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**Six cases of reliability study of Pb-free solder joints in electronic packaging technology**

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#	Paper	IF	Citations
1187	Effect of phosphorus content and solid state aging on intermetallic formation between lead-free Sn-Ag-Cu solder and electroless nickel/immersion gold under bump metallurgy.		3
1186	Growth of an intermetallic compound layer with Sn-3.5Ag-5Bi on Cu and Ni-P/Cu during aging treatment. <i>Journal of Electronic Materials</i> , <b>2003</b> , 32, 1195-1202	1.9	76
1185	Effect of Cu content on interfacial reactions between Sn(Cu) alloys and Ni/Ti thin-film metallization. <i>Journal of Electronic Materials</i> , <b>2003</b> , 32, 1214-1221	1.9	24
1184	Study of interaction between Cu-Sn and Ni-Sn interfacial reactions by Ni-Sn3.5Ag-Cu sandwich structure. <i>Journal of Electronic Materials</i> , <b>2003</b> , 32, 1303-1309	1.9	99
1183	Physical metallurgy in lead-free electronic solder development. <b>2003</b> , 55, 26-32		23
1182	A thermodynamic model for electrical current induced damage. <b>2003</b> , 40, 7315-7327		87
1181	Effect of 0.5 wt % Cu in Sn3.5%Ag Solder on the Interfacial Reaction with Au/Ni Metallization. <b>2003</b> , 15, 4340-4342		60
1180	Physics and materials challenges for lead-free solders. <b>2003</b> , 93, 1335-1353		280
1179	Development of CuSn intermetallic compound at Pb-free solder/Cu joint interface. <b>2003</b> , 57, 3361-3365		75
1178	Investigation of interfacial reactions between Sn5Bi solder and Cu substrate. <i>Journal of Alloys and Compounds</i> , <b>2003</b> , 359, 202-208	5.7	70
1177	Unique phase changes induced by electromigration (EM) in solder joints.		1
1176	Self-sensed inspection of joint temperature for thin-film sensors. <b>2003</b> ,		
1175	Characterisation of intermetallic Aging in flip chip solder bumps.		
1174	Parallel gap bonding mechanism of joint formation for thin-film metallization. <b>2003</b> ,		
1173	Investigation of Co UBM for direct bumping on Cu/LowK dies.		2
1172	Inter-dependence of processing and alloy composition on the reliability of Sn-based lead free solders in fine pitch FCOB interconnection.		1
1171	Pb-free solder challenges in electronic packaging and assembly.		7

1170	Electromigration failure in flip chip solder joints due to rapid dissolution of copper. <b>2003</b> , 18, 2544-2548	104
1169	Investigation of electroplating Ni UBM for Pb-free solders.	3
1168	Microstructural and performance implications of gold in Sn-Ag-Cu-Sb interconnections.	3
1167	Effect of reaction time and P content on mechanical strength of the interface formed between eutectic Sn <sub>3</sub> Ag solder and Au/electroless Ni(P)/Cu bond pad. <b>2003</b> , 94, 4108-4115	93
1166	Effect of 0.5 wt % Cu addition in Sn <sub>3</sub> .5%Ag solder on the dissolution rate of Cu metallization. <b>2003</b> , 94, 7904	69
1165	Study of the reaction mechanism between electroless Ni <sub>3</sub> P and Sn and its effect on the crystallization of Ni <sub>3</sub> P. <b>2003</b> , 18, 4-7	24
1164	Effect of supersaturation of Cu on reaction and intermetallic compound formation between Sn <sub>3</sub> Cu solder and thin film metallization. <b>2003</b> , 18, 2109-2114	18
1163	Microstructure and interface reaction between Sn-3.5Ag solder and electroplated Ni layer on Cu substrate during high temperature exposure.	3
1162	Fractal analysis of Sn-Ag, Sn-Ag-Cu, Sn-Ag-Bi interfacial morphology in flipchip packaging applications.	
1161	Effect of current density and geometry structure on Pb-free solder joints electromigration.	1
1160	Pb-free plating: a process and solder joint reliability study.	
1159	In-situ electromigration studies on Sn-Ag-Cu solder joint by digital image speckle analysis (DISA).	
1158	Driving force and mechanism for spontaneous metal whisker formation. <b>2004</b> , 93, 206104	129
1157	Interfacial reactions of Sn <sub>3</sub> Cu and Sn <sub>3</sub> Pb <sub>3</sub> Ag solder with Au/Ni during extended time reflow in ball grid array packages. <b>2004</b> , 19, 2897-2904	18
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1151	Aging Effects on Microstructure and Tensile Property of Sn3.9Ag0.6Cu Solder Alloy. <b>2004</b> , 126, 208-212		48
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1141	The nanoindentation characteristics of Cu6Sn5, Cu3Sn, and Ni3Sn4 intermetallic compounds in the solder bump. <i>Journal of Electronic Materials</i> , <b>2004</b> , 33, 1103-1110	1.9	91
1140	Interfacial reactions and shear strengths between Sn-Ag-based Pb-free solder balls and Au/EN/Cu metallization. <i>Journal of Electronic Materials</i> , <b>2004</b> , 33, 1182-1189	1.9	72
1139	Reliability investigation and interfacial reaction of ball-grid-array packages using the lead-free Sn-Cu solder. <i>Journal of Electronic Materials</i> , <b>2004</b> , 33, 1190-1199	1.9	66
1138	Intermetallic compounds formed during the reflow and aging of Sn-3.8Ag-0.7Cu and Sn-20In-2Ag-0.5Cu solder ball grid array packages. <i>Journal of Electronic Materials</i> , <b>2004</b> , 33, 171-180	1.9	29
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1132	Interfacial reaction between Sn-rich solders and Ni-based metallization. <b>2004</b> , 462-463, 387-394		35
1131	Solid state interfacial reaction of Sn <sub>3</sub> 7Pb and Sn <sub>3</sub> .5Ag solders with Ni <sub>3</sub> under bump metallization. <b>2004</b> , 52, 2047-2056		167
1130	TBGA substrate for lead-free and halogen-free applications.		0
1129	Evolution of Ag/sub 3/Sn during reflow soldering.		0
1128	Effect of stress on interfacial intermetallic compound development of Sn-Ag-Cu lead-free solder joint on Au/Ni/Cu substrate.		1
1127	Effect of intermetallic phases on performance in a mechanical drop environment: 96.5Sn3.5Ag solder on Cu and Ni/Au pad finishes.		11
1126	.		
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1017	Interfacial microstructure and shear behavior of Sn-Ag-Cu solder balls joined with Sn-Zn-Bi paste. <i>Journal of Alloys and Compounds</i> , <b>2006</b> , 422, 153-163	5-7 19
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704	Growth Mechanism of a Ternary (Cu,Ni) <sub>6</sub> Sn <sub>5</sub> Compound at the Sn(Cu)/Ni(P) Interface. <i>Journal of Electronic Materials</i> , <b>2010</b> , 39, 2382-2386	1.9	6
703	Influence of Palladium Thickness on the Soldering Reactions Between Sn-3Ag-0.5Cu and Au/Pd(P)/Ni(P) Surface Finish. <i>Journal of Electronic Materials</i> , <b>2010</b> , 39, 2387-2396	1.9	54

