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Tin Whisker Growth Experiment

1. Sample:

DO-204	(Matte tin)	10 Pcs
SMA	(Matte tin)	10 Pcs
TO-220	(Bright tin)	10 Pcs
RS4M	(Bright tin)	10 Pcs

2. Plating thickness: Typ. 5um

3. Post baking after plating: 150℃ for 1 Hr.

4. Environment condition (Humidity): 85℃/ 85%RH

5. Microscope:

4-1 Post 500Hrs results under a 20000X microscope

PREPARED	DATE	APPROVED	DATE
J H Wang	Mar 15, 2006	Richard	Mar 15, 2006

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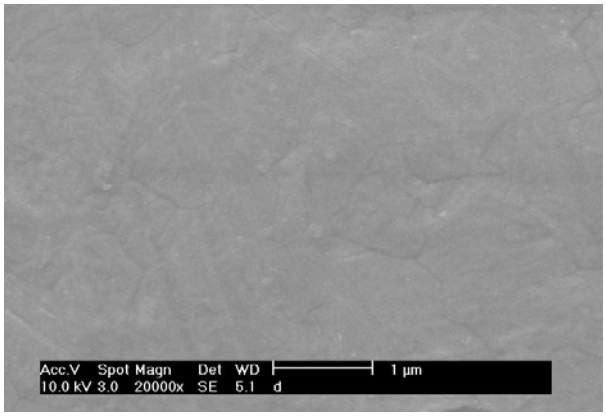
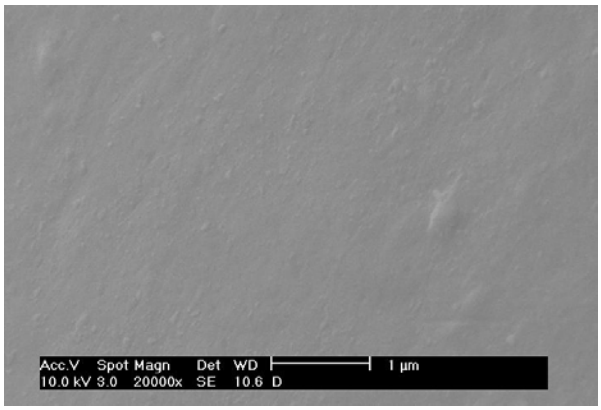
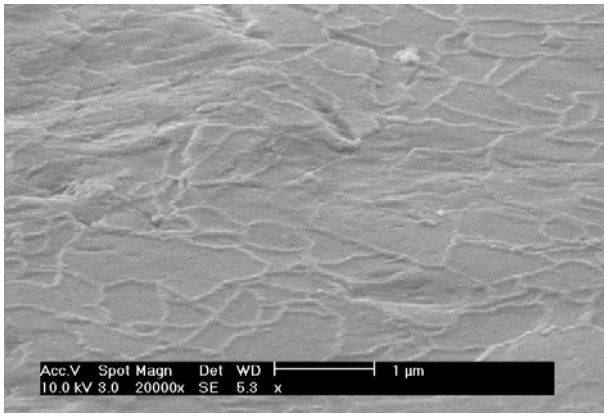
DO204



