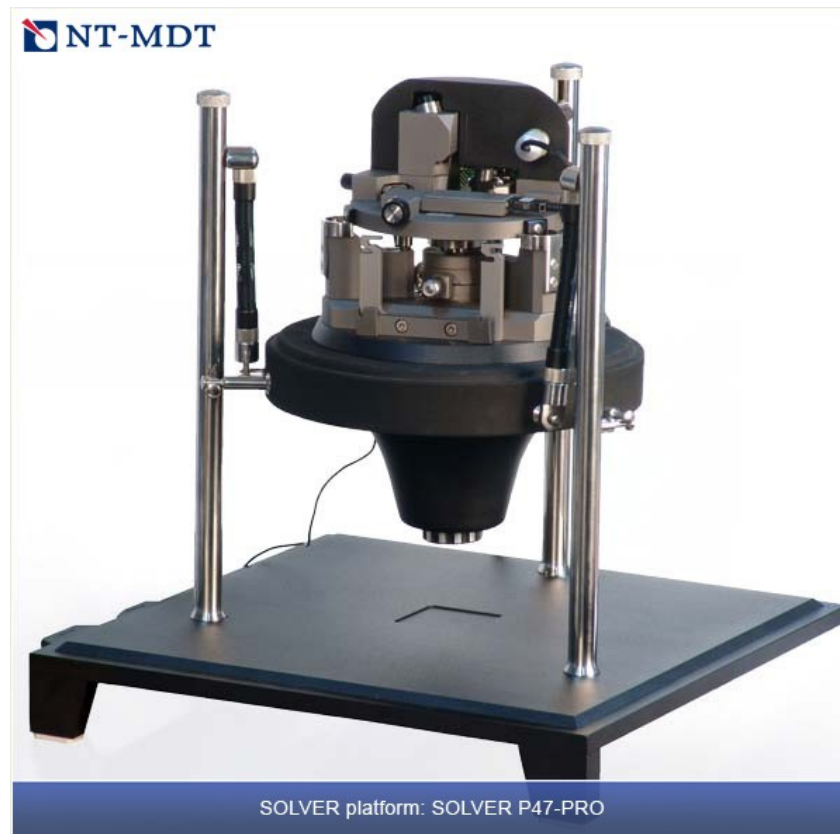
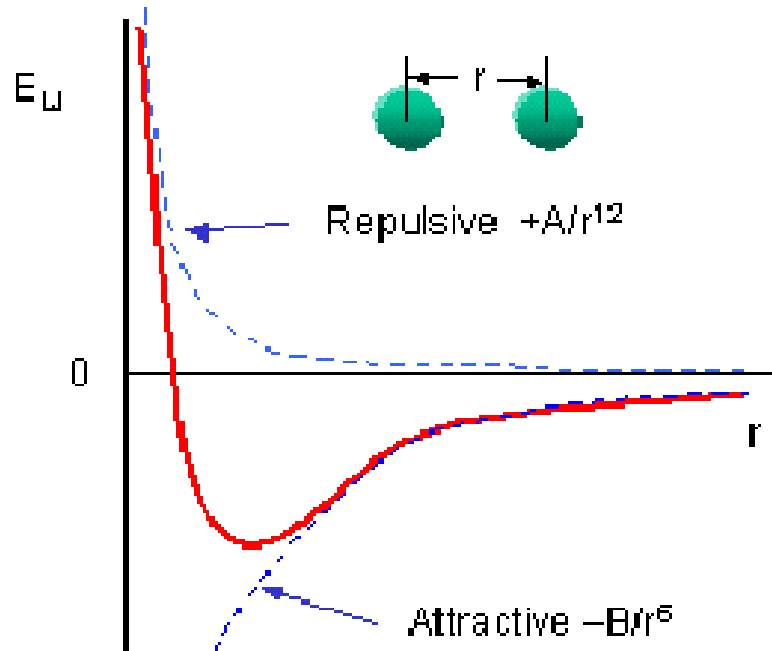


AFM: *Atomic Force Microscope*

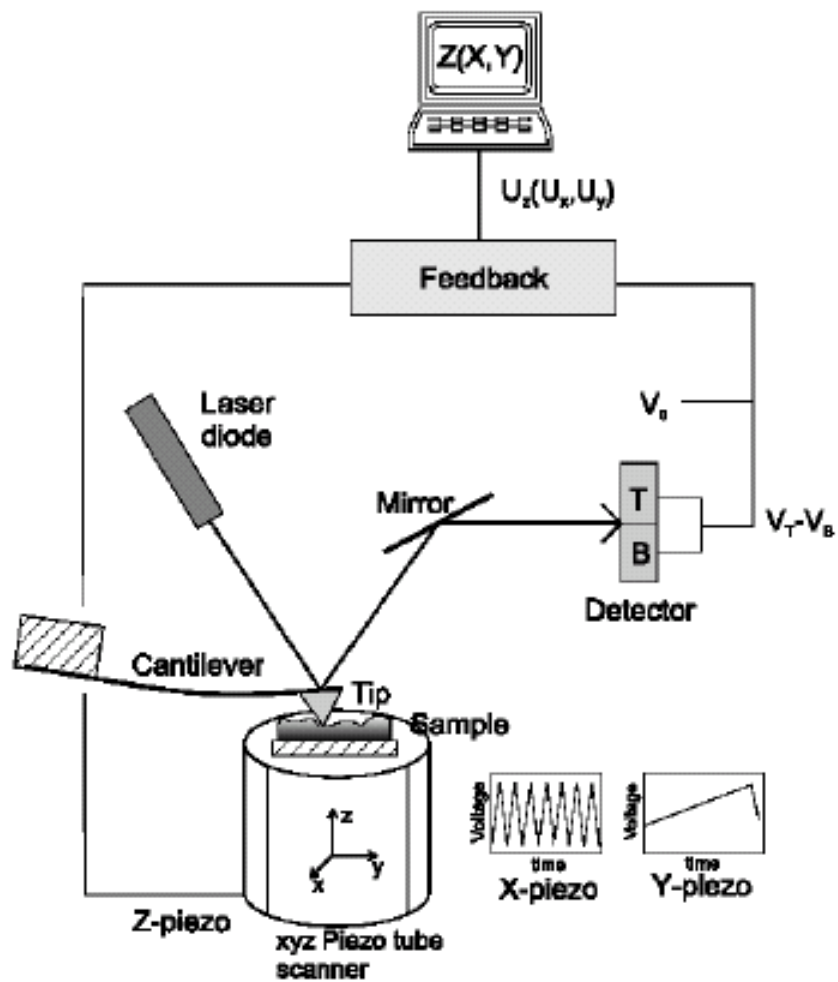
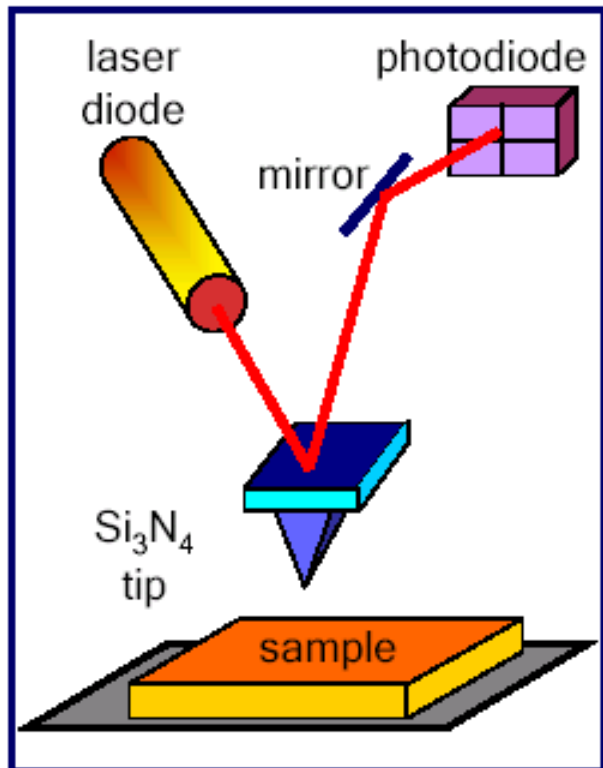


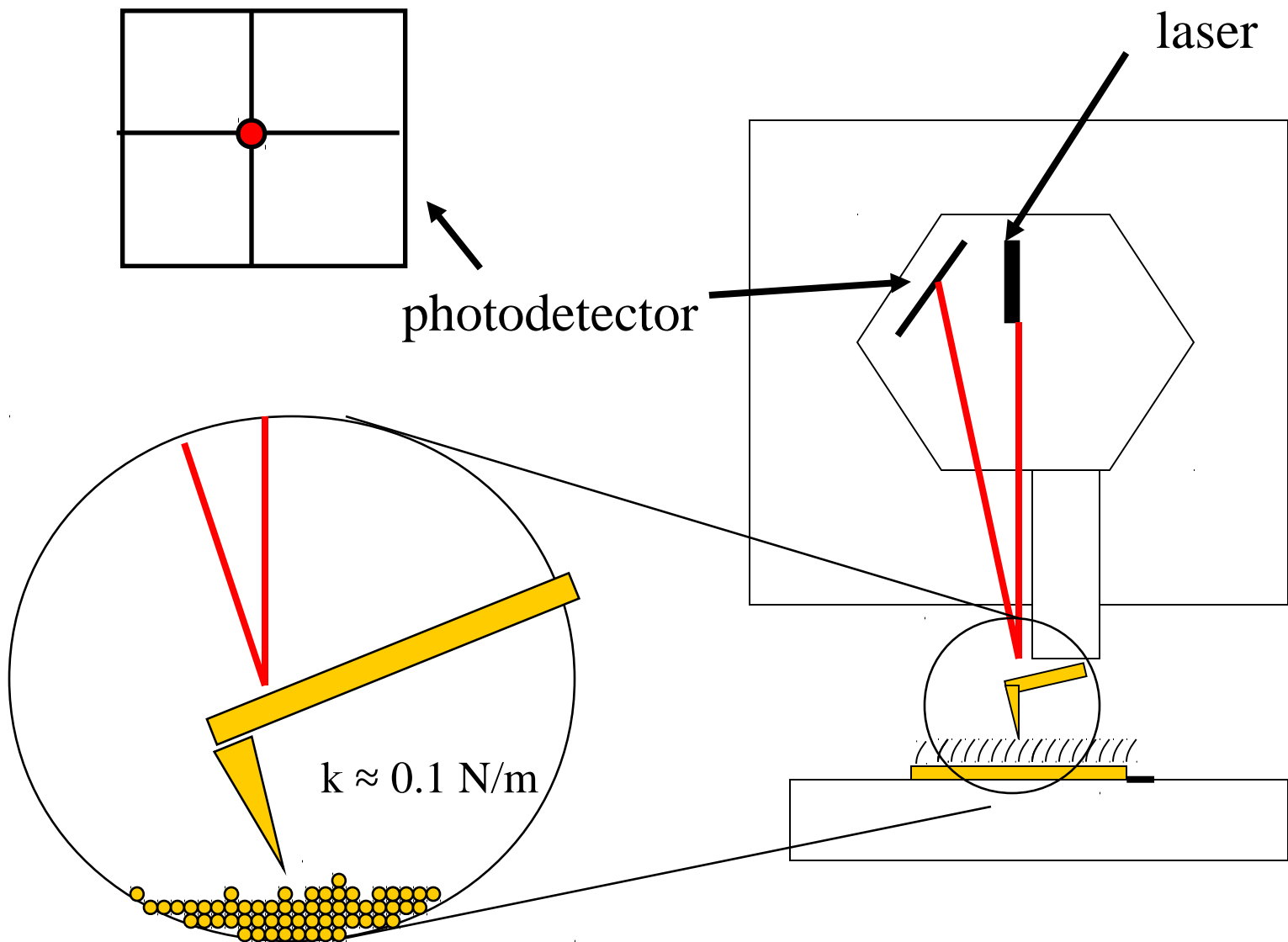
a Lennard-Jones potenciál: $U(r) = \frac{A}{r^{12}} - \frac{B}{r^6}$ (egy taszító és vonzó tag összege).