702	Interfacial Reactions of Sn-3.0Ag-0.5Cu Solder with Cu-Mn UBM During Aging. <i>Journal of Electronic Materials</i> , <b>2010</b> , 39, 2522-2527	1.9	16
701	Transmission Electron Microscopy Characterization of Ni(V) Metallization Stressed Under High Current Density in Flip Chip Solder Joints. <i>Journal of Electronic Materials</i> , <b>2010</b> , 39, 2528-2535	1.9	1
700	Reactions of Sn-3.5Ag-Based Solders Containing Zn and Al Additions on Cu and Ni(P) Substrates. <i>Journal of Electronic Materials</i> , <b>2010</b> , 39, 2720-2731	1.9	44
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692	Effects of Aging on Interfacial Microstructure and Reliability Between SnAgCu Solder and FeNi/Cu UBM. <b>2010</b> , 12, 497-503		5
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690	Effects of Zn addition on microstructure and tensile properties of Sn <sub>3</sub> Ag <sub>0</sub> .5Cu alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2010</b> , 527, 1343-1350	5.3	48
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687	Effect of Cu substrate and solder alloy on the formation of kirkendall voids in the solder joints during thermal aging. <b>2010</b> ,		
686	Strong effect of Pd concentration on the soldering reaction between Ni and Sn <sub>3</sub> Pd alloys. <b>2010</b> , 25, 2078-2081		17
685	Measurement of electromigration activation energy in eutectic SnPb and SnAg flip-chip solder joints with Cu and Ni under-bump metallization. <b>2010</b> , 25, 1847-1853		5

684	Impact of Key Deposition Parameters on the Voiding Sporadically Occurring in Solder Joints with Electroplated Copper. <b>2010</b> , 157, D111	23
683	Variation of Mechanical Property and Microstructure across Sn Solder Joint in Cu/Sn/Ni Structure. <b>2010</b> , 13, H298	1
682	Enhanced stress relaxation of Sn <sub>3</sub> .8Ag <sub>0</sub> .7Cu solder by electrical current. <b>2010</b> , 25, 1172-1178	4
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675	Growth of Sn Whiskers on Semiconductor and Insulator Surfaces. <b>2010</b> ,	3
674	Thermal and mechanical design optimization of a pressure-mounted base-plate-less high temperature power module. <b>2010</b> ,	2
673	Effect of solder volume on interfacial reactions between Sn <sub>3</sub> .5Ag <sub>0</sub> .75Cu solder balls and cu pad. <b>2010</b> ,	0
672	Strain Rate Effects and Rate-Dependent Constitutive Models of Lead-Based and Lead-Free Solders. <b>2010</b> , 77,	26
671	Introducing environmental concern in manufacturing strategies. <b>2010</b> , 33, 877-899	47
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669	Effect of La content on microstructure evolution of 20Ag <sub>0</sub> 1Cu <sub>0</sub> 2Zn <sub>0</sub> 5Sn <sub>0</sub> 1Pb <sub>0</sub> 1a filler metals and properties of joints. <b>2010</b> , 15, 59-63	11
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662	The adsorption of Ag <sub>3</sub> Sn nano-particles on CuSn intermetallic compounds of Sn $\beta$ Ag $\alpha$ .5Cu/Cu during soldering. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 492, 433-438	5-7	58
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658	Wettability and strength of InBiSn lead-free solder alloy on copper substrate. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 507, 290-296	5-7	50
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656	. <b>2010</b> , 33, 198-204		9
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642	Agglomeration of Ag3Sn compounds in microbumps during reflow for 3D-IC packaging. <b>2010,</b>	
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636	Thermal effects of die-attach voids location and style on performance of chip level package. <b>2011,</b>	4
635	A comparative investigation of the electromigration behavior between wedge-type and line-type Cu/Sn3.0Ag0.5Cu/Cu interconnects. <b>2011,</b>	1
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628	A generalized computational interface for combined thermodynamic and kinetic modeling. <b>2011</b> , 35, 391-395		6
627	Evolution of nano-Ag <sub>3</sub> Sn particle formation on Cu <sub>3</sub> Sn intermetallic compounds of Sn <sub>3.5</sub> Ag <sub>0.5</sub> Cu composite solder/Cu during soldering. <i>Journal of Alloys and Compounds</i> , <b>2011</b> , 509, 2326-2333	5-7	72
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606	Microstructure of interfacial reaction layer in SnAgCu/electroless Ni (P) solder joint. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2011</b> , 22, 1308-1312	2.1	3
605	Intermetallic reactions in a Sn-3.5Ag-1.5In solder ball-grid-array package with Au/Ni/Cu pads. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2011</b> , 22, 1703-1708	2.1	6
604	Formation and behavior of Kirkendall voids within intermetallic layers of solder joints. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2011</b> , 22, 703-716	2.1	53
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582	Electromagnetic induced heating for rapid thermal cycling of single SnAgCu solder joint in double substrates. <b>2011</b> ,		3
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580	Concurrent electromigration and creep in lead-free solder. <b>2011</b> , 110, 083716		24
579	Investigation of accelerated surface oxidation of Sn-3.5Ag-0.5Cu solder particles by TEM and STEM. <b>2011</b> ,		0
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570	Copper Electroless Bonding of Dome-Shaped Pillars for Chip-to-Package Interconnect. <b>2011</b> , 158, D698		12
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564	Relationship between crack propagation trends and grains in SnAgCu interconnects. <b>2012</b> ,		0
563	Study on the meso-mechanical characteristics of SAC0307-xCe micro-solder joints. <b>2012</b> ,		
562	Study on the electrodeposition of Fe-Ni UBM films in modified watts bath. <b>2012</b> ,		
561	Evaluation of the microstructure and whisker growth in Sn <sub>70</sub> Zn <sub>10</sub> Ag solder with Pr content. <b>2012</b> , 27, 1887-1894		7
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559	Effect of reflow time on shear property of two-step electroplated Sn-3.5Ag solder bumps. <b>2012</b> ,		1

