

## **Major Experimental Facilities in Group:**

BG group along with AKR group has number of facilities in the laboratory. Modern growth facilities, as well as electrical, magnetic and optical measurement facilities all are available in the group.

Details of sample preparation and nanolithography activity is given in the links .

For regular day to day characterization, central equipment facilities are being used (<https://newweb.bose.res.in/facilities/TechnicalCell/>).

Crystallographic structure and magnetic structural measurements are being done using the following facilities:

### **1) Neutron beam line:**

i) Dhruva, BARC, Mumbai, India

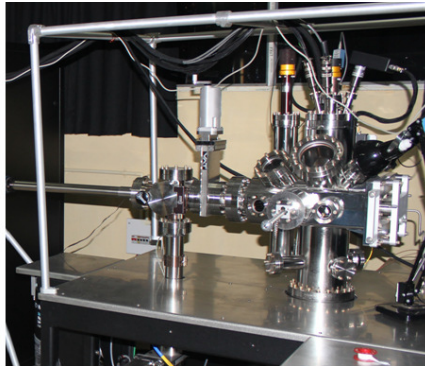
ii) ILL, Grenoble, France

iii) Heinz Maier-Leibnitz Zentrum (MLZ), Lichtenbergstr, Garching, Germany

### **2) Synchrotron beam line:**

Photon Factory, KEK, Japan

## **Experimental facilities in BG & AKR group**



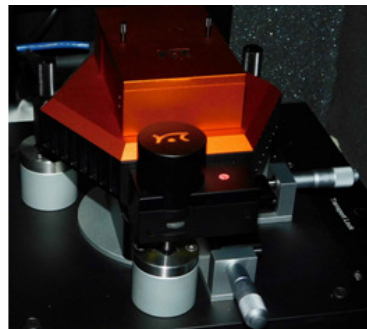
Ultra High Vacuum (UHV) temperature variable Scanning probe microscope with magnetic field



1.5K, 10T GM cycle based low temperature system for transport, magnetic, Hall and dielectric measurements.



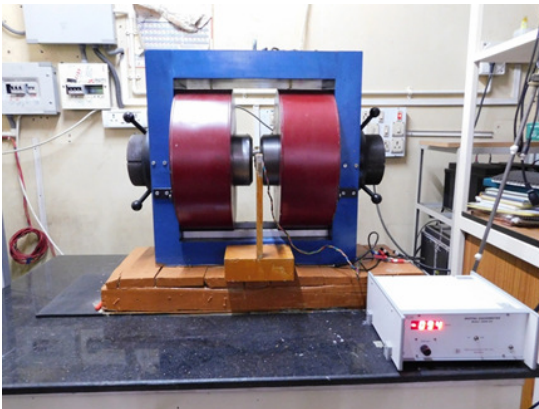
Low frequency noise Measurement and with variable temperature facility down to 77K with magnetic field of 0.4T



Atomic Force Microscope (AFM)



Cryostat with UHV set-up along with electronics



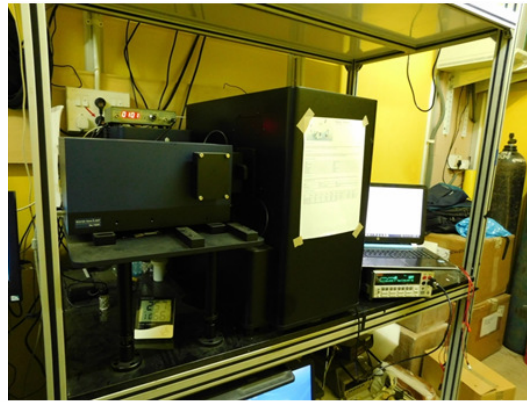
Hall measurement up to 1 Tesla



Resistivity & impedance measurement set-up down to 77K



Time domain capacitance Spectroscopy



Measurements of Photoconductivity in nanowires and films are done using a monochromator and a Light source (Xenon lamp).



Cryostat for low temperature Photoconductivity measurements down to 77K



Thermal evaporation unit



Gas sensing measurement set -up

