Hard and soft condensed matter x-ray reflectometry and GISAXS studies using the incoatec microfocus source IμS

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Incoatec offers a unique possibility to upgrade your existing diffractometer by installing our high-performance, air-cooled and low-power microfocus source IμS.

You have a Bruker AXS, Marresearch, Nonius, Rigaku, Huber or some other system?

Your home lab diffraction system lacks intensity?
Brighten it up with Incoatec´s state-of-the-art microfocus X-ray source IμS!
A significant increase in flux density of up to $2 \cdot 10^{10}$ ph/(s•mm2) and smallest beam cross-sections of down to 95 μm can be obtained. With an IμS upgrade you will get the highest standard of quality, precision and safety Made in Germany. Our long-standing experience is based on more than 60 upgrades of IμS integrations into nearly all existing X-ray diffractometers worldwide. Your local service contact can be involved in the on-site installation. Additionally, Incoatec provides profound customer support during the whole project and beyond.
We take care!

Your upgrade options:

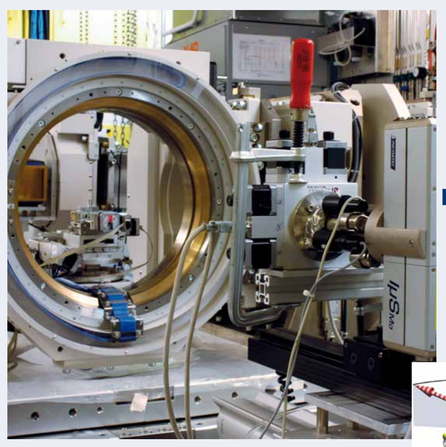
- Source, optics and beam conditioning elements
- Single source upgrade for XRD, SCD, (GI)SAXS, XRR and many more applications
- Dual wavelength setup by adding IμS as complementary source
- Cu, Mo, Ag, Co and Cr radiation (others on request)

Your benefits:

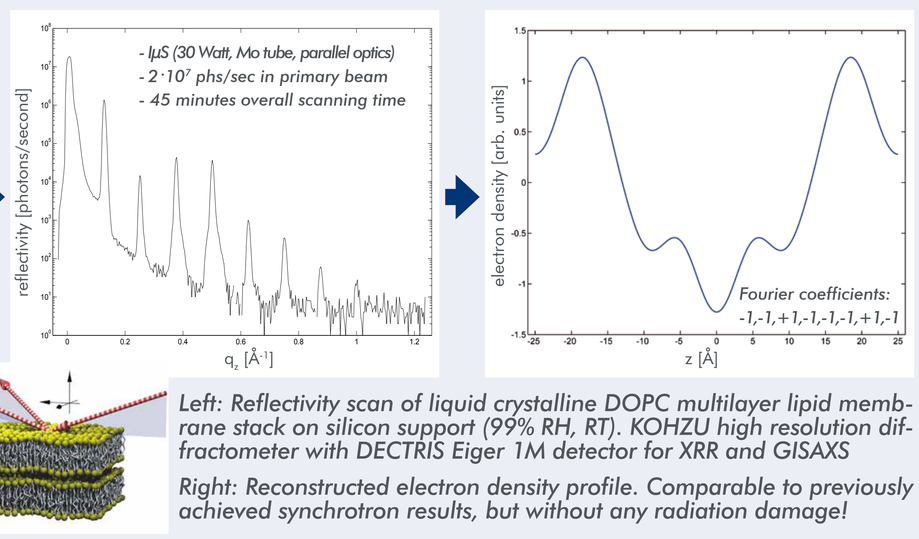
- No maintenance, only single phase power and no water cooling required
- 3 years warranty
- Implementation into Bruker software or stand-alone operation (remote control)
- Maximum installation down time of only 2 - 4 days
- Full integration into existing safety circuits, new safety concept development on request
- Full compliance with European Machinery Directive 2006/42/EC

Old systems shining in new bright light ...

Results of special engineering applications. Cutting-edge ideas deserve state of the art technical support. An international team of engineers, physicians and chemicists with a broad background in all kinds of scientific applications find the optimal solution also for your specific application. Contact us, challenge us!

