase field microelasticity model of dislocation climb: Methodology and applications. Acta Materialia, 2014, 79, 396-410.	7.9	29
98	Volume Shrinkage Induced by Interfacial Reaction in Micro-Ni/Sn/Ni Joints. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 2343-2346.	2.2	26
99	Growth kinetics of Ag ₃ Sn in silicon solar cells with a sintered Ag metallization layer. Solar Energy Materials and Solar Cells, 2014, 123, 139-143.	6.2	33
100	Precipitation induced by diffusivity anisotropy in Sn grains under electron current stressing. Journal of Alloys and Compounds, 2013, 555, 237-240.	5.5	19
101	Gold and palladium embrittlement issues in three-dimensional integrated circuit interconnections. Materials Letters, 2013, 110, 13-15.	2.6	15
102	Effects of Ag concentration on the Ni-Sn interfacial reaction for 3D-IC applications. , 2013, , .		0
103	Au and Pd embrittlement in space-confined soldering reactions for 3D IC applications. , 2013, , .		1
104	Assembly of N type Bi ₂ (Te, Se) ₃ thermoelectric modules by low temperature bonding. Science and Technology of Welding and Joining, 2013, 18, 421-424.	3.1	7
105	Single-joint shear strength of micro Cu pillar solder bumps with different amounts of intermetallics. Microelectronics Reliability, 2013, 53, 47-52.	1.7	54
106	Reactions of Sn-4.0Ag-0.5Cu on Cu and Electroless Ni Substrate in Premelting Soldering Process. Journal of Electronic Materials, 2013, 42, 1254-1259.	2.2	9
107	Volume shrinkage induced by interfacial reactions in micro joints. , 2013, , .		1
108	Cu(TiWN _x) Film as a Barrierless Buffer Layer for Metallization Applications. Japanese Journal of Applied Physics, 2013, 52, 01AC12.	1.5	8

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109	Serrated cathode dissolution under high current density: Morphology and root cause. Journal of Applied Physics, 2013, 114, .	2.5	4
110	Grain refinement of solder materials by minor element addition. , 2013, , .		0
111	Interfacial Reactions and Electromigration in Flip-Chip Solder Joints. , 2013, , 503-560.		5
112	Soldering reactions under space confinement for 3D IC applications. , 2012, , .		6
113	Critical Concerns in Soldering Reactions Arising from Space Confinement in 3-D IC Packages. IEEE Transactions on Device and Materials Reliability, 2012, 12, 233-240.	2.0	81
114	Origin and evolution of voids in electroless Ni during soldering reaction. Acta Materialia, 2012, 60, 4586-4593.	7.9	33
115	Effects of Ti addition to Sn-Ag and Sn-Cu solders. Journal of Alloys and Compounds, 2012, 520, 244-249.	5.5	86
116	Roles of phosphorous in Sn4Ag0.5Cu solder reaction with electrolytic Ni-Au. Journal of Alloys and Compounds, 2012, 539, 57-62.	5.5	9
117	Mechanism for serrated cathode dissolution in Cu/Sn/Cu interconnect under electron current stressing. Acta Materialia, 2012, 60, 2082-2090.	7.9	68
118	Elimination of voids in reactions between Ni and Sn: A novel effect of silver. Scripta Materialia, 2012, 66, 171-174.	5.2	80
119	The critical oxide thickness for Pb-free reflow soldering on Cu substrate. Thin Solid Films, 2012, 520, 5346-5352.	1.8	26
120	Growth of CuAl intermetallic compounds in Cu and Cu(Pd) wire bonding. , 2011, , .		33
121	Consumption of Cu pad during multiple reflows of Ni-doped SnAgCu solder. International Journal of Materials Research, 2011, 102, 579-583.	0.3	0
122	The orientation relationship between Ni and Cu6Sn5 formed during the soldering reaction. Scripta Materialia, 2011, 65, 331-334.	5.2	30
123	Laminar pattern induced by cycling thermomechanical stress in two-phase materials. Materials Chemistry and Physics, 2011, 130, 413-417.	4.0	0
124	Investigation of growth behavior of Al-Cu intermetallic compounds in Cu wire bonding. Microelectronics Reliability, 2011, 51, 125-129.	1.7	45
125	Analysis and experimental verification of the competing degradation mechanisms for solder joints under electron current stressing. Acta Materialia, 2011, 59, 2462-2468.	7.9	52
126	Effects of Joining Sequence on the Interfacial Reactions and Substrate Dissolution Behaviors in Ni/Solder/Cu Joints. Journal of Electronic Materials, 2011, 40, 1912-1920.	2.2	30

