



The University of Arizona Electron Microprobe Laboratory

About the Lab

The University of Arizona Electron Microprobe Laboratory began operation in 1974 with an ARL SEMQ electron microprobe and has been under the overall supervision of **Professor Michael J. Drake**.

Mr. Thomas Teska provided day-to-day management of the facility from 1974 until his retirement in 1999. Since September 1999 the facility has been managed by **Dr. Kenneth Domanik**.



The microprobe facility is open to qualified users from all departments of the University of Arizona campus, other universities, and the surrounding community.

Demand for microprobe time is heavy, averaging over 400 hrs/month. From 1990 - 2007, the SX50 was used by over 280 individuals from

- 14 University of Arizona departments
- 11 U.S. universities
- 7 foreign universities
- 7 corporations
- 1 museum
- 3 U.S. government agencies

Data were used in over 265 peer reviewed publications, 75 Ph.D. theses, 35 M.S. theses, 1 state high school science fair championship.

The current **CAMECA SX50 electron microprobe** was installed in 1990 with funding from the Keck Foundation, the National Science Foundation (NSF), and the National Aeronautics and Space Administration (NASA). It has been in continuous use for 19 years.

Four WDS spectrometers are capable of **full quantitative analysis of all solid elements from Beryllium to Uranium**.

A **PGT 5000 EDS detector** provides **rapid qualitative analysis**. The system is fully computer controlled, allowing **point analyses, line analyses, x-ray maps, and BSE images** to be acquired automatically without additional user intervention after initial calibration and setup.



Researchers usually collect their own data, and are provided with one-on-one training and full time technical support. Students are particularly encouraged to learn how to use the instrument independently.

We welcome new users and new applications. If you are interested in using our microprobe, or would like additional information, please feel free to contact us at 621-2959.