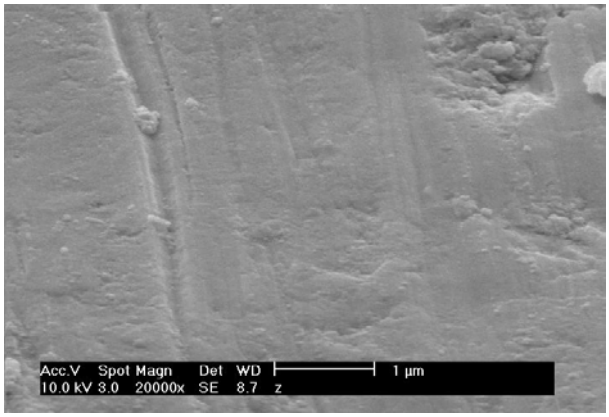
SMA



TO220



RS4M



4-2 Post 1000Hrs results under a 20000X microscope

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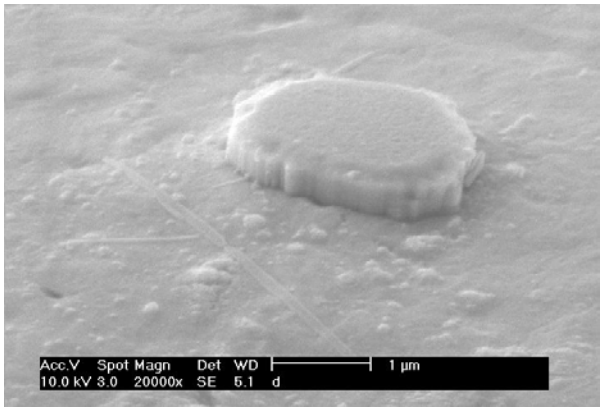
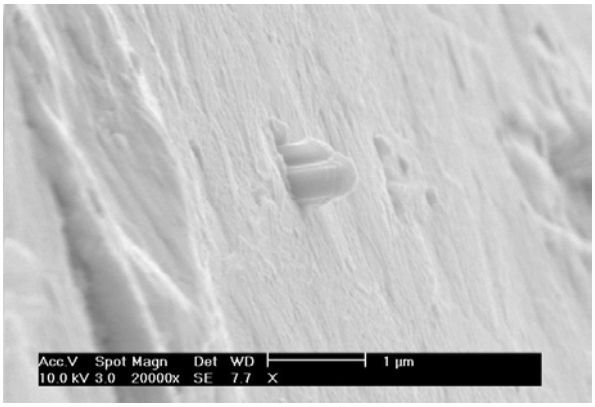
DO-204

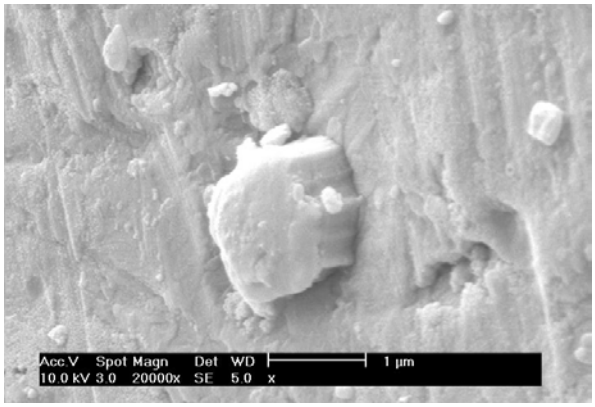


SMA

TO220



RS4M



4-3 Post 2000Hrs under a 20000X microscope

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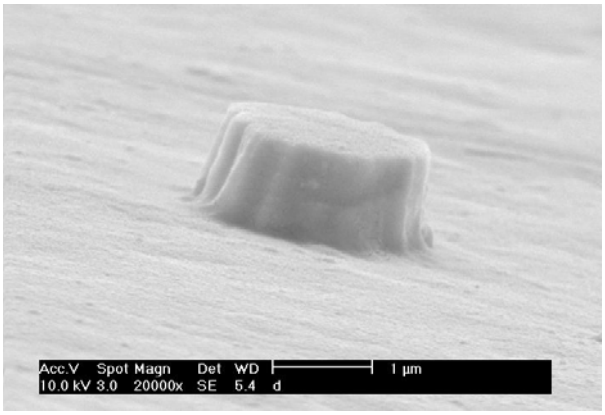
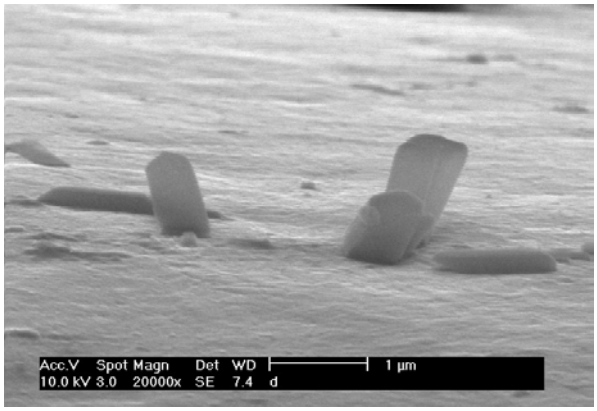
DO204



