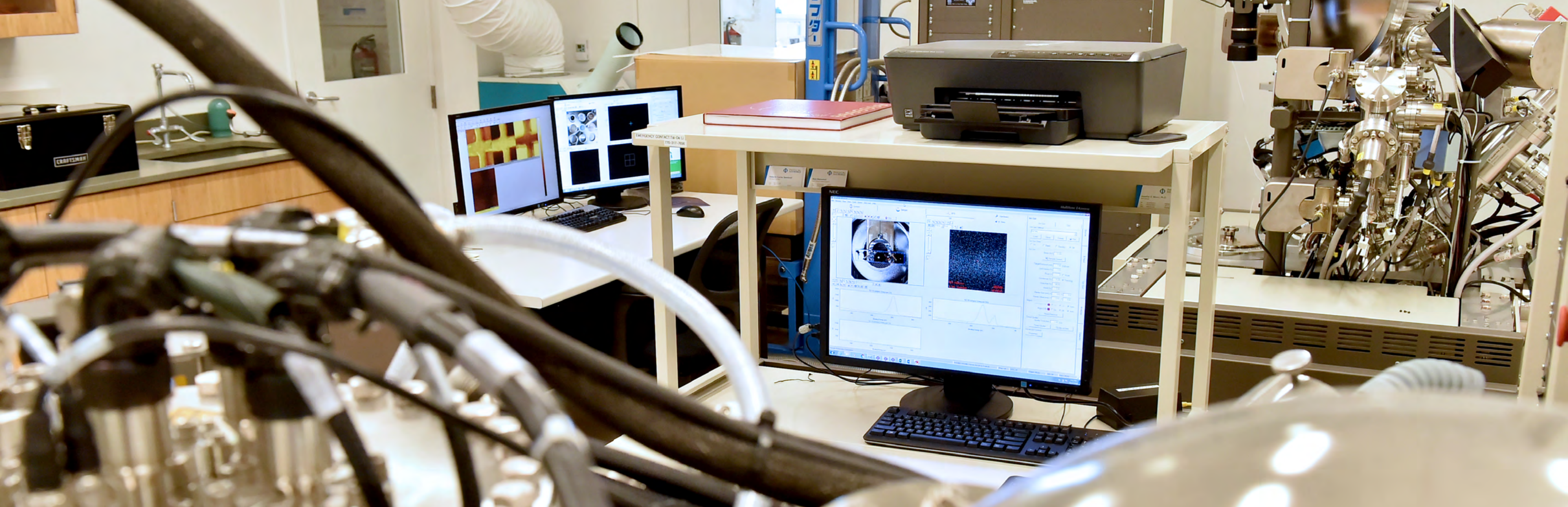

CUNY ADVANCED SCIENCE RESEARCH CENTER

Surface Science Facility

The **Surface Science Facility** offers access and services to state-of-the-art surface analysis instrumentation including X-ray photoelectron spectroscopy (XPS), time-of-flight secondary ion mass spectrometry (TOF-SIMS), atomic force microscopy (AFM), and thermochemical nanolithography (TCNL).

With a range of sample preparation chambers, hardware configurations, and in-house expertise, researchers in the physical sciences have the capability to prepare and analyze a variety of different sample types, including **immobilized biological, organic, inorganic, and mixed composition samples**.

The facility welcomes users from CUNY, other academic and research institutions, start-up companies and industry.

For more information:
asrc.cuny.edu/surface-science

Available Instrumentation

PHYSICAL ELECTRONICS VERSAPROBE II XPS

*The XPS is a surface-sensitive quantitative spectroscopic technique that **measures the empirical formula, chemical state, and electronic state of the elements** that exist within a material in the **parts per thousand range**.*

PHYSICAL ELECTRONICS NANOTOF

*The TOF-SIMS is a surface analytical technique that **provides information about the molecular, inorganic, and elemental species present on the sample surface at the parts per billion level**.*

BRUKER MULTIMODE 8 AFM

*The AFM is a type of scanning probe microscopy that produces i**magery of different topographical features and surface properties at nanometer scale**, with demonstrated resolution on the order of fractions of a nanometer.*

SWISSLITHO NANOFRAZOR TCNL

*The TCNL is a unique tool for **rapid-fabrication of nanostructures and devices** with extreme resolution, high versatility, and control of topographical and chemical patterning of arbitrary geometries with a precision of 1 nm.*

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