X-ray Spectrometers for science and research Thomas Reul, Martin Rohde, Bruker Nano GmbH

The Berlin based company Bruker Nano GmbH (former Roentec GmbH) looks back on more than 25 years of experience in X-ray detection and spectroscopy. While mainly focusing on X-ray elemental analysis for the electron microscopy market (EDS) as well as turn-key desktop systems for X-ray fluorescence applications (XRF), over all those years Bruker Nano respectively its predecessors have also supported scientific applications with customized spectroscopy components, like detectors and associated electronics. These have been sold, among other, to a number of synchrotron sites. The current portfolio on x-ray detectors ranges from Silicon Drift Detectors (SDD) in different sizes and form factors over monolithic multi element SDD, namely the renown "Flat Quad" allowing for unrivaled solid angle of detection, to a 16 element Microcalorimeter detector that can be provided in collaboration with an US-based company. These energy dispersive detectors are complemented by a unique parallel beam wavelength dispersive spectrometer (WDS) for the low end of the X-ray range. These detectors are always provided in connection with an adapted supply and signal processing system as well as a wide range of software. The high level hardware interfaces ranges from legacy RS232 via USB to Gigabit Ethernet allowing easy integration in existing laboratory environments.