SMA



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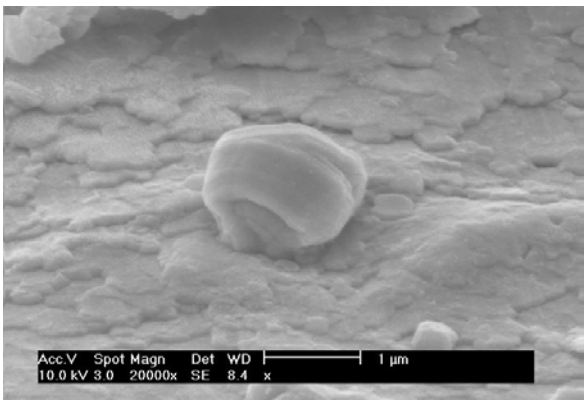
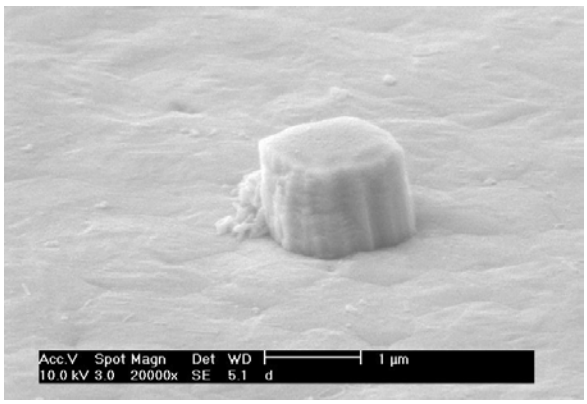


RS4M



4-4 Post 3000Hrs under a 20000X microscope

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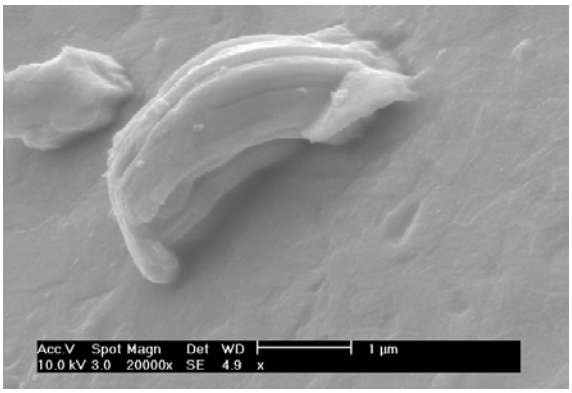
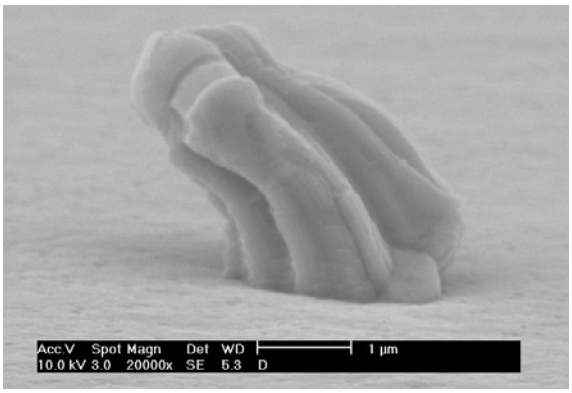
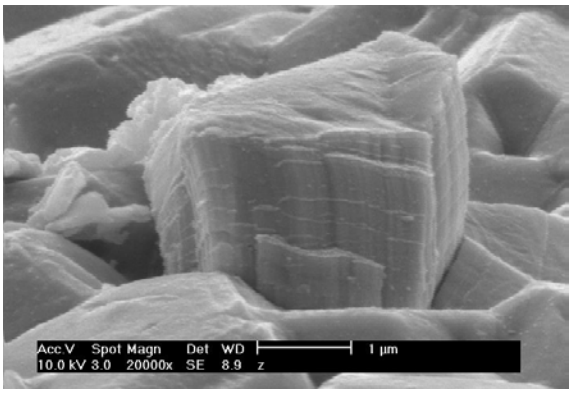
DO204



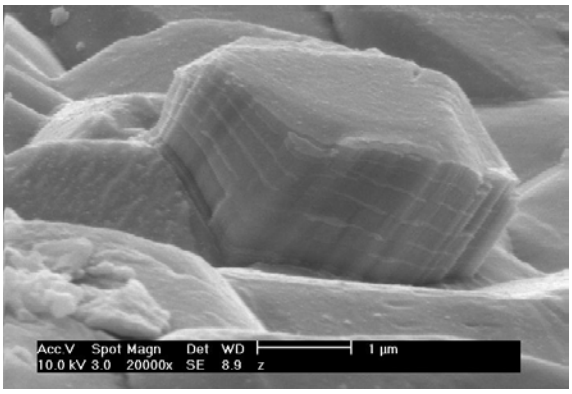
SMA



TO220



RS4M



5. Conclusion:

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The post observation confirmed that after Humidity condition of **85℃/ 85%RH for 3000 Hrs,** our Tin-plating process with 100% post bake of 150°C for 1 hour reduces the promotion of major whisker growth per JESD22A121 specifications. All test samples observed under a 20000X microscope displayed end results of Tin-whisker growth up to 4- 5um maximum with a total numbers of whisker less than 2 in 1mm x 1mm area.

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