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127	Experimental Evidence for Formation of Ni-Al Compound in Flip-Chip Joints Under Current Stressing. Journal of Electronic Materials, 2011, 40, 2076-2080.	2.2	1
128	Critical new issues relating to interfacial reactions arising from low solder volume in 3D IC packaging. , 2011, , .		8
129	Electromigration in flip chip solder joints under extra high current density. Journal of Applied Physics, 2010, 107, 073516.	2.5	22
130	Interfacial Reaction Between 95Pb-5Sn Solder Bump and 37Pb-63Sn Presolder in Flip-Chip Solder Joints. Journal of Electronic Materials, 2010, 39, 1289-1294.	2.2	8
131	Interaction Between Ni and Cu Across 95Pb-5Sn High-Lead Layer. Journal of Electronic Materials, 2010, 39, 2662-2668.	2.2	9
132	Effects of Ni Additions on the Growth of Cu ₃ Sn in High-Lead Solders. Journal of Electronic Materials, 2010, 39, 2636-2642.	2.2	8
133	Transmission Electron Microscopy Characterization of Ni(V) Metallization Stressed Under High Current Density in Flip Chip Solder Joints. Journal of Electronic Materials, 2010, 39, 2528-2535.	2.2	2
134	Uncovering the driving force for massive spalling in the Sn-Cu/Ni system. Scripta Materialia, 2010, 63, 47-49.	5.2	27
135	Direct evidence for a Cu-enriched region at the boundary between Cu ₆ Sn ₅ and Cu ₃ Sn during Cu/Sn reaction. Scripta Materialia, 2010, 63, 258-260.	5.2	48
136	The effects of solder volume and Cu concentration on the consumption rate of Cu pad during reflow soldering. Journal of Alloys and Compounds, 2010, 492, 99-104.	5.5	93
137	Inhibiting the formation of microvoids in Cu ₃ Sn by additions of Cu to solders. Journal of Alloys and Compounds, 2010, 493, 233-239.	5.5	39
138	Grain growth sequence of Cu ₃ Sn in the Cu/Sn and Cu/Sn-Zn systems. Journal of Alloys and Compounds, 2010, 494, 123-127.	5.5	24
139	Effect of Cu concentration, solder volume, and temperature on the reaction between SnAgCu solders and Ni. Journal of Alloys and Compounds, 2010, 499, 149-153.	5.5	46
140	Novel Cu-Ru composite layer with good solderability and very low consumption rate. Journal of Alloys and Compounds, 2010, 504, L25-L27.	5.5	12
141	Sn concentration effect on the formation of intermetallic compounds in high-Pb/Ni reactions. Journal of Alloys and Compounds, 2010, 504, 341-344.	5.5	14
142	Temperature effects on electromigration behavior of solder joints. , 2010, , .		0
143	Cross-interaction between Ni and Cu across a high-lead solder joint with different solder volume. , 2010, , .		0
144	Effects of Ni addition to high-lead solders on the growth of Cu ₃ Sn and micro voids. , 2009, , .		0

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145	Effect of Sn concentration on massive spalling in high-Pb soldering reaction with Cu substrate. Journal of Materials Research, 2009, 24, 3407-3411.	2.6	10
146	Interfacial Reaction and Wetting Behavior Between Pt and Molten Solder. Journal of Electronic Materials, 2009, 38, 25-32.	2.2	14
147	Fundamental Study of the Intermixing of 95Pb-5Sn High-Lead Solder Bumps and 37Pb-63Sn Pre-Solder on Chip-Carrier Substrates. Journal of Electronic Materials, 2009, 38, 2234-2241.	2.2	6
148	Kirkendall voids formation in the reaction between Ni-doped SnAg lead-free solders and different Cu substrates. Microelectronics Reliability, 2009, 49, 248-252.	1.7	93
149	Development of lead-free solders with superior drop test reliability performance. , 2009, , .		3
150	Interfacial reaction and the dominant diffusing species in Mg-Ni system. Journal of Alloys and Compounds, 2009, 471, 90-92.	5.5	20
151	Minimum effective Ni addition to SnAgCu solders for retarding Cu ₃ Sn growth. Journal of Alloys and Compounds, 2009, 478, L1-L4.	5.5	84
152	Effects of minor Fe, Co, and Ni additions on the reaction between SnAgCu solder and Cu. Journal of Alloys and Compounds, 2009, 478, 121-127.	5.5	163
153	Effects of Cu content on the dissolution rate of Cu for real solder joint during reflow soldering. , 2009, , .		0
154	Transmission electron microscopy characterization of the porous structure induced by high current density in the flip-chip solder joints. , 2009, , .		0
155	Effect of multiple reflow cycles on ball impact responses of Sn-Ag-Cu solder joints. Soldering and Surface Mount Technology, 2009, 21, 4-9.	1.5	5
156	Lead-free and lead-bearing electronic solders: Implementation, reliability, and new technology. Jom, 2008, 60, 60-60.	1.9	0
157	Tin Whisker Growth Induced by High Electron Current Density. Journal of Electronic Materials, 2008, 37, 17-22.	2.2	27
158	Effect of UBM Thickness on the Mean Time to Failure of Flip-Chip Solder Joints under Electromigration. Journal of Electronic Materials, 2008, 37, 96-101.	2.2	25
159	Analysis and Experimental Verification of the Volume Effect in the Reaction Between Zn-Doped Solders and Cu. Journal of Electronic Materials, 2008, 37, 1591-1597.	2.2	18
160	Microstructure Study of High Lead Bump FCBGA Bending Test. , 2008, , .		1
161	Minor Fe, Co, and Ni additions to SnAgCu solders for retarding Cu ₃ Sn growth. , 2008, , .		3
162	Effect of Multiple Reflow Cycles on Ball Impact Responses of Sn-4Ag-0.5Cu Solder Joints with Immersion Tin Substrate Pad Finish. , 2008, , .		1

