



An anodic aluminium oxide film was investigated by TEM. Primary goal was to study the quality of the typically shaped porous film with columnar structure, its cell properties (e.g. pore diameter) and thickness of the Barrier Layer.

Careful preparation of a cross-sectional specimen like the one depicted is essential in order not to damage the relatively fragile columnar structure, and to reveal virtually single porous columns so that its cell properties can be determined unambiguously. A suitable thin electron transparent TEM specimen was obtained by the technique of Dimple Grinding and Argon ion milling.

During TEM observation also special care had to be taken into account in order to preserve its virgin structure as much as possible. This was achieved by minimizing the primary beam current density to the lowest possible usable level.

TEM EXAMPLE