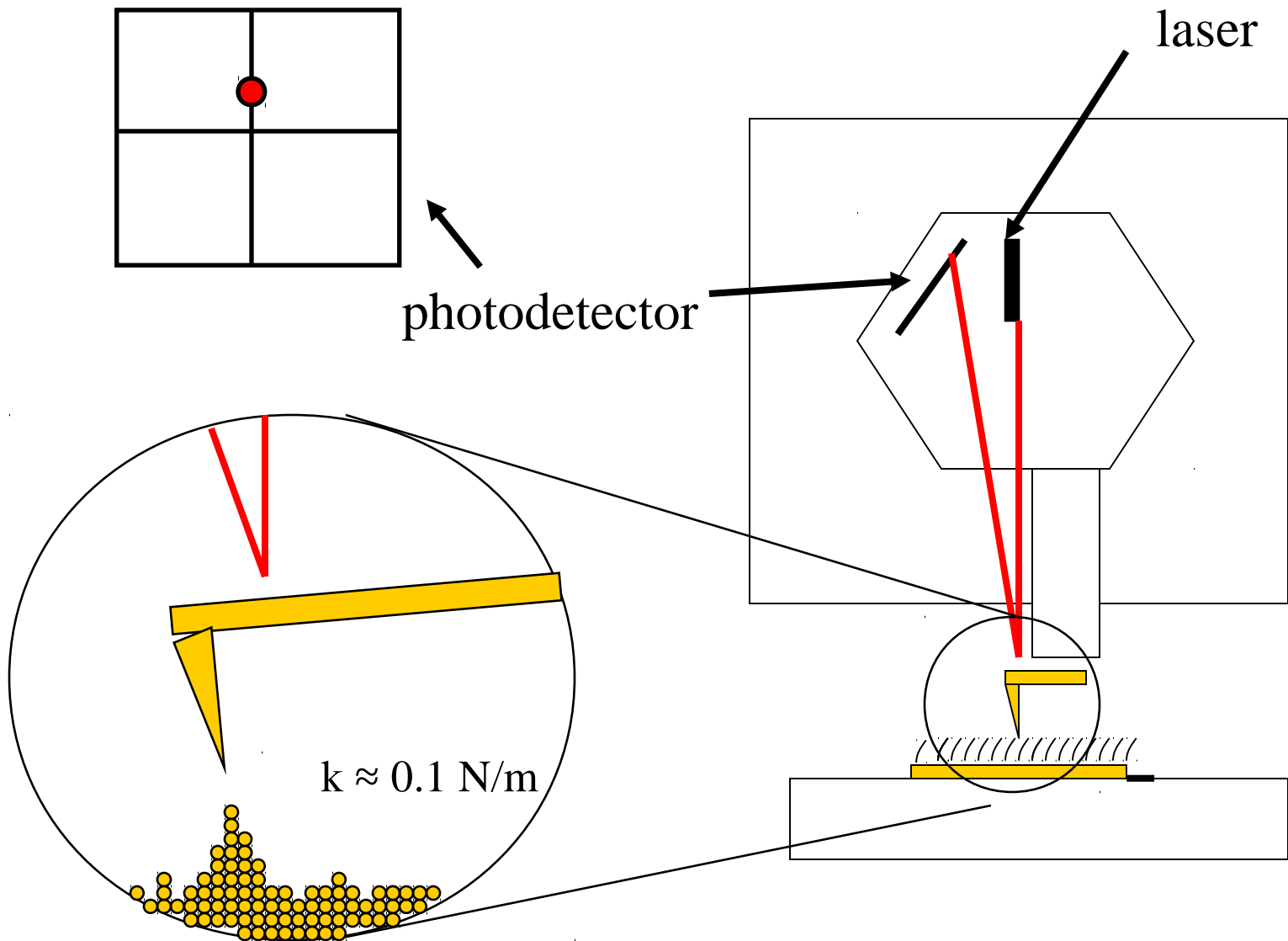


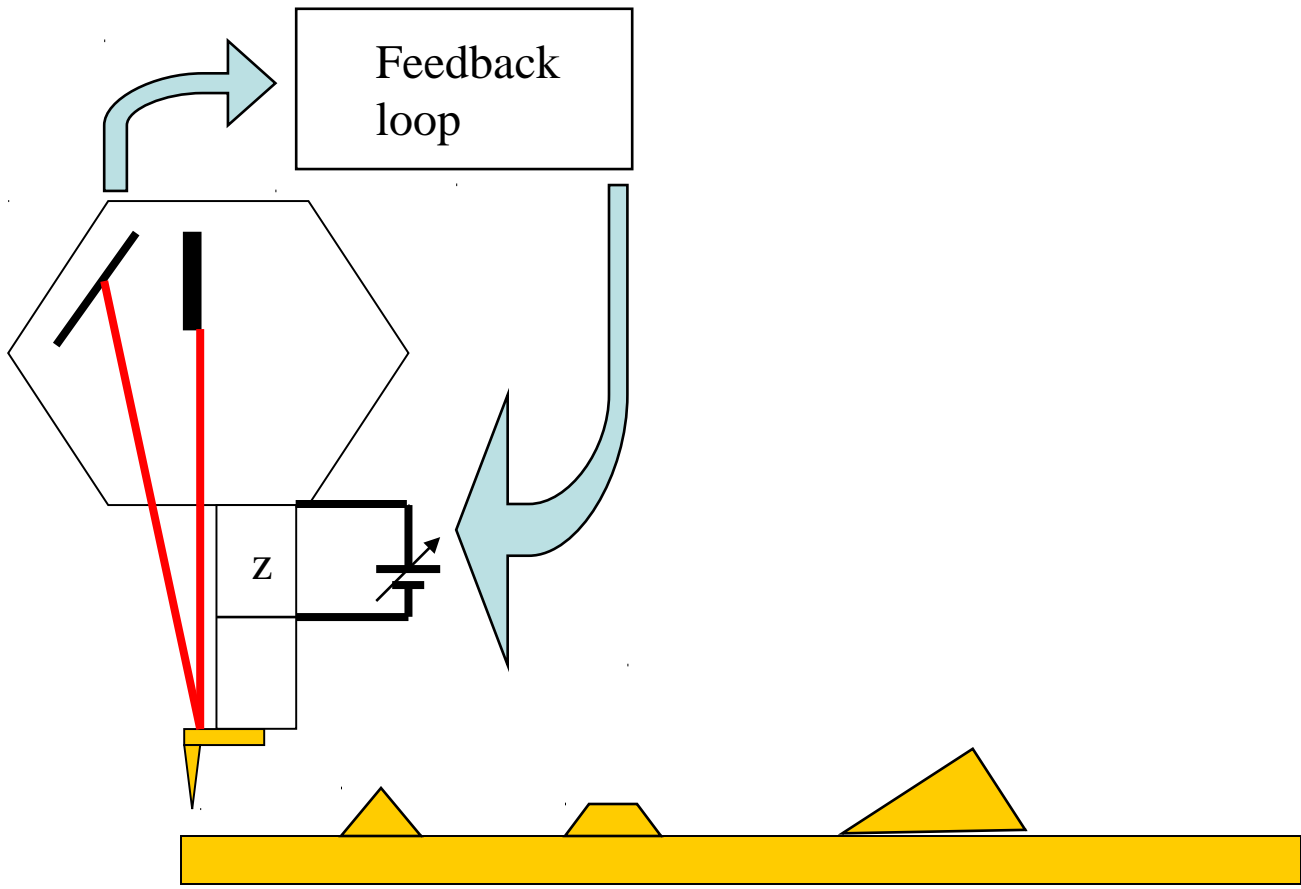
$$U(r) = \sum_{i < j} U(r_{i,j})$$

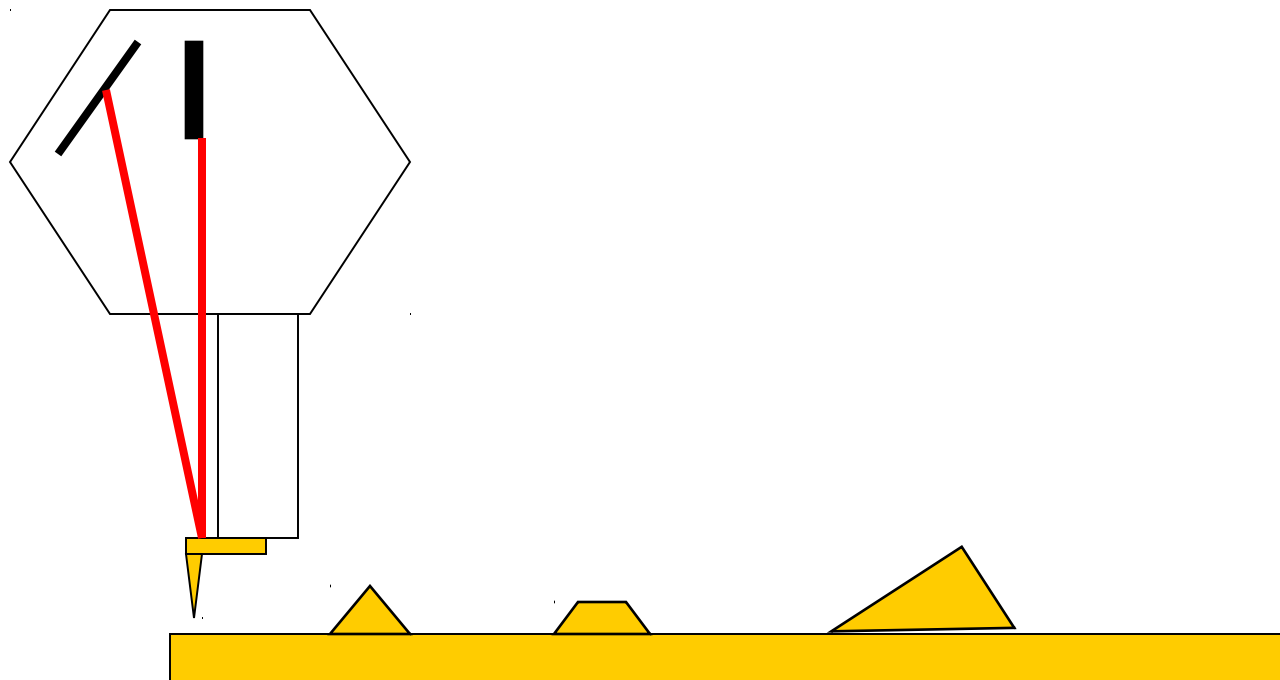
Párkölsönhatás: magok közötti taszítás és van der Waals vonzás

