

## Molecular Analysis Facility

UNIVERSITY of WASHINGTON

THE MOLECULAR ANALYSIS FACILITY (MAF) IS AN OPEN-ACCESS INSTRUMENTATION FACILITY AT THE UNIVERSITY OF WASHINGTON IN SEATTLE.

The MAF offers microscopy, spectroscopy and surface science tools for the characterization and development of novel materials, advanced biomedical devices, drug delivery systems, solar cells, photonic sensors, thin films and more. The facility is open to University of Washington researchers as well as external users from academia and industry. Users can be trained to independently perform experiments, or an experienced staff member can perform experiments for users. The MAF is located in the ground floor of the Molecular Engineering and Sciences building, which was specifically designed to minimize vibration and electromagnetic interference that could impact sensitive equipment or experiments.

### TOOLS

#### Microscopy

- Transmission Electron Microscopy (TEM)
- Atomic Force Microscopy (AFM)
- Scanning Electron Microscopy (SEM/FIB) with EDS and EBS
- Profilometer
- Confocal Microscopy
- Nanoindenter

#### Spectroscopy

- 2D X-Ray Diffraction (XRD)
- Raman Spectroscopy/Microscopy
- Benctop X-ray Absorption Near Edge Spectroscopy (XANES)
- Ultrafast Transient-Absorption and Photoluminescence Laser System
- Ellipsometry

#### Surface Science

- X-Ray and UV Photoelectron Spectroscopy (XPS/UPS)
- Time of Flight-Secondary Ion Mass Spectrometry (ToF-SIMS)
- Glow Discharge Optical Emission Spectrometry
- Vibrational Sum Frequency Generation

#### Biophysics

- Surface Plasmon Resonance (SPR)
- Differential Scanning Calorimetry
- Isothermal Titration Calorimetry
- Quartz Crystal Microbalance with Dissipation (QCM-D)
- UV/Vis instrument

### STAFF ASSISTANCE

MAF staff scientists have deep expertise in biology, chemistry, clean energy, photonics, and nanomaterials. In addition to training users and performing experiments, MAF staff are available to consult on experimental design and can help identify the best available technique for a particular scientific inquiry. Existing and prospective users are encouraged to contact staff about their research needs.

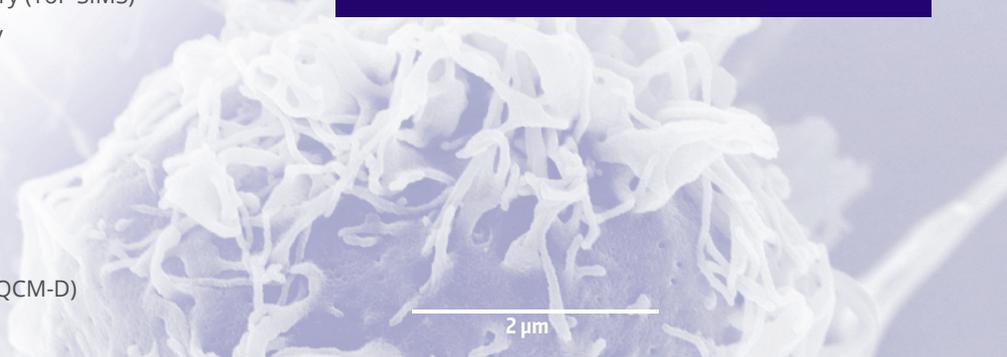
#### CONTACT US

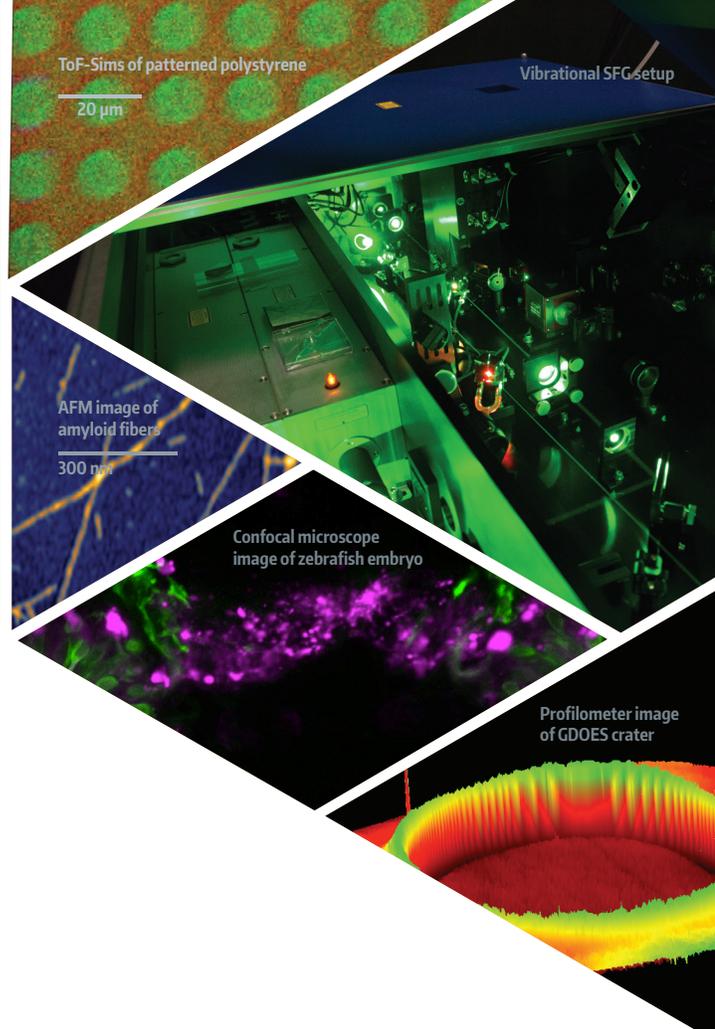
For details about instruments, services and rates, contact our staff.

Website: [www.maf.washington.edu](http://www.maf.washington.edu)

Email: [UWMAF@uw.edu](mailto:UWMAF@uw.edu)

Phone: 206-685-6774





## STAFF

### FACILITY DIRECTOR

#### Lara Gamble, Ph.D.

Research Associate Professor of Bioengineering

### RESEARCH SCIENTISTS

#### Scott Braswell, M.A.T

*SEM, FIB, EDS*

Expertise: Electron microscopy, FIB imaging/milling/lift-out, image processing, education, x-ray microanalysis

#### Micah Glaz, Ph.D.

*AFM, Confocal Microscope, Profilometer, Nanoindenter*

Expertise: AFM, physical chemistry, organic/inorganic semiconductors, solar materials, microscopy, spectroscopy

#### Dan Graham, Ph.D.

*ToF-SIMS, XPS*

Expertise: Surface analysis of polymer, biological, and inorganic materials, 2D and 3D imaging, multivariate data analysis methods

#### Ellen Lavoie, M.S.

*TEM*

Expertise: Electron microscopy, TEM, including preparation of materials, biological, and polymer samples

#### Timothy Pollock, Ph.D.

*Raman, TA/TRPL, Ellipsometer, GDOES, DSC*

Expertise: Ultrafast transient absorption spectroscopy and time-resolved photoluminescence

#### Samantha Young, Ph.D.

*XPS, UPS, XRD*

Expertise: Surface and interface analysis, x-ray diffraction/scattering, nanoparticles, metals, catalysts, electrochemistry



*The MAF is part of the National Science Foundation's National Nanotechnology Coordinated Infrastructure (NNCI), a network of fabrication and characterization facilities that provide researchers with the tools and training necessary to engineer at the nanoscale. Learn more at [nnci.net](http://nnci.net).*

