



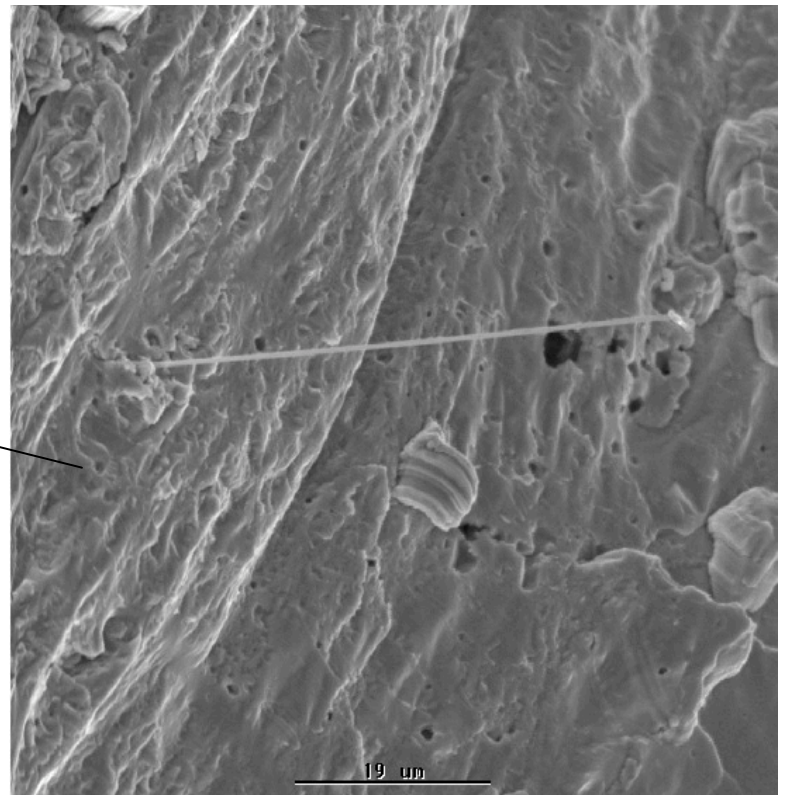
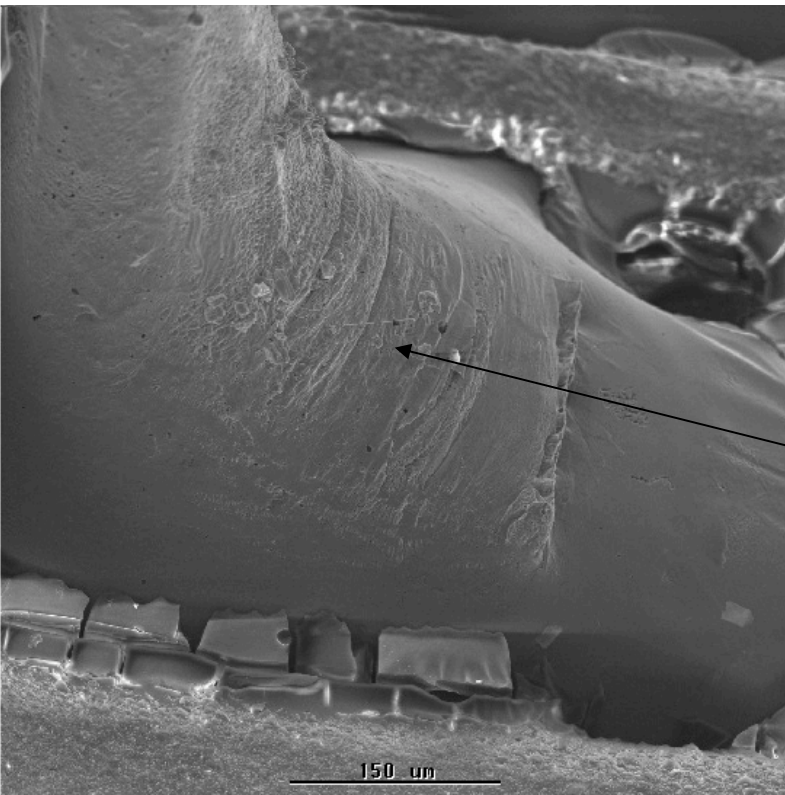
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Metal whiskers

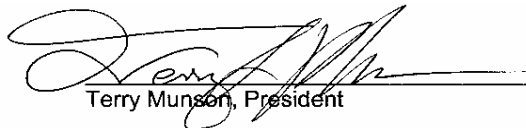
Metal whiskers have been seen to grow in normal operating conditions on Alloy 42 leads with SAC 305 solder at 20% RH and 60C for 10 days. These whiskers can conduct current. Metal whiskers have grown to 4 and 5 mm lengths in the ten days.

We believe that one of the critical requirements for whiskers to grow is that the surface and subsurface ionic levels are high as detected by Ion Chromatography and C3 localized extraction system. The chloride, sulfate and ammonia levels have always been high when whiskers grow. The other requirements are the metal stresses. These issues require more research to detail.

This metal whisker were grown in 5 days at the 60C, 20% RH condition with high chloride, sulfate, and ammonia-doped samples. Additional Research is scheduled for this fall under a proposed NIST ATP.



Reported by:


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