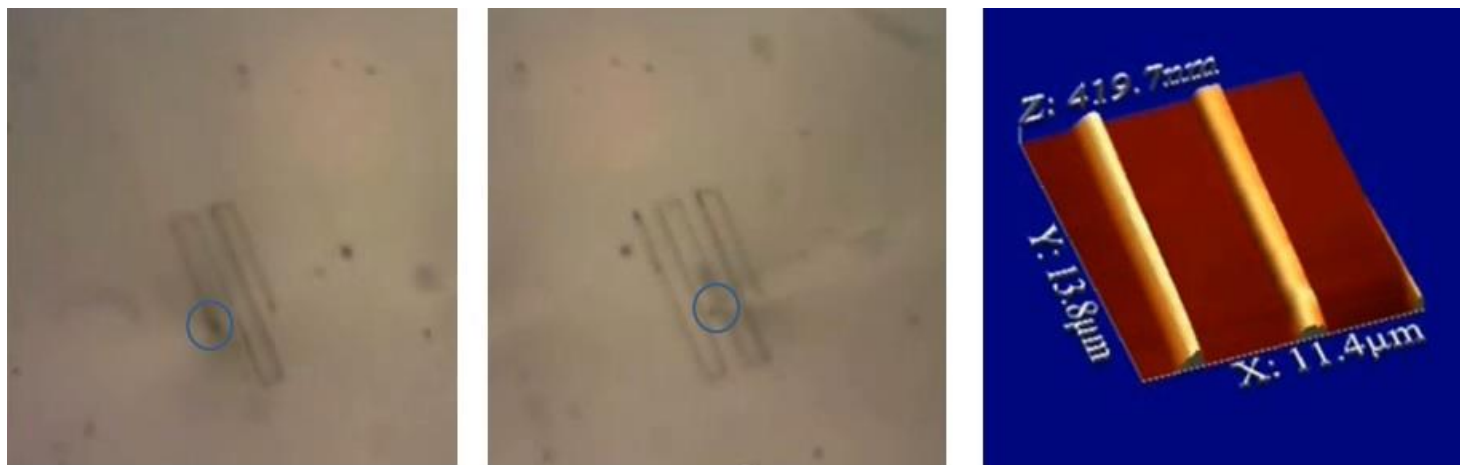


MultiProbe Fountain Pen Nanolithography (FPN)

MultiProbe Nanolithography Writing and Reading

The images and movie below show deposition of BSA protein lines onto a silicon surface with an MV4000 Two Probe system for simultaneous "writing" and "reading". The size of the deposited protein feature is controlled by the applied forces, which are defined by the setpoint of the AFM tip-sample interaction. The movie shows a fountain pen nanopipette probe delivering the protein to the surface and then retracting from the surface. The lines are then immediately imaged with the second on-line AFM probe of the MultiProbe AFM system

AFM images of the deposited structure is seen at the end of the movie and in the right image below. The MultiProbe system allows for improved online imaging of the deposited structures without switching to a "writing" probe from an imaging probe, and thus it provides a quick and accurate solution for finding and imaging lithographic patterns.



(Left) BSA protein deposition with FPN capillary nanopipette probe where pipette's tip is indicated by a blue circle. (Middle) AFM imaging with a second online probe where tip is indicated by blue circle. (Right) 3D AFM Height image performed with the AFM probe showing BSA printed lines

See more information about Nanonics fountain pen nanolithography

<http://www.nanonics.co.il/products/nsom-spm-systems/chemical-writing.html>

Movie can be found on our Youtube Channel:

<https://www.youtube.com/watch?v=08vuFB0dBC4>



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