24 June 2016

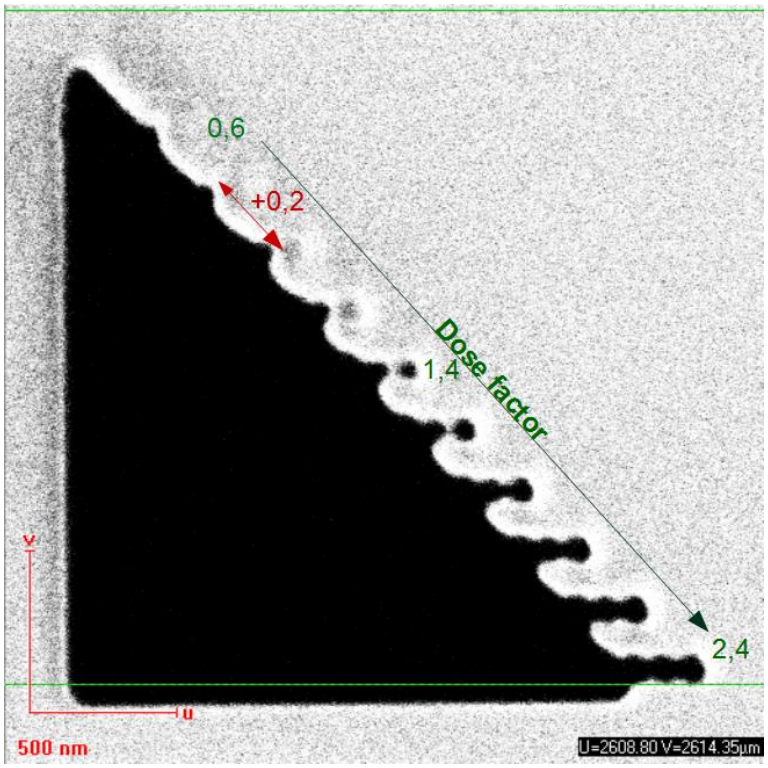
Miling of Chromium coated SiN membrane.

Parameters :

Coating	5 nm Cr
Thickness	5 + 100 nm
Beam	20µm – 6.5pA
Dose	1000
Loop factor	20
Dot dose	0.1004pC
Dot dwell time	14.743ms
Design	*fdtriangle*

Results :

We milled a large area (triangle) of dose factor 10 that goes through the whole membrane. Crossing this area, we made lines of dots, each line with a higher dose factor. We then compare the dots to the hole next to them.



The dots pierce through the membrane for a dose factor equal to **1.4** (*ie* 2.811pC). We also achieve a minimal hole size of ~70nm.

To make sure we milled through the membrane, we can make fall a small part of it: