

# **Ru/C multilayers for X-ray tomography and imaging**

Michael Störmer

*Helmholtz-Zentrum Geesthacht*

Multilayers are interesting optical elements for synchrotron beamlines. A suitable combination of multilayer materials can provide a very high photon flux due to Bragg reflection. Ru/C is selected for a photon energy of about 15 keV for tomography applications. It is expected that the installation of a double-multilayer monochromator will cause a gain of 40 at our imaging beamline (IBL). The mirrors were coated using our 4.5 m long sputtering facility, which was designed in-house at the Helmholtz-Zentrum Geesthacht. After magnetron sputtering, the Ru/C coatings were investigated by X-ray reflectometry in order to determine layer thickness, roughness and density. The current experimental results are discussed with regard to former publications.