558	Effect of Bump Shape on Current Density and Temperature Distributions in Solder Bump Joints under Electromigration. <b>2012</b> , 569, 82-87		1
557	Study on rapid thermal cycling by inducted heating for microstructure of single SnAgCu solder joint. <b>2012</b> , 17, 237-243		7
556	Failure Analysis of Halogen-Free Printed Circuit Board Assembly Under Board-Level Drop Test. <b>2012</b> , 134,		1
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538	Wetting of Sn-0.7Cu solder alloy on different substrates at different temperatures. <b>2012,</b>		2
537	Interfacial reaction of heat-sink during vacuum and reflow soldering in space power electronics. <b>2012,</b>		
536	Effects of cooling rate on microstructure and microhardness of lead-free Sn-3.0Ag-0.5Cu solder. <b>2012,</b>		1
535	The Influence of Surface Oxides on Whiskering. <b>2012,</b>		
534	. <b>2012,</b>		
533	Influence of soldering temperature and dwelling time on morphological evolution of Cu <sub>6</sub> Sn <sub>5</sub> intermetallic compound at the Sn-3.0Ag-0.5Cu/Cu interface. <b>2012,</b>		
532	. <b>2012,</b>		
531	Modelling metal migration for high reliability components when subjected to thermo-mechanical loading. <b>2012,</b>		1
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529	Numerical study on thermal impacts of different void patterns on performance of chip-scale packaged power device. <i>Microelectronics Reliability</i> , <b>2012, 52, 1409-1419</b>	1.2	35
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524	Applications of multi-walled carbon nanotube in electronic packaging. <b>2012, 7, 183</b>		11
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517	Effects of Pd(P) Thickness on the Microstructural Evolution Between Sn-3Ag-0.5Cu and Ni(P)/Pd(P)/Au Surface Finish During the Reflow Process. <i>Journal of Electronic Materials</i> , <b>2012</b> , 41, 3348-3358	1.9	14
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515	Effects of Minor Alloying Additions on the Properties and Reliability of Pb-Free Solders and Joints <b>2012</b> , 119-159		1
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510	Surface Morphology of Sn-Rich Solder Interconnects After Electrical Loading. <i>Journal of Electronic Materials</i> , <b>2012</b> , 41, 741-747	1.9	5
509	Influence of Poly(ethylene glycol) Degradation on Voiding Sporadically Occurring in Solder Joints with Electroplated Cu. <i>Journal of Electronic Materials</i> , <b>2012</b> , 41, 1898-1906	1.9	17
508	Internal Microstructure Investigation of Tin Whisker Growth Using FIB Technology. <i>Journal of Electronic Materials</i> , <b>2012</b> , 41, 2029-2034	1.9	2
507	Modeling Fracture of Sn-Rich (Pb-Free) Solder Joints Under Mechanical Shock Conditions. <i>Journal of Electronic Materials</i> , <b>2012</b> , 41, 2089-2099	1.9	14
506	Influence of current density on microstructure of pulse electrodeposited tin coatings. <b>2012</b> , 68, 22-32		39
505	Precipitation of large Ag <sub>3</sub> Sn intermetallic compounds in SnAg <sub>2.5</sub> microbumps after multiple reflows in 3D-IC packaging. <i>Materials Chemistry and Physics</i> , <b>2012</b> , 134, 340-344	4.4	18

504	Calculating the diffusivity of Cu and Sn in Cu <sub>3</sub> Sn intermetallic by molecular dynamics simulations. <b>2012</b> , 73, 92-94		38
503	The effect of a concentration gradient on interfacial reactions in microbumps of Ni/SnAg/Cu during liquid-state soldering. <b>2012</b> , 66, 741-744		34
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501	Microstructure, orientation and damage evolution in SnPb, SnAgCu, and mixed solder interconnects under thermomechanical stress. <b>2012</b> , 96, 82-91		24
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498	Reflow discoloration formation on pure tin (Sn) surface finish. <i>Microelectronics Reliability</i> , <b>2012</b> , 52, 1153-1156	3	3
497	Interfacial reaction and elemental redistribution in Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu/Pd/immersion Au/electroless Ni solder joints after aging. <b>2012</b> , 177, 278-282		24
496	Novel First-Level Interconnect Techniques for Flip Chip on MEMS Devices. <b>2011</b> , 21, 132-144		8
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491	Cross-Interaction Study of Cu/Sn/Pd and Ni/Sn/Pd Sandwich Solder Joint Structures. <i>Journal of Electronic Materials</i> , <b>2012</b> , 41, 130-137	1.9	5
490	Effects of addition of copper particles of different size to Sn-3.5Ag solder. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2012</b> , 23, 86-93	2.1	9
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487	Enhanced electromigration reliability via Ag nanoparticles modified eutectic Sn <sub>58</sub> Bi solder joint. <b>2013</b> , 19, 1069-1080		22



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485	Review on microstructure evolution in SnAgCu solders and its effect on mechanical integrity of solder joints. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2013</b> , 24, 3149-3169	2.1	43
484	Correlation of intermetallic compound growth behavior and melt state of Sn3.5Ag3.5Bi/Cu joint during soldering and isothermal aging. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2013</b> , 24, 1231-1237	2.1	2
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478	Properties and interfacial microstructure of SnZnGa solder joint with rare earth Pr addition. <b>2013</b> , 46, 816-823		28
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476	Effects of Ni-coated Carbon Nanotubes addition on the electromigration of SnAgCu solder joints. <i>Journal of Alloys and Compounds</i> , <b>2013</b> , 581, 202-205	5.7	35
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453	Effects of thermal cycling on rare earth (Pr)-induced Sn whisker/hillock growth. <b>2013</b> , 98, 78-81		10
452	Effect of grain orientation on mechanical properties and thermomechanical response of Sn-based solder interconnects. <b>2013</b> , 85, 64-72		21
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439	A multi-phase field study of the role of grain boundary diffusion in growth of Cu6Sn5 intermetallic compound during early stage of soldering reaction. <b>2013</b> ,		
438	Formation and growth of interfacial intermetallic layers of Sn-8Zn-3Bi-0.3Cr on Cu, Ni and Ni-W substrates. <b>2013</b> ,		
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436	Electroplated and Light-Induced Plated Sn-Bi Alloys for Silicon Photovoltaic Applications. <b>2013</b> , 160, D446-D452		3
435	Effect of interface structure on fatigue life under thermal cycle with SAC305 solder joints. <b>2013</b> ,		1
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428	IMC Growth at the Interface of Sn0.0Ag0.5Zn Solder Joints with Cu, Ni, and NiW Substrates. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 4119-4125	1.9	3
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425	Morphology, kinetics and service reliability of Cu6Sn5 texture formed on Sn/Cu interface. <b>2014</b> ,		
424	Effect of pad shape on electromigration in solder bump joints. <b>2014</b> ,		
423	Comparison of Ball Pull Strength Among Various Sn-Cu-Ni Solder Joints With Different Pad Surface Finishes. <b>2014</b> , 136,		2
422	Study of IMC at interfaces of Sn3.0Ag0.5Cu3.0Bi0.05Cr/Cu joints during thermal ageing. <i>Soldering and Surface Mount Technology</i> , <b>2014</b> , 26, 173-179	1.4	4
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419	Role of substrate aspect ratio on the robustness of capillary alignment. <b>2014</b> , 104, 081605		5
418	The growth of Ag3Sn intermetallic compound under a temperature gradient. <b>2014</b> ,		
417	Mechanical property and void ratio of several Pb-containing and Pb-free solder joints in space power electronics. <b>2014</b> ,		0
416	Universal mechanisms of Al metallization ageing in power MOSFET devices. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 2432-2439	1.2	17
415	Low cycle fatigue performance of ball grid array structure Cu/Sn3.0Ag0.5Cu/Cu solder joints. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 2911-2921	1.2	15

