Anil Kunwar

List of Publications by Year in Descending Order

48 papers	374 citations	12 h-index	16 g-index
72 ext. papers	519 ext. citations	3.5 avg, IF	3.74 L-index

#	Paper	IF	Citations
48	pyMPEALab Toolkit for Accelerating Phase Design in Multi-principal Element Alloys. *Metals and Materials International*, **2022**, 28, 269	2.4	1
47	Study of the interfacial reactions controlling the spreading of Al on Ni. *Applied Surface Science*, **2022**, 571, 151272	6.7	1
46	Automatic Featurization Aided Data-Driven Method for Estimating the Presence of Intermetallic Phase in Multi-Principal Element Alloys. *Metals*, **2022**, 12, 964	2.3	1
45	Multi-phase field simulation of Al3Ni2 intermetallic growth at liquid Al/solid Ni interface using MD computed interfacial energies. *International Journal of Mechanical Sciences*, **2021**, 215, 106930	5.5	1
44	Surface tension of aluminum-oxygen system: A molecular dynamics study. *Acta Materialia*, **2021**, 221, 117430	8.4	0
43	Superhydrophobic Surface and Lubricant-Infused Surface: Implementing Two Extremes on Electrodeposited Ni?TiO2 Surface to Drive Optimal Wettability Regimes for Droplets Multifunctional Behaviors. *Advanced Engineering Materials*, **2021**, 23, 2100266	3.5	3
42	Effect of the degree of supercooling on growth mechanism of Cu6Sn5 in pure Sn/Cu solder joint. *Journal of Materials Science: Materials in Electronics*, **2021**, 32, 7528-7540	2.1	1
41	Convolutional neural network model for synchrotron radiation imaging datasets to automatically detect interfacial microstructure: An in situ process monitoring tool during solar PV ribbon fabrication. *Solar Energy*, **2021**, 224, 230-244	6.8	3
40	Insight into the preferential grain growth of intermetallics under electric current stressing A phase field modeling. *Scripta Materialia*, **2021**, 203, 114071	5.6	2
39	Combining multi-phase field simulation with neural network analysis to unravel thermomigration accelerated growth behavior of Cu6Sn5 IMC at cold side CuSn interface. *International Journal of Mechanical Sciences*, **2020**, 184, 105843	5.5	12
38	Integration of machine learning with phase field method to model the electromigration induced Cu6Sn5 IMC growth at anode side Cu/Sn interface. *Journal of Materials Science and Technology*, **2020**, 59, 203-219	9.1	10
37	A data-driven framework to predict the morphology of interfacial Cu6Sn5 IMC in SAC/Cu system during laser soldering. *Journal of Materials Science and Technology*, **2020**, 50, 115-127	9.1	13
36	Fabrication of cerium myristate coating for a mechanochemically robust modifier-free superwettability system to enhance the corrosion resistance on 316L steel by one-step electrodeposition. *Surface and Coatings Technology*, **2020**, 398, 125970	4.4	8
35	Size effect on interface reaction of SnCu/Cu solder joints during multiple reflows. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 4359-4369	2.1	6
34	Enhancement of hardness of bulk solder by doping Cu nanoparticles at the interface of Sn/Cu solder joint. *Microelectronic Engineering*, **2019**, 208, 47-53	2.5	13
33	Growth behavior of preferentially scalloped intermetallic compounds at extremely thin peripheral Sn/Cu interface. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 2872-2887	2.1	4
32	Geometrical Effects of Cu@Ag CoreShell Nanoparticles Treated Flux on the Growth Behaviour of Intermetallics in Sn/Cu Solder Joints. *Electronic Materials Letters*, **2019**, 15, 253-265	2.9	8