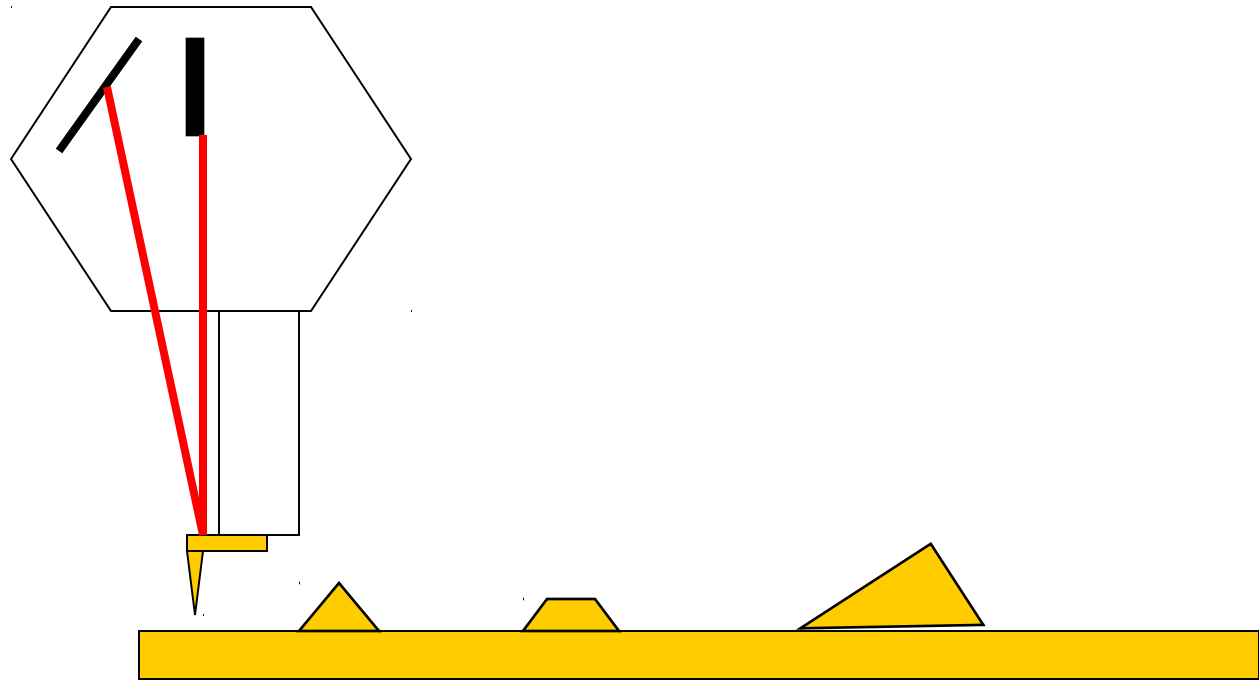


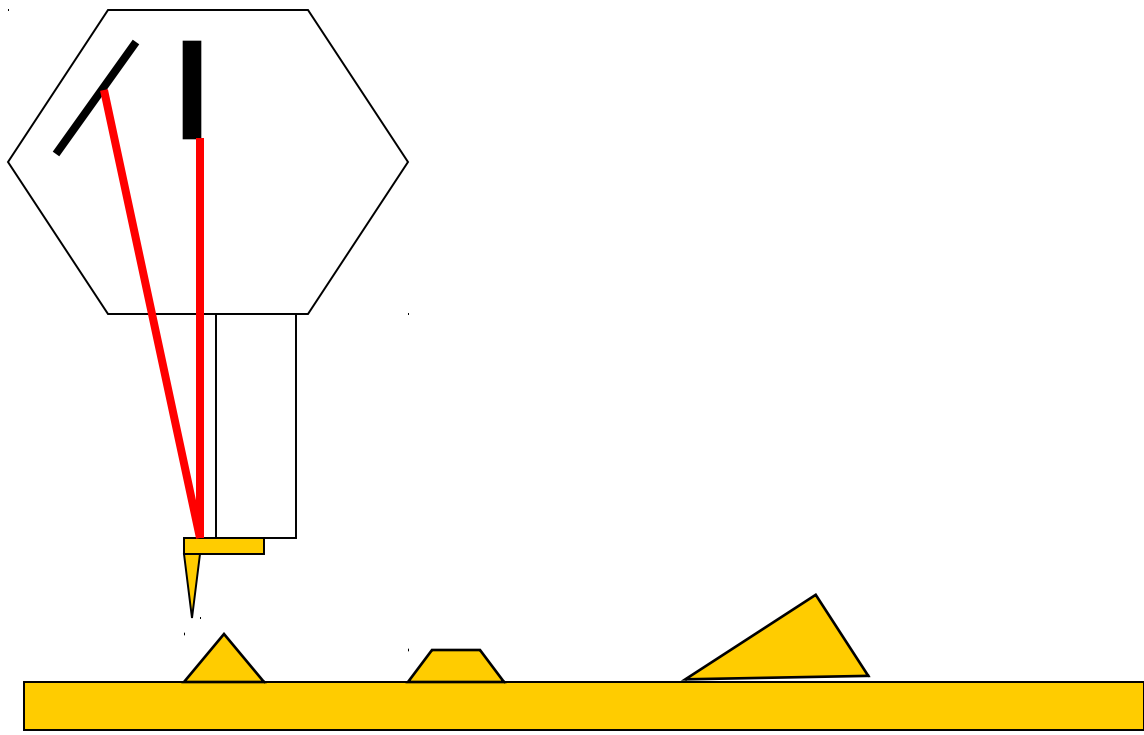


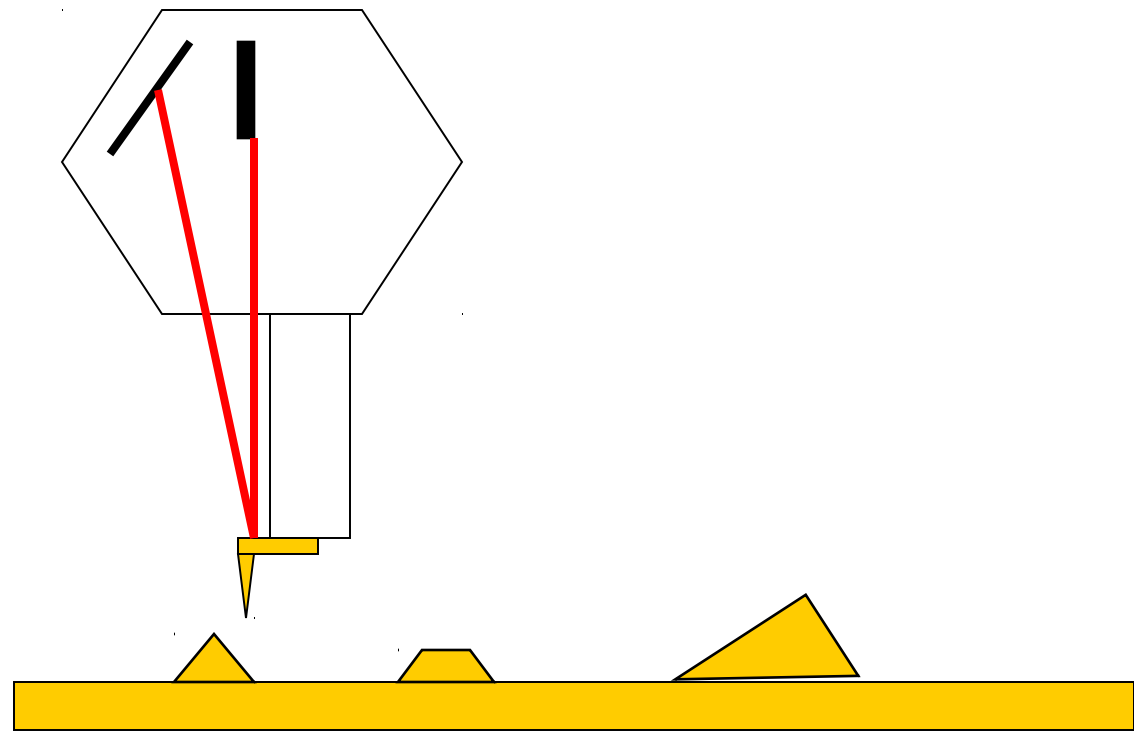


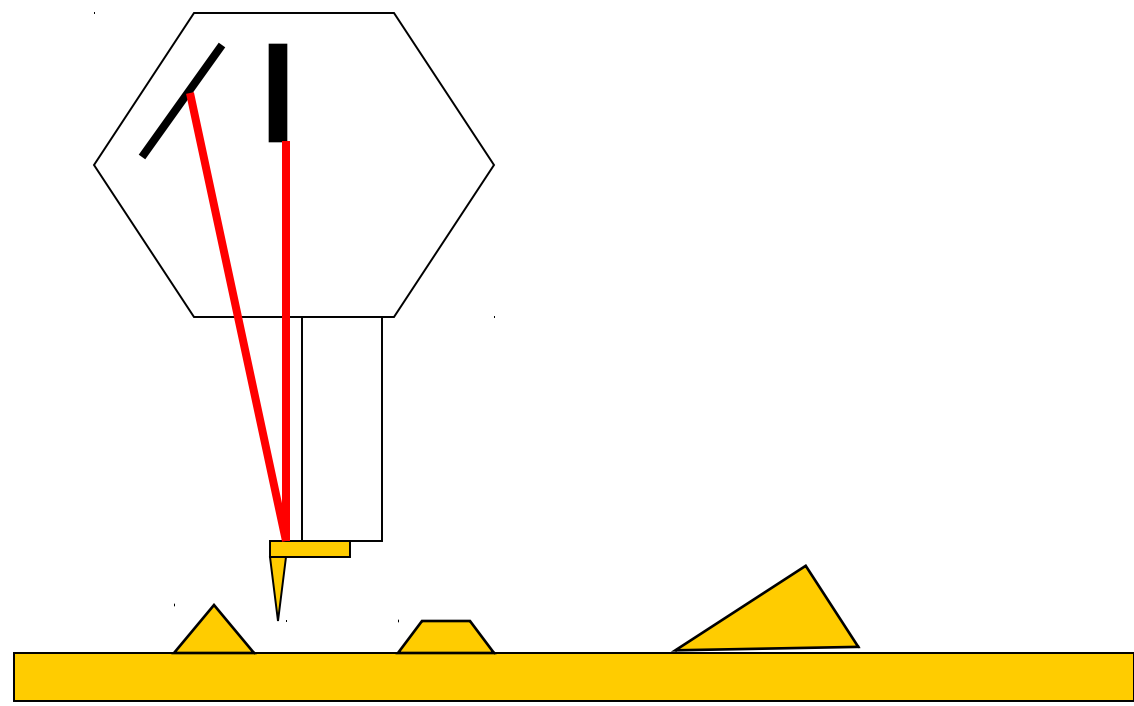


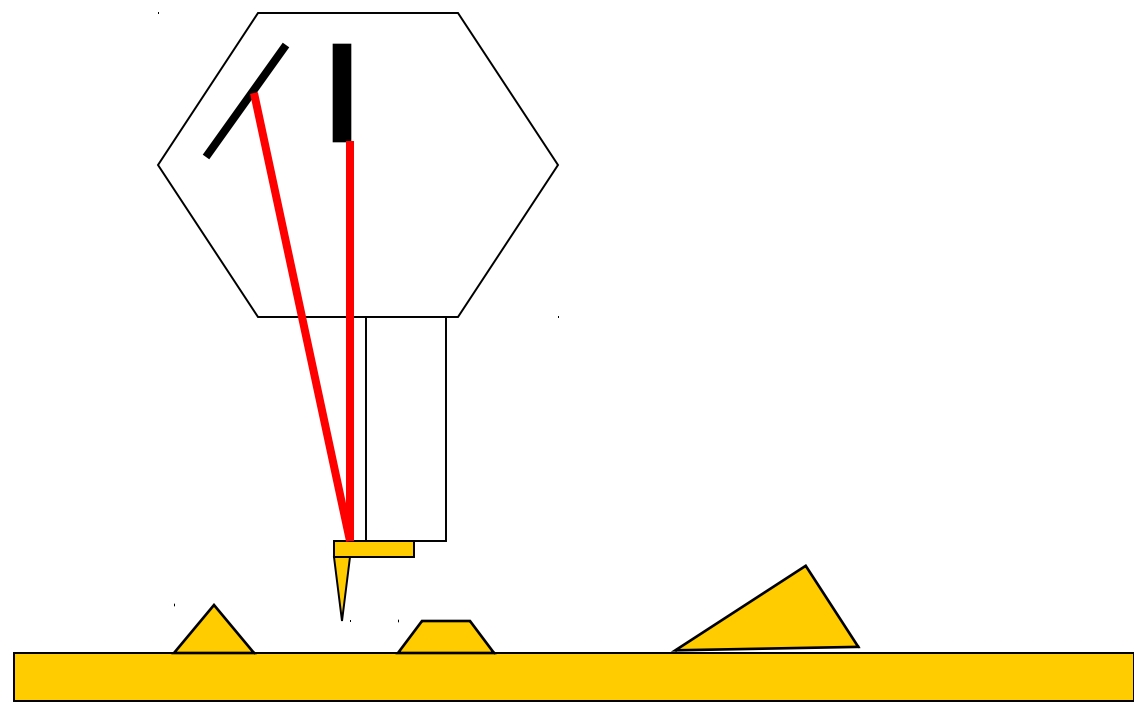


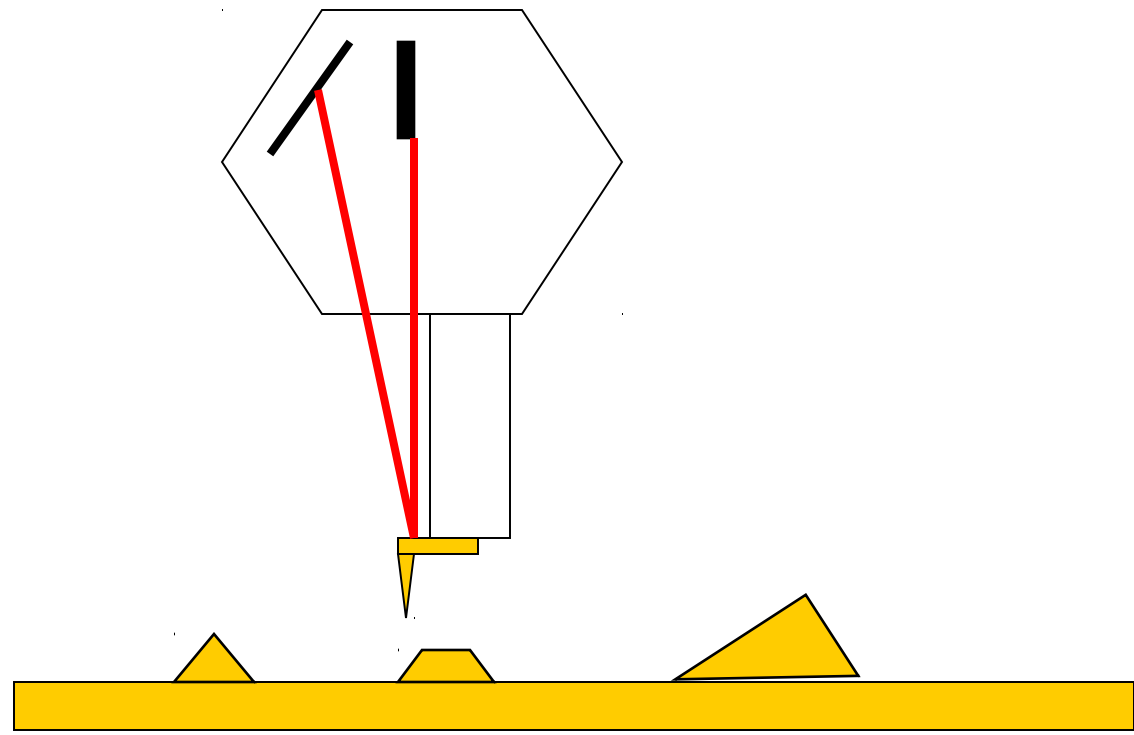


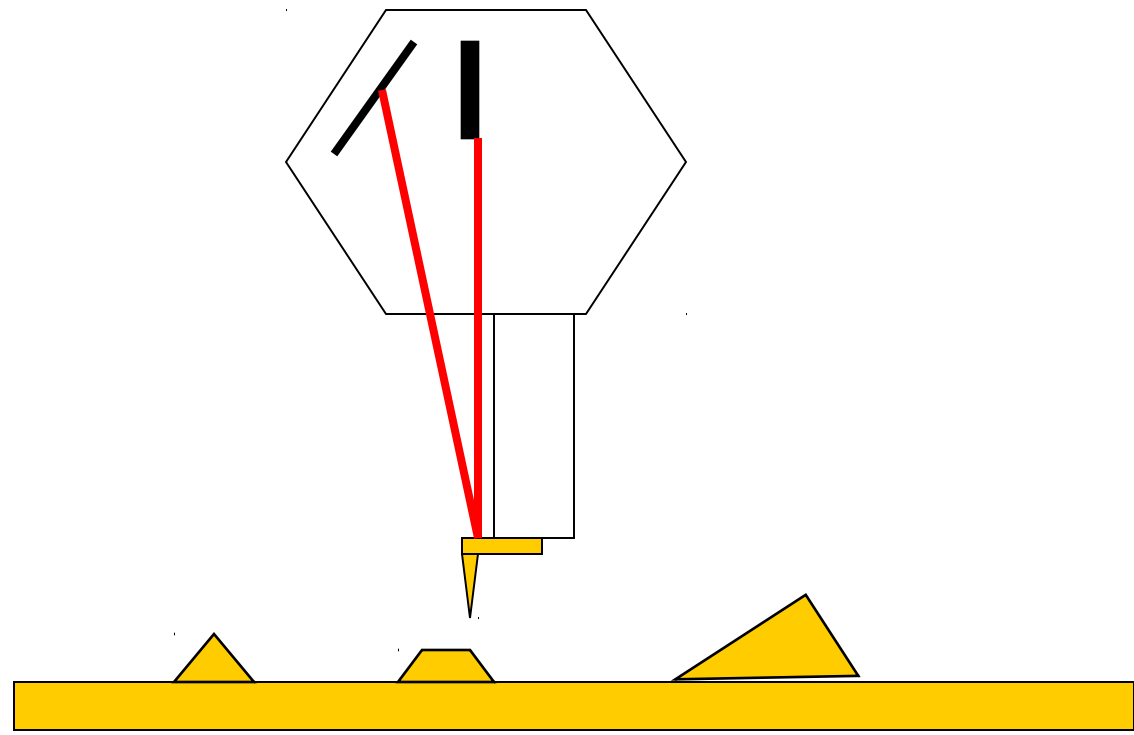


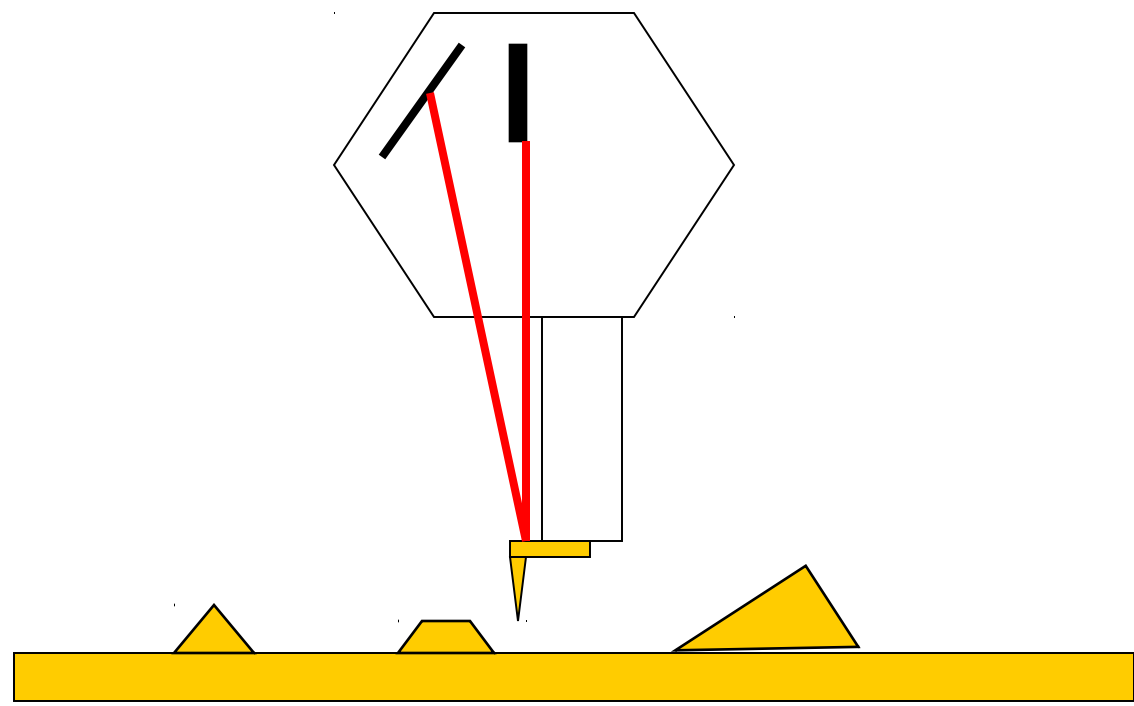


