

Y C Chan

List of Publications by Year in descending order

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136
papers

1,939
citations

279487

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all docs

136
docs citations

136
times ranked

918
citing authors

#	ARTICLE	IF	CITATIONS
1	Electromigration behavior of silver thin film fabricated by electron-beam physical vapor deposition. Journal of Materials Science, 2021, 56, 9769-9779.	1.7	6
2	Observation of void formation patterns in SnAg films undergoing electromigration and simulation using random walk methods. Scientific Reports, 2021, 11, 8668.	1.6	2
3	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, .	1.1	15
4	Microstructural evolution of 96.5Sn-3Ag-0.5Cu lead free solder reinforced with nickel-coated graphene reinforcements under large temperature gradient. Journal of Materials Science: Materials in Electronics, 2018, 29, 5253-5263.	1.1	15
5	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.	1.1	7
6	Study of Fusion Thickness of Tin Solder Heating by Self-Propagating Exothermic Reaction. Journal of Electronic Materials, 2018, 47, 7435-7448.	1.0	1
7	Effect of Nickel-Coating Modified CNTs on the Dopant Dispersion and Performance of BGA Solder Joints. , 2017, , .		3
8	Thermo-migration behavior of SAC305 lead-free solder reinforced with fullerene nanoparticles. Journal of Materials Science, 2016, 51, 10077-10091.	1.7	24
9	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.	1.1	13
10	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.	1.1	21
11	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.	1.1	9
12	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.	1.1	13
13	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.	1.1	38
14	Effect of pad shape on electromigration in solder bump joints. , 2014, , .		0
15	Drawbacks of the nanoparticle reinforced lead-free BGA solder joints. , 2014, , .		1
16	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.	1.1	19
17	Electroless Ni-P-ZrO ₂ metallization for lead-free solder interconnection. , 2014, , .		2
18	Interfacial microstructure and shear strength of Sn-Ag-Cu based composite solders on Cu and Au/Ni metallized Cu substrates. , 2014, , .		0

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19	Reinforced solder joint performance by incorporation of ZrO_2 nanoparticles in electroless Ni-P composite layer. Journal of Materials Research, 2014, 29, 2657-2666.	1.2	6
20	A study of Ag additive methods by comparing mechanical properties between Sn57.6Bi0.4Ag and 0.4wt% nano-Ag-doped Sn58Bi BGA solder joints. Journal of Materials Science: Materials in Electronics, 2014, 25, 4380-4390.	1.1	38
21	Tin whiskers growth of SnAgIn solder on Kovar substrate with Au/Ni plating. Journal of Materials Science: Materials in Electronics, 2014, 25, 1222-1227.	1.1	5
22	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.	1.1	13
23	Effect of 1wt% 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.	1.1	8
24	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.	1.1	9
25	Electroless Ni-P-ZrO ₂ metallization for lead-free solder interconnection. , 2014, , .		0
26	Comments on electromigration analysis methods. , 2013, , .		0
27	Remedies to control electromigration: Effects of CNT doped Sn-Ag-Cu interconnects. , 2012, , .		3
28	Influence of diamond additions on lead-free Sn-Zn-Bi solder-alloys. , 2012, , .		0
29	Reinforced performance of lead-free Sn-8Zn-3Bi solder with doping of 0.03 wt.% C ₆₀ on Cu pads. , 2012, , .		0
30	Microstructure and plating thickness analysis of different surface finished plated printed circuit boards. , 2012, , .		0
31	Influence of small Sb nanoparticles additions on the microstructure, hardness and tensile properties of Sn9Zn binary eutectic solder alloy. Journal of Materials Science: Materials in Electronics, 2012, 23, 1427-1434.	1.1	16
32	Multi-physics computer simulation of the electromigration phenomenon. , 2011, , .		3
33	Thermomigration and electromigration in Sn8Zn3Bi solder joints. Journal of Materials Science: Materials in Electronics, 2011, 22, 217-222.	1.1	16
34	Growth characteristic study of intermetallic compounds growth in nanoscale-thickness Cu/Sn/Cu sandwich structure. , 2011, , .		1
35	Thermomigration and electromigration in Sn58Bi ball grid array solder joints. Journal of Materials Science: Materials in Electronics, 2010, 21, 1090-1098.	1.1	24
36	Fast-response polyimide/multiwall carbon nanotube composite films for monitoring humidity in microelectronic packages. , 2010, , .		4