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163	Pronounced electromigration of Cu in molten Sn-based solders. Journal of Materials Research, 2008, 23, 250-257.	2.6	49
164	Tin whisker growth induced by high electron current density. , 2007, , .		8
165	Massive spalling of intermetallic compounds in solder-substrate reactions due to limited supply of the active element. Journal of Applied Physics, 2007, 101, 084911.	2.5	42
166	Massive Spalling of Intermetallics in Solder Joints: a General Phenomenon that Can Occur in Multiple Solder-Substrate Systems. , 2007, , .		1
167	Role of minor Zn addition in the interfacial reaction between lead-free solders and Cu. , 2007, , .		0
168	Dissolution and interfacial reaction between Cu and Sn-Ag-Cu solders. , 2007, , .		6
169	The effects of minor Fe, Co, and Ni additions to lead-free solders on the thickness of Cu3Sn at the interface. , 2007, , .		1
170	Cross-Interaction between Ni and Cu across Sn Layers with Different Thickness. Journal of Electronic Materials, 2007, 36, 1455-1461.	2.2	60
171	Interfacial reaction issues for lead-free electronic solders. Journal of Materials Science: Materials in Electronics, 2006, 18, 155-174.	2.2	206
172	In-situ observation of material migration in flip-chip solder joints under current stressing. Journal of Electronic Materials, 2006, 35, 1781-1786.	2.2	9
173	Microstructure evolution of gold-tin eutectic solder on Cu and Ni substrates. Journal of Electronic Materials, 2006, 35, 65-71.	2.2	36
174	Kinetics of AuSn ₄ migration in lead-free solders. Journal of Electronic Materials, 2006, 35, 1948-1954.	2.2	26
175	Effect of surface finish on the failure mechanisms of flip-chip solder joints under electromigration. Journal of Electronic Materials, 2006, 35, 2147-2153.	2.2	31
176	Cross-interaction between Au and Cu in Au/Sn/Cu ternary diffusion couples. Journal of Electronic Materials, 2006, 35, 366-371.	2.2	28
177	Local melting induced by electromigration in flip-chip solder joints. Journal of Electronic Materials, 2006, 35, 1005-1009.	2.2	58
178	Electromigration-induced UBM consumption and the resulting failure mechanisms in flip-chip solder joints. Journal of Electronic Materials, 2006, 35, 1010-1016.	2.2	44
179	Effects of limited cu supply on soldering reactions between SnAgCu and Ni. Journal of Electronic Materials, 2006, 35, 1017-1024.	2.2	138
180	Effect of Zn Addition on the Interfacial Reactions between Cu and Lead-Free Solders. Materials Research Society Symposia Proceedings, 2006, 968, 1.	0.1	1

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181	Massive Spalling of Intermetallic Compound in Lead-Free Solder Joints. Materials Research Society Symposia Proceedings, 2006, 968, 1.	0.1	1
182	Strong Zn concentration effect on the soldering reactions between Sn-based solders and Cu. Journal of Materials Research, 2006, 21, 2436-2439.	2.6	89
183	Interfacial reaction issues for lead-free electronic solders. , 2006, , 155-174.		40
184	Solid-state reactions between Ni and Sn-Ag-Cu solders with different Cu concentrations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 396, 385-391.	5.6	110
185	In situ observation of the void formation-and-propagation mechanism in solder joints under current-stressing. Acta Materialia, 2005, 53, 2029-2035.	7.9	134
186	Electromigration-induced failure in flip-chip solder joints. Journal of Electronic Materials, 2005, 34, 27-33.	2.2	94
187	Controlling the microstructure from the gold-tin reaction. Journal of Electronic Materials, 2005, 34, 182-187.	2.2	99
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