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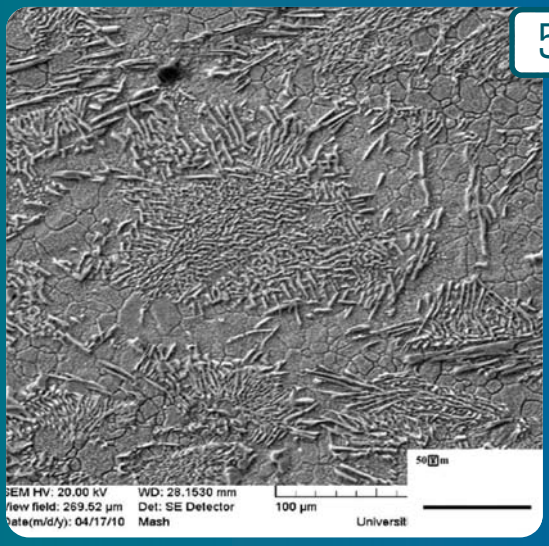

The research paper made by M. Matahir, L.T. Chin, K.S. Tan and A.O. Olofinjana on "Mechanical strength and its variability in Bi- modified Sn-Ag-Cu solder alloy" on a **page 50** clarifies the role of Bi substitution in improving the mechanical properties and reliability of soldered joints with unleaded solders. Many previous work on Sn rich Pb-free soldering focused on the evolution, morphology and the role of interfacial intermetallic compounds (IMC) layers of Cu_3Sn and Cu_6Sn_5 on the mechanical integrity of soldered joints. However recent studies have shown that under static shearing stress, more fracture failures were found to occur through the solder and thus indicate the significance of solder microstructures in the joint integrity. In this work, we investigated the effect of Bi substitution for Sn on the shear strength of solder joints of near eutectic SAC alloy Sn3.5Ag0.9Cu. Results show that failures occurred in quasi-brittle manner, with large variability. The ternary SAC alloy had average shear strength of 30 MPa better than binary eutectic Sn/Cu. Small Bi substitution of Sn up to 2wt% lead to increased average shear strengths with maximum strengths of about 50MPa recorded for compositions with Bi content of 0.5 to 1.5wt%. Bi substitutions beyond 2wt% gave substantially lower strength values. The application of Weibull criteria suggests untypical high variability in strength with Webuill moduli less than 10. Higher variability in shear strengths were found in compositions containing more than 2wt%Bi. Micro-structural evidence suggests that the role of Bi in increasing strength may be related to the high solubility of Bi in Sn and this would have provided some solution hardening effect. Higher Bi content however, lead to the formation Bi rich phases in the microstructure and this would have affected the mechanics of deformation thus leading to generally lower strength values and much higher variability in measurements.