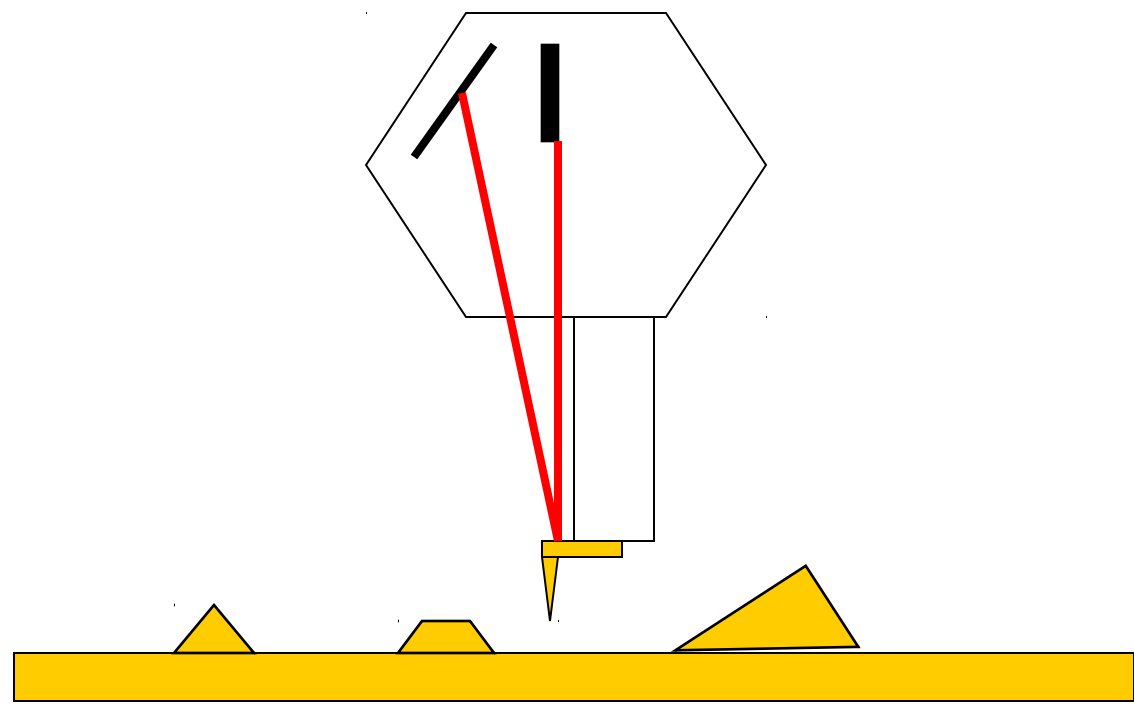
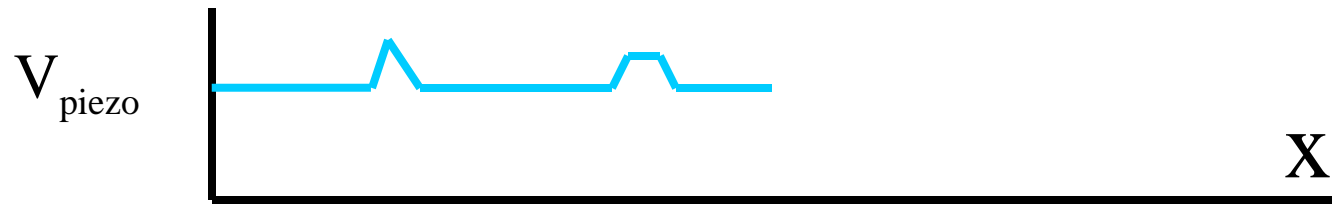


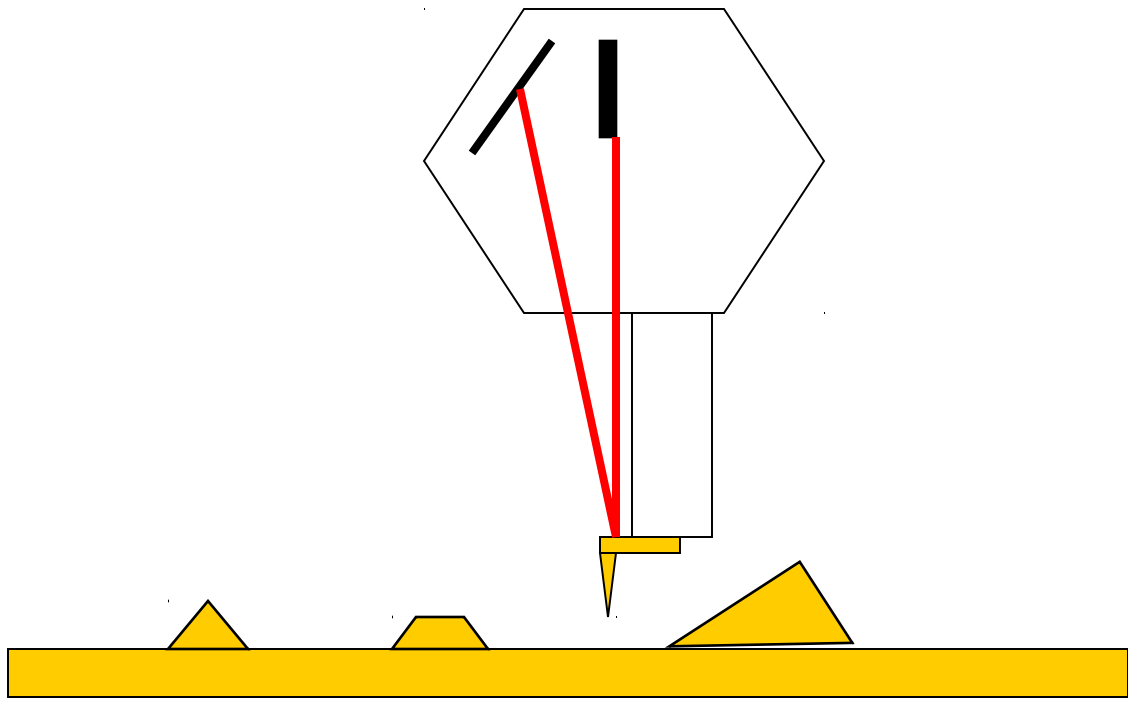
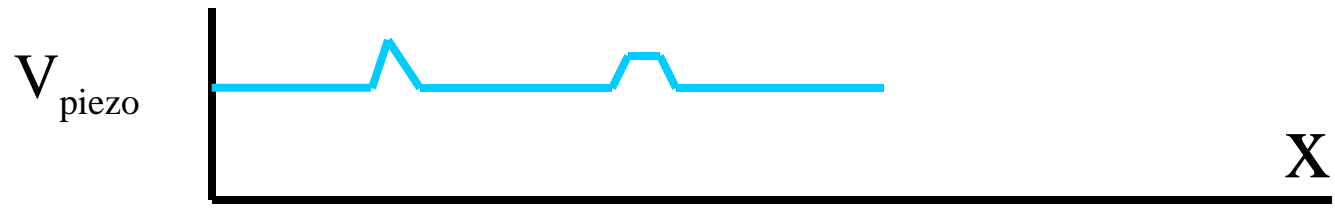


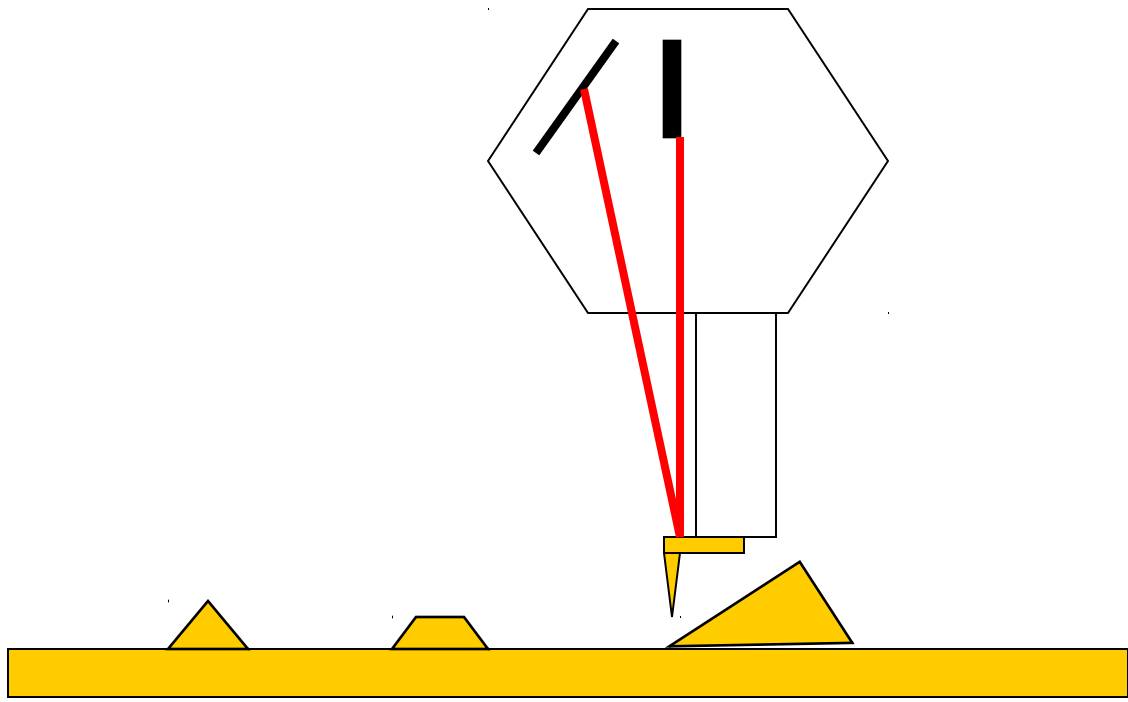
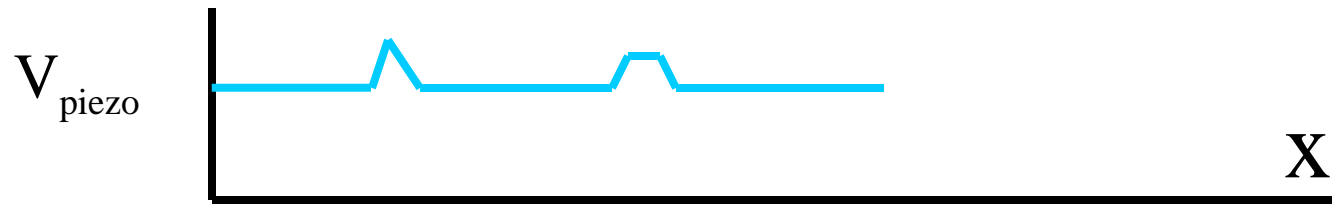


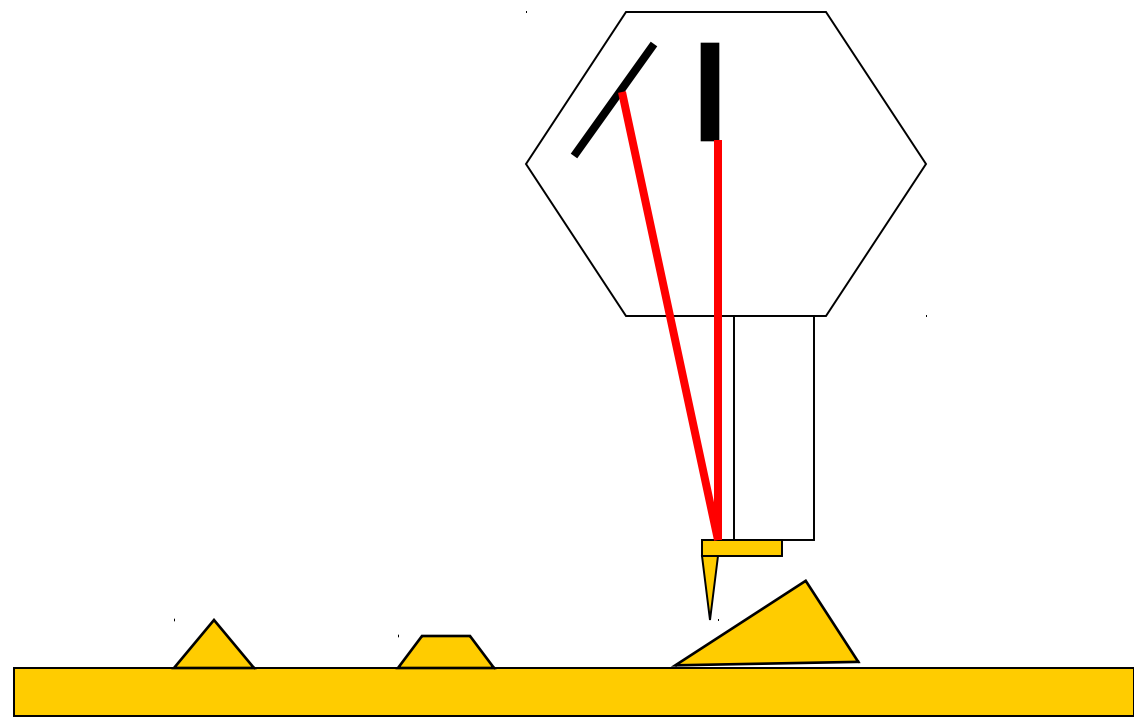
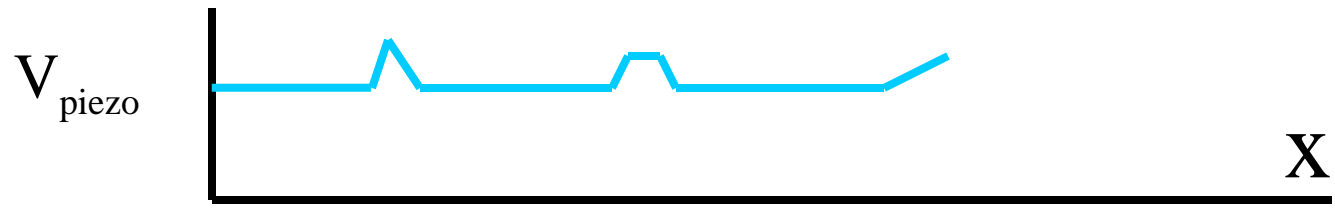