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37	Thermomigration and electromigration in Sn58Bi solder joints. Journal of Applied Physics, 2009, 105, .	1.1	44
38	Effect of small Sn-Ag-Cu additions on structure and properties of Sn-Zn-Bi solder/BGA during as-soldered and as-aged conditions. , 2009, , .		0
39	The determination of hexavalent chromium (Cr6+) in electronic and electrical components and products to comply with RoHS regulations. Journal of Hazardous Materials, 2009, 163, 1360-1368.	6.5	43
40	Finite-Element Simulation of Stress Intensity Factors in Solder Joint Intermetallic Compounds. IEEE Transactions on Device and Materials Reliability, 2009, 9, 40-48.	1.5	11
41	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.	1.4	5
42	Fracture mechanics analysis of cracks in solder joint Intermetallic Compounds. , 2008, , .		7
43	Impact of RoHS/WEEE- on effective recycling- electronics system integration. , 2008, , .		3
44	A hybrid prognostics methodology for electronic products. , 2008, , .		16
45	Anisotropic Conductive Adhesives for Flip-Chip Interconnects. Journal of Adhesion Science and Technology, 2008, 22, 871-892.	1.4	8
46	The time-dependent melting failure in flip chip lead-free solder interconnects under current stressing. Applied Physics Letters, 2008, 93, 041907.	1.5	19
47	Effect of nano Ni additions on the structure and properties of Sn-9Zn and Sn-8Sn-3Bi solder in ball grid array packages. , 2008, , .		3
48	Effect of Carbon Inclusion in the Ni-P Coating on Shearing Behavior of Sn4Ag0.5Cu Ball Grid Array Solder Joints. , 2007, , .		0
49	Study of the thermal stress in a Pb-free half-bump solder joint under current stressing. Applied Physics Letters, 2007, 90, 232112.	1.5	13
50	Effect of multiple reflows on mechanical strength of the interface formed between Sn ϵ -Zn ϵ -Bi solder and Au/Ni/Cu bond pad. Journal of Materials Research, 2007, 22, 40-45.	1.2	1
51	Electrical Characterization of NCP- and NCF-Bonded Fine-Pitch Flip-Chip-on-Flexible Packages. IEEE Transactions on Advanced Packaging, 2007, 30, 142-147.	1.7	19
52	Microstructural evolution and atomic transport by thermomigration in eutectic tin-lead flip chip solder joints. Journal of Applied Physics, 2007, 102, 043502.	1.1	37
53	The characteristics of electromigration and thermomigration in flip chip solder joints. , 2007, , .		2
54	High Current Density induced Damage Mechanisms in Electronic Solder Joints: A State-of-the-Art Review. , 2007, , .		4

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55	Shear Strength Analysis of Ball Grid Array (BGA) Solder Interfaces. , 2007, , .		3
56	Multiple reflow study of ball grid array (BGA) solder joints on Au/Ni metallization. Journal of Materials Science, 2007, 42, 5239-5247.	1.7	18
57	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.	1.7	3
58	Effect of current stressing on the reliability of 63Sn37Pb solder joints. Journal of Materials Science, 2007, 42, 7415-7422.	1.7	11
59	Thermomigration in eutectic tin-lead flip chip solder joints. , 2006, , .		12
60	Solid state growth kinetics of complex intermetallics in the Pb-free ball grid array (BGA) solder joint for MEMS packaging. , 2006, , .		0
61	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.	1.1	11
62	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.	1.1	2
63	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.	1.0	13
64	Microwave preheating of anisotropic conductive adhesive films for high-speed flip chip on flex bonding. Journal of Electronic Materials, 2006, 35, 123-131.	1.0	3
65	Processability and reliability of nonconductive adhesives (NCAs) in fine-pitch chip-on-flex applications. Journal of Electronic Materials, 2006, 35, 443-452.	1.0	12
66	Comparative Wetting Behavior of Sn-0.7Cu and Sn-0.7Cu-0.3Ni Solders on Cu and Ni Substrates. , 2006, , .		5
67	Shearing tests of solder joints on tape ball grid array substrates. Journal of Materials Research, 2006, 21, 2224-2231.	1.2	14
68	Electrical Characterization of NCP- and NCF-Bonded Fine-Pitch Flip-Chip-on-Flexible Packages. IEEE Transactions on Advanced Packaging, 2006, 29, 735-740.	1.7	12
69	Electrochemical corrosion study of Pb-free solders. Journal of Materials Research, 2006, 21, 62-70.	1.2	46
70	Reliability of Anisotropic Conductive Film Joints Using Bumpless Chipâ€™Influence of Reflow Soldering and Environmental Testing. Journal of Electronic Packaging, Transactions of the ASME, 2005, 127, 113-119.	1.2	7
71	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.	1.2	4
72	Interfacial reactions of Cu-containing lead-free solders with Au/NiP metallization. Journal of Electronic Materials, 2005, 34, 662-669.	1.0	8

