

Interfacial Phase Stability in TiV Multilaminate Thin Films

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Supporting Information: Additional Experimental Details

FIB milling was used to prepare cross-sectional foils for TEM, as shown in Figure 1. In this procedure, the ion beam is used to mill away a trench in the thin film. Once the trench is cut, the specimen is milled away on the wafer side to preserve the film while removing extraneous material. Subsequent material is removed from the back of the specimen until the film is electron transparent, as shown in Figure 1. Once the foil has been prepared, the specimen stage is tilted off-axis from 4 to 10° and the final cuts, shown in Figure 1, are performed to release the specimen from the trench. The TEM foil is then lifted out of the trench by use of an *ex situ* manipulator and then mounted on a Cu mesh TEM grid. FIB annular milling of the flat-top coupons produced a micro-tip array

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of sharpened posts, each with a radius of approximately 50 nm (Figure 2) for use in the LEAP experiments.

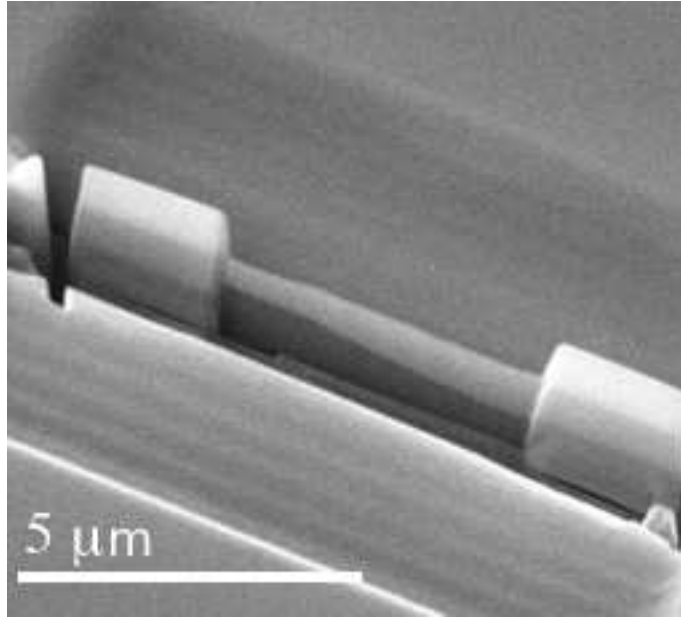


Figure S1. Cross-sectional TEM image of specimen prepared by FIB milling to show foil preparation.

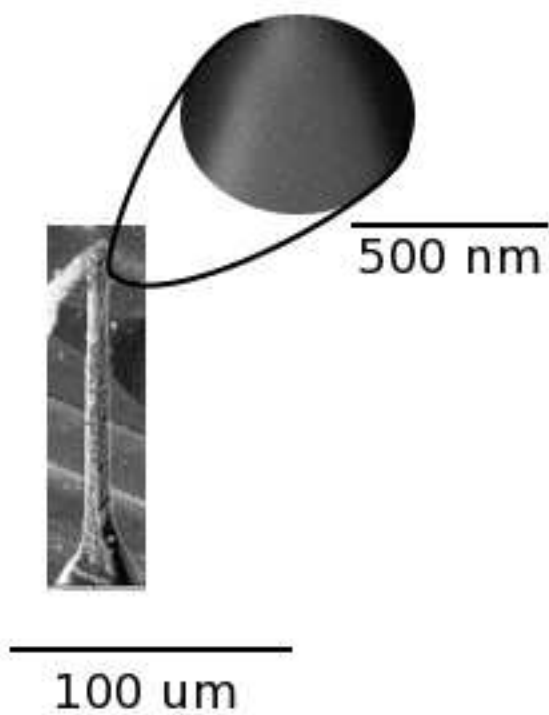


Figure S2 LEAP specimen preparation. SEM image showing initial flat-top post for LEAP experiment before milling (100 μm scale). Inset shows SEM image of the approximately 80 nm sharpened atom probe tip prepared by annular milling in the FIB.