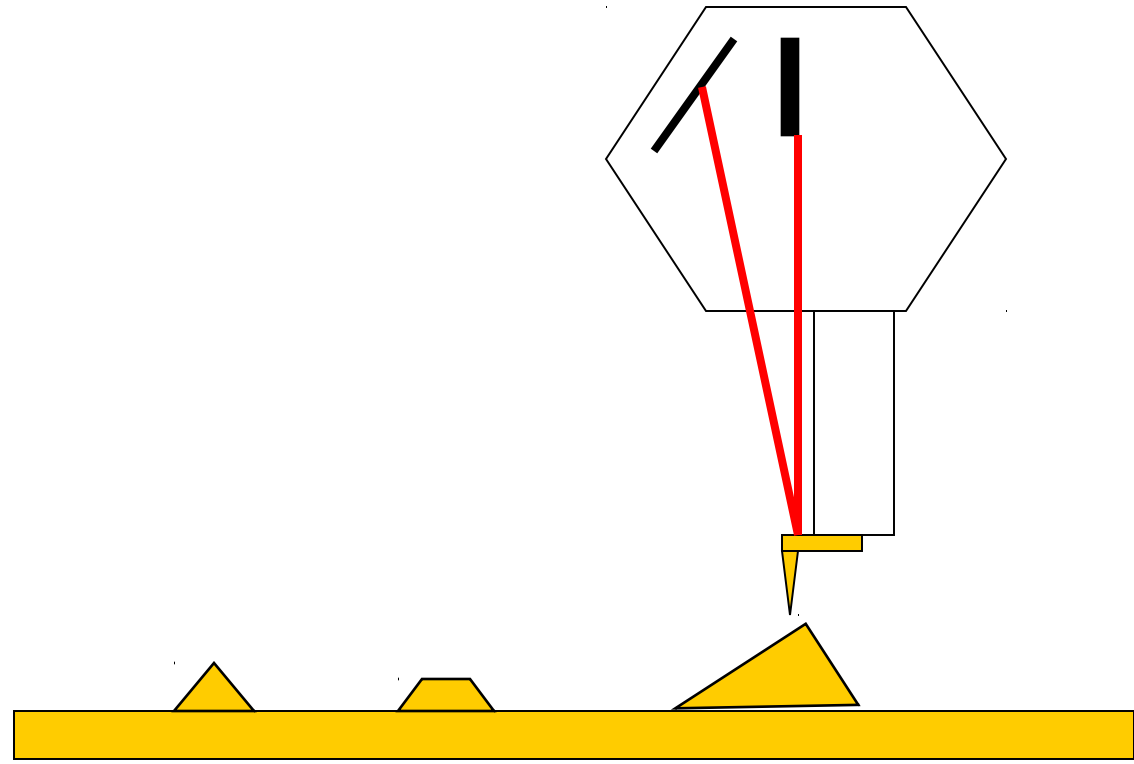
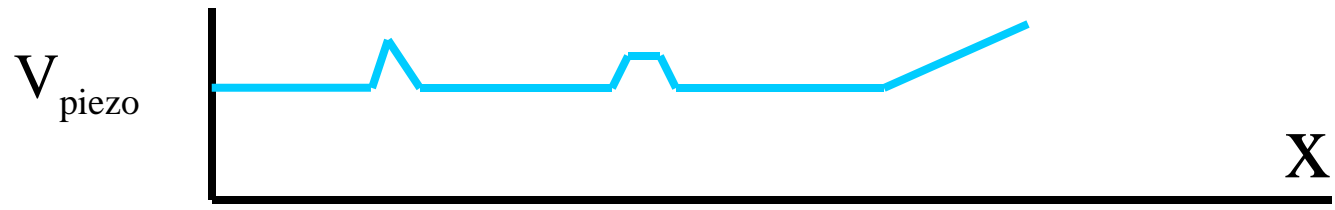


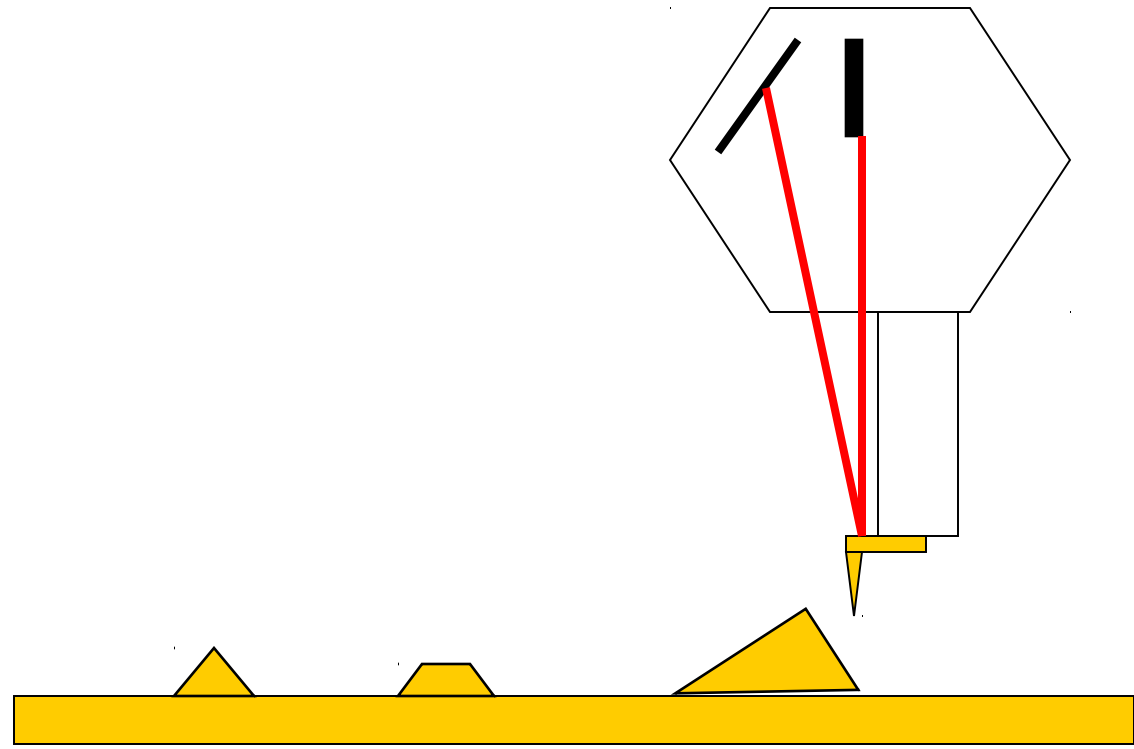
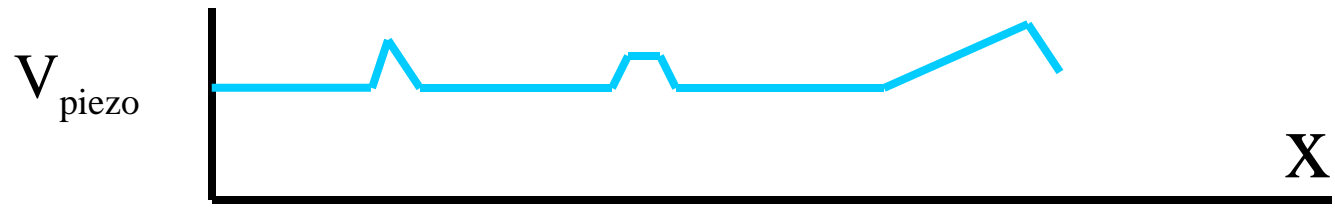


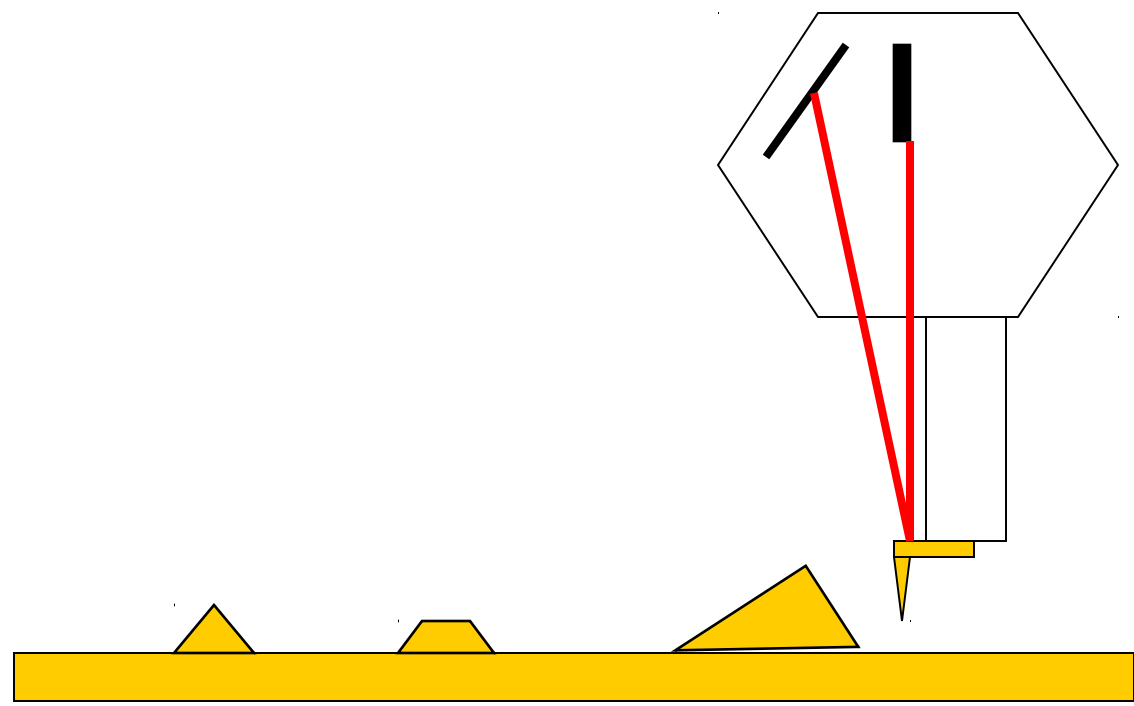
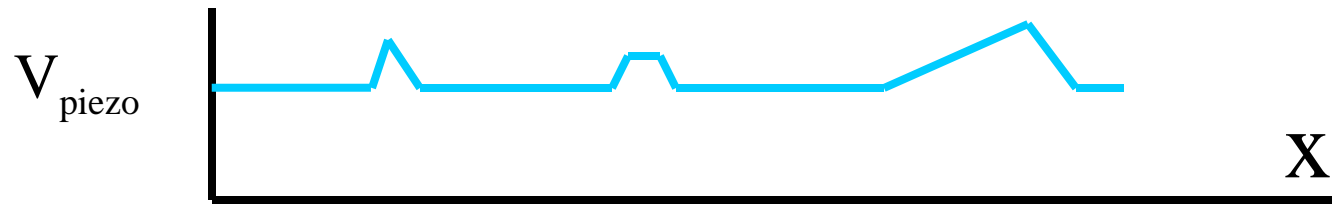


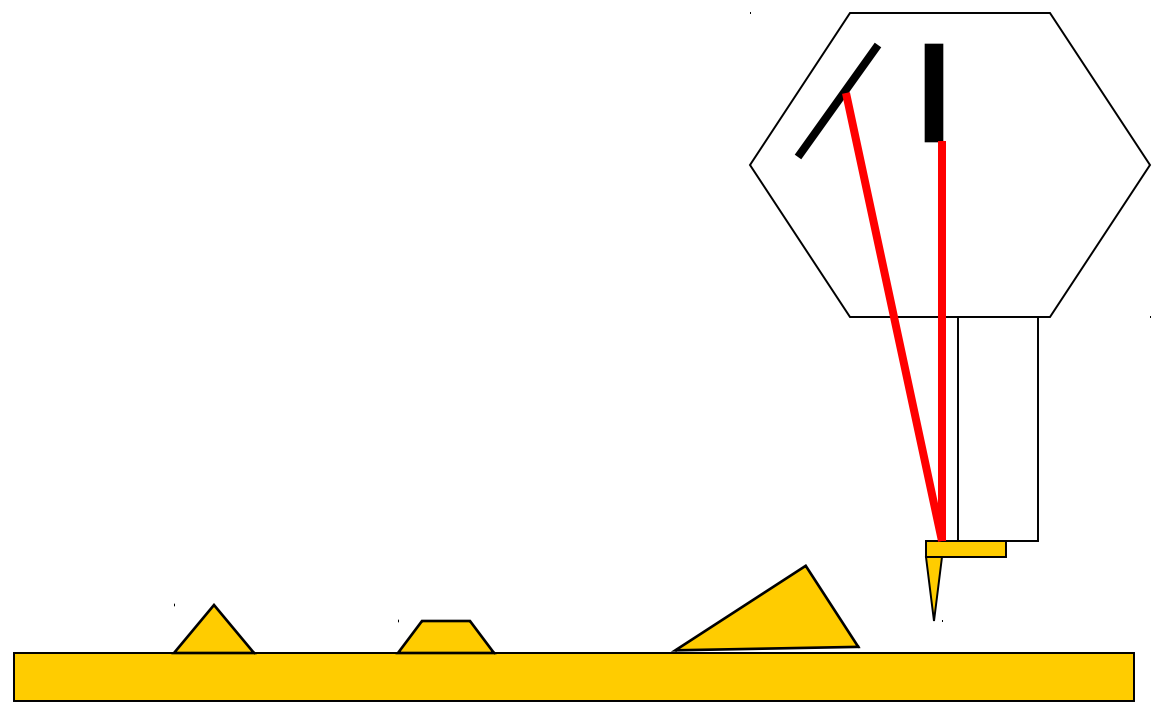
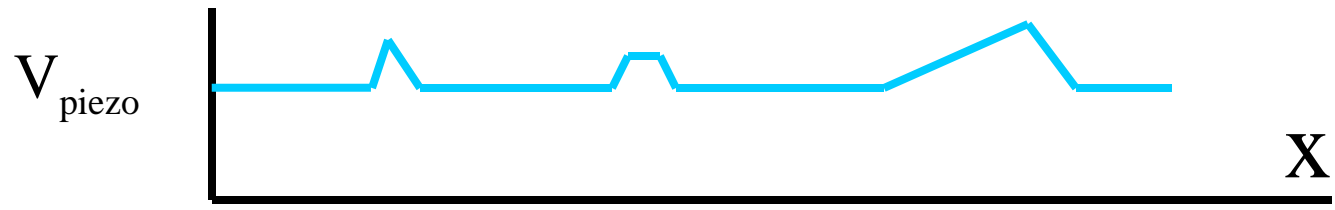