4 <sup>14</sup>	Interaction effect between electromigration and microstructure evolution in BGA structure Cu/Sn-58Bi/Cu solder interconnects. <b>2014</b> ,		1
4 <sup>13</sup>	Interface Reaction Between Electroless Ni <sub>3</sub> Sn <sub>2</sub> Metallization and Lead-Free Sn <sub>3</sub> .5Ag Solder with Suppressed Ni <sub>3</sub> P Formation. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 4103-4110	1.9	4
4 <sup>12</sup>	Enhanced Electromigration Resistance of Pb-Free Solders by Using Cu/Sn Composite Structure. <b>2014</b> , 66, 2334-2339		1
4 <sup>11</sup>	The effects of Mn powder additions on the microstructures and tensile property of SnAgCu/Cu solder joints. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2014</b> , 25, 4779-4785	2.1	1
4 <sup>10</sup>	Reliability of thermally stressed rigidflex printed circuit boards for High Density Interconnect applications. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 204-213	1.2	14
4 <sup>09</sup>	Enhanced growth of the Cu <sub>6</sub> Sn <sub>5</sub> phase in the Sn/Ag/Cu and Sn/Cu multilayers subjected to applied strain. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 591, 297-303	5.7	16
4 <sup>08</sup>	Optimization of the Ni(P) Thickness for an Ultrathin Ni(P)-Based Surface Finish in Soldering Applications. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 16-25	1.9	12
4 <sup>07</sup>	Effect of Pd thickness on wettability and interfacial reaction of Sn-1.0Ag-Ce solders on ENEPIG surface finish. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2014</b> , 25, 423-430	2.1	8
4 <sup>06</sup>	Effect of Metal Bond-Pad Configurations on the Solder Microstructure Development of Flip-Chip Solder Joints. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 170-175	1.9	
4 <sup>05</sup>	Interfacial Reactions Between Columnar or Layered Ni(P) Layers and Sn-Ag-Cu Solder. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 277-283	1.9	3
4 <sup>04</sup>	Experimental Studies and Thermodynamic Assessment of Ternary Cu-Pd-Sn Phase Relations Focusing on the Sn-Rich Alloys. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 176-186	1.9	5
4 <sup>03</sup>	Effects of zinc on the interfacial reactions of tinindium solder joints with copper. <i>Journal of Materials Science</i> , <b>2014</b> , 49, 3805-3815	4.3	6
4 <sup>02</sup>	Solid-state interfacial reaction of eutectic Sn <sub>3</sub> .5Ag and pure tin solders with polycrystalline Cu substrate. <i>Journal of Materials Science</i> , <b>2014</b> , 49, 3652-3664	4.3	9
4 <sup>01</sup>	Investigation on high temperature mechanical fatigue failure behavior of SnAgCu/Cu solder joint. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2014</b> , 25, 1429-1434	2.1	10
4 <sup>00</sup>	Reactions and mechanical properties between AuSn <sub>20</sub> solders and metalized AlSi alloys for electronic packaging application. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2014</b> , 25, 742-748	2.1	6
399	Improved metal-adhesive polymers from copper(I)-catalyzed azide-alkyne cycloaddition. <b>2014</b> , 20, 10710-9		13
398	Study of Undercooling and Recalescence During Solidification of Sn <sub>62</sub> .5Pb <sub>36</sub> .5Ag <sub>1</sub> and Sn <sub>96</sub> .5Ag <sub>3</sub> Cu <sub>0.5</sub> Solders in Real Electronic Joints. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 2479-2486	1.9	7
397	Effects of ultrasonic irradiation and cooling rate on the solidification microstructure of Sn <sub>3</sub> .0Ag <sub>0.5</sub> Cu alloy. <b>2014</b> , 214, 13-20		17

396	Formation and growth of interfacial intermetallic layers of Sn <sub>8</sub> Zn <sub>8</sub> Bi <sub>0.3</sub> Cr on Cu, Ni and NiW substrates. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 245-251	1.2	3
395	Evaluation of mechanical properties of low-Ag ball grid array solder joints using a high-speed ball shear test. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 589, 590-595	5.7	5
394	Effects of Al and Fe additions on microstructure and mechanical properties of SnAgCu eutectic lead-free solders. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2014</b> , 593, 79-84	5.3	26
393	Low-cycle fatigue failure behavior and life evaluation of lead-free solder joint under high temperature. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 2922-2928	1.2	24
392	Effects of Microstructure and Loading on Fracture of Sn-3.8Ag-0.7Cu Joints on Cu Substrates with ENIG Surface Finish. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 4485-4496	1.9	5
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388	Effect of Fe Content on the Interfacial Reliability of SnAgCu/FeNi Solder Joints. <b>2014</b> , 30, 928-933		12
387	Size and constraint effects on mechanical and fracture behavior of micro-scale Ni/Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu/Ni solder joints. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2014</b> , 617, 14-23	5.3	29
386	Effect of aluminium additions on wettability and intermetallic compound (IMC) growth of lead free Sn (2 wt. % Ag, 5 wt. % Bi) soldered joints. <b>2014</b> , 10, 997-1004		26
385	Cu <sub>3</sub> Sn suppression criterion for solid copper/molten tin reaction. <b>2014</b> , 94, 217-224		10
384	Effect of TiO <sub>2</sub> addition concentration on the wettability and intermetallic compounds growth of Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu/TiO <sub>2</sub> nano-composite solders. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2014</b> , 25, 3816-3827	2.1	21
383	Semiconductor Research Corporation: A Case Study in Cooperative Innovation Partnerships. <b>2014</b> , 52, 237-261		2
382	Electromigration in Cu-Cored Sn-3.5Ag-0.7Cu Solder Interconnects Under Current Stressing. <i>Journal of Electronic Materials</i> , <b>2014</b> , 43, 1144-1149	1.9	1
381	Fabrication of Cu-Ni mixed phase layer using DC electroplating and suppression of Kirkendall voids in Sn-Ag-Cu solder joints. <b>2014</b> , 10, 637-644		3
380	Effective suppression of interfacial intermetallic compound growth between Sn <sub>88</sub> wt.% Bi solders and Cu substrates by minor Ga addition. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 586, 319-327	5.7	39
379	Torsional fatigue with axial constant stress for Sn <sub>8</sub> Ag <sub>0.5</sub> Cu lead-free solder. <b>2014</b> , 67, 203-211		9

