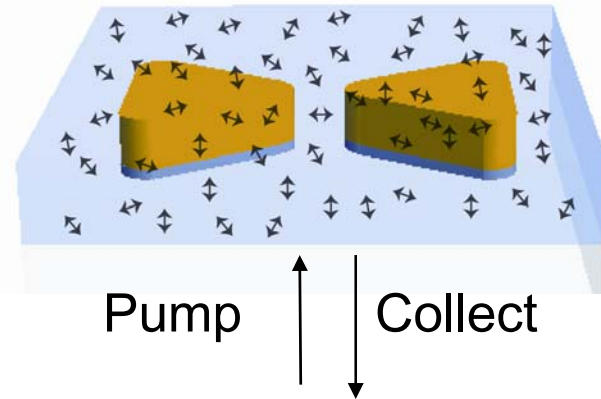
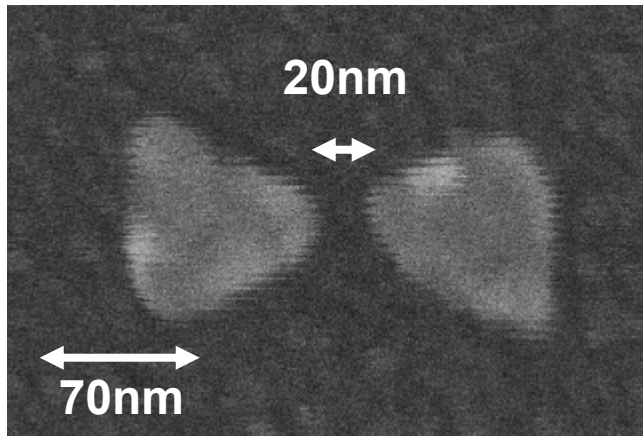


Enhancing Single-Molecule Fluorescence using Gold Bowtie Nanoantennas

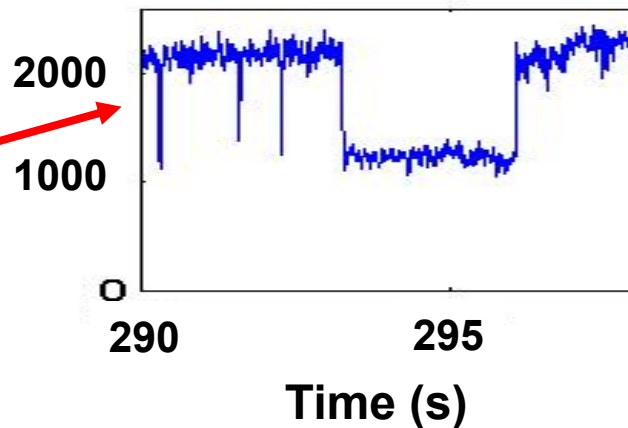
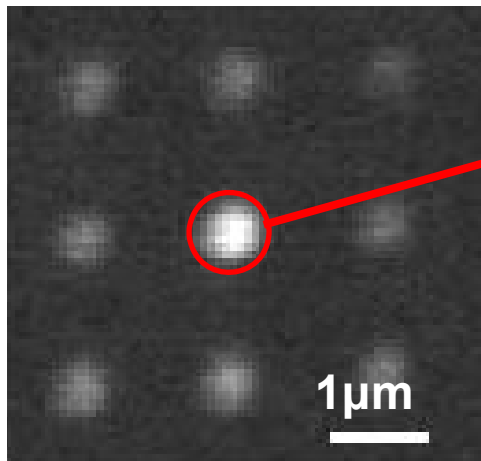
Anika Kinkhabwala, Zongfu Yu, Shanhui Fan, W. E. Moerner, *Nature Photonics* **3**, 654 (2009)

Top View (SEM)



\leftrightarrow = Fluorescent Molecule = PMMA

Confocal Scan



Fluorescence brightness enhancements up to 1300x, and $\tau \sim 10\text{-}20$ ps from increased E_{local} and rad./nonrad. rate changes by bowtie antenna