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BURNISHING UNCOATED GRIDS BEFORE MOUNTING ULTRATHIN SECTIONS; A MEANS OF ASSURING ADHESION

During the past few years, the writer has been amazed to learn that many workers in electron microscopy are having much trouble with sections not adhering to uncoated grids. Because of the simplicity and reliability of the method used in our laboratory, the precedure is described below.

The grids may be smooth on one side or they may be rough. Generally, grids of 300 mesh or finer are used. The grid is removed from its container and placed on the forefinger with the smooth surface up (if one side is polished). The handle surface of a pair of forceps (generally the ones used in handling the grids; Inox No. 5, for example) is then applied with a brisk rubbing motion and firm pressure over the grid surface. This burnishing removes most of the oxidized surface and also polishes it. The grid is then immersed in 1 *N* HCl for about 10–15 sec, washed thoroughly with distilled water, dipped once into absolute ethanol, and dried on filter paper. The grid must then be used within 5–10 min; otherwise, its adhesive properties become unpredictable.

To retrieve the sections, they are first gathered together in the desired orientation on the water in the knife trough. The treated grid is brought straight down (flatwise) directly above the assembled sections until it comes into contact with them. The water may then be removed from the grid with a strip of filter paper.

Advantages of this method are the certainty that sections will adhere to the copper surface, and that uncoated sections give much better contrast in the electron beam. Section drift on uncoated grids is no greater than that with coated grids.

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