Model 751-HD Nickel NanoChannel Array Substrate for AFM and STM

General Characteristics

Channel width about 370 nm, Depth about 180 nm, top and bottom approximately flat. Height Profile across ridges indicates sidewall angle of about 70°.
Dimensions are given for information only. This sample is not a calibration grating.

Background Information

Composition: Solid Nickel, about 6x4x0.3 mm (Length, Width, Thickness). The pattern covers the entire surface.
General appearance: the patterned side is somewhat shiny and a rainbow of diffracted light is visible at some angles. The back side is dull.
Can be used for STM, AFM and related scanning probe techniques.

Appearance and usage

Be sure to mount the specimen with the patterned side up.
The pattern consists of ridges with occasional 'bulges'. The bulges are not defects and are sometimes regarded as useful reference points. In some applications, liquids may be temporarily confined in a single channel, in a segment bounded by two bulges. Bulge separation along a single ridge varies from 25 mm to about 400 mm.
There may be a number of visible defects on the surface of this specimen, such as pits, scratches and dust. Defects can help you focus on the surface of the specimen. After focusing, for best results, make images that exclude such defects.

Storage and handling

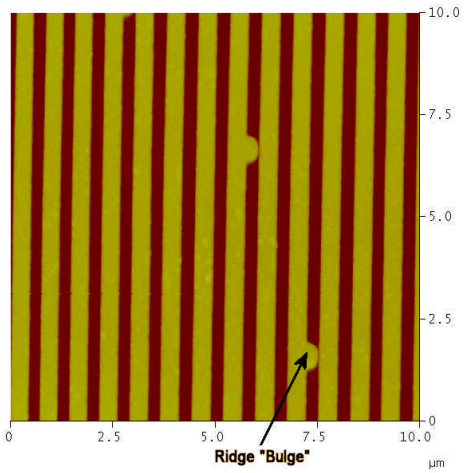
In you wish to preserve the sample in 'new' condition, we recommend that you store it in a dry environment at room temperature or below.
CAUTION:

- Do not touch the surface.
- Do not expose the surface to liquid or vapor of any material that reacts with Nickel

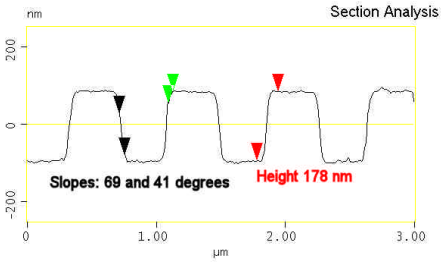
Deposition of Materials, Cleaning

Material deposition on the surface or cleaning is done at the user's risk. We don't warrant against damage to or contamination of the surface from such processes or from exposure to any liquid or gas. We regard the array substrate as a disposable lab supply item.

AFM 10 mm Scan (top view)



AFM 3 mm Scan Height Profile



Slopes indicated above (69° at middle and 41° near the top) may be tip-limited, i.e. the actual slope may be steeper.

Advanced Surface Microscopy, Inc.
3250 N. Post Rd., Ste. 120
Indianapolis, IN 46226 USA
www.asmicro.com