

INDUSTRIAL APPLICATIONS

In this section, six carefully selected experiments successfully accomplished in the industrial field in 2002B and 2003A are presented.

The very interesting experiments referred in this section were achieved using the following five different beamlines; that is, two experiments were achieved using the engineering science research beamline, BL19B2, and four experiments, using the contract beamline for industrial consortium ID, BL16XU, the magnetic materials beamline, BL39XU, the structural biology II beamline, BL40B2, and the single crystal structure analysis beamline, BL02B1.

The first experiment is about an *in situ* study of rubbers for a studless tire that can run on ice or snow by refraction contrast imaging which provides a visual information (BL19B2), the second experiment involves the X-ray scattering measurement and X-ray absorption spectroscopy of a CVD-RAM material which provide useful information for the development of high-speed phase change devices (BL19B2), the third experiment is about a study of the oxide/Si interface for an international technology roadmap of a semiconductor (ITRS) and a complementary metal oxide semiconductor (CMOS) by X-ray crystal truncation rod (XCTR) scattering (BL16XU), the fourth experiment is about a study of a Co/Pt multilayer for recording media by X-ray magnetic circular dichroism (XMCD) (BL39XU), the fifth experiment is about an *in situ* small-angle X-ray scattering study of a polymer material (BL40B2) and the sixth experiment involves the strain analysis of a thermal barrier thick coating using high-energy X-ray (BL02B1). The remarkable articles shown in this section can be used as good models for material researchers.