378	Numerical assessment of the effect of void morphology on thermo-mechanical performance of solder thermal interface material. <b>2014</b> , 64, 51-63		31
377	Effect of intermetallic compound thickness on shear strength of 25 $\mu$ m diameter Cu-pillars. <i>Intermetallics</i> , <b>2014</b> , 51, 37-47	3-5	25
376	Formation of Sn-rich phases via the decomposition of Cu <sub>6</sub> Sn <sub>5</sub> compounds during current stressing. <b>2014</b> , 124, 261-263		4
375	Interface reaction between an electroless NiCoP metallization and Sn <sub>3.5</sub> Ag lead-free solder with improved joint reliability. <b>2014</b> , 71, 69-79		37
374	Low-temperature direct copper-to-copper bonding enabled by creep on highly (111)-oriented Cu surfaces. <b>2014</b> , 78-79, 65-68		59
373	Effect of isothermal aging and low density current on intermetallic compound growth rate in lead-free solder interface. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 252-258	1-2	7
372	Electromigration induced microstructure evolution and damage in asymmetric Cu/Sn-58Bi/Cu solder interconnect under current stressing. <b>2014</b> , 24, 1619-1628		6
371	Size and geometry effects on the electromigration behavior of flip-chip Sn <sub>3.5</sub> Ag solder joints. <b>2015</b> ,		1
370	The size effect on intermetallic microstructure evolution of critical solder joints for flip chip assemblies. <i>Soldering and Surface Mount Technology</i> , <b>2015</b> , 27, 178-184	1-4	8
369	Quasi in-situ study of morphological evolution of the interfacial IMC in single-sided interface Sn-0.3Ag-0.7Cu/Cu joints during multiple reflow process. <b>2015</b> ,		
368	Improved drop reliability of SnAgCu solder joints by Zn addition to a Cu wetting layer. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2015</b> , 26, 5852-5862	2-1	9
367	Electromigration in eutectic In-48Sn ball grid array (BGA) solder interconnections with Au/Ni/Cu pads. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2015</b> , 26, 8522-8533	2-1	18
366	Investigation on fatigue behavior of single SnAgCu/SnPb solder joint by rapid thermal cycling. <i>Soldering and Surface Mount Technology</i> , <b>2015</b> , 27, 76-83	1-4	15
365	Click Chemistry in Materials Synthesis: The Beginning. <b>2015</b> , 358, 10-20		6
364	An on-wafer embedded passive device using chip-in-substrate packaging technology. <b>2015</b> , 57, 2060-2067		
363	Effect of silver (Ag) nanoparticle size on the microstructure and mechanical properties of Sn58BiAg composite solders. <i>Journal of Alloys and Compounds</i> , <b>2015</b> , 645, 566-576	5-7	60
362	Interfacial reaction and IMCs formation between Sn-0.7Cu solder and Cu substrate during reflow soldering. <b>2015</b> ,		
361	Effect of solder joint volume on its shear fracture mode. <b>2015</b> ,		

360	Influence of argon reflow on the microstructure and properties of lead-free solder joints. <b>2015,</b>		
359	Effect of electromigration of Sn-xAg-Cu solder joints on its microstructure and mechanical properties. <b>2015,</b>		1
358	Effect of Ag concentration on Ni/Sn-xAg/Ni micro joints under space confinement. <b>2015,</b>		
357	Effect of nano Al <sub>2</sub> O <sub>3</sub> particles doping on electromigration and mechanical properties of Sn <sub>88</sub> Bi solder joints. <i>Microelectronics Reliability</i> , <b>2015</b> , 55, 1226-1233	1.2	36
356	Influence of La <sub>2</sub> O <sub>3</sub> nanoparticle additions on microstructure, wetting, and tensile characteristics of Sn <sub>88</sub> Ag <sub>10</sub> Cu alloy. <i>Materials and Design</i> , <b>2015</b> , 87, 370-379	8.1	55
355	Minor Ga addition to effectively inhibit PdSn <sub>4</sub> growth between Sn solder and Pd substrate. <i>Intermetallics</i> , <b>2015</b> , 67, 102-110	3.5	8
354	Peltier effect on CoSn <sub>3</sub> growth in Sn/Co/Sn couples with different substrate lengths. <i>Materials Chemistry and Physics</i> , <b>2015</b> , 153, 72-77	4.4	8
353	Effect of intermetallic compound layer thickness on the shear strength of 1206 chip resistor solder joint. <i>Soldering and Surface Mount Technology</i> , <b>2015</b> , 27, 52-58	1.4	6
352	Interfacial Reaction and Mechanical Characterization of Sn <sub>88</sub> Ag <sub>10</sub> Cu/Au/Pd(P)/Cu Solder Joints: Thick Pd(P) Deposition. <i>Journal of Electronic Materials</i> , <b>2015</b> , 44, 568-580	1.9	10
351	Effects of Cu, Zn on the Wettability and Shear Mechanical Properties of Sn-Bi-Based Lead-Free Solders. <i>Journal of Electronic Materials</i> , <b>2015</b> , 44, 532-541	1.9	16
350	The failure analysis and lifetime prediction for the solder joint of the magnetic head. <b>2015</b> , 118, 691-697		
349	Characterization and growth kinetics of the formation of intermetallic compounds in the liquid state during soldering with lead-free solders. <b>2015</b> , 59, 325-338		1
348	Effect of aluminum concentration on the microstructure and mechanical properties of Sn <sub>88</sub> Cu <sub>10</sub> Al solder alloy. <i>Microelectronics Reliability</i> , <b>2015</b> , 55, 596-601	1.2	16
347	Enhancement of mean-time-to-failure of Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu solder bump joint under current stressing via controlling bump shape. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2015</b> , 26, 1940-1949	2.1	4
346	Growth Behavior of Intermetallic Compounds in Cu/Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu Solder Joints with Different Rates of Cooling. <i>Journal of Electronic Materials</i> , <b>2015</b> , 44, 590-596	1.9	17
345	Effect of BaTiO <sub>3</sub> on the microstructure and mechanical properties of Sn <sub>1.0</sub> Ag <sub>0.5</sub> Cu lead-free solder. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2015</b> , 26, 613-619	2.1	16
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343	Vertical interconnects of microbumps in 3D integration. <b>2015</b> , 40, 257-263		41



