AN 364
FEI DualBeam™ FIB

December 18, 2009 (Version 6.0)

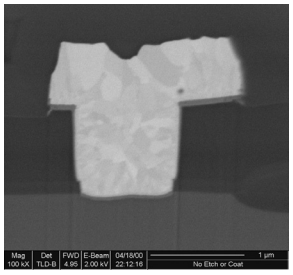
FIB Services for:

Defects:
- Navigation
- Cross sectioning
- Marking

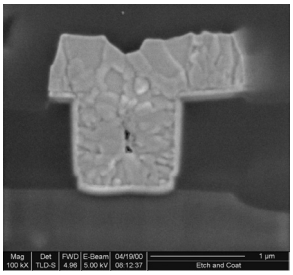
Copper:
- Fill quality
- Grain imaging
- Void examination

Cross Sections of:
- Difficult materials
- IC's

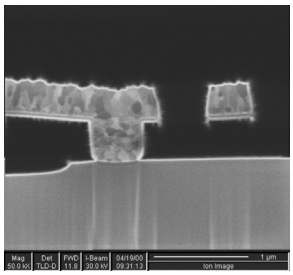
Sample Prep for:
- SEM, STEM & TEM imaging
- Buried defects



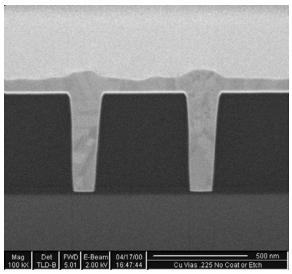
Backscatter electron image of a FIB section without coating or etching



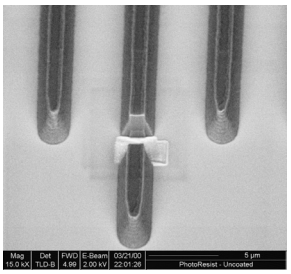
Secondary electron image of a FIB section after etching and coating



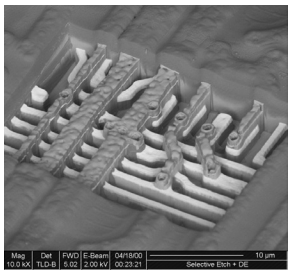
Imaging with the ion column gives excellent grain contrast



Backscatter image of Cu vias showing barrier layer



Selective C etch chemistry allows sectioning of photoresist and other organic materials



Selective etch chemistry can be used to reveal buried structure

Instruments include: Helios Nanolab 600, Strata 400s, Nova Nanolab 600, Dual-Beam 835, Dual-Beam 830

Instrument Features include:

- 1 nm SEM resolution
- Full 200 mm wafer navigation
- Selective etch for Carbon & Oxides
- Defect file navigation
- OmniProbe™ lift-out needle for TEM prep
- 7 nm FIB resolution
- Metal deposition
- Delineation etch
- CAD navigation

The World Leader in Surface Analysis

Starting with Charles Evans & Associates in 1978, the Evans Analytical Group (EAG) network has grown to become the world's largest independent micro-analytical services organization with facilities in the USA, Europe, and Asia. The Evans Analytical Group provides you with:

- a multi-million dollar installed equipment base featuring state-of-the-art instruments at key locations around the world
- highly trained and experienced technical staff
- leading edge analytical protocols
- rapid turn-around times

You can depend on EAG experience to provide the materials analysis insight to help improve product performance, increase yield, or integrate new materials into your products/processes.

Some of the many solutions EAG delivers for it's clients include:

- Dopant/Impurity depth profiling
- Thin film and coatings analysis, including film composition, impurities, thickness and morphology
- Identification of particles, defects, and residues that impact product yields
- Failure analysis relating to corrosion, adhesion, polymer degradation and coating irregularities
- Materials characterization, including identification, mapping, and depth profiling of surface passivation, coatings, and other materials
- Quality control programs, custom-designed to ensure optimum quality of incoming materials, work in progress and final products

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