Y C Chan

List of Publications by Year in Descending Order

125 papers	1,578 citations	22 h-index	33 g-index
136 ext. papers	1,822 ext. citations	2.6 avg, IF	4.51 L-index

#	Paper	IF	Citations
125	Observation of void formation patterns in SnAg films undergoing electromigration and simulation using random walk methods. *Scientific Reports*, **2021**, 11, 8668	4.9	0
124	Electromigration behavior of silver thin film fabricated by electron-beam physical vapor deposition. *Journal of Materials Science*, **2021**, 56, 9769-9779	4.3	1
123	Novel polarity effect on intermetallic compound thickness changes during electromigration in Cu/Sn-3.0Ag-0.5Cu/Cu solder joints. *Journal of Applied Physics*, **2019**, 126, 185109	2.5	9
122	Microstructural evolution of 96.5Sn3Ag0.5Cu lead free solder reinforced with nickel-coated graphene reinforcements under large temperature gradient. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 5253-5263	2.1	14
121	Reliability performance of tin–bismuth–silver (Sn57.6Bi0.4Ag) solder joints with different content of carbon nano-tubes (CNTs) or nickel (Ni)-modified CNTs. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 8584-8593	2.1	6
120	Study of Fusion Thickness of Tin Solder Heating by Self-Propagating Exothermic Reaction. *Journal of Electronic Materials*, **2018**, 47, 7435-7448	1.9	1
119	Effect of Nickel-Coating Modified CNTs on the Dopant Dispersion and Performance of BGA Solder Joints **2017**,		2
118	An investigation on the ZnO retained ratio, microstructural evolution, and mechanical properties of ZnO doped Sn3.0Ag0.5Cu composite solder joints. *Journal of Materials Science: Materials in Electronics*, **2016**, 27, 9083-9093	2.1	6
117	Thermo-migration behavior of SAC305 lead-free solder reinforced with fullerene nanoparticles. *Journal of Materials Science*, **2016**, 51, 10077-10091	4.3	20
116	Influence of the aggregated Ag3Sn on the improvement of electromigration phenomenon in the doped Sn58Bi solder joints. *Journal of Materials Science: Materials in Electronics*, **2015**, 26, 5129-5134	2.1	11
115	Microstructure, elastic modulus and shear strength of alumina (Al2O3) nanoparticles-doped tin–silver–copper (Sn–Ag–Cu) solders on copper (Cu) and gold/nickel (Au/Ni)-plated Cu substrates. *Journal of Materials Science: Materials in Electronics*, **2015**, 26, 7039-7048	2.1	33
114	Electromigration in eutectic In-48Sn ball grid array (BGA) solder interconnections with Au/Ni/Cu pads. *Journal of Materials Science: Materials in Electronics*, **2015**, 26, 8522-8533	2.1	18
113	The impact of reflow soldering induced dopant redistribution on the mechanical properties of CNTs doped Sn58Bi solder joints. *Journal of Materials Science: Materials in Electronics*, **2015**, 26, 5318-5325	2.1	8
112	Tin whiskers growth of SnAgIn solder on Kovar substrate with Au/Ni plating. *Journal of Materials Science: Materials in Electronics*, **2014**, 25, 1222-1227	2.1	4
111	Interfacial microstructure and hardness of nickel (Ni) nanoparticle-doped tin–silver–copper (Sn–Ag–Cu) solders on immersion silver (Ag)-plated copper (Cu) substrates. *Journal of Materials Science: Materials in Electronics*, **2014**, 25, 4012-4023	2.1	11
110	Effect of 1 wt% ZnO nanoparticles addition on the microstructure, IMC development, and mechanical properties of high Bi content Sn57.6Bi0.4Ag solder on Ni metalized Cu pads. *Journal of Materials Science: Materials in Electronics*, **2014**, 25, 2169-2176	2.1	6
109	Microstructure and kinetic analysis of the properties and behavior of nickel (Ni) nano-particle doped tin–zinc–bismuth (Sn8Zn3Bi) solders on immersion silver (Ag)-plated copper (Cu) substrates. *Journal of Materials Science: Materials in Electronics*, **2014**, 25, 2529-2539	2.1	9

108	Drawbacks of the nanoparticle reinforced lead-free BGA solder joints **2014**,		1
107	Influence of cerium oxide (CeO2) nanoparticles on the microstructure and hardness of tin–silver–copper (Sn–Ag–Cu) solders on silver (Ag) surface-finished copper (Cu) substrates. *Journal of Materials Science: Materials in Electronics*, **2014**, 25, 5375-5387	2.1	16
106	Electroless Ni-P-ZrO2 metallization for lead-free solder interconnection **2014**,		2
105	Reinforced solder joint performance by incorporation of ZrO2 nanoparticles in electroless Ni–P composite layer. *Journal of Materials Research*, **2014**, 29, 2657-2666	2.5	1
104	A study of Ag additive methods by comparing mechanical properties between Sn57.6Bi0.4Ag and 0.4 wt% nano-Ag-doped Sn58Bi BGA solder joints. *Journal of Materials Science: Materials in Electronics*, **2014**, 25, 4380-4390	2.1	33
103	Influence of small Sb nanoparticles additions on the microstructure, hardness and tensile properties of Sn–9Zn binary eutectic solder alloy. *Journal of Materials Science: Materials in Electronics*, **2012**, 23, 1427-1434	2.1	13
102	Remedies to control electromigration: Effects of CNT doped Sn-Ag-Cu interconnects **2012**,		2
101	Thermomigration and electromigration in Sn8Zn3Bi solder joints. *Journal of Materials Science: Materials in Electronics*, **2011**, 22, 217-222	2.1	14
100	Multi-physics computer simulation of the electromigration phenomenon **2011**,		2
99	Growth characteristic study of intermetallic compounds growth in nanoscale-thickness Cu/Sn/Cu sandwich structure **2011**,		1
98	Fast-response polyimide/multiwall carbon nanotube composite films for monitoring humidity in microelectronic packages **2010**,		1
97	Thermomigration and electromigration in Sn58Bi ball grid array solder joints. *Journal of Materials Science: Materials in Electronics*, **2010**, 21, 1090-1098	2.1	18
96	Thermomigration and electromigration in Sn58Bi solder joints. *Journal of Applied Physics*, **2009**, 105, 093537	2.5	33
95	The determination of hexavalent chromium (Cr6+) in electronic and electrical components and products to comply with RoHS regulations. *Journal of Hazardous Materials*, **2009**, 163, 1360-8	12.8	38
94	Finite-Element Simulation of Stress Intensity Factors in Solder Joint Intermetallic Compounds. *IEEE Transactions on Device and Materials Reliability*, **2009**, 9, 40-48	1.6	6
93	Effect of 0.5 wt% Cu in Sn-3.5%Ag Solder to Retard Interfacial Reactions With the Electroless Ni-P Metallization for BGA Solder Joints Application. *IEEE Transactions on Components and Packaging Technologies*, **2008**, 31, 431-438		3
92	Fracture mechanics analysis of cracks in solder joint Intermetallic Compounds **2008**,		3
91	Impact of RoHS/WEEE- on effective recycling- electronics system integration **2008**,		2

90	A hybrid prognostics methodology for electronic products **2008**,		6
89	Anisotropic Conductive Adhesives for Flip-Chip Interconnects. *Journal of Adhesion Science and Technology*, **2008**, 22, 871-892	2	8
88	The time-dependent melting failure in flip chip lead-free solder interconnects under current stressing. *Applied Physics Letters*, **2008**, 93, 041907	3.4	15
87	Effect of nano Ni additions on the structure and properties of Sn-9Zn and Sn-8Sn-3Bi solder in ball grid array packages **2008**,		1
86	High Current Density induced Damage Mechanisms in Electronic Solder Joints: A State-of-the-Art Review **2007**,		4
