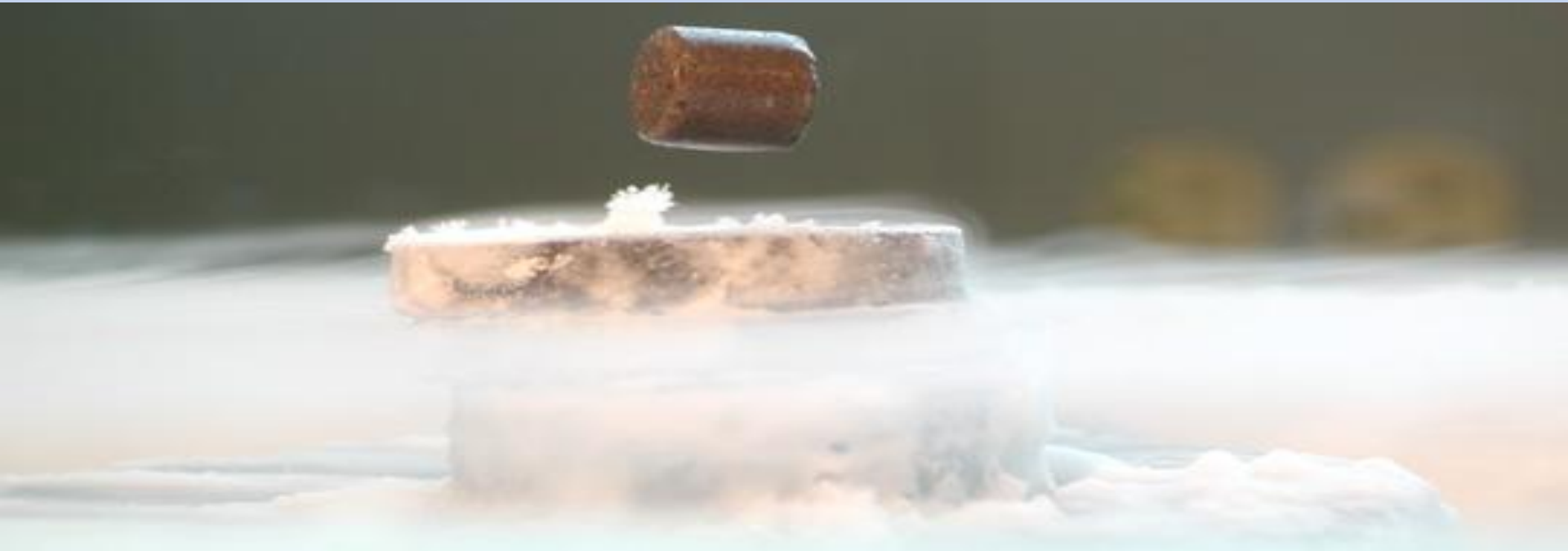
Condensed Matter Experiment at UBC

Studies the physical properties of materials

Develops new materials and artificial structures

Drives the development of future device technology



Materials and Structures

Bonn – single crystal growth, cuprates, pnictides

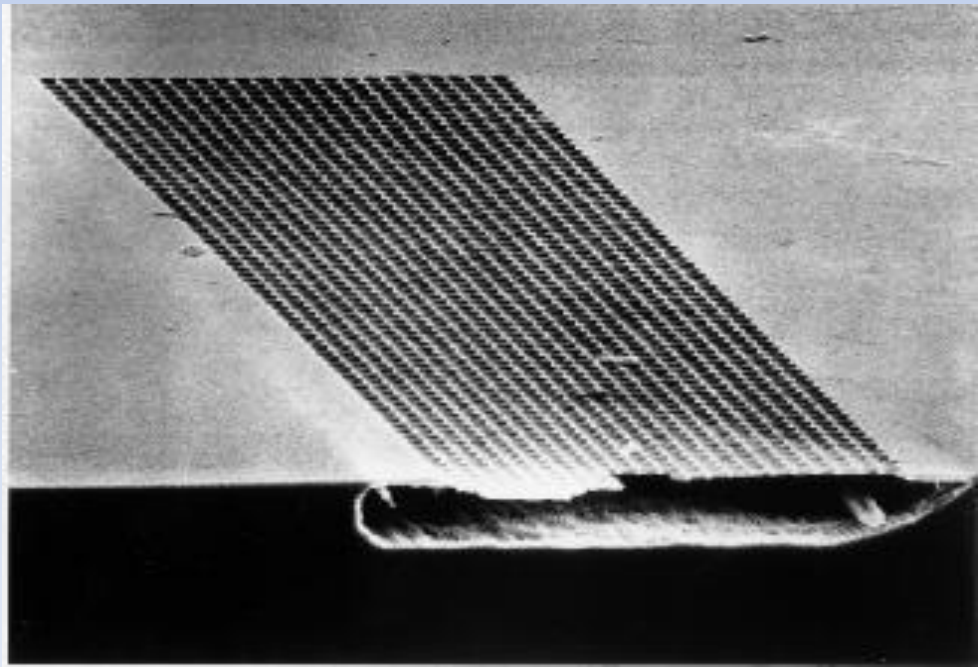
Burke - organic molecules on surfaces, graphene