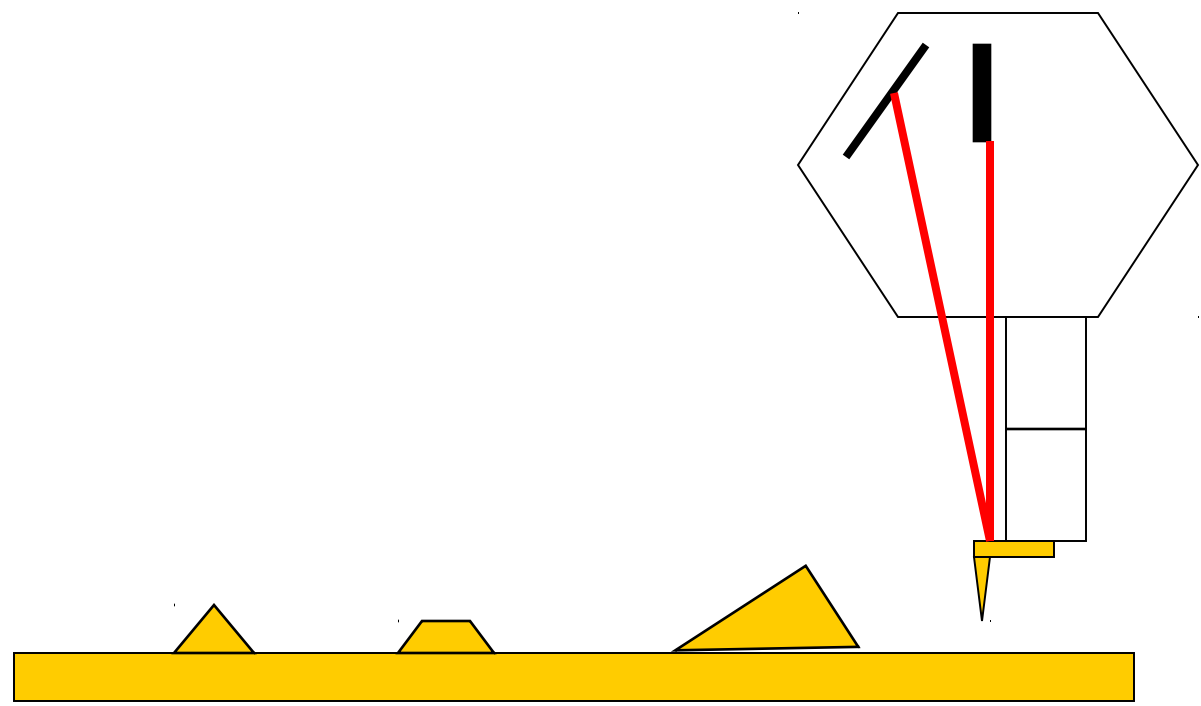
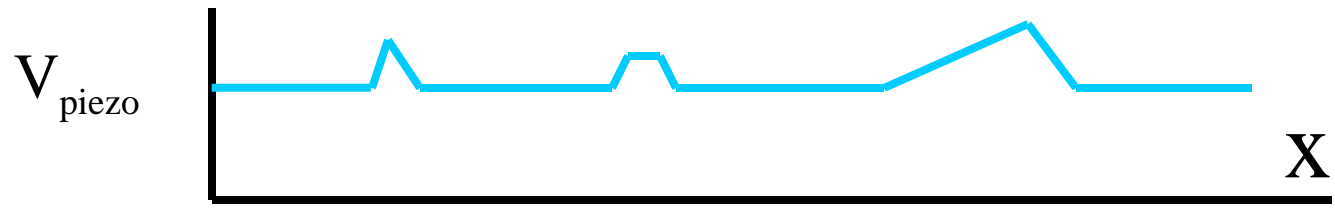


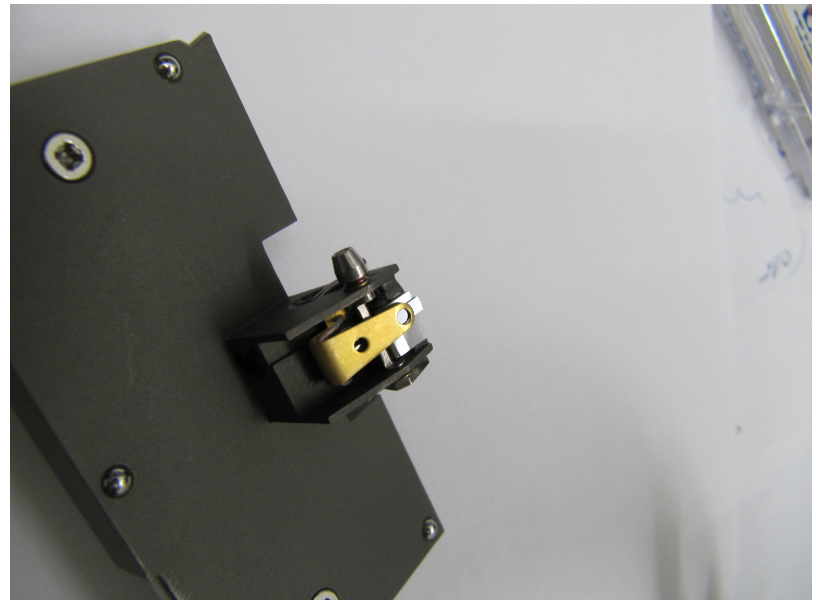
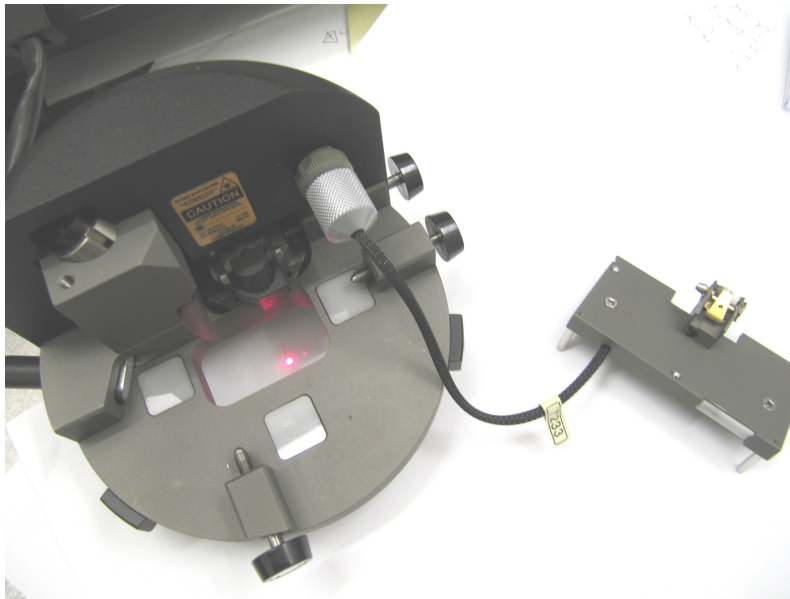
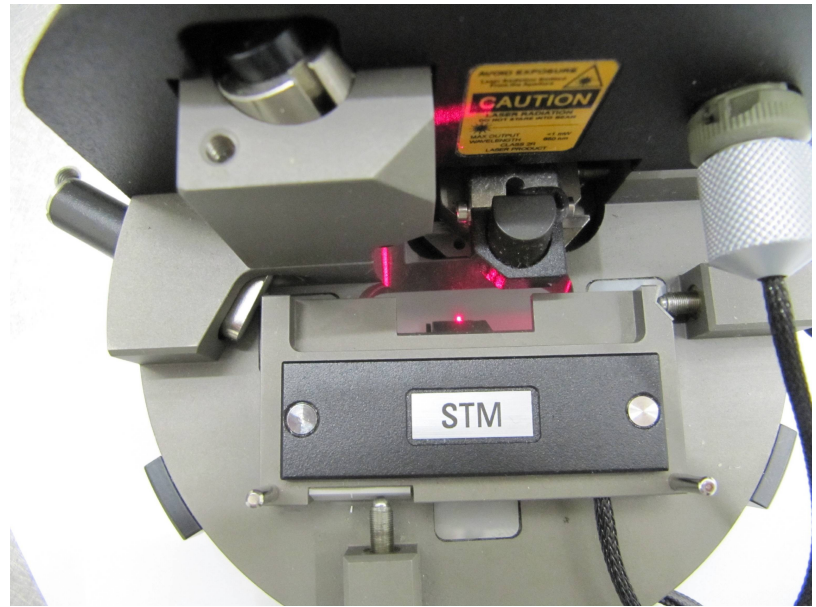
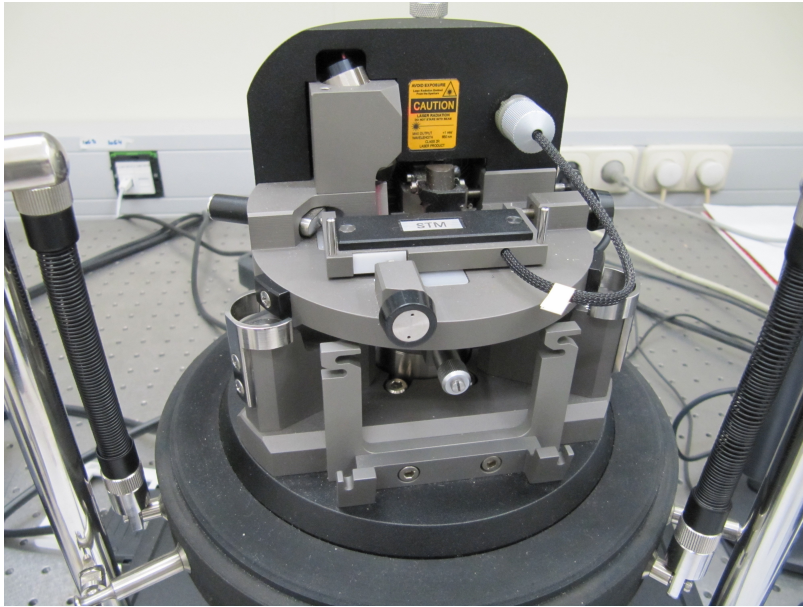


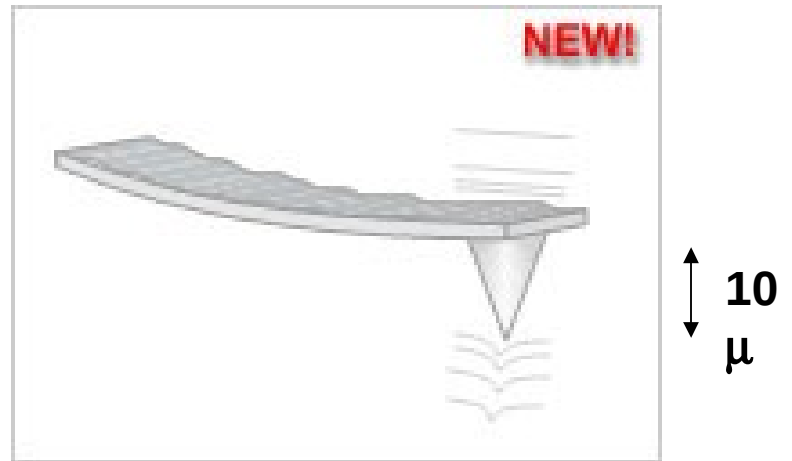
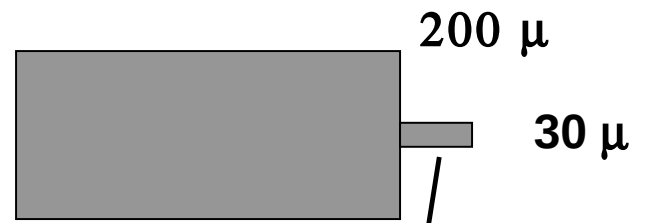
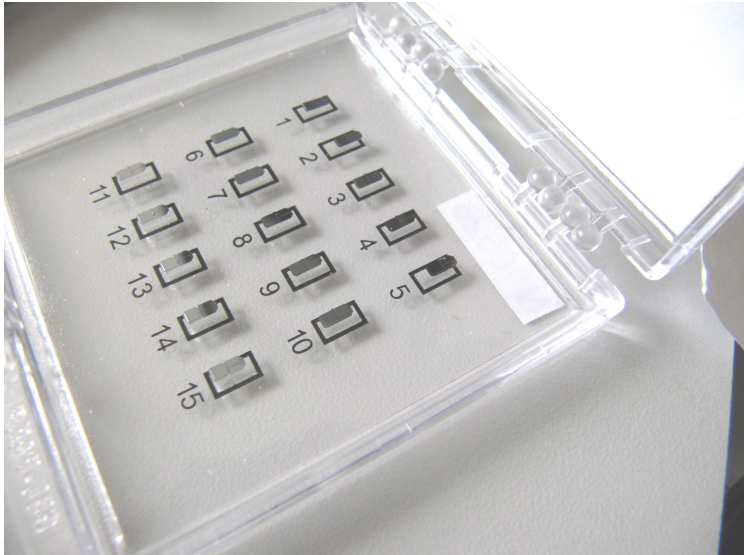


