

Beamtime report
Exp HS 4000

The aim of the experiment HS 4000 was the study of the dynamics of fullerenes C60 confined inside carbon nanotubes. To proceed we decided to fill the nanotubes with a new form of fullerenes the Kr@C60 which are molecules made of one atom of Krypton inserted inside the fullerene.

The study of the EXAFS signal at the Kr K edge could help us to distinguish the transition between rotating molecules and oscillating molecules with the appearance at low temperature of a clear multiple scattering signal.

Unfortunately, we could not get the samples ready for the experiment because of problems during the synthesis.

We decided to use the beamtime to follow the work on confined system inside carbon nanotubes. We have so studied the structure of polyiodide chains confined inside carbon nanotubes by measuring the EXAFS signal at the Iodine K edge. The beamtime was successfully used and important informations have been carried out from this experiment.

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