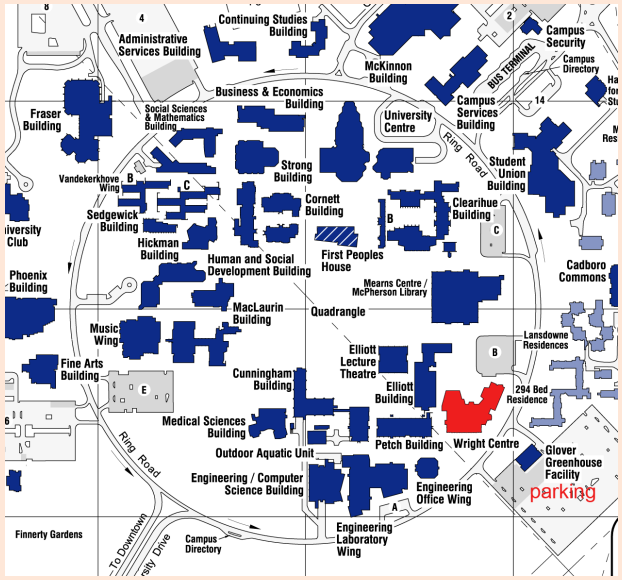
How to Find the AMF

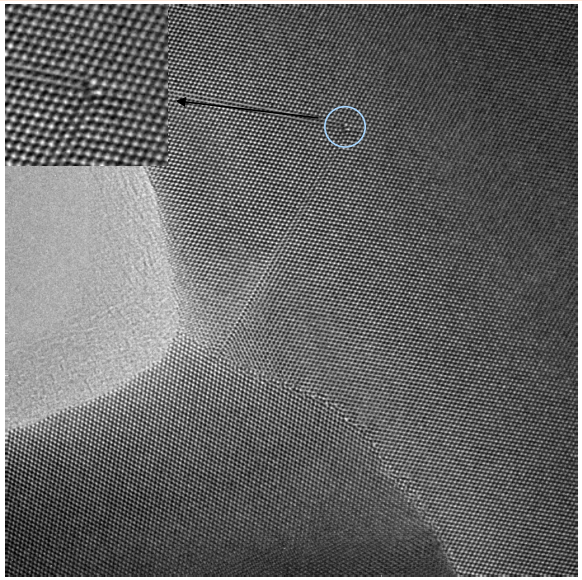
The Advanced Microscopy Facility is in the basement of the Bob Wright Science Building.

If you are travelling from the ferry or airport, take the Pat Highway to McKenzie Ave. Follow the road into UVic. Drive to the ring road, (one way). Go into the left hand lane until you pass the stop junction at University Dr. Just a short way along on the right hand side is Parking lot #1, across the road from the Bob Wright Science Building.

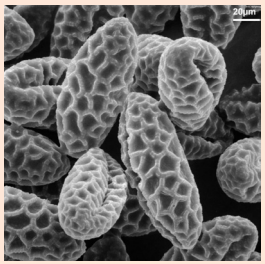
Enter the building through the front doors and then decend to the basement either by the stairs or the elevator in the main lobby. The Advanced Microscopy Facillity is to the right, rooms A050



Map of the University of Victoria to show the Bob Wright Science Building and easy proximity of parking.



C. Kisielowski **TEM Imaging of Atomic Positions in Gold**



lily pollen

University of Victoria

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THE AMF:

The Advanced Microscopy Facility was built in 2009 with the generous support of the Canadian Foundation for Innovation, British Columbia Knowledge Development Fund, Hitachi High Technologies Canada Inc and the University of Victoria.

It will house the highest resolution scanning transmission electron holography microscope in the world.

making it as easy as possible to visualize the invisible

AMF

Advanced Microscopy Facility

Bob Wright Centre

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University of Victoria

The Advanced Microscopy Facility

About the Facility

zoea = larval crab

The Facility Environment

The Advanced Microscopy Facility is housed in the basement of the new Bob Wright Science Building, in a purposely built laboratory controlling temperature, humidity, external magnetic and electromagnetic fields and floor vibrations, to ensure the highest resolution images possible.

The STEHM

The scanning transmission electron holography microscope will both achieve a STEM electron probe size and TEM spatial resolution of < 50 picometers.
The accessories include four electron biprisms for many types of electron holography and new methods of electron microscopy, an imaging energy filter (GIF), a 360 degree tomography specimen holder and supporting software, an ultrastable heating (1500 C) and cryo holder, an analytical and high resolution specimen holder, an EDX detector and remote control system.
The TEM mode will have the first "aplanatic" lenses that correct for Cs and coma aberrations. The STEM mode will have the first Cs and Cc aberration correctors. These are incorporated into the highly stable Hitachi HF 3300 microscope.

Equipment

FIB system: Focused Ion Beam (HB 2100) for making TEM specimens of hard and soft materials and their combination, useful for engineers, physical scientists and life scientists. Useful to biologists when making TEM specimens containing different types of tissue, for example, tissue growing on implants.
ion miller (Fischione 1010): a PC-controlled precision milling and polishing system for creating high-quality TEM specimens with large electron transparent areas.
plasma cleaner: (Fischione 1020) for contaminant removal, activation, prebond preparation, surface chemistry modification, polymeric grafting & coating
FESEM
field emission scanning electron microscope (Hitachi S-4800 SEM). For imaging the surfaces of samples at high resolution (down to 1 nm). With EDS system.

Staff

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Training

While training can be one-to-one for those with experience, we also run workshops once a month for each instrument for those with no or limited experience.

To attend a workshop contact the lab manager, Dr. Elaine Humphrey at: ech@uvic.ca or 250-853-3968

The workshops are limited to six persons at a time for SEM and three for FIB.

The SEM workshop is 1.5 days: one day as a group of up to six persons; half a day at a mutually convenient time one-to-one with your specimen to take away publishable images.

The FIB workshop will be a three day workshop: one day as a group, two days one-to-one with your specimens.

Electron Microscopy

University of Victoria

**Vancouver Island,
Victoria,
British Columbia,
CANADA**

Welcome

The AMF is open to anyone needing to use these faciities for their research. We provide a welcoming atmosphere and try to make it as easy as possible for you to get your specimens processed and imaged. Contact Dr. Elaine Humphrey to discuss how we can help you: ech@uvic.ca. Website: www.stehm.uvic.ca

Installation of Equipment

The STEHM is being built and should begin its installation at the beginning of 2011. The field emission SEM, FIB, Ion Mill and Plasma Cleaner are installed and ready for use.