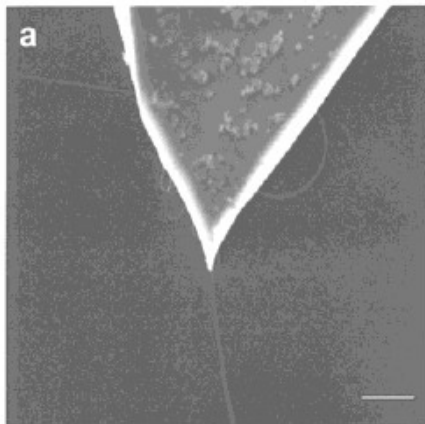




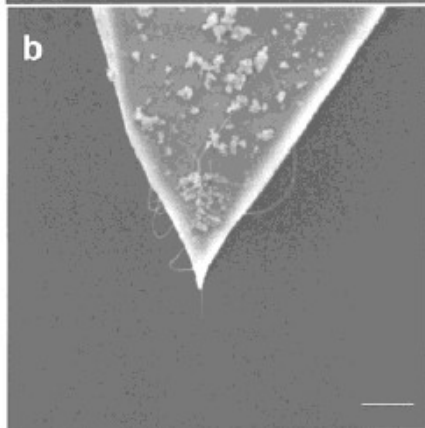




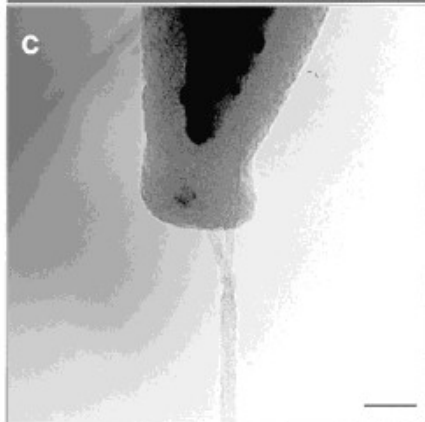




500 nm



500 nm

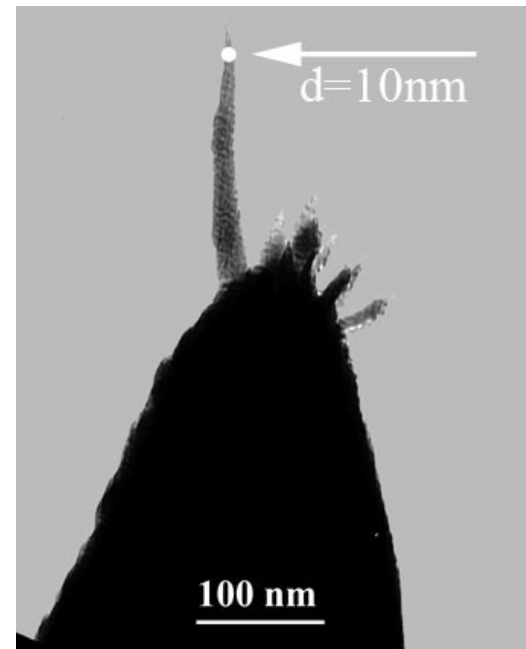


Szénnanocső
 $r=1\text{ nm}$

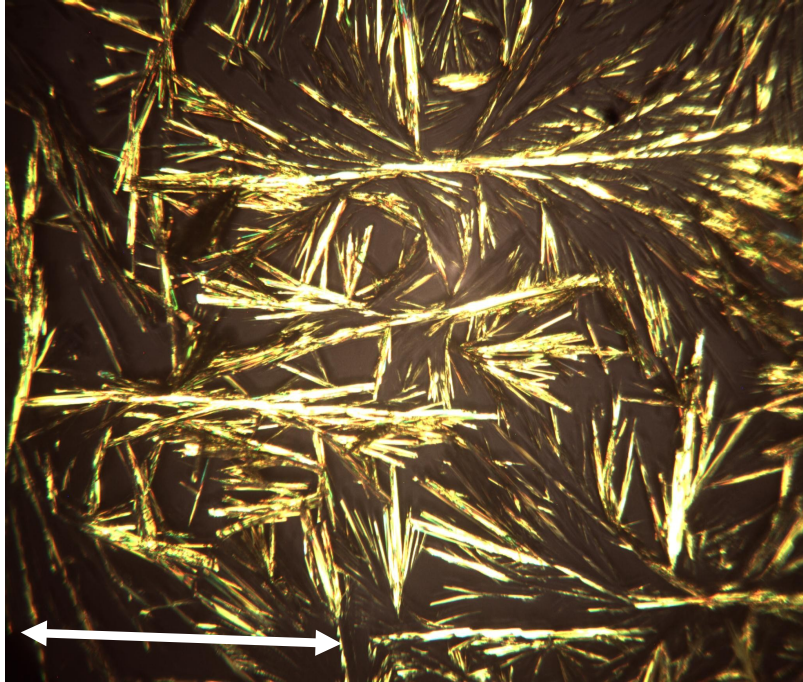
20 nm

transzmissziós
elektronmikroszkóp-
felvételek

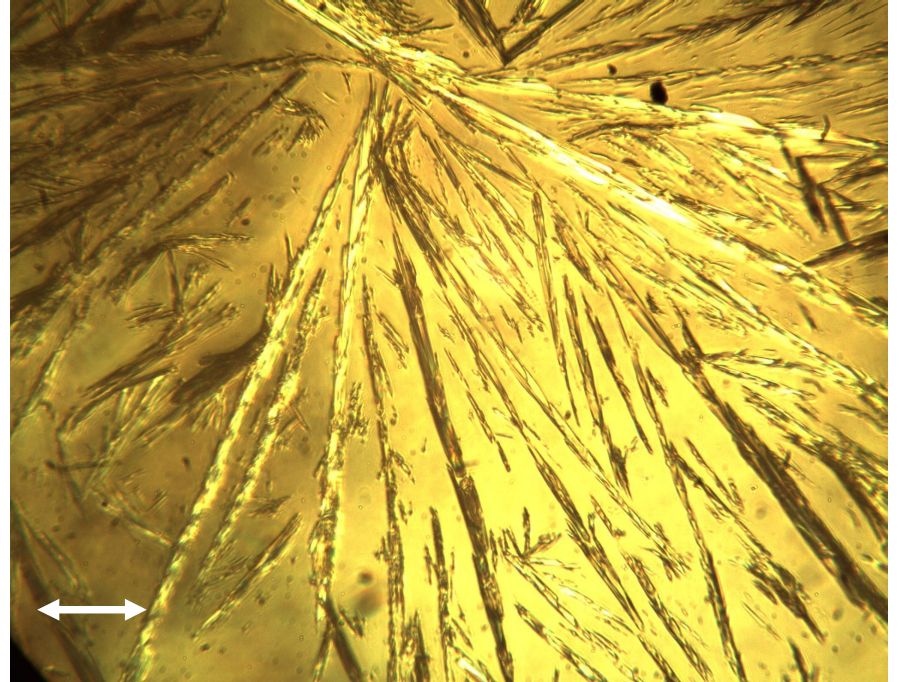
a tűk görbületi sugara
10 nm



Acetilszalicil sav

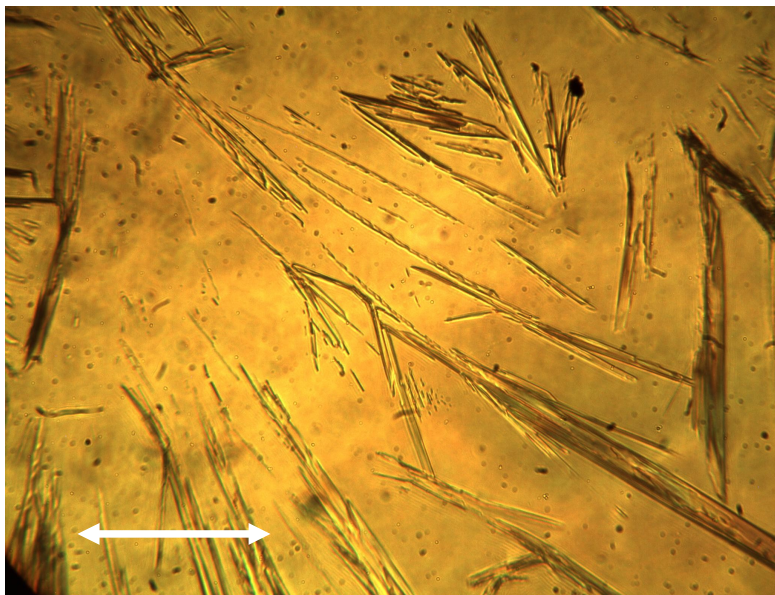


1 mm



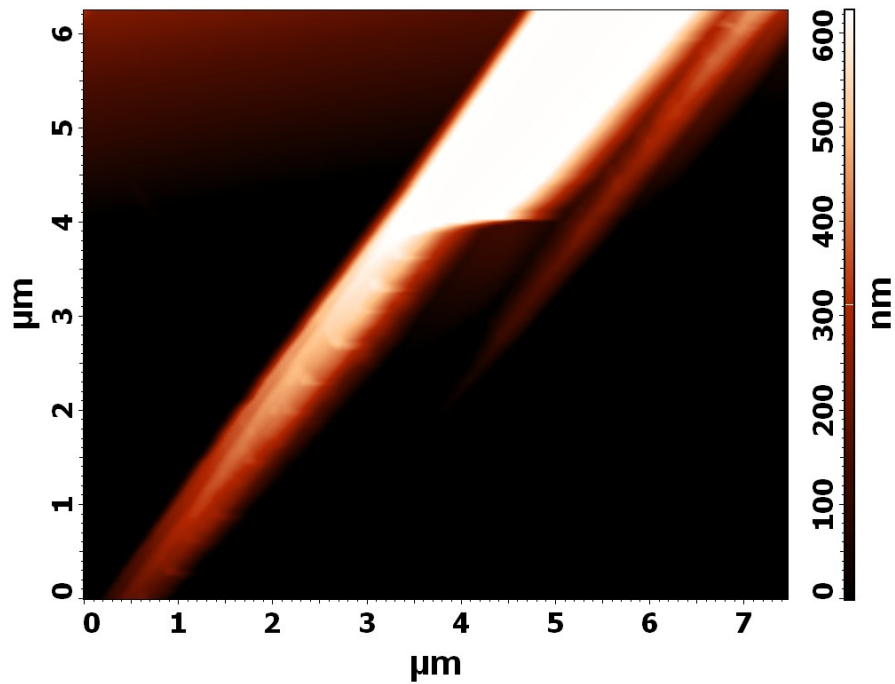
0.1 mm

fénymikroszkóp

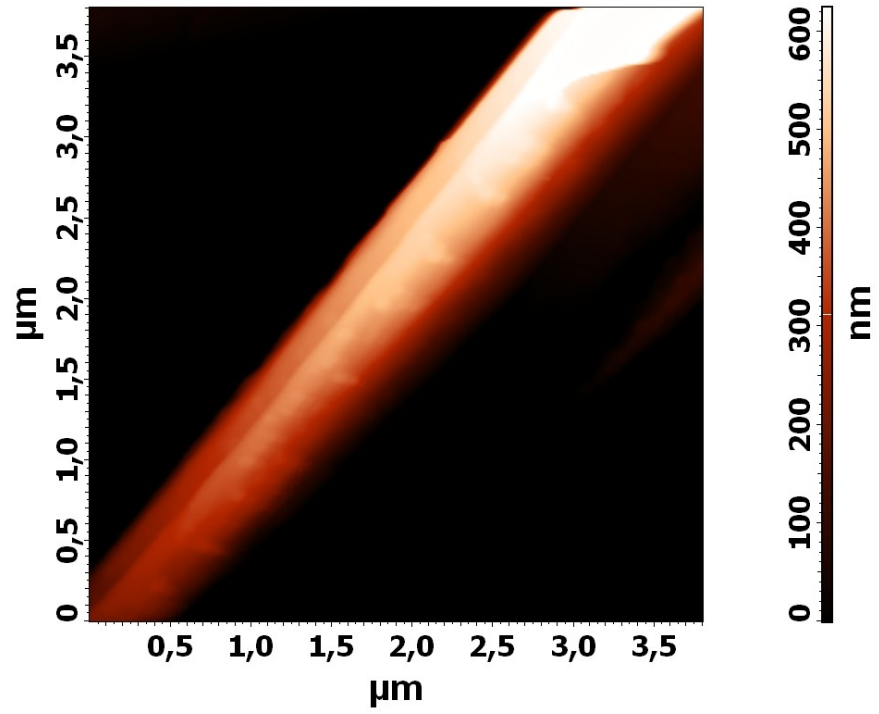


100
 μm

fénymikroszkóp

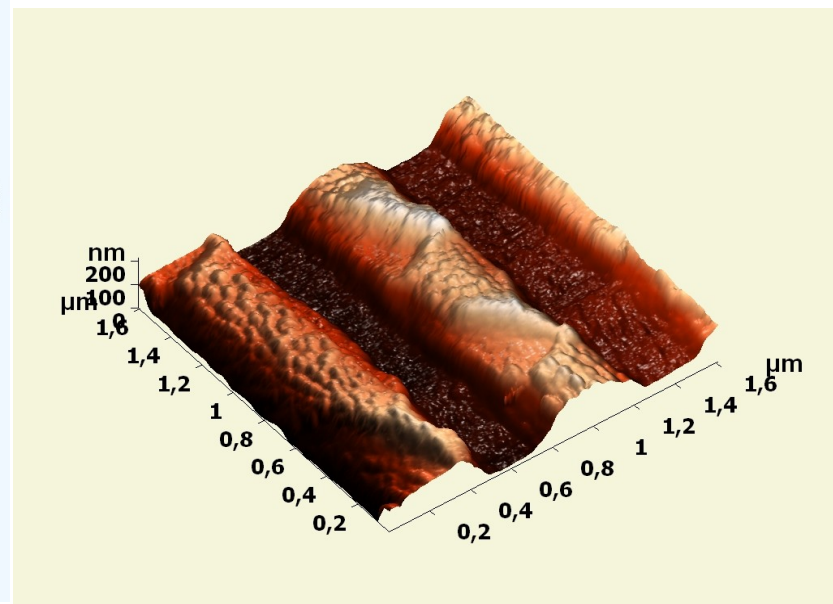
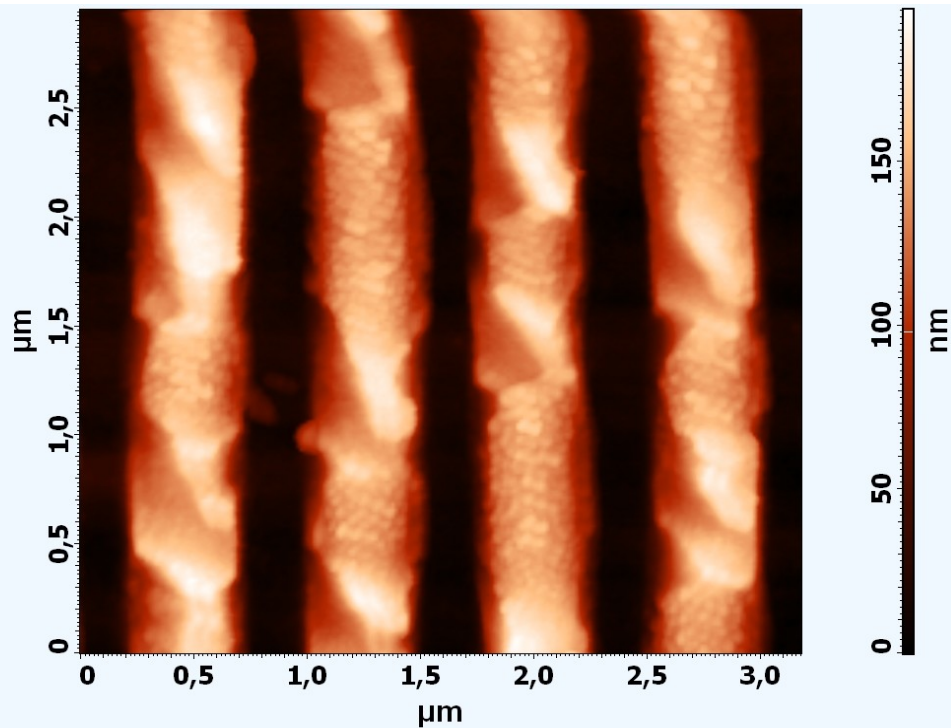