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341	Strong effects of minor Ga addition on liquid-state Sn <sub>3</sub> Ga/Co interfacial reactions. <i>Journal of Alloys and Compounds</i> , <b>2015</b> , 649, 1197-1204	5.7	12
340	Development of a microwave sintered TiO <sub>2</sub> reinforced Sn <sub>0.7</sub> wt%Cu <sub>0.05</sub> wt%Ni alloy. <i>Materials and Design</i> , <b>2015</b> , 82, 136-147	8.1	35
339	Effects of Soldering Temperature on IMCs Formation between Sn-0.7Cu Solder and Cu Substrate. <b>2015</b> , 713-715, 2685-2688		
338	Universal solders for direct bonding and packaging of optical devices. <b>2015</b> , 152, 232-236		4
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336	Nonaqueous Halide-Free Flux Reactions with Tin-Based Solders. <i>Journal of Electronic Materials</i> , <b>2015</b> , 44, 1144-1150	1.9	
335	Properties and Reliability of Solder Microbump Joints Between Si Chips and a Flexible Substrate. <i>Journal of Electronic Materials</i> , <b>2015</b> , 44, 2458-2466	1.9	9
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333	Spontaneous Growth of Metal Whiskers on Surfaces of Solids: A Review. <b>2015</b> , 31, 675-698		50
332	Reflow Optimization Process: Thermal Stress Using Numerical Analysis and Intermetallic Spallation in Backwards Compatibility Solder Joints. <b>2015</b> , 40, 1669-1679		7
331	Apparatus for electronic component disassembly from printed circuit board assembly in e-wastes. <b>2015</b> , 144, 11-15		32
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327	Geometry effect on mechanical performance and fracture behavior of micro-scale ball grid array structure Cu/Sn <sub>3</sub> Ag <sub>0.5</sub> Cu/Cu solder joints. <i>Microelectronics Reliability</i> , <b>2015</b> , 55, 1214-1225	1.2	16
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321	Corrosion behavior of lead-free SAC-type solder alloys in liquid media. <b>2015</b> , 15, 206-213		22
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310	Study of discrete voids formation in flip-chip solder joints due to electromigration using in-situ 3D laminography and finite-element modeling. <b>2016</b> ,		0
309	Reliability of Ag Nanoporous Bonding Joint for High Temperature Die Attach under Temperature Cycling. <b>2016</b> , 57, 1192-1196		6
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296	Low-temperature low-cost 58 Bismuth 42 Tin alloy forensic chip re-balling and re-soldering. <b>2016,</b> 19, 60-68		11
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293	Microstructure evolution and shear fracture behavior of aged Sn3Ag0.5Cu/Cu solder joints. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing,</i> <b>2016,</b> 673, 167-177	5.3	60
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290	A review: lead free solder and its wettability properties. <i>Soldering and Surface Mount Technology,</i> <b>2016,</b> 28, 125-132	1.4	17
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280	Effect of Ce on resistivity of Sn-3.8Ag-0.7Cu-xCe lead-free solders. <b>2016</b> , 54, 37-41		4
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278	Effects on the microstructure and mechanical properties of Sn-0.7Cu lead-free solder with the addition of a small amount of magnesium. <b>2016</b> , 23, 641-647		2
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274	Novel Silver Solid-State Bonding Designs Between Two Copper Structures. <b>2017</b> , 7, 10-18		1
273	Effects of Ag addition on solid-state interfacial reactions between SnAgCu solder and Cu substrate. <b>2017</b> , 124, 250-259		31
272	Fundamentals of Electromigration in Interconnects of 3D Packaging. <i>Springer Series in Advanced Microelectronics</i> , <b>2017</b> , 223-244	1	2
271	Eliminating Whisker Growth by Indium Addition in Electroplated Sn on Copper Substrate. <i>Journal of Electronic Materials</i> , <b>2017</b> , 46, 4062-4075	1.9	9

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269	Current induced segregation of intermetallic compounds in three-dimensional integrated circuit microbumps. <i>Intermetallics</i> , <b>2017</b> , 85, 117-124	3.5	9
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267	Effect of high temperature high humidity and thermal shock test on interfacial intermetallic compounds (IMCs) growth of low alpha solders. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2017</b> , 28, 8116-8129	2.1	9
266	Nucleation, grain orientations, and microstructure of Sn-3Ag-0.5Cu soldered on cobalt substrates. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 706, 596-608	5.7	25
265	Structural and dynamic properties of liquid tin from a new modified embedded-atom method force field. <b>2017</b> , 95,		12
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263	Cu <sub>6</sub> Sn and Ni <sub>3</sub> Sn transient liquid phase bonding for die-attach technology applications in high-temperature power electronics packaging. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2017</b> , 28, 7827-7833	2.1	37
262	Current induced rapid phase transformation in Au/Sn reaction couple. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 712, 111-120	5.7	4
261	Effect of type of thermo-mechanical excursion on growth of interfacial intermetallic compounds in Cu/Sn-Ag-Cu solder joints. <i>Microelectronics Reliability</i> , <b>2017</b> , 74, 44-51	1.2	8
260	Interfacial behaviors of Sn-Pb, Sn-Ag-Cu Pb-free and mixed Sn-Ag-Cu/Sn-Pb solder joints during electromigration. <i>Microelectronics Reliability</i> , <b>2017</b> , 73, 106-115	1.2	16
259	Effects of the degradation of methane sulfonic acid electrolyte on the collapse failure of SnAg alloy solders for flip-chip interconnections. <b>2017</b> , 7, 23136-23142		5
258	Lead-Free Sn-Ce-O Composite Coating on Cu Produced by Pulse Electrodeposition from an Aqueous Acidic Sulfate Electrolyte. <i>Journal of Electronic Materials</i> , <b>2017</b> , 46, 5855-5865	1.9	4
257	The Melting Characteristics and Interfacial Reactions of Sn-ball/Sn-3.0Ag-0.5Cu-paste/Cu Joints During Reflow Soldering. <i>Journal of Electronic Materials</i> , <b>2017</b> , 46, 1504-1515	1.9	4
256	Effects of nanoscale Cu <sub>6</sub> Sn <sub>5</sub> particles addition on microstructure and properties of SnBi solder alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2017</b> , 684, 328-334	5.3	39
255	Impact of thermal aging on the intermetallic compound particle size and mechanical properties of lead free solder for green electronics. <i>Microelectronics Reliability</i> , <b>2017</b> , 78, 311-318	1.2	8
254	Diffusivities and atomic mobilities for fcc Cu <sub>3</sub> Ni <sub>3</sub> Sn alloys. <b>2017</b> , 59, 84-89		11
253	Recycling Tin from Electronic Waste: A Problem That Needs More Attention. <b>2017</b> , 5, 9586-9598		43

