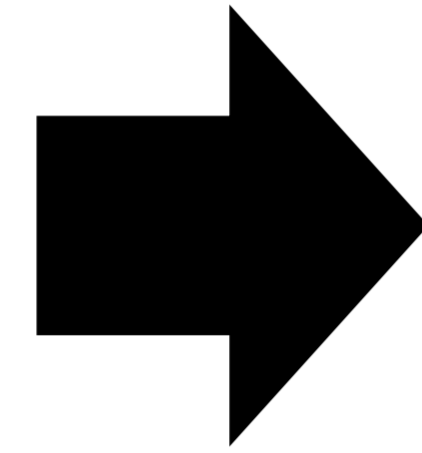


# ETCHING LAB

The etching operation is needed to obtain a surface finish free from any impurity



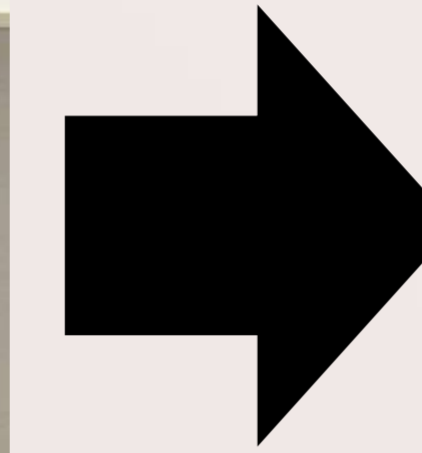
The cavity is weighed



The cavity is then degreased  
in a ultrasonic bath



The cavity is then prepared  
to undergo the treatment

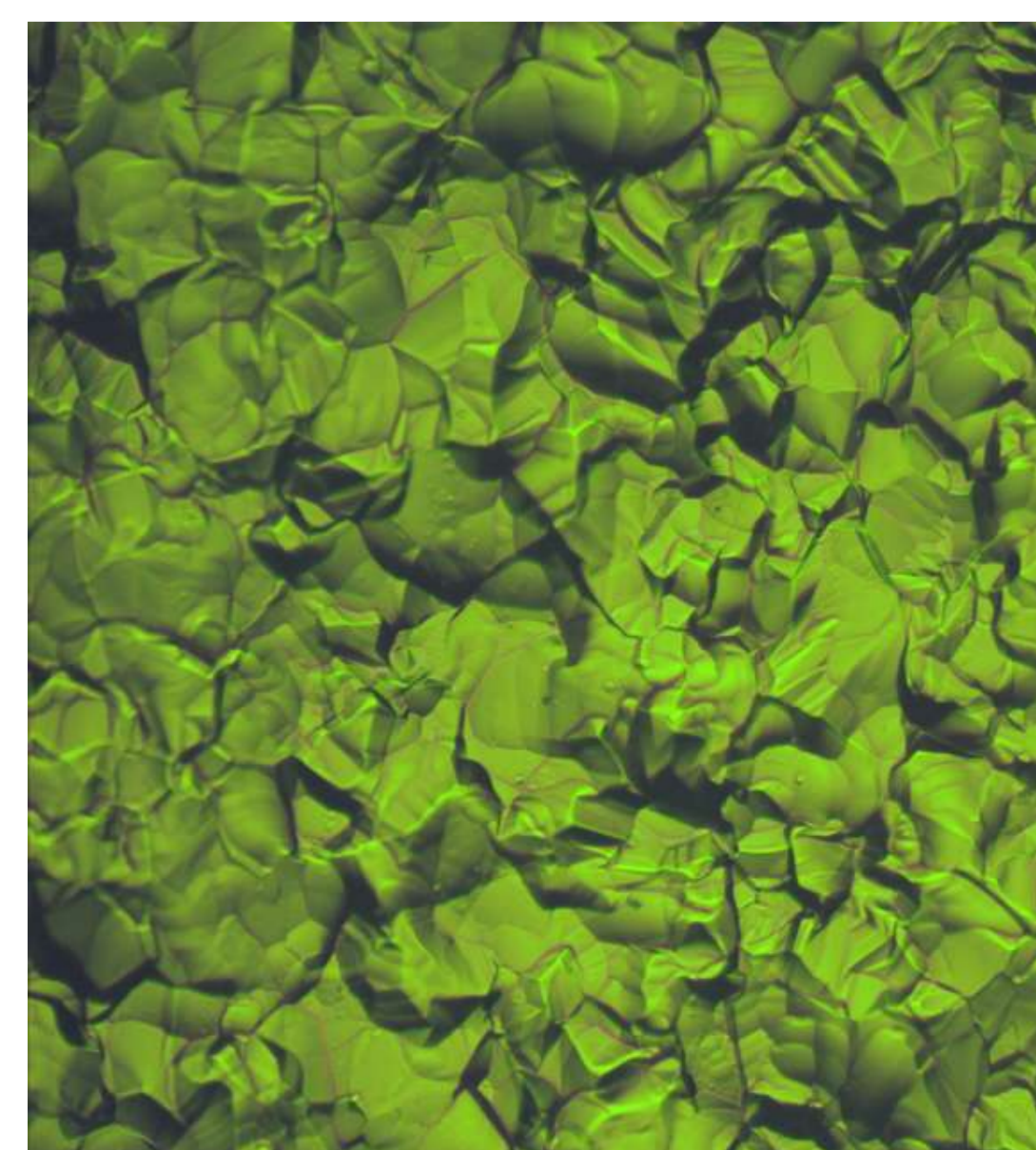
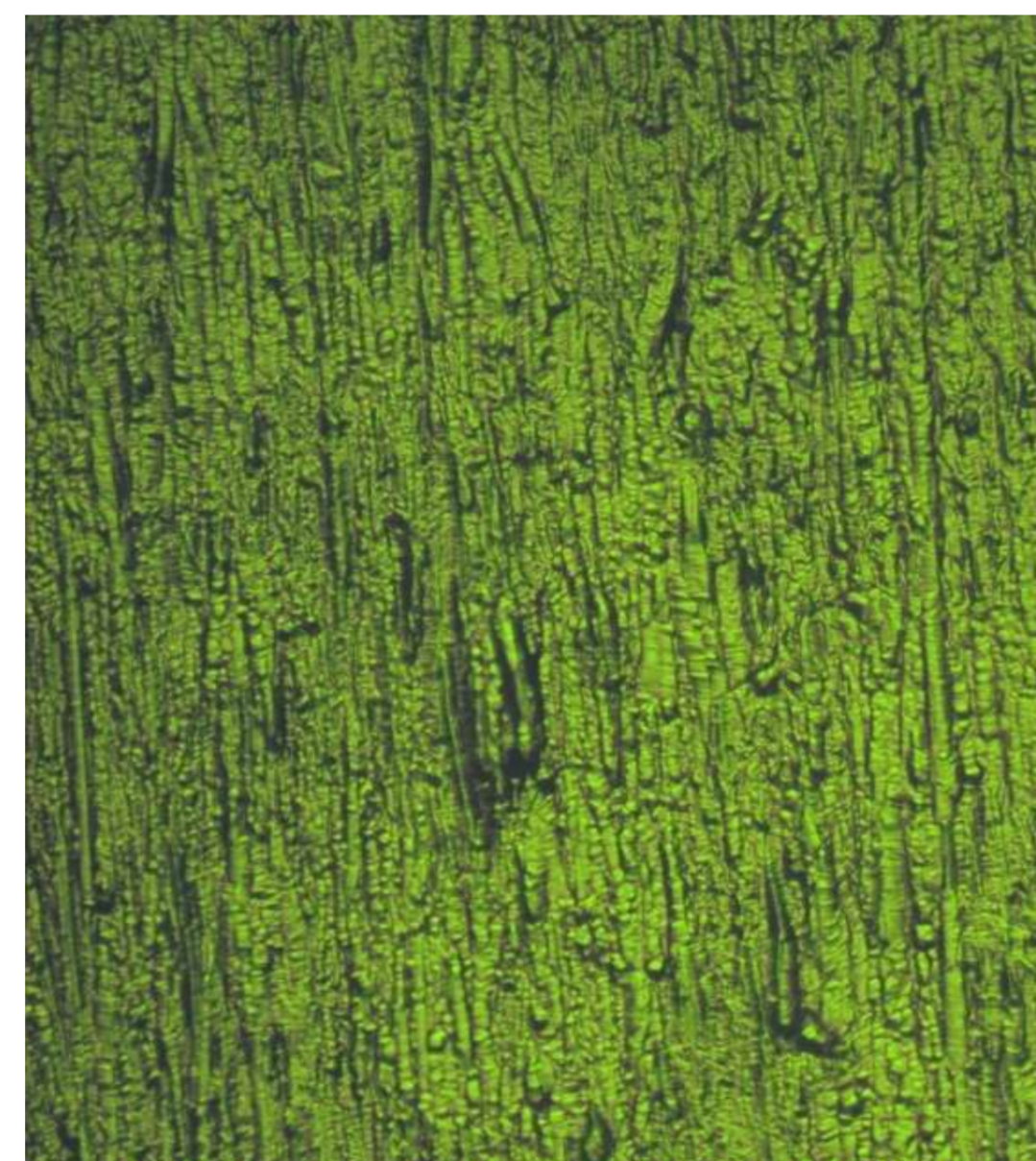


Buffered chemical  
polishing etching



The cavity is rinsed with ultra-  
pure water

Surface state  
before etching  
( $\times 200$ )



Surface state after  
100  $\mu\text{m}$  etching  
( $\times 200$ )

### **Operational facility since 2007**

- Mixture of phosphoric, nitric and hydrofluoric acids (2.4:1:1)
- Average etching rate :  $\sim 0.5 \mu\text{m}/\text{minute}$
- Typical etching depth : between 10 and 250  $\mu\text{m}$

### **Available surface observation devices**

- Ultrasonic probe (local depth measurement)
- Roughness meter
- Optical microscope ( $\times 1000$ )  
Bright Field, Dark Field, Polarized light