85	Shear Strength Analysis of Ball Grid Array (BGA) Solder Interfaces **2007**,		3
84	Multiple reflow study of ball grid array (BGA) solder joints on Au/Ni metallization. *Journal of Materials Science*, **2007**, 42, 5239-5247	4.3	12
83	The effect of bonding force on the electrical performance and reliability of NCA joints processed at a lowered temperature. *Journal of Materials Science*, **2007**, 42, 6658-6664	4.3	3
82	Effect of current stressing on the reliability of 63Sn37Pb solder joints. *Journal of Materials Science*, **2007**, 42, 7415-7422	4.3	10
81	Study of the thermal stress in a Pb-free half-bump solder joint under current stressing. *Applied Physics Letters*, **2007**, 90, 232112	3.4	10
80	Effect of multiple reflows on mechanical strength of the interface formed between Sn□nBi solder and Au/Ni/Cu bond pad. *Journal of Materials Research*, **2007**, 22, 40-45	2.5	1
79	Electrical Characterization of NCP- and NCF-Bonded Fine-Pitch Flip-Chip-on-Flexible Packages. *IEEE Transactions on Advanced Packaging*, **2007**, 30, 142-147		12
78	Microstructural evolution and atomic transport by thermomigration in eutectic tin-lead flip chip solder joints. *Journal of Applied Physics*, **2007**, 102, 043502	2.5	30
77	Effect of reaction time on mechanical strength of the interface formed between the Sn-Zn(-Bi) solder and the Au/Ni/Cu bond pad. *Journal of Electronic Materials*, **2006**, 35, 1812-1817	1.9	11
76	Microwave preheating of anisotropic conductive adhesive films for high-speed flip chip on flex bonding. *Journal of Electronic Materials*, **2006**, 35, 123-131	1.9	3
75	Processability and reliability of nonconductive adhesives (NCAs) in fine-pitch chip-on-flex applications. *Journal of Electronic Materials*, **2006**, 35, 443-452	1.9	10
74	Comparative Wetting Behavior of Sn-0.7Cu and Sn-0.7Cu-0.3Ni Solders on Cu and Ni Substrates **2006**,		2
73	Shearing tests of solder joints on tape ball grid array substrates. *Journal of Materials Research*, **2006**, 21, 2224-2231	2.5	10

72	Electrical Characterization of NCP- and NCF-Bonded Fine-Pitch Flip-Chip-on-Flexible Packages. *IEEE Transactions on Advanced Packaging*, **2006**, 29, 735-740		8
71	Electrochemical corrosion study of Pb-free solders. *Journal of Materials Research*, **2006**, 21, 62-70	2.5	33
70	Thermomigration in eutectic tin-lead flip chip solder joints **2006**,		5
69	Degradation of Sn37Pb and Sn3.5Ag0.5Cu solder joints between Au/Ni (P)/Cu pads stressed with moderate current density. *Journal of Materials Science: Materials in Electronics*, **2006**, 17, 943-950	2.1	9
68	Effect of solder filler thickness on the mechanical stability of fiber-solder-ferrule joint under temperature cyclic loading. *Journal of Materials Science: Materials in Electronics*, **2006**, 17, 325-333	2.1	1
67	Process optimization to overcome void formation in nonconductive paste interconnections for fine-pitch applications. *Journal of Electronic Materials*, **2005**, 34, 1143-1149	1.9	6
66	Macro-Micro Modeling Analysis for High Density Packaged Flip Chips **2005**,		1
65	Effect of 0.5 wt % Cu in Sn□3.5%Ag Solder Balls on the Solid State Interfacial Reaction with Au/Ni/Cu Bond Pads for Ball Grid Array (BGA) Applications. *Chemistry of Materials*, **2005**, 17, 2223-2226	9.6	28
64	Interfacial Reaction Phenomena of Sn□Pb Solder with Au/Ni/Cu Metallization. *Chemistry of Materials*, **2005**, 17, 927-930	9.6	9
63	Reliability of Anisotropic Conductive Film Joints Using Bumpless Chip□nfluence of Reflow Soldering and Environmental Testing. *Journal of Electronic Packaging, Transactions of the ASME*, **2005**, 127, 113-119	2	7