252	Effects of acrylic adhesives property and optimized bonding parameters on Sn58Bi solder joint morphology for flex-on-board assembly. <i>Microelectronics Reliability</i> , <b>2017</b> , 78, 181-189	1.2	17
251	Effect of Cu solubility on electromigration in Sn(Cu) micro joint. <b>2017</b> , 122, 095702		6
250	Further insight into interfacial interactions in nickel/liquid SnAg solder system at 230±50 °C. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2017</b> , 28, 18366-18378	2.1	4
249	TEM investigation of interfacial microstructure and fracture mode of the Sn-Ag-Cu/Ni joint system. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2017</b> , 706, 269-278	5.3	10
248	Discrete phase method particle simulation of ultra-fine package assembly with SAC305-TiO <sub>2</sub> nano-reinforced lead free solder at different weighted percentages. <i>Microelectronics Reliability</i> , <b>2017</b> , 79, 336-351	1.2	3
247	Phase diagram and structural evolution of tin/indium (Sn/In) nanosolder particles: from a non-equilibrium state to an equilibrium state. <b>2017</b> , 9, 12398-12408		6
246	Effect of indium addition on interfacial IMC growth and bending properties of eutectic Sn0.7Cu solder joints. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2017</b> , 28, 16120-16132	2.1	12
245	. <b>2017</b> ,		11
244	Ab Initio Investigation on Structural, Elastic and Electronic Properties of β-Phase Cu <sub>4.5</sub> Ni <sub>1</sub> Au <sub>0.5</sub> Sn <sub>5</sub> and Cu <sub>5</sub> Ni <sub>1</sub> Sn <sub>4.5</sub> In <sub>0.5</sub> Intermetallic Compounds. <i>Journal of Electronic Materials</i> , <b>2017</b> , 46, 5684-5692	1.9	
243	Bottom-up nanoarchitectures of semiconductor nano-building blocks obtained via a controllable in situ SEM-FIB thermal soldering method. <b>2017</b> , 5, 8707-8713		2
242	Morphologies and evolution of intermetallic compounds formed between Sn <sub>1.0</sub> Ag <sub>0.7</sub> Cu composite solder and Cu substrate. <b>2017</b> , 1		2
241	Effects of AlN Nanoparticles on the Microstructure, Solderability, and Mechanical Properties of Sn-Ag-Cu Solder. <b>2017</b> , 48, 4372-4384		12
240	Wetting and spreading kinetics of liquid Sn on Ag and Ag <sub>3</sub> Sn substrates. <b>2017</b> , 127, 24-28		8
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238	Intermetallic compounds in solar cell interconnections: Microstructure and growth kinetics. <b>2017</b> , 159, 370-388		27
237	Protection against lead-free solder in wave-soldering by Ti/TiC coatings prepared by filtered cathodic arc deposition. <b>2017</b> , 312, 7-12		5
236	Effects of Cu nanoparticles doped flux on the microstructure of IMCs between Sn solder and Cu substrate. <b>2017</b> ,		2
235	Effects of POSS on the interfacial reactions between Sn-3.5Ag solders and Cu substrates during soldering. <b>2017</b> ,		

234	The influence of thermal aging on reliability of Sn-58Bi interconnects. <b>2017</b> ,		
233	Microstructure and mechanical properties of resistor chip joints fabricated by laser soldering using Sn-58Bi solder on Ni(P)/Cu pads. <b>2017</b> ,		1
232	Towards reliable pitch assembly using Cu/Ni/SnAg based interconnects. <b>2017</b> ,		
231	Effect of isothermal aging on mechanical properties and strain rate sensitivity of the eutectic Sn-58Bi solder alloy. <b>2017</b> ,		0
230	The Effect of Polymer Rebound on SnBi58 Solder ACFs Joints Cracks during a Thermo-Compression Bonding. <b>2017</b> ,		1
229	Experimental Observation on Solid-State Reactive Diffusion between SnAg Alloys and Ni. <b>2017</b> , 58, 561-566		7
228	Acetic acid mediated leaching of metals from lead-free solders. <b>2017</b> , 4,		2
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226	On the initial stages of solid state reactions in Ni/Sn-Ag solder system at 150±10 °C. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 742, 199-211	5-7	4
225	Experimental Investigation of Microstructure and Phase Transitions in Ag-Cu-Zn Brazing Alloys. <b>2018</b> , 27, 1570-1579		4
224	Effect of Gold Addition on the Microstructure and Mechanical Properties of Sn3.8Ag0.7Cu Lead-Free Solder Alloy. <b>2018</b> , 71, 1497-1505		3
223	A new failure mechanism of electromigration by surface diffusion of Sn on Ni and Cu metallization in microbumps. <b>2018</b> , 8, 5935		17
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221	Aging Studies of Cu3Sn Intermetallics in Cu Micropillars Used in Flip Chip Attachment onto Cu Lead Frames. <i>Journal of Electronic Materials</i> , <b>2018</b> , 47, 1694-1704	1.9	3
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218	Low-Temperature Copper Bonding Strategy with Graphene Interlayer. <b>2018</b> , 12, 2395-2402		36
217	The Mechanical and Microstructural Changes of Sn-Ag-Bi Solders with Cooling Rate and Bi Content Variations. <b>2018</b> , 27, 344-352		11

216	Experimental analysis of Sn-3.0Ag-0.5Cu solder joint board-level drop/vibration impact failure models after thermal/isothermal cycling. <i>Microelectronics Reliability</i> , <b>2018</b> , 80, 29-36	1.2	20
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211	Microstructure and opto-electronic properties of Sn-rich Au-Sn diffusive solders. <i>Applied Surface Science</i> , <b>2018</b> , 451, 32-39	6.7	9
210	Asymmetrical interfacial reactions of Ni/SAC101(NiIn)/Ni solder joint induced by current stressing. <b>2018</b> , 123, 115102		3
209	The suppression effect of easy-to-activate nucleation sites on the critical heat flux in pool boiling. <b>2018</b> , 129, 231-237		10
208	Advances in LED Solder Joint Reliability Testing and Prediction. <b>2018</b> , 301-351		0
207	A molecular dynamics investigation of the micro-mechanism for vacancy formation between Ag <sub>3</sub> Sn and Sn under electromigration. <b>2018</b> , 116, 99-106		4
206	Effect of Ni-P Plating Temperature on Growth of Interfacial Intermetallic Compound in Electroless Nickel Immersion Gold/Sn-Ag-Cu Solder Joints. <i>Journal of Electronic Materials</i> , <b>2018</b> , 47, 110-116	1.9	4
205	Investigation on the Joule heat and thermal expansion in flip chip package by electro-thermo-mechanical coupling analysis. <b>2018</b> ,		
204	Modal analysis and experimental testing for PCBA. <b>2018</b> ,		
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202	Influence of Ultrasonic Vibration Power on the Wettability and Interfacial Microstructure of Sn <sub>2.5</sub> Ag <sub>0.7</sub> Cu <sub>0.1</sub> RE <sub>0.05</sub> Ni Solder Alloy on Cu Substrate. <b>2018</b> , 381, 012157		1
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193	Influence of Cu nanoparticles on Cu <sub>6</sub> Sn <sub>5</sub> growth behavior at the interface of Sn/Cu solder joints. <b>2018</b> ,		
192	Investigation of microstructure and growth behavior of CoSn <sub>3</sub> full intermetallic joints in electronic packaging. <b>2018</b> ,		1
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184	A computational investigation of the effect of three-dimensional void morphology on the thermal resistance of solder thermal interface materials. <b>2018</b> , 142, 346-360		23
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177	Effects of Aging on the Damage Accumulation in SAC305 Lead Free Solders Subjected to Cyclic Loading. <b>2019</b> ,		0
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167	Ultrasonic-Accelerated Intermetallic Joint Formation with Composite Solder for High-Temperature Power Device Packaging. <b>2019</b> ,		1
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164	Joint effects of Ti and Cu additions on microstructure and mechanical properties of Zn-25Sn-xCu-yTi high-temperature Pb-free solders. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2019</b> , 765, 138323	5.3	5
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160	Sintered Silver for LED Applications. <b>2019,</b> 35-65		1
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147	An In-Class Practice and Oral-Presentation as an Innovative Approach for Teaching Hydraulic Component Reliability Theory and Fault Diagnosis. <b>2019,</b>		
146	Size effects on segregated growth kinetics of interfacial IMC between Sn solder and Cu substrate. <b>2019,</b>		
145	Insights into Growth Behavior of Intermetallic Compounds in Sn-Ag-Cu Solder Joints during Mechanical and Thermo-Mechanical Deformation Processes. <b>2019,</b>		

