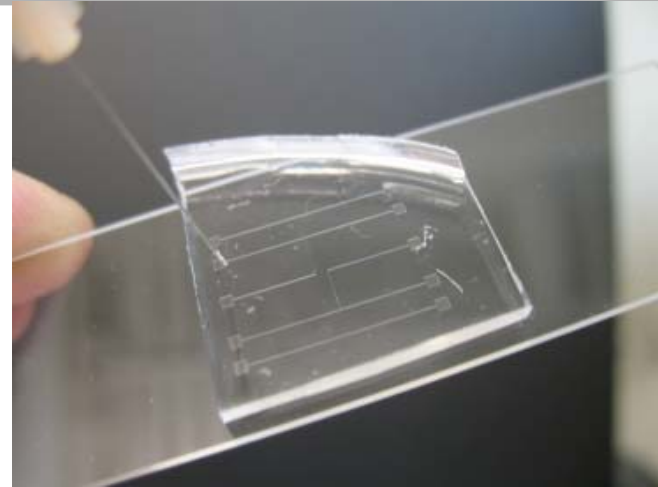
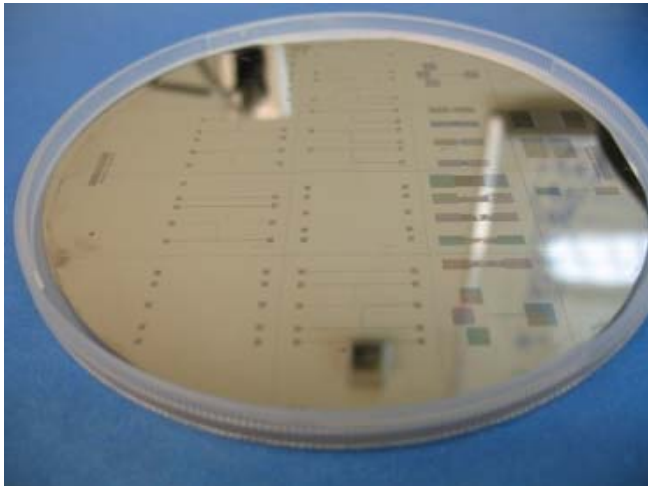


Combining Microfluidics and Fluorescence Fluctuation Spectroscopy to Probe the Composition and Assembly of the HIV-1 Retrovirus

Joachim Mueller (PI), Jolene Johnson, Ruoqi Tang,
Physics and Astronomy, University of Minnesota

● Fabrication of Mold

- ◆ Soft lithography techniques were applied
- ◆ Su-8 2000 series photoresist was used
- ◆ Mold was made for channel heights from 2-20 microns and widths from 1-100 microns
- ◆ Example shown below



● Microfluidic device

- ◆ PDMS was poured over mold and cured
- ◆ PDMS and glass was treated with ozone machine
- ◆ Device shown above
- ◆ Individual fluorescently labeled viruses will be encapsulated in microdroplets formed at T junction and studied using fluorescence fluctuation spectroscopy