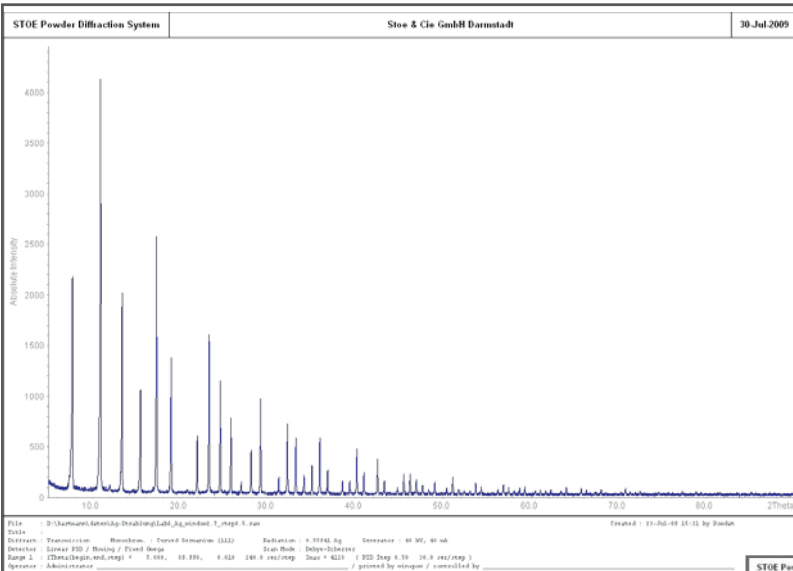


# Monochromatic Ag $K\alpha_1$ -radiation and the new linear HR-PSD



Measurement of LaB<sub>6</sub> in a 0.3mm capillary on a STOE STADI P powder diffractometer with Ag K $\alpha_1$  radiation in Debye-Scherrer mode up to 90° 2Theta (d=2.75Å!).

Though the reflections at the low angle side show the typical asymmetric peak shape the Rietveld refinement of the LaB<sub>6</sub> structure using Fullprof<sup>1)</sup> and the profile function of Finger, Cox & Jephcoat<sup>2)</sup> results in excellent R values and shows a FWHM of 0.04 for the LaB<sub>6</sub> 100 reflection.

Figure 1

LaB<sub>6</sub>, Ag-Strahlung, Stoe Stadi P

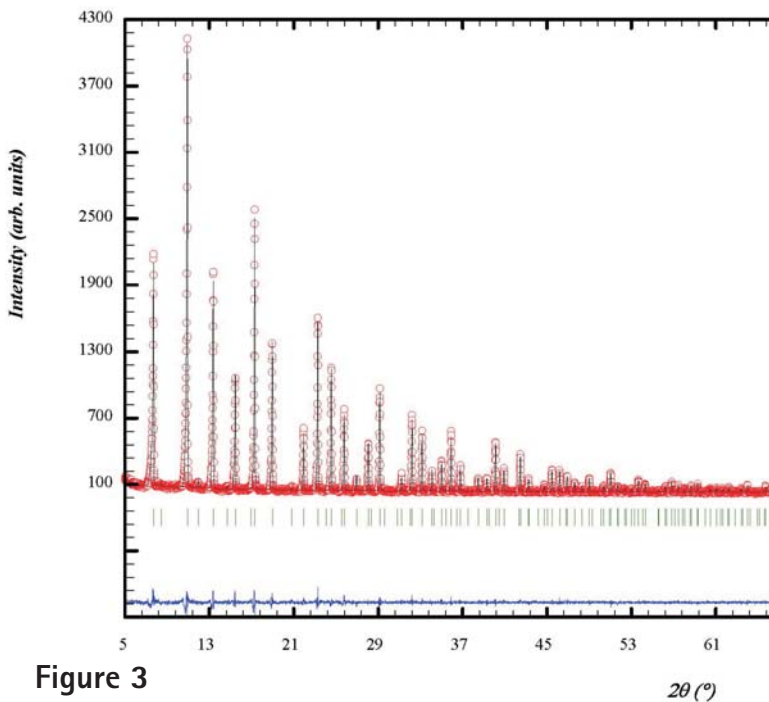


Figure 3

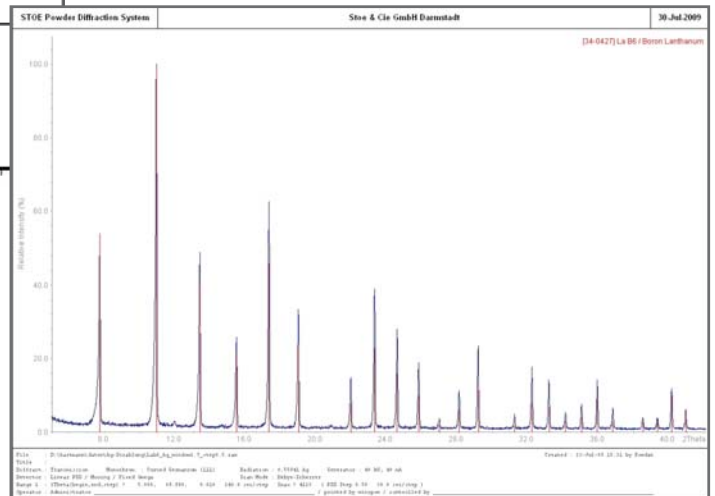


Figure 2

Figure 1 shows the Fullpattern of LaB<sub>6</sub>, Figure 2 a detail of figure 1 with the reflection markers of the ICDD database (phase 34-0427) and Figure 3 the observed and calculated pattern of the Rietveld refinement with the reflection markers and the referring difference plot.

<sup>1)</sup>Rodriguez-Carvajal, J., Physica B.(1993), 192, 55

<sup>2)</sup>Finger, Cox and Jephcoat, J. Appl. Cryst. 27, 892, 1994