62	Comparative Study of the Dissolution Kinetics of Electrolytic Ni and Electroless NiP Layers by Molten Sn3.5Ag Solder Alloy. *Journal of Electronic Packaging, Transactions of the ASME*, **2005**, 127, 365-369	2	2
61	Interfacial reactions of Cu-containing lead-free solders with Au/NiP metallization. *Journal of Electronic Materials*, **2005**, 34, 662-669	1.9	7
60	Comparative study of interfacial reactions of Sn-Ag-Cu and Sn-Ag solders on Cu pads during reflow soldering. *Journal of Electronic Materials*, **2005**, 34, 46-52	1.9	19
59	Effect of volume in interfacial reaction between eutectic Sn-3.5% Ag-0.5% Cu solder and Cu metallization in microelectronic packaging. *Journal of Electronic Materials*, **2005**, 34, 143-149	1.9	62
58	Wetting and reaction of Sn-2.8Ag-0.5Cu-1.0Bi solder with Cu and Ni substrates. *Journal of Electronic Materials*, **2005**, 34, 1115-1122	1.9	41
57	Interfacial reactions of Sn-3.5% Ag and Sn-3.5% Ag-0.5% Cu solder with electroless Ni/Au metallization during multiple reflow cycles. *Journal of Materials Science: Materials in Electronics*, **2005**, 16, 153-158	2.1	13
56	Solid-state growth kinetics of Ni3Sn4 at the Sn□3.5Ag solder□Ni interface. *Journal of Applied Physics*, **2005**, 98, 123527	2.5	42
55	A Study of Impact Reliability of Lead-free BGA Balls on Au/Electrolytic Ni/Cu Bond Pad. *Materials Research Society Symposia Proceedings*, **2005**, 863, B10.5-1		7

54	Interfacialreactions of SnCu and SnPbAg solder with Au/Ni during extended timereflow in ball grid array packages. *Journal of Materials Research*, **2004**, 19, 2897-2904	2.5	18
53	Elimination of Au-embrittlement in solder joints on Au/Ni metallization. *Journal of Materials Research*, **2004**, 19, 1303-1306	2.5	50
52	Effect of drop impact energy on contact resistance of anisotropic conductive adhesive film joints. *Journal of Materials Research*, **2004**, 19, 1662-1668	2.5	16
51	Effect of bump characteristics and temperature variation on the online contact resistance of anisotropic conductive joints. *Journal of Electronic Materials*, **2004**, 33, 1028-1035	1.9	2
50	Effect of spin coating on the curing rate of epoxy adhesive for the fabrication of a polymer optical waveguide. *Journal of Electronic Materials*, **2004**, 33, 224-228	1.9	18
49	A continuous contact resistance monitoring during the temperature ramp of anisotropic conductive adhesive film joint. *Journal of Electronic Materials*, **2004**, 33, 14-21	1.9	7
48	The Effect of Cooling Rate on the Growth of Cu-Sn Intermetallics in Annealed PBGA Solder Joints. *Journal of Electronic Packaging, Transactions of the ASME*, **2003**, 125, 153-156	2	5
47	Electrical Conductive Characteristics of Anisotropic Conductive Adhesive Particles. *Journal of Electronic Packaging, Transactions of the ASME*, **2003**, 125, 609-616	2	22
46	Research on the contact resistance, reliability, and degradation mechanisms of anisotropically conductive film interconnection for flip-chip-on-flex applications. *Journal of Electronic Materials*, **2003**, 32, 228-234	1.9	27
45	Plasma cleaning of the flex substrate for flip-chip bonding with anisotropic conductive adhesive film. *Journal of Electronic Materials*, **2003**, 32, 1117-1124	1.9	11
44	Curing kinetics of anisotropic conductive adhesive film. *Journal of Electronic Materials*, **2003**, 32, 131-136	1.9	21
43	Current-carrying capacity of anisotropic-conductive film joints for the flip chip on flex applications. *Journal of Electronic Materials*, **2003**, 32, 101-108	1.9	9