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73	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.	1.0	22
74	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.	1.0	88
75	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.	1.0	45
76	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.	1.1	14
77	Solid-state growth kinetics of Ni ₃ Sn ₄ at the Sn-3.5Ag solder-Ni interface. Journal of Applied Physics, 2005, 98, 123527.	1.1	49
78	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.	0.1	10
79	Process optimization to overcome void formation in nonconductive paste interconnections for fine-pitch applications. Journal of Electronic Materials, 2005, 34, 1143-1149.	1.0	12
80	Macro-Micro Modeling Analysis for High Density Packaged Flip Chips. , 2005, , .		1
81	Effect of 0.5 wt % Cu in Sn-3.5Ag 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.	3.2	31
82	Interfacial Reaction Phenomena of Sn-Pb Solder with Au/Ni/Cu Metallization. Chemistry of Materials, 2005, 17, 927-930.	3.2	11
83	Interfacial reactions of Sn-Cu and Sn-Pb-Ag solder with Au/Ni during extended time reflow in ball grid array packages. Journal of Materials Research, 2004, 19, 2897-2904.	1.2	19
84	Elimination of Au-embrittlement in solder joints on Au/Ni metallization. Journal of Materials Research, 2004, 19, 1303-1306.	1.2	55
85	Effect of drop impact energy on contact resistance of anisotropic conductive adhesive film joints. Journal of Materials Research, 2004, 19, 1662-1668.	1.2	17
86	Effect of bump characteristics and temperature variation on the online contact resistance of anisotropic conductive joints. Journal of Electronic Materials, 2004, 33, 1028-1035.	1.0	2
87	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.	1.0	25
88	A continuous contact resistance monitoring during the temperature ramp of anisotropic conductive adhesive film joint. Journal of Electronic Materials, 2004, 33, 14-21.	1.0	7
89	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.	1.0	31
90	Plasma cleaning of the flex substrate for flip-chip bonding with anisotropic conductive adhesive film. Journal of Electronic Materials, 2003, 32, 1117-1124.	1.0	15

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91	Curing kinetics of anisotropic conductive adhesive film. Journal of Electronic Materials, 2003, 32, 131-136.	1.0	27
92	Current-carrying capacity of anisotropic-conductive film joints for the flip chip on flex applications. Journal of Electronic Materials, 2003, 32, 101-108.	1.0	12
93	Effect of 0.5 wt % Cu in Sn~3.5%Ag Solder on the Interfacial Reaction with Au/Ni Metallization. Chemistry of Materials, 2003, 15, 4340-4342.	3.2	66
94	Effect of reaction time and P content on mechanical strength of the interface formed between eutectic Sn~Ag solder and Au/electroless Ni(P)/Cu bond pad. Journal of Applied Physics, 2003, 94, 4108-4115.	1.1	107
95	Effect of 0.5 wt % Cu addition in Sn~3.5%Ag solder on the dissolution rate of Cu metallization. Journal of Applied Physics, 2003, 94, 7904.	1.1	76
96	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.	1.2	7
97	Electrical Conductive Characteristics of Anisotropic Conductive Adhesive Particles. Journal of Electronic Packaging, Transactions of the ASME, 2003, 125, 609-616.	1.2	29
98	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.	1.2	2
99	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.	1.2	2
100	Interfacial reaction of Pb-Sn solder and Sn-Ag solder with electroless Ni deposit during reflow. Journal of Electronic Materials, 2002, 31, 1117-1121.	1.0	45
101	Title is missing!. Journal of Materials Science Letters, 2000, 19, 1755-1757.	0.5	28
102	Title is missing!. Journal of Materials Science: Materials in Electronics, 2000, 11, 587-593.	1.1	23
103	Developing a lead-free solder alloy Sn-Bi-Ag-Cu by mechanical alloying. Journal of Electronic Materials, 2000, 29, 1015-1020.	1.0	44
104	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.	1.0	31
105	Nondestructive Evaluation of Ceramic Substrate With Embedded Passive Components by SAM. Journal of Electronic Packaging, Transactions of the ASME, 2000, 122, 172-177.	1.2	3
106	Electronic structures of polycrystalline ZnO thin films probed by electron energy loss spectroscopy. Applied Physics Letters, 2000, 77, 1484-1486.	1.5	24
107	Correlation between Ni ₃ Sn ₄ intermetallics and Ni ₃ P due to solder reaction-assisted crystallization of electroless Ni~P metallization in advanced packages. Journal of Materials Research, 2000, 15, 2534-2539.	1.2	53
108	Optical characterization of hydrogenated amorphous silicon thin films deposited at high rate. Journal of Electronic Materials, 1999, 28, 1452-1456.	1.0	10