31	Geometrical effects on growth kinetics of interfacial intermetallic compounds in Sn/Cu joints reflowed with Cu nanoparticles doped flux. *Thin Solid Films*, **2019**, 669, 198-207	2.2	5
30	Effect of the (text {TiO}_2) Nanoparticles on the Growth Behavior of Intermetallics in Sn/Cu Solder Joints. *Metals and Materials International*, **2019**, 25, 499-507	2.4	4
29	Shielding effect of Ag3Sn on growth of intermetallic compounds in isothermal heating and cooling during multiple reflows. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 4383-4390	2.1	3
28	Evolution behavior and growth kinetics of intermetallic compounds at Sn/Cu interface during multiple reflows. *Intermetallics*, **2018**, 96, 1-12	3.5	13
27	Study of electrochemical migration based transport kinetics of metal ions in Sn-9Zn alloy. *Microelectronics Reliability*, **2018**, 83, 198-205	1.2	6
26	Effect of initial Cu concentration on the IMC size and grain aspect ratio in Sn□Cu solders during multiple reflows. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 602-613	2.1	9
25	All-round suppression of Cu6Sn5 growth in Sn/Cu joints by utilizing TiO2 nanoparticles. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 15966-15972	2.1	3
24	Synthesis of Cu@Ag core□shell nanoparticles for characterization of thermal stability and electric resistivity. *Applied Physics A: Materials Science and Processing*, **2018**, 124, 1	2.6	14
23	Heat and mass transfer effects of laser soldering on growth behavior of interfacial intermetallic compounds in Sn/Cu and Sn-3.5Ag0.5/Cu joints. *Microelectronics Reliability*, **2018**, 80, 55-67	1.2	17
22	Roles of interfacial heat transfer and relative solder height on segregated growth behavior of intermetallic compounds in Sn/Cu joints during furnace cooling. *Intermetallics*, **2018**, 93, 186-196	3.5	13
21	Effect of Ag3Sn nanoparticles and temperature on Cu6Sn5 IMC growth in Sn-xAg/Cu solder joints. *Materials Research Bulletin*, **2018**, 99, 239-248	5.1	18
20	Synchrotron radiation imaging study on the rapid IMC growth of Sn□Ag solders with Cu and Ni substrates during the heat preservation stage. *Journal of Materials Science: Materials in Electronics*, **2018**, 29, 589-601	2.1	8
19	Formation mechanism and kinetic analysis of the morphology of Cu6Sn5 in the spherical solder joints at the Sn/Cu liquid□solid interface during soldering cooling stage. *Journal of Materials Science: Materials in Electronics*, **2017**, 28, 5398-5406	2.1	8
18	Size effect on IMC growth induced by Cu concentration gradient and pinning of Ag 3 Sn particles during multiple reflows. *Intermetallics*, **2017**, 90, 90-96	3.5	15
17	Geometrical outline evolution and size-inhibiting interaction of interfacial solder bubbles and IMCs during multiple reflows. *Vacuum*, **2017**, 145, 103-111	3.7	5
16	Quantitative polynomial free energy based phase field model for void motion and evolution in Sn under thermal gradient **2017**,		1
15	Effects of Cu nanoparticles doped flux on the microstructure of IMCs between Sn solder and Cu substrate **2017**,		2
14	Modelling the melting of Sn0.7Cu solder using the enthalpy method **2016**,		2

13	Positive feedback on imposed thermal gradient by interfacial bubbles in Cu/liquid Sn-3.5Ag/Cu joints **2016**,		2
12	Effect of cooling condition and Ag on the growth of intermetallic compounds in Sn-based solder joints. *Applied Physics A: Materials Science and Processing*, **2016**, 122, 1	2.6	12
11	On the thickness of Cu6Sn5 compound at the anode of Cu/liquid Sn/Cu joints undergoing electromigration. *Journal of Materials Science: Materials in Electronics*, **2016**, 27, 7699-7706	2.1	10
10	On the increase of intermetallic compound's thickness at the cold side in liquid Sn and SnAg solders under thermal gradient. *Materials Letters*, **2016**, 172, 211-215	3.3	21
9	In situ study on the increase of intermetallic compound thickness at anode of molten tin due to electromigration of copper. *Scripta Materialia*, **2015**, 107, 88-91	5.6	29
8	Modeling the diffusion-driven growth of a pre-existing gas bubble in molten tin. *Metals and Materials International*, **2015**, 21, 962-970	2.4	12
7	In situ study on growth behavior of interfacial bubbles and its effect on interfacial reaction during a soldering process. *Applied Surface Science*, **2014**, 305, 133-138	6.7	28
6	A numerical model for diffusion driven gas bubble growth in molten Sn-based solder **2014**,		2
5	The study of interficial reaction during rapidly solidified lead-free solder Sn3.5Ag0.7Cu/Cu laser soldering **2014**,		4
4	A Study on the Physical Properties and Interfacial Reactions with Cu Substrate of Rapidly Solidified Sn-3.5Ag Lead-Free Solder. *Journal of Electronic Materials*, **2013**, 42, 2686-2695	1.9	16
3	**2013**,		2
2	Effect of Hydrothermally Prepared Graft Copolymer Addition on a Brittle Matrix: A Preliminary Study on Glass Fiber Reinforced PLA/LLDPE-g-MA Composite. *Advanced Materials Research*, **2012**, 530, 46-51	0.5	1
1	Phase-field approach to simulate BCC-B2 phase separation in the AlnCrFe2Ni2 medium-entropy alloy. *Journal of Materials Science*,1	4.3	2