42	Effect of 0.5 wt % Cu in Sn3.5%Ag Solder on the Interfacial Reaction with Au/Ni Metallization. *Chemistry of Materials*, **2003**, 15, 4340-4342	9.6	60
41	Effect of reaction time and P content on mechanical strength of the interface formed between eutectic SnAg solder and Au/electroless Ni(P)/Cu bond pad. *Journal of Applied Physics*, **2003**, 94, 4108-4115	2.5	93
40	Effect of 0.5 wt % Cu addition in Sn3.5%Ag solder on the dissolution rate of Cu metallization. *Journal of Applied Physics*, **2003**, 94, 7904	2.5	69
39	An Investigation of Intermetallics Formation Between Pd/Ag Metallization and Sn/Pb/Ag Solder. *Journal of Electronic Packaging, Transactions of the ASME*, **2002**, 124, 305-310	2	2
38	Interfacial reaction of Pb-Sn solder and Sn-Ag solder with electroless Ni deposit during reflow. *Journal of Electronic Materials*, **2002**, 31, 1117-1121	1.9	38
37	Correlation Between the Mechanical Strength and Curing Condition of No-Flow Flip Chip Assemblies. *Journal of Electronic Packaging, Transactions of the ASME*, **2002**, 124, 397-402	2	2

36	Study of Ni3P growth due to solder reaction-assisted crystallization of electroless Ni-P metallization. *Journal of Materials Science Letters*, **2000**, 19, 1755-1757		23
35	Metallurgical reaction and mechanical strength of electroless Ni-P solder joints for advanced packaging applications. *Journal of Materials Science: Materials in Electronics*, **2000**, 11, 587-593	2.1	20
34	Developing a lead-free solder alloy Sn-Bi-Ag-Cu by mechanical alloying. *Journal of Electronic Materials*, **2000**, 29, 1015-1020	1.9	39
33	Microstructural evolution of a lead-free solder alloy Sn-Bi-Ag-Cu prepared by mechanical alloying during thermal shock and aging. *Journal of Electronic Materials*, **2000**, 29, 1021-1026	1.9	24
32	Nondestructive Evaluation of Ceramic Substrate With Embedded Passive Components by SAM. *Journal of Electronic Packaging, Transactions of the ASME*, **2000**, 122, 172-177	2	2
31	Electronic structures of polycrystalline ZnO thin films probed by electron energy loss spectroscopy. *Applied Physics Letters*, **2000**, 77, 1484-1486	3.4	23
30	Correlation between Ni3Sn4 intermetallics and Ni3P due to solder reaction-assisted crystallization of electroless NiP metallization in advanced packages. *Journal of Materials Research*, **2000**, 15, 2534-2539	2.5	49
29	Optical characterization of hydrogenated amorphous silicon thin films deposited at high rate. *Journal of Electronic Materials*, **1999**, 28, 1452-1456	1.9	8
28	Digital speckle correlation method based on wavelet-packet noise-reduction processing. *Applied Optics*, **1999**, 38, 3474-82	1.7	7
27	Influence of Minority Carrier Mobility on Organic Electroluminescent Device Characteristics. *Digest of Technical Papers SID International Symposium*, **1999**, 30, 568	0.5	1
26	Aging effects on shear fatigue life and shear strength of soldered thick film joints. *IEEE Transactions on Advanced Packaging*, **1998**, 21, 398-406		12
25	Interactions between SilverPalladium Metallization and TinLeadSilver Solder. *Physica Status Solidi A*, **1998**, 166, R13-R14		7
24	Diamond-like carbon protective films for organic photoconductors. *Journal of Electronic Materials*, **1998**, 27, 42-44	1.9	3
23	The influence of direct current bias on the initial aging of a doped lead magnesium niobate ceramic. *Journal of Materials Research*, **1998**, 13, 675-679	2.5	4
22	Protective AlZrN film for organic photoconductors. *Journal of Materials Research*, **1998**, 13, 2042-2044	2.5	3