AFM



AFM

DVD felülete



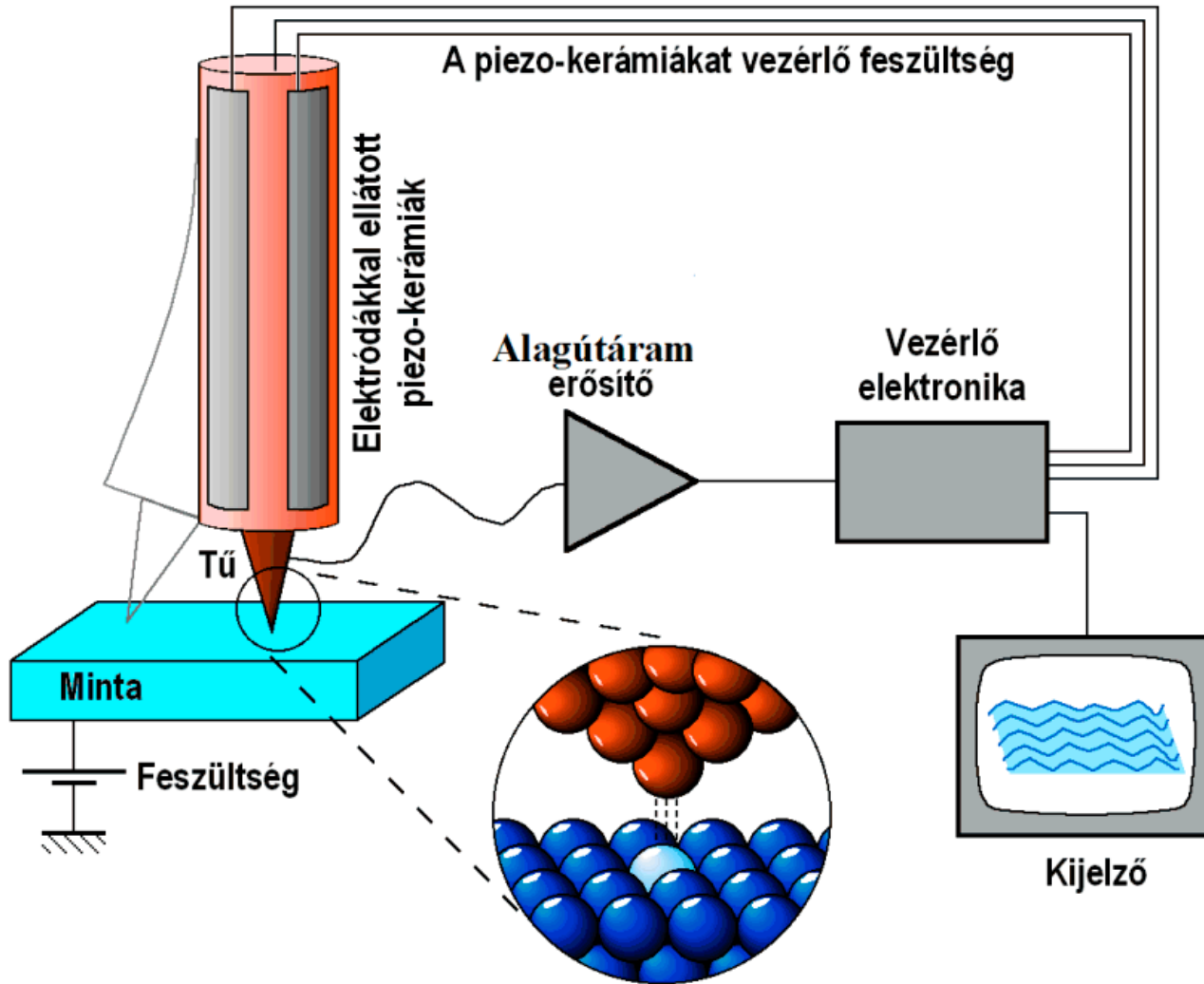
„track”, „mark”

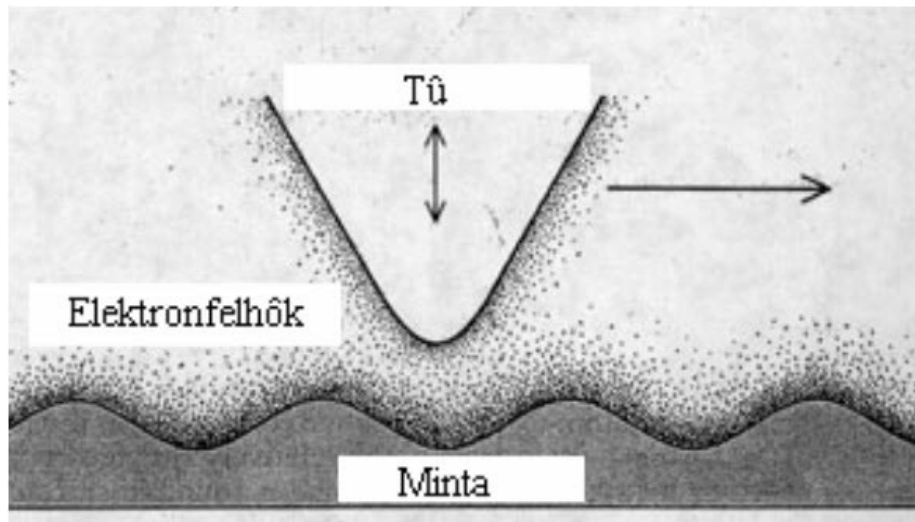
(video)

A lemezre fókuszált lézernyaláb felmelegíti a jelrögzítő réteg szerves festékanyagát, ezáltal „mark”-okat hoz létre, azaz megtörténik a rögzítés.

A rendszer a jel leolvasásakor a **fényvisszaverés** megváltozásait érzékeli.

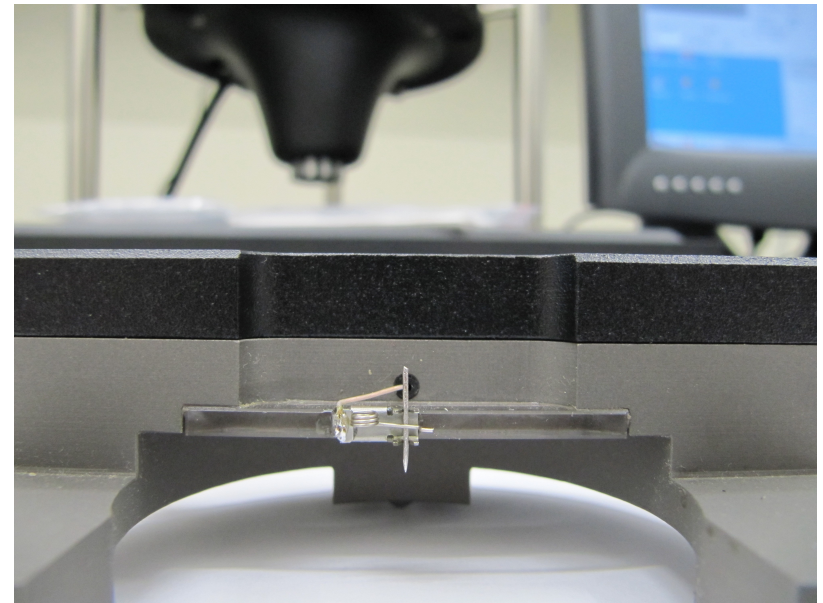
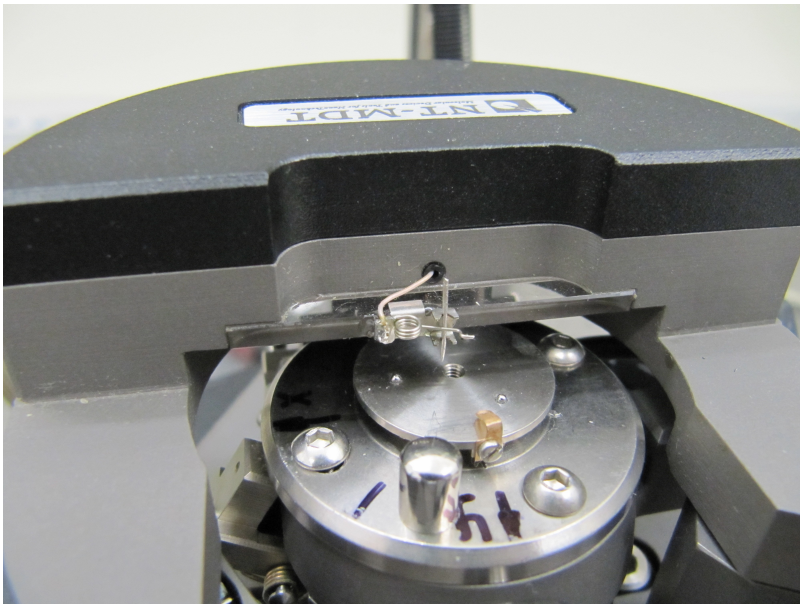
Pásztázó alagútmikroszkóp, STM

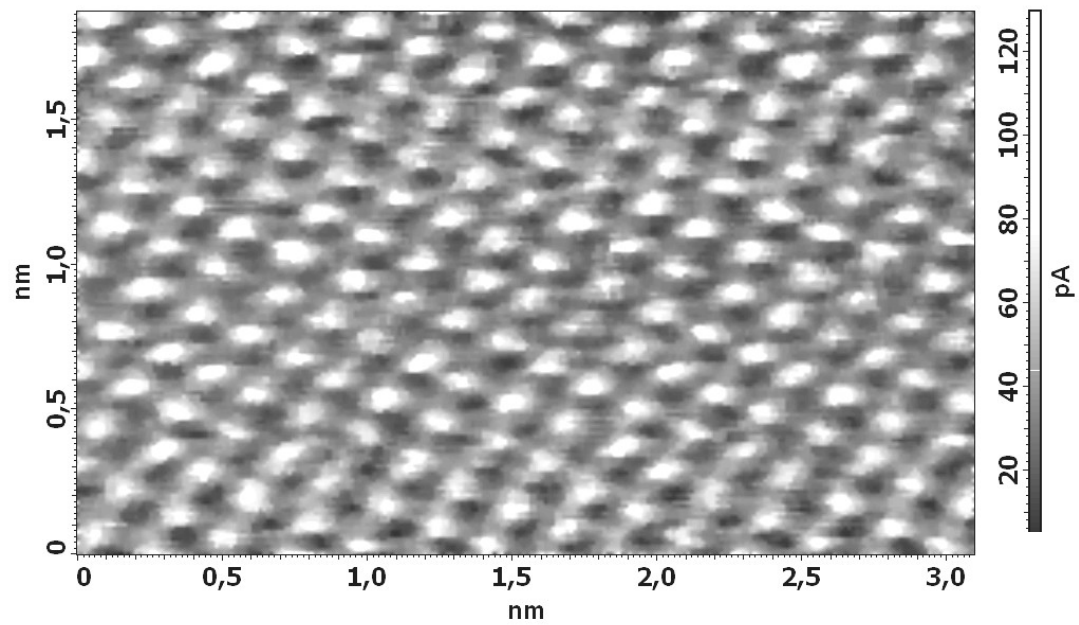




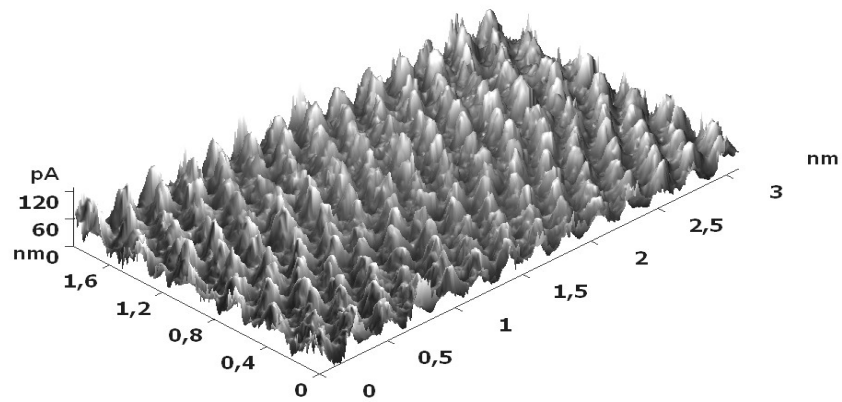
Alagúthatás: az átfedő elektronfelhők megengedik az elektron átugrását az egyik elektródáról a másikra.

távolság: 1 nm alagútáram: 1 nA





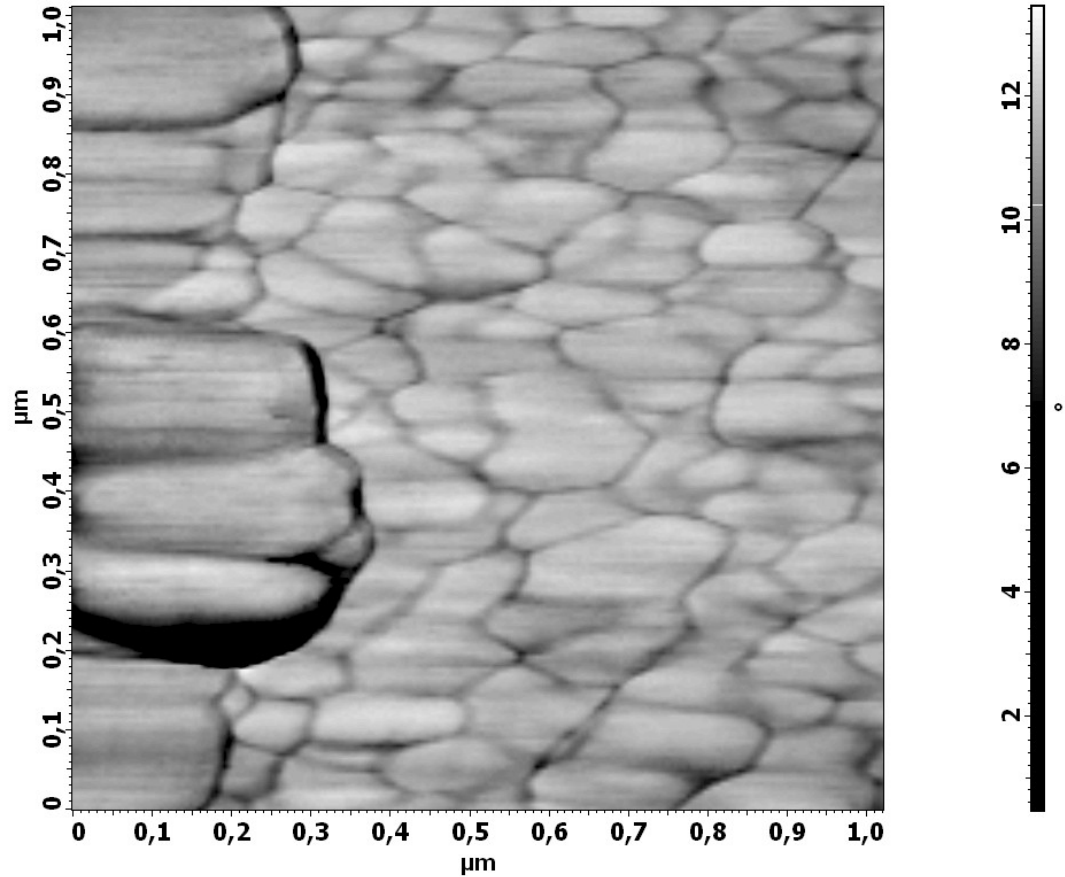
grafit „atomsorok”



Magnetic force microscope

mágneses tűvel

magnoszalag, domének



Floppy- mágneses bitek