Damascelli - in situ growth of transition metal oxides

Folk - graphene, quantum dots

Hoffman – in-situ growth of topological insulators

Young - nanostructures for photonics and quantum computation

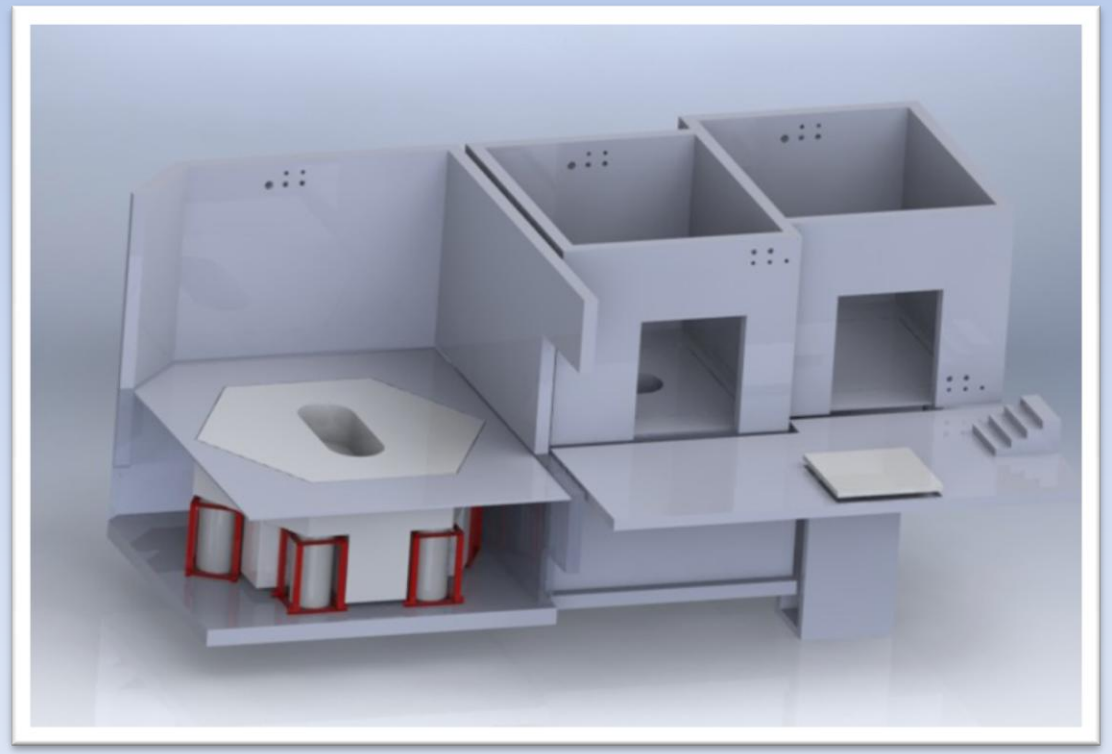


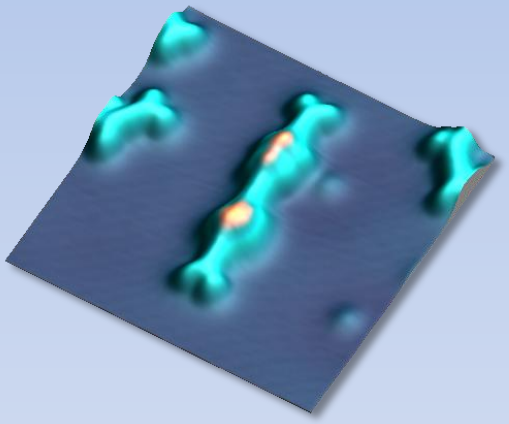
Measurement Techniques

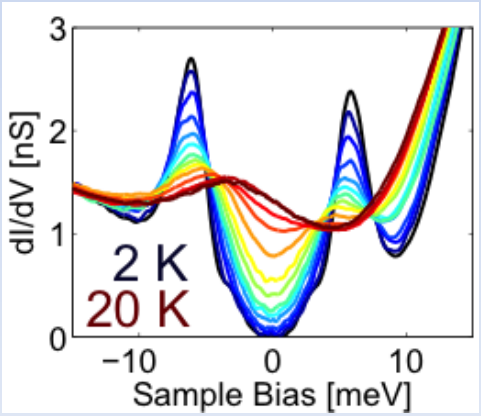
Burke - atomic force & scanning tunneling microscopy

Bonn – microwaves, transport, scanning microscopy

Hoffman – scanning tunneling microscopy/spectroscopy





