Surface-Enhanced Raman Scattering (SERS) On Any Surface

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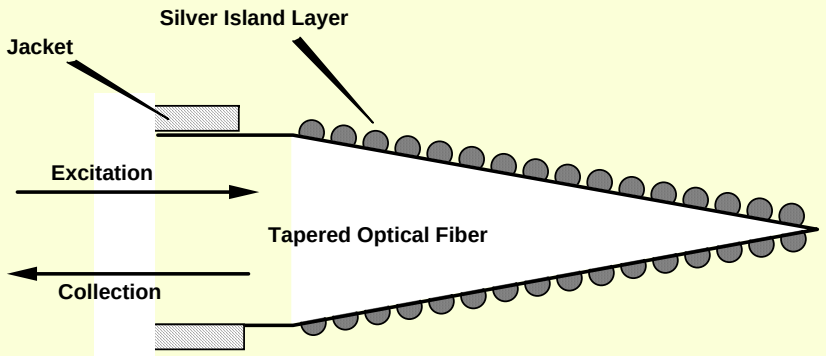
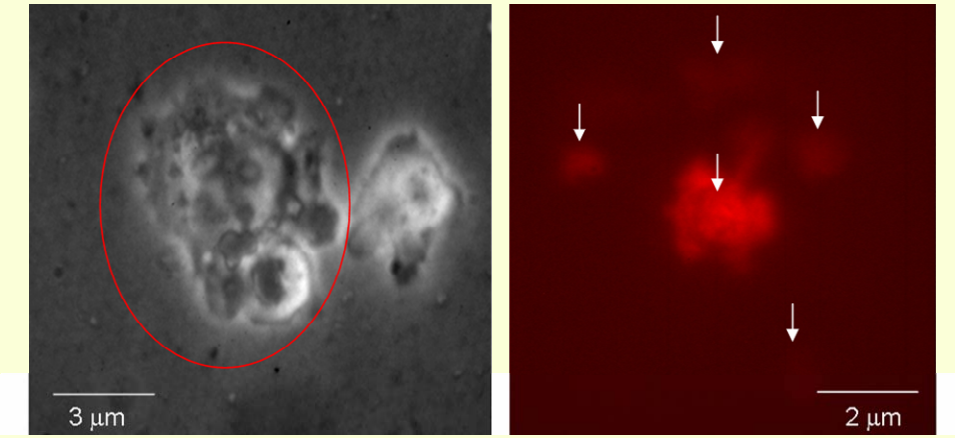
- **Vo-Dinh and colleagues at ORNL have created a nanoprobe that induces the SERS effect on any surface**
- **Small-scale probe allows SERS detection in nanoscale environments, on localized surfaces, and inside cells**
- **Optical fiber with 100-nm-diam tip coated with silver island nanoparticles**
- **Laser excitation produced oscillations of the electrons in the silver nanoparticles, inducing enormous Raman enhancement (SERS effect)**
- **SERS probe allows samples to be analyzed directly in their native state**
- **Could spur renewed interest in SERS as a diagnostic tool**
- **Research reported in *Applied Spectrometry* 58, 292-298 (2004) and highlighted in *Analytical Chemistry, pg. 151A, May 1, 2004***



SERS-inducing nanoprobe



Imaging of cells using novel SERS-labelled nanoparticle probes

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