

X-ray absorption fine structure spectrometer (Rigaku)

Main characteristics:

Range of elements that may be investigated: from Ca to U.

Fixed sample section (allowing mounting of in situ measurement cells)

Maximum power: 3 kW (maximum HV = 40 kV, maximum emission current 100 mA)

Interchangeable X-ray target: Mo, W

Interchangeable filaments: W, LaB6

Measurements: transmission / fluorescence

Spectroscopic method: linear monochromator

Rowland circle radius: 320 mm

2θ range: 30-90 °

Monochromating crystals: Ge(220), Ge(111), Ge(311), Ge(400), Ge(840), Si(400), Si(620)

Detectors: I0 = S-PC, I = SC

Primary and refined EXAFS data analysis software



Fig. 1. The Rigaku XAFS spectrometer installed in NIMP, in the Surface Science and X-ray Spectroscopies group from the Nanoscale Condensed Matter Physics Department

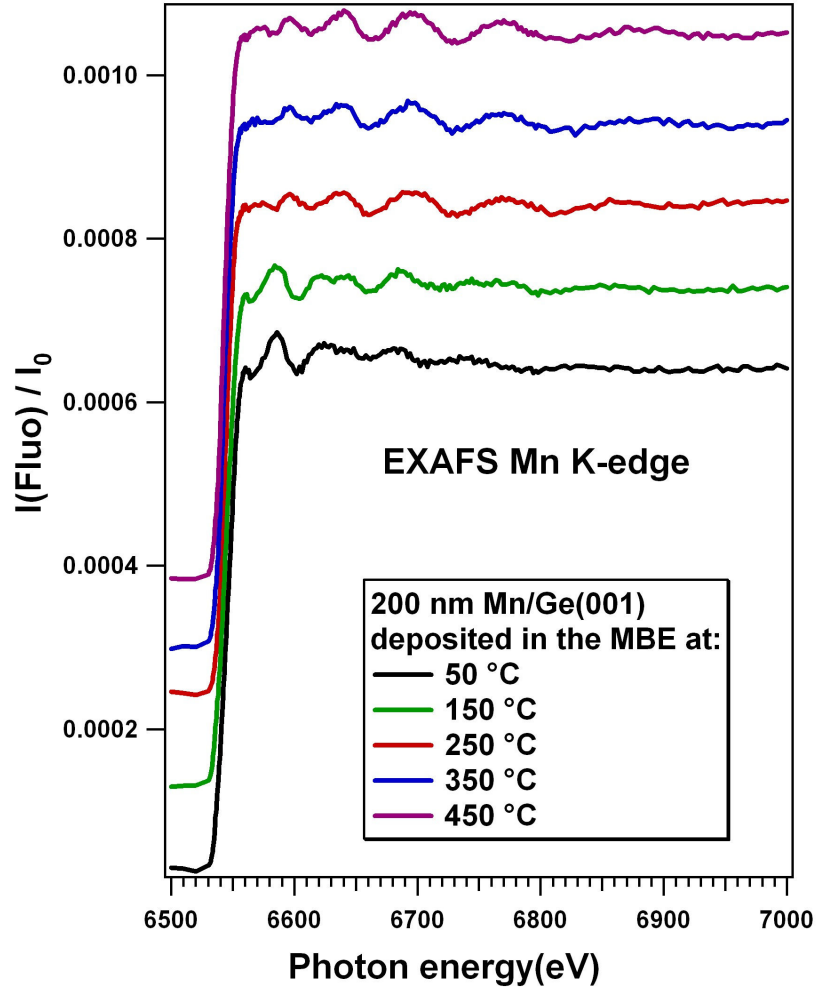


Fig. 2. Extended X-ray absorption fine structure (EXAFS) spectra measured on 200 nm thick Mn films deposited on Ge(001) p(2 × 1) in the molecular beam epitaxy chamber. Samples deposited at 50 and 150 °C are non-magnetic, whereas the other ones are magnetic.