21	Effect of negative rf bias on electrophotographic properties of hard diamond-like carbon films deposited on organic photoconductors. *Journal of Physics Condensed Matter*, **1998**, 10, 7835-7841	1.8	5
20	Effects of bandwidth limitations on the localized state distribution calculated from transient photoconductivity data. *Journal of Applied Physics*, **1998**, 83, 4782-4787	2.5	5
19	Probing of microvoids in high-rate deposited a-Si: H thin films by variable energy positron annihilation spectroscopy. *Journal of Materials Research*, **1998**, 13, 2833-2840	2.5	

18	Identification of Vacancy-Like Defects in High-Rate Grown a-Si Before and After Light Soaking by Vepas. *Materials Research Society Symposia Proceedings*, **1998**, 507, 637		
17	Interface Characterisation and Internal Electric Field Evaluation of a-Si:H Solar Cell by Variable Energy Positron Annihilation Spectroscopy. *Materials Research Society Symposia Proceedings*, **1998**, 507, 643		
16	Fabrication and Characterization of Multilayer Capacitors Buried in a Low Temperature Co-Fired Ceramic Substrate. *Active and Passive Electronic Components*, **1998**, 20, 215-224	0.3	5
15	A new protective AlN film for organic photoconductors. *Applied Physics Letters*, **1997**, 71, 184-186	3.4	11
14	Fatigue in hydrazone-based xerographic photoreceptors: Effect of ultraviolet irradiation. *Journal of Materials Research*, **1997**, 12, 106-112	2.5	4
13	Experimental Determination of the Distribution of Tail States of Hydrogenated Amorphous Silicon: A Transient Photocurrent Analysis. *Materials Research Society Symposia Proceedings*, **1997**, 467, 257		
12	Study of Microvoids in High-Rate a-Si:H Using Positron Annihilation. *Materials Research Society Symposia Proceedings*, **1997**, 467, 525		
11	Influence of Dielectric Film Thickness on the Magnetic Properties of the Magneto-Optical Multilayer Films. *Materials Research Society Symposia Proceedings*, **1997**, 475, 93		
10	Influence of AIN protective film thickness on the hardness and electrophotographic properties of organic photoconductors. *Journal of Electronic Materials*, **1997**, 26, 387-390	1.9	3
9	Thermally stimulated current measurements on a UV irradiated organic photoreceptor layer. *Journal of Electronic Materials*, **1997**, 26, 470-473	1.9	
8	Optical Properties and Reactive Sputtering Conditions of AIN and AlSiN Thin Films for Magneto-Optical Applications. *Journal of Electronic Materials*, **1997**, 26, 21-24	1.9	8
7	Nondestructive detection of delaminations in multilayer ceramic capacitors using improved digital speckle correlation method. *Microwave and Optical Technology Letters*, **1997**, 16, 80-85	1.2	6
6	Defect Characterization of High-Rate Deposited Hydrogenated Amorphous Silicon Films. *Materials Research Society Symposia Proceedings*, **1996**, 420, 599		
5	The modification of electrophotographic and mechanical properties of organic photoconductors by ultra-violet irradiation. *Journal of Electronic Materials*, **1996**, 25, 1451-1457	1.9	8
4	Analysis of the infrared transmission data of hydrogenated amorphous silicon film fabricated by high rate PECVD. *Journal of Electronic Materials*, **1996**, 25, 1837-1840	1.9	4
3	Analysis of a tunable frequency-selective surface on an in-plane biased ferrite substrate. *Microwave and Optical Technology Letters*, **1996**, 13, 59-63	1.2	14
2	Effect of dopants on ageing properties for the PMN-0.1 PT relaxor ferroelectric ceramics. *Journal of Materials Science: Materials in Electronics*, **1996**, 7, 133	2.1	5
1	Characteristics of porosity in solder pastes during infrared reflow soldering. *Journal of Materials Science*, **1995**, 30, 5543-5550	4.3	6