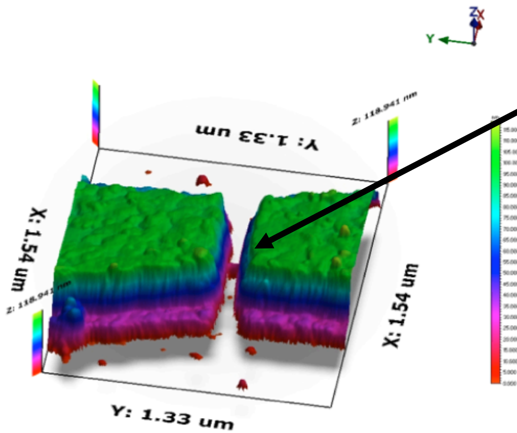
*Metrology*

# AFM Imaging at the Base of Trenches

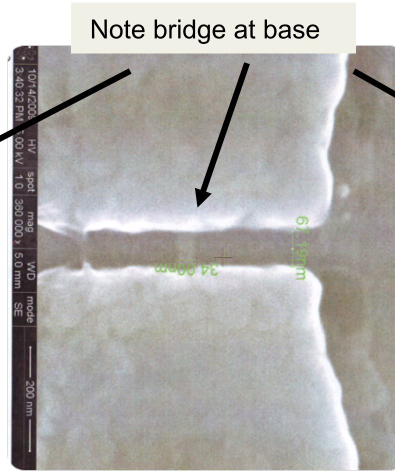
C|D|I

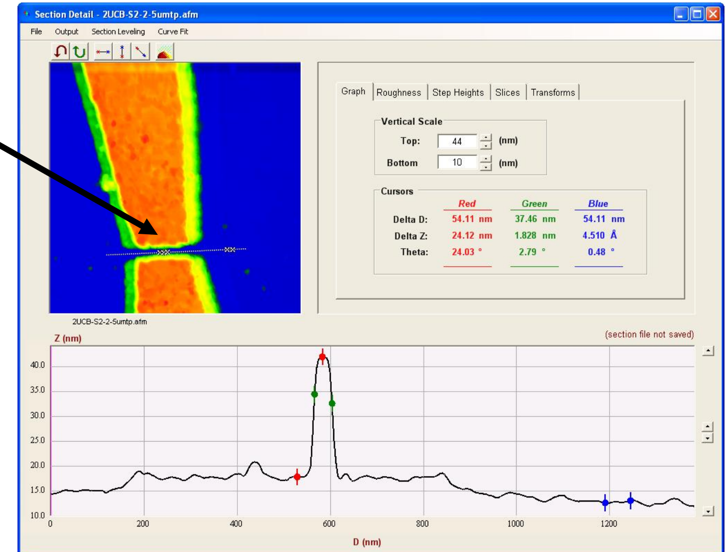
Carbon Design Innovations

**SIMPLY BETTER IMAGES**




Note bridge at base




3-Dimensional representation of an AFM scan of a semiconductor part, featuring a “bridge” at the base of the trench.

An SEM scan confirms the trench and the bridge, but no Z (height) information.

A histogram drawn through the center of the trench analyzes the height of the bridge at the base of the trench.

The images are courtesy of Gary Williams, application specialist for Ambios Technologies. He (and his customer) were very impressed with the resolution, the extreme high-aspect ratio and the tip toughness of the CDI probes. Gary stated “I had been scanning with other tips for days and none of the other tips revealed any bottom travel. Your tips are the only tips that imaged the bridge at the bottom of the trench. After 17 years of imaging, the CDI AFM tips are the best. Thank you for your help.”

The patented processing technologies used by CDI ensure that the CNT is straight and mounted at precisely the correct angle to ensure that the probe is imaging perpendicular to the surface, thus maintaining the full extreme high-aspect ratio advantage of using CNTs for AFM imaging. CDI can mount CNTs to almost any cantilever. Contact us to discuss your needs.



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