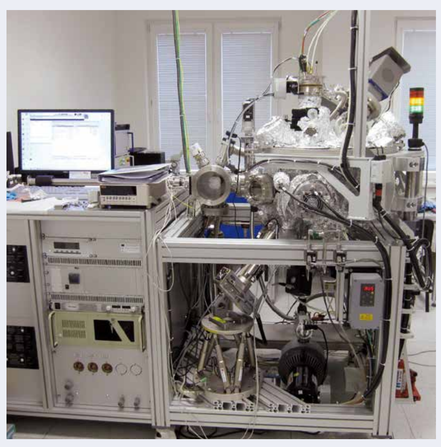


HRXRD setup at synchrotron beamline (Petra III, DESY) in Hamburg, Germany

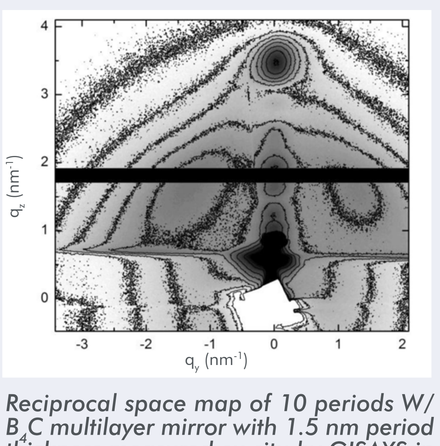


Left: Reflectivity scan of liquid crystalline DOPC multilayer lipid membrane stack on silicon support (99% RH, RT). KOHZU high resolution diffractometer with DECTRIS Eiger 1M detector for XRR and GISAXS

Right: Reconstructed electron density profile. Comparable to previously achieved synchrotron results, but without any radiation damage!



Hexapod adaptation to UHV deposition chamber for in-situ studies in Bratislava, Slovakia



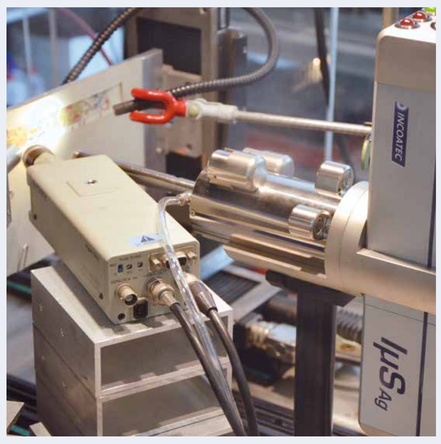
Reciprocal space map of 10 periods W/B_4C multilayer mirror with 1.5 nm period thickness measured ex-situ by GISAXS in deposition chamber

Upgrades on other systems. Incoatec has upgraded more than 30 other commercial x-ray diffractometers from all over the world. An audit of the existing radiation safety system according to your local safety demands with required upgrades is mandatory. Together with detailed experiences about third-party controller systems Incoatec offers a whole in one diffractometer solution even with these non-Bruker machines.

Marresearch 345 in Liege, Belgium

Replacement of Rigaku RU-200 generator in Boulder, USA

Huber system for SAXS in Tamkang, Taiwan

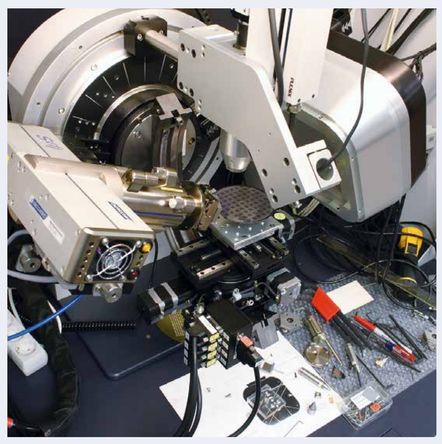


Combined XRF/XRD setup for painting analysis in Antwerp, Belgium

XRD/XRR setup in synchrotron optics lab at ESRF, Grenoble, France

Upgrades on Bruker AXS systems: Incoatec supports full integration into two decades of Bruker´s x-ray product portfolio with worldwide project experiences. This includes former Nonius diffractometers, all generations of Bruker D8 machines and the Bruker SAXS product lines. Close teamwork with the Bruker AXS system developers and local service staff ensures the highest standard of system integrity.

Bruker Systems for XRD, XRR and (GI)SAXS



Bruker D8 DISCOVER GADDS in Karlsruhe, Germany

Bruker NANOSTAR (IμS and Scatex) in Vienna, Austria

Bruker Systems for Single Crystal Diffraction

Nonius Kappa APEX II, FR 590 in Jena, Germany

Bruker APEX II DUO IμS in Düsseldorf, Germany

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