

## **FIB sample preparation for atom probe and TEM over a wide range of materials**

Yang, L.<sup>1</sup>

<sup>1</sup> Australian Center of Microscopy and Microanalysis, Australia

Focused Ion Beam (FIB), with a combination of milling and deposition capabilities, has become a powerful technique for nano-machining. Gallium liquid metal ion source (LMIS) has been widely used for over 20 years. In recent years plasma field ion source (PFIB) is becoming more popular.

This poster covers a successful application of FIB techniques for APT and TEM sample preparation and a comparison in the performance of site-specific sample preparation between Gallium FIB and PFIB. The studied specimens include metallic alloys, oxides [1], semi-conductors, magnetics, etc., which exist in various forms such as bulk, thin film, nanowire, powder and quantum dots.

[1] David J. Young, Thuan Dinh Nguyen, Peter Felfer, Jianqiang Zhang, and Julie M. Cairney, *Scripta Materialia* 77 (2014) 29-32