# Anil Kunwar

## List of Publications by Citations

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

| # | Paper | IF | Citations |
|---|---|---|---|
| 48 | 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 |
| 47 | 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 |
| 46 | 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 |
| 45 | 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 |
| 44 | 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 |
| 43 | 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 |
| 42 | 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 |
| 41 | Synthesis of Cu@Ag core�hell nanoparticles for characterization of thermal stability and electric resistivity. *Applied Physics A: Materials Science and Processing*, **2018**, 124, 1 | 2.6 | 14 |
| 40 | 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 |
| 39 | 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 |
| 38 | Evolution behavior and growth kinetics of intermetallic compounds at Sn/Cu interface during multiple reflows. *Intermetallics*, **2018**, 96, 1-12 | 3.5 | 13 |
| 37 | 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 |
| 36 | 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 |
| 35 | Combining multi-phase field simulation with neural network analysis to unravel thermomigration accelerated growth behavior of Cu6Sn5 IMC at cold side Cu�n interface. *International Journal of Mechanical Sciences*, **2020**, 184, 105843 | 5.5 | 12 |
| 34 | 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 |
| 33 | 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 |
| 32 | 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 |

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| 31 | 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 |
| 30 | 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 |
| 29 | 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 |
| 28 | Geometrical Effects of Cu@Ag Core‐Shell Nanoparticles Treated Flux on the Growth Behaviour of Intermetallics in Sn/Cu Solder Joints. *Electronic Materials Letters*, **2019**, 15, 253-265 | 2.9 | 8 |
| 27 | 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 |
| 26 | Size effect on interface reaction of Sn‐Cu/Cu solder joints during multiple reflows. *Journal of Materials Science: Materials in Electronics*, **2019**, 30, 4359-4369 | 2.1 | 6 |
| 25 | Study of electrochemical migration based transport kinetics of metal ions in Sn-9Zn alloy. *Microelectronics Reliability*, **2018**, 83, 198-205 | 1.2 | 6 |
| 24 | Geometrical outline evolution and size-inhibiting interaction of interfacial solder bubbles and IMCs during multiple reflows. *Vacuum*, **2017**, 145, 103-111 | 3.7 | 5 |
| 23 | 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 |
| 22 | The study of interficial reaction during rapidly solidified lead-free solder Sn3.5Ag0.7Cu/Cu laser soldering **2014**, | | 4 |
| 21 | 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 |
| 20 | 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 |
| 19 | 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 |
| 18 | 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 |
| 17 | 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 |
| 16 | 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 |
| 15 | Modelling the melting of Sn0.7Cu solder using the enthalpy method **2016**, | | 2 |
| 14 | Positive feedback on imposed thermal gradient by interfacial bubbles in Cu/liquid Sn-3.5Ag/Cu joints **2016**, | | 2 |

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| 13 | **2013**, | | 2 |
| 12 | Effects of Cu nanoparticles doped flux on the microstructure of IMCs between Sn solder and Cu substrate **2017**, | | 2 |
| 11 | A numerical model for diffusion driven gas bubble growth in molten Sn-based solder **2014**, | | 2 |
| 10 | Insight into the preferential grain growth of intermetallics under electric current stressing A phase field modeling. *Scripta Materialia*, **2021**, 203, 114071 | 5.6 | 2 |
| 9 | Phase-field approach to simulate BCC-B2 phase separation in the AlnCrFe2Ni2 medium-entropy alloy. *Journal of Materials Science*,1 | 4.3 | 2 |
| 8 | Quantitative polynomial free energy based phase field model for void motion and evolution in Sn under thermal gradient **2017**, | | 1 |
| 7 | 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 |
| 6 | pyMPEALab Toolkit for Accelerating Phase Design in Multi-principal Element Alloys. *Metals and Materials International*, **2022**, 28, 269 | 2.4 | 1 |
| 5 | 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 |
| 4 | 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 |
| 3 | Study of the interfacial reactions controlling the spreading of Al on Ni. *Applied Surface Science*, **2022**, 571, 151272 | 6.7 | 1 |
| 2 | 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 |
| 1 | Surface tension of aluminum-oxygen system: A molecular dynamics study. *Acta Materialia*, **2021**, 221, 117430 | 8.4 | 0 |