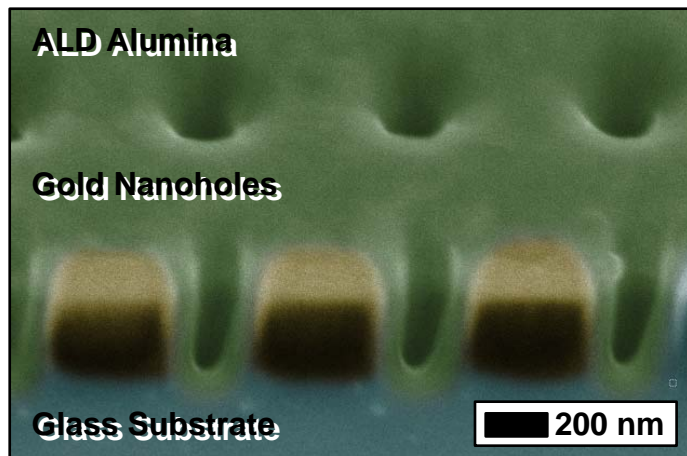


Plasmonic Structures for Biosensing and Nanofocusing

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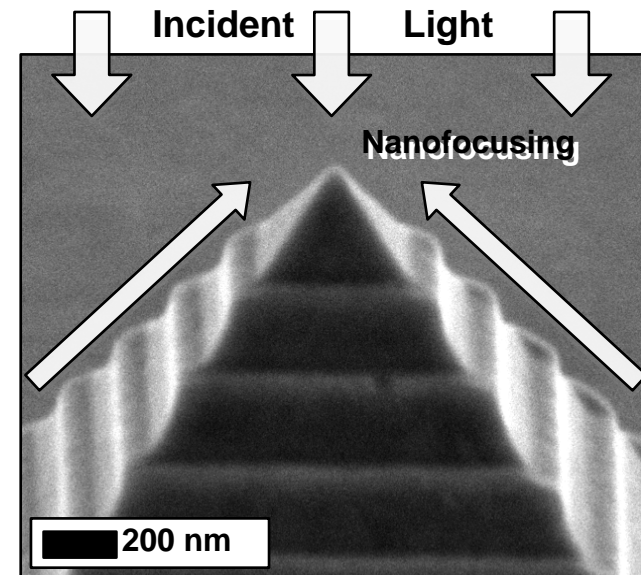
DESCRIPTION OF WORK

- ◆ Surface plasmons are very sensitive to the surface properties of metals.
- ◆ They are also not limited by diffraction, allowing tight localization of optical energy.
- ◆ We are developing high-resolution sensors using novel fabrication methods.



MAJOR OBSERVATIONS

- ◆ Template stripping for ultrasmooth surfaces.
- ◆ Able to precisely control resonances of surface plasmons using atomic layer deposition (ALD).
- ◆ Ultrasharp tips obtained for nanofocusing of light.



Publications

- ◆ Nagpal, Lindquist, Oh, and Norris, *Science* **325**, 597 (2009).
- ◆ Lindquist, Nagpal, Lesuffleur, Norris, and Oh, *Nano Lett.* (in press).
- ◆ Im, Lindquist, Lesuffleur, and Oh, *ACS Nano* **4**, 947 (2010).