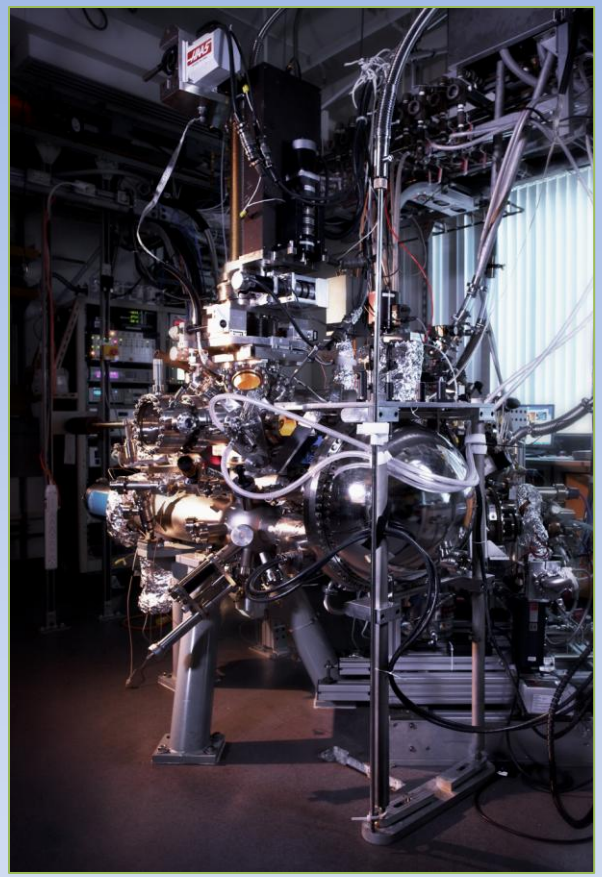


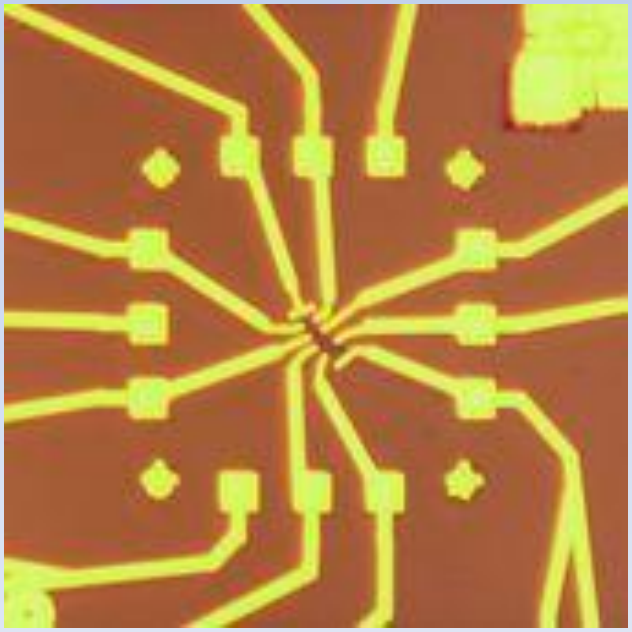
Measurement Techniques

Damascelli

angle-resolved photoemission

Sawatzky – resonant X-ray scattering, X-ray absorption





Folk – high magnetic field measurements and transport

Major Facilities

AMPEL
Advanced Materials and
Process Engineering Lab

Quantum Matter Institute
partnered with Max Planck Society

TRIUMF β-NMR, μ–SR
(Kiefl,Macfarlane)

Canadian Light Source
ARPES and X-Ray scattering
with dedicated UBC beamlines