

## “Scanning Probe Microscopy with Spectroscopic Molecular Recognition”, ORNL-ID 2174

### Applications:

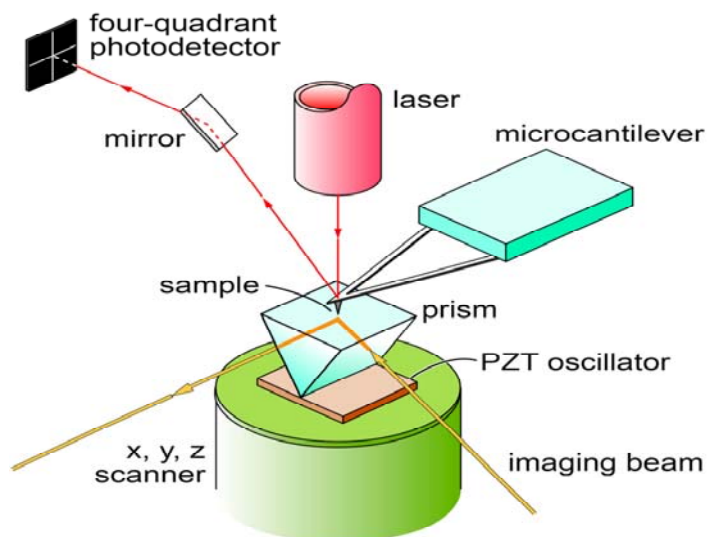
- Atomic Force Imaging

### Advantages:

- Subsurface topography
- Nanometer spatial resolution
- Chemical differentiation of surface features

### Contact:

Russ Miller  
Oak Ridge National Laboratory  
P.O. Box 2008, Mail Stop 6196  
Oak Ridge, TN 37831  
(865) 574-8746  
millerr@ornl.gov  
[www.ornl.gov/adm/partnerships/](http://www.ornl.gov/adm/partnerships/)



### Summary:

#### *Technology Description*

This invention describes a novel imaging method that possesses the imaging capability of Scanning Near Field Ultrasound Holography and the chemical specificity of Reverse Photo Acoustic Spectroscopy. The novel imaging method can achieve chemical speciation with nanometer resolution.

#### *Technology Application*

This invention can be applied in the area of atomic force imaging where additional chemical differentiation of surface features is useful.

**Stage of Development:** Proof-of-Principle

**Patent Status:** Patent pending

**Licensing Status:** Available for licensing