



The Electron Microscopy core at the Houston Methodist Research Institute, is equipped with the capability to perform scanning electron microscopy, fluorescent microscopy, and atomic force microscopy. The core utilizes multiple surface analytical techniques to conduct research. The images can be acquired from millimeter-scale to nanometer-scale.

#### Electron Microscopy Core

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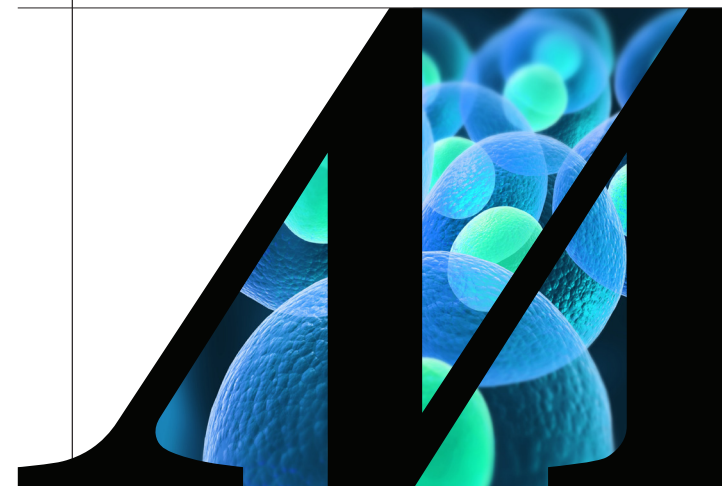
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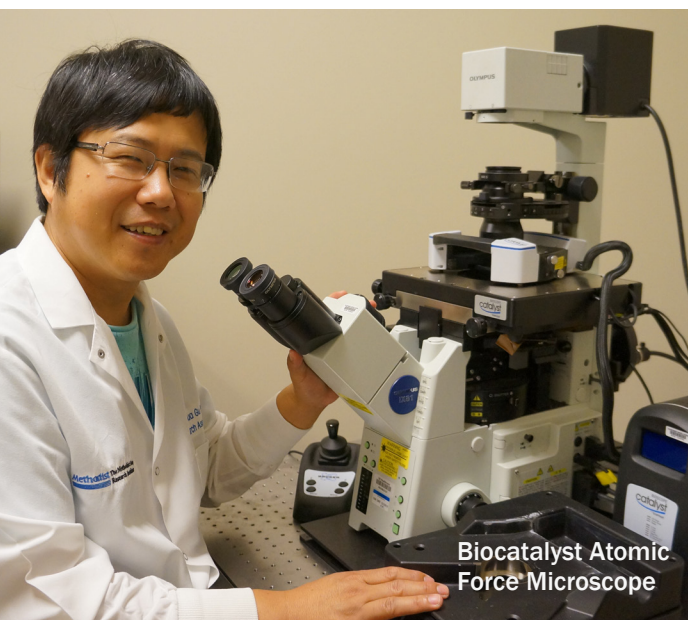
HOUSTON METHODIST  
RESEARCH INSTITUTE

# ELECTRON MICROSCOPY CORE



# Electron Microscopy Core

The Electron Microscopy core is a service and research resource at the Houston Methodist Research Institute. The facility is equipped with a brand new FEI Nova NanoSEM, sample processing equipment (sputter-coater), and two Bruker atomic force microscopes – the Catalyst and the MultiMode®. The core staff is available to train and assist with imaging samples. The core is a fee-for-use and fee-for-service facility that is open to the Texas Medical Center community.



## FACILITY

Some of the equipment available at the Electron Microscopy core include:

### Biocatalyst Atomic Force Microscope

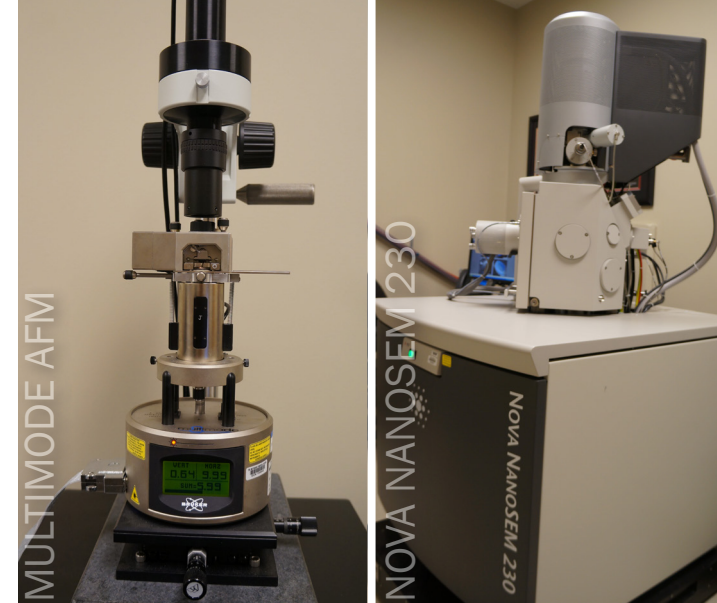
The Bruker Catalyst atomic force microscope is a high-resolution optical imaging, life science atomic force microscope. The system integrates atomic force microscopy with fluorescent microscopy using MIRO software. This allows optical images to guide atomic force microscopy imaging and force measurements. This system is compatible with coverslips, petri dishes, and a perfusing stage incubator. PeakForce Quantitative Nanomechanical imaging mode and Peak Force Tapping provide mechanical properties of living cells.

### Multimode Atomic Force Microscope

The Bruker MultiMode atomic force microscope is an ultra-high resolution material science microscope, equipped with ScanAsyst and PeakForce Quantitative Nanomechanical imaging modes and Peak Force Tapping technology. Imaging can either be performed in air or fluid medium, enabling imaging of electrical and nanomechanical properties.

### Nova NanoSEM 230

The FEI Nova NanoSEM 230 is an ultra-high resolution scanning electron microscope that provides nanoscale images of material and biological specimens. Ultra-high resolution imaging can be performed at high and low vacuum, permitting imaging in the presence of non-conducting and contaminating materials. The system features secondary and backscattered electron in-lens detection and beam deceleration.



## Specialized Services

- The core provides assistance with preparing samples and generating data for high impact publications
- The core offers no-cost first test for any new user. Additionally, for facilities-related problems, the user will not be charged