144	The influence of phase inhomogeneity on the current density and temperature gradient in Cu/Sn58Bi/Cu solder joint. <b>2019</b> ,		
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142	Novel polarity effect on intermetallic compound thickness changes during electromigration in Cu/Sn-3.0Ag-0.5Cu/Cu solder joints. <b>2019</b> , 126, 185109		9
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136	Interfacial reaction and mechanical reliability between Sn-3Ag-0.5Cu alloy and ultrathin-Ni(P)-type Au/Pd(P)/Ni(P)/Cu metallization pad. <b>2019</b> , 359, 374-383		5
135	Electromigration behaviors of Sn58%Bi solder containing Ag-coated MWCNTs with OSP surface finished PCB. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 775, 581-588	5.7	17
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133	Review of the wettability of solder with a wetting balance test for recent advanced microelectronic packaging. <b>2019</b> , 44, 324-343		10
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131	Effects of Fe <sub>2</sub> O <sub>3</sub> Additions on Assembly Reliability of Electroplated Sn-Based Solder Cap on Cu Pillar Bump During Thermal Cycling. <i>Journal of Electronic Materials</i> , <b>2019</b> , 48, 1079-1090	1.9	2
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129	Recent advances on kinetic analysis of solder joint reactions in 3D IC packaging technology. <i>Materials Science and Engineering Reports</i> , <b>2019</b> , 136, 1-12	30.9	52
128	Microstructure and properties of continuous casting Ag <sub>28</sub> Cu <sub>3</sub> Sn alloy fabricated by dieless drawing. <b>2020</b> , 39, 279-288		0
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122	The Microstructure, Thermal, and Mechanical Properties of Sn-3.0Ag-0.5Cu-Sb High-Temperature Lead-Free Solder. <i>Materials</i> , <b>2020</b> , 13,	3.5	5
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118	Review: Special brazing and soldering. <b>2020</b> , 60, 608-635		20
117	Effect of reinforced multiwall carbon nanotubes on the damping characteristics of Sn-Ag-Cu lead-free solder. <b>2020</b> , 276, 128196		3
116	Effect of Ni Content on the Microstructure Formation and Properties of Sn-0.7Cu-xNi Solder Alloys. <b>2020</b> , 29, 4934-4943		2
115	Formation of a Diffusion Barrier-Like Intermetallic Compound to Suppress the Formation of Micro-voids at the Sn-0.7Cu/Cu Interface by Optimal Ga Additions. <b>2020</b> , 72, 3538-3546		1
114	Effect of relative humidity on corrosion behavior of SAC305 and SnBi solders under polyvinyl chloride fire smoke atmosphere. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2020</b> , 31, 19920-19930	2.1	1
113	Controlling Ag <sub>3</sub> Sn Plate Formation and Its Effect on the Creep Resistance of SnBi Lead-Free Solder by Adding Minor Alloying Elements Fe, Co, Te and Bi. <b>2020</b> , 27, 4294		2
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106	Effect of intermetallic compound thickness on mechanical fatigue properties of copper pillar micro-bumps. <i>Microelectronics Reliability</i> , <b>2020</b> , 111, 113723	1.2	6
105	Solderability, Microstructure, and Thermal Characteristics of Sn-0.7Cu Alloy Processed by High-Energy Ball Milling. <i>Metals</i> , <b>2020</b> , 10, 370	2.3	2
104	Effect of Sn nanoparticle additions on thermal properties of Sn-Ag-Cu lead-free solder paste. <b>2020</b> , 690, 178642		8
103	An analytical model to predict diffusion induced intermetallic compounds growth in Cu-Sn-Cu sandwich structures. <b>2020</b> , 10, 33-37		0
102	Optimal Hot-Dipped Tinning Process Routine for the Fabrication of Solderable Sn Coatings on Circuit Lead Frames. <i>Materials</i> , <b>2020</b> , 13,	3.5	
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99	Effect of nickel metallization thickness on microstructure evolution and mechanical properties in Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu/Au/Ni/Cu solder joints. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2020</b> , 31, 11569-11580	2.1	1
98	Interfacial reactions and mechanical properties of Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu solder with pure Pd or Pd(P) layers containing thin-Au/Pd/Ni(P) surface-finished PCBs during aging. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2020</b> , 31, 4027-4039	2.1	0
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96	A Novel Intermetallic Compound Insertion Bonding to Improve Throughput for Sequential 3-D Stacking. <b>2020</b> , 10, 669-678		3
95	Effects of Creep Failure Mechanisms on Thermomechanical Reliability of Solder Joints in Power Semiconductors. <b>2020</b> , 35, 8956-8964		15
94	Effect of micromorphology on corrosion and mechanical properties of SAC305 lead-free solders. <i>Microelectronics Reliability</i> , <b>2020</b> , 108, 113634	1.2	10
93	Effect of Ni(P) thickness in Au/Pd/Ni(P) surface finish on the electrical reliability of Sn <sub>3.0</sub> Ag <sub>0.5</sub> Cu solder joints during current-stressing. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 850, 156729	5.7	5
92	Electro-chemo-mechanics of lithium in solid state lithium metal batteries. <b>2021</b> , 14, 602-642		40
91	Microstructure, wetting property of Sn <sub>3.0</sub> Ag <sub>0.5</sub> CuBi <sub>2</sub> Ce solder and IMC growth at solder/Cu interface during thermal cycling. <b>2021</b> , 40, 714-719		9

90	Cu <sub>5</sub> Sn Solder Alloy by Combustion Synthesis: Structural Characterization and Magnetic Properties. <b>2021</b> , 30, 30-35		0
89	Determination of internal stress in soldered joints with Sn-based alloys by X-ray diffraction. <b>2021</b> , 45, 4364-4366		1
88	Mathematical Modelling of Vickers Hardness of Sn-9Zn-Cu Solder Alloys Using an Artificial Neural Network. <b>2021</b> , 27, 4084-4096		3
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