Download Procedures For The Preparation Of Samples For Cross Sectional Transmission

Preparation of cross-sectional TEM samples for low-angle ion milling. J.P. McCaffrey 1,* and; A. Barna 2; Article first published online: 7 DEC 1998. DOI: 10.1002/(SICI)1097-0029(19970301)36:53.0.CO;2-N ...

A Polishless Method For Preparation Of Cross-Sectional Tem Samples - Volume 115 - J. T. Wetzel, D. A. Danner

Preparation of cross-section samples for transmission electron microscopy (TEM) Dr. Elisabeth Muller & Daniel Abou-Ras¨ Elektronenmikroskopie-Zentrum der ETH Z¨urich (EMEZ)

In the recent years, the Helmholtz-Zentrum Berlin für Materialien und Energie GmbH (HZB, previously known as Hahn-Meitner Institute, HMI), Berlin, Germany, has developed a particular technique of cross-sectional specimen preparation for transmission electron microscopy (TEM), mainly suitable for thin film stacks of solar-cell devices.

Even though there is a risk of breaking diamond knife during sample preparation due to the high hardness of metal component in the sample, ultramicrotomy enables the relatively rapid preparation of thin sectioned slices for the TEM analysis. In addition, this technique provides contamination free sections with large, thin areas of uniform thickness.

This article presents a new and more time-saving method for the preparation of cross-sectional TEM specimens from coated materials. The preparation procedure includes prepreparation, mounting, embedding, mechanical thinning, and ion-beam thinning.

Sample preparation technique for cross?sectional transmission electron microscopy of quantum... Chen, Yu?Pei; Reed, Jason D.; O'Keefe, Sean S.; Schaff, William J.; Eastman, Lester F. 1993-10-01 00:00:00 A novel cross?sectional sample preparation technique for quantum wire (QWR) structures is described.

The method is capable of producing cross-sectional transmission electron microscopy samples with a large amount of transparent area (1 ?m × 2.5 mm) which allows the examination of many patterned test sites on the same sample from the same chip of a silicon wafer. An example of the application of the technique is given for localized oxidation through a mask.

By pouring a very small droplet of that colloidal solution having fine particles onto carbon coated Cu-grids (400 mesh), grid-preparation was made for transmission electron microscopy. The focused beam of electron is allowed to pass through the samples in the very high vacuum chamber. The final data were recorded using a charge coupled device.

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