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109	Digital speckle correlation method based on wavelet-packet noise-reduction processing. Applied Optics, 1999, 38, 3474.	2.1	9
110	Influence of Minority Carrier Mobility on Organic Electroluminescent Device Characteristics. Digest of Technical Papers SID International Symposium, 1999, 30, 568.	0.1	1
111	Aging effects on shear fatigue life and shear strength of soldered thick film joints. IEEE Transactions on Advanced Packaging, 1998, 21, 398-406.	0.7	13
112	Interactions between Silver-Palladium Metallization and Tin-Lead-Silver Solder. Physica Status Solidi A, 1998, 166, R13-R14.	1.7	9
113	Diamond-like carbon protective films for organic photoconductors. Journal of Electronic Materials, 1998, 27, 42-44.	1.0	3
114	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.	1.2	4
115	Protective AlZrN film for organic photoconductors. Journal of Materials Research, 1998, 13, 2042-2044.	1.2	4
116	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.	0.7	6
117	Effects of bandwidth limitations on the localized state distribution calculated from transient photoconductivity data. Journal of Applied Physics, 1998, 83, 4782-4787.	1.1	6
118	Probing of microvoids in high-rate deposited α -Si:H thin films by variable energy positron annihilation spectroscopy. Journal of Materials Research, 1998, 13, 2833-2840.	1.2	0
119	Identification of Vacancy-Like Defects in High-Rate Grown α -Si Before and After Light Soaking by Vepas. Materials Research Society Symposia Proceedings, 1998, 507, 637.	0.1	0
120	INTERFACE CHARACTERISATION AND INTERNAL ELECTRIC FIELD EVALUATION OF α -Si:H PIN SOLAR CELL BY VARIABLE ENERGY POSITRON ANNIHILATION SPECTROSCOPY. Materials Research Society Symposia Proceedings, 1998, 507, 643.	0.1	0
121	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	6
122	A new protective AlN film for organic photoconductors. Applied Physics Letters, 1997, 71, 184-186.	1.5	13
123	Fatigue in hydrazone-based xerographic photoreceptors: Effect of ultraviolet irradiation. Journal of Materials Research, 1997, 12, 106-112.	1.2	4
124	Experimental Determination of the Distribution of Tail States of Hydrogenated Amorphous Silicon: A Transient Photocurrent Analysis. Materials Research Society Symposia Proceedings, 1997, 467, 257.	0.1	0
125	Study of Microvoids in High-Rate α -Si:H Using Positron Annihilation. Materials Research Society Symposia Proceedings, 1997, 467, 525.	0.1	0
126	Influence of Dielectric Film Thickness on the Magnetic Properties of the Magneto-Optical Multilayer Films. Materials Research Society Symposia Proceedings, 1997, 475, 93.	0.1	0

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127	Influence of AlN protective film thickness on the hardness and electrophotographic properties of organic photoconductors. Journal of Electronic Materials, 1997, 26, 387-390.	1.0	4
128	Thermally stimulated current measurements on a UV irradiated organic photoreceptor layer. Journal of Electronic Materials, 1997, 26, 470-473.	1.0	0
129	Optical Properties and Reactive Sputtering Conditions of AlN and AlSiN Thin Films for Magneto-Optical Applications. Journal of Electronic Materials, 1997, 26, 21-24.	1.0	10
130	Nondestructive detection of delaminations in multilayer ceramic capacitors using improved digital speckle correlation method. Microwave and Optical Technology Letters, 1997, 16, 80-85.	0.9	6
131	Defect Characterization of High-Rate Deposited Hydrogenated Amorphous Silicon Films. Materials Research Society Symposia Proceedings, 1996, 420, 599.	0.1	0
132	The modification of electrophotographic and mechanical properties of organic photoconductors by ultra-violet irradiation. Journal of Electronic Materials, 1996, 25, 1451-1457.	1.0	8
133	Analysis of the infrared transmission data of hydrogenated amorphous silicon film fabricated by high rate PECVD. Journal of Electronic Materials, 1996, 25, 1837-1840.	1.0	5
134	Analysis of a tunable frequency-selective surface on an in-plane biased ferrite substrate. Microwave and Optical Technology Letters, 1996, 13, 59-63.	0.9	16
135	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.	1.1	7
136	Characteristics of porosity in solder pastes during infrared reflow soldering. Journal of Materials Science, 1995, 30, 5543-5550.	1.7	8