

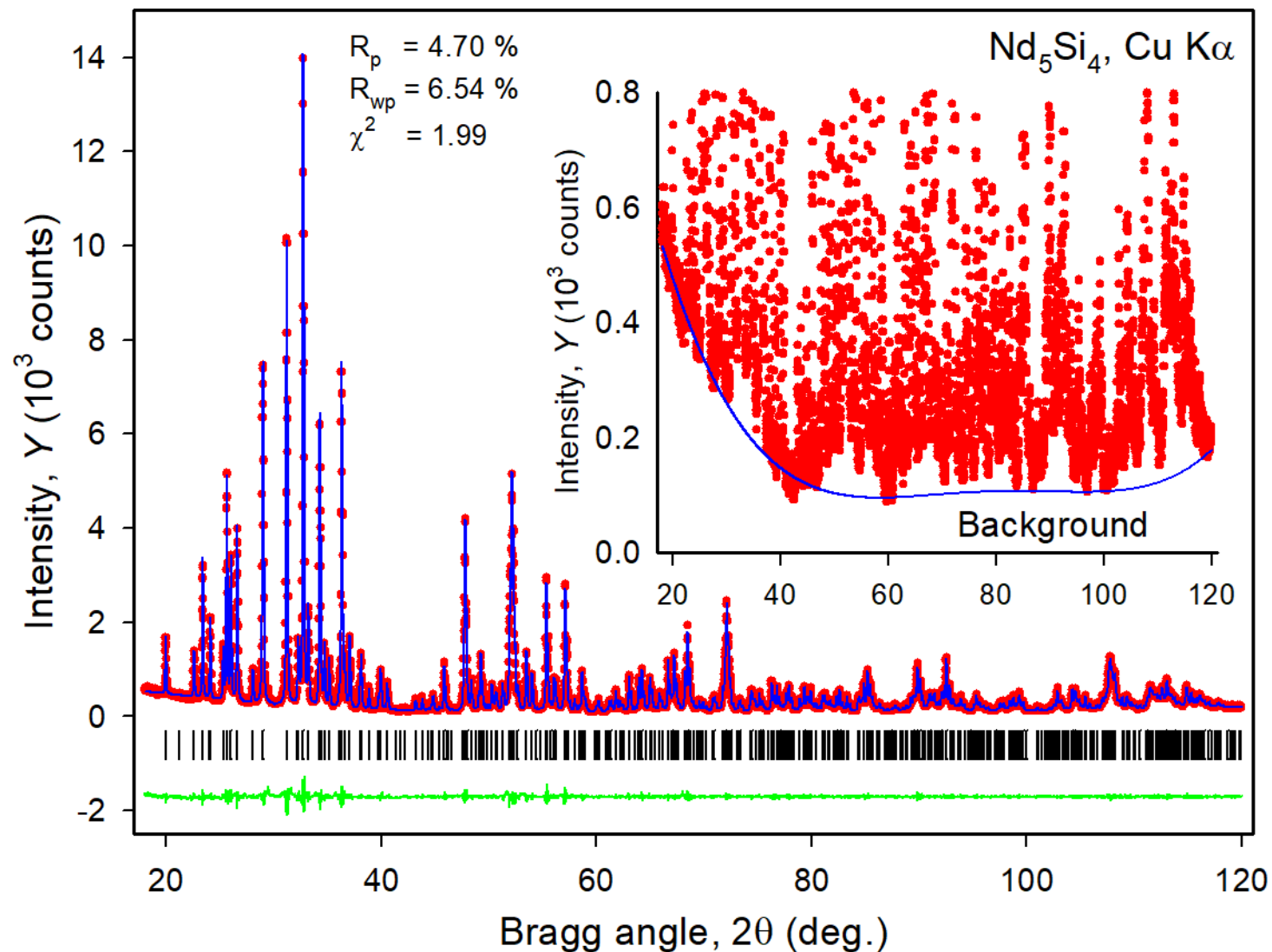
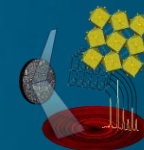


Figure 18.1. The observed and calculated powder diffraction patterns of Nd_5Si_4 after refinement of all parameters. The powder diffraction data were collected from a ground sample of Nd_5Si_4 using $\text{Cu K}\alpha$ radiation on a Rigaku TTRAX rotating anode diffractometer. The divergence slit was 0.75° and the receiving slit was 0.03° . The experiment was carried out in a continuous scanning mode with a sampling step 0.02° and a scan rate of 0.5 deg/min. The inset shows the low intensity region of the powder diffraction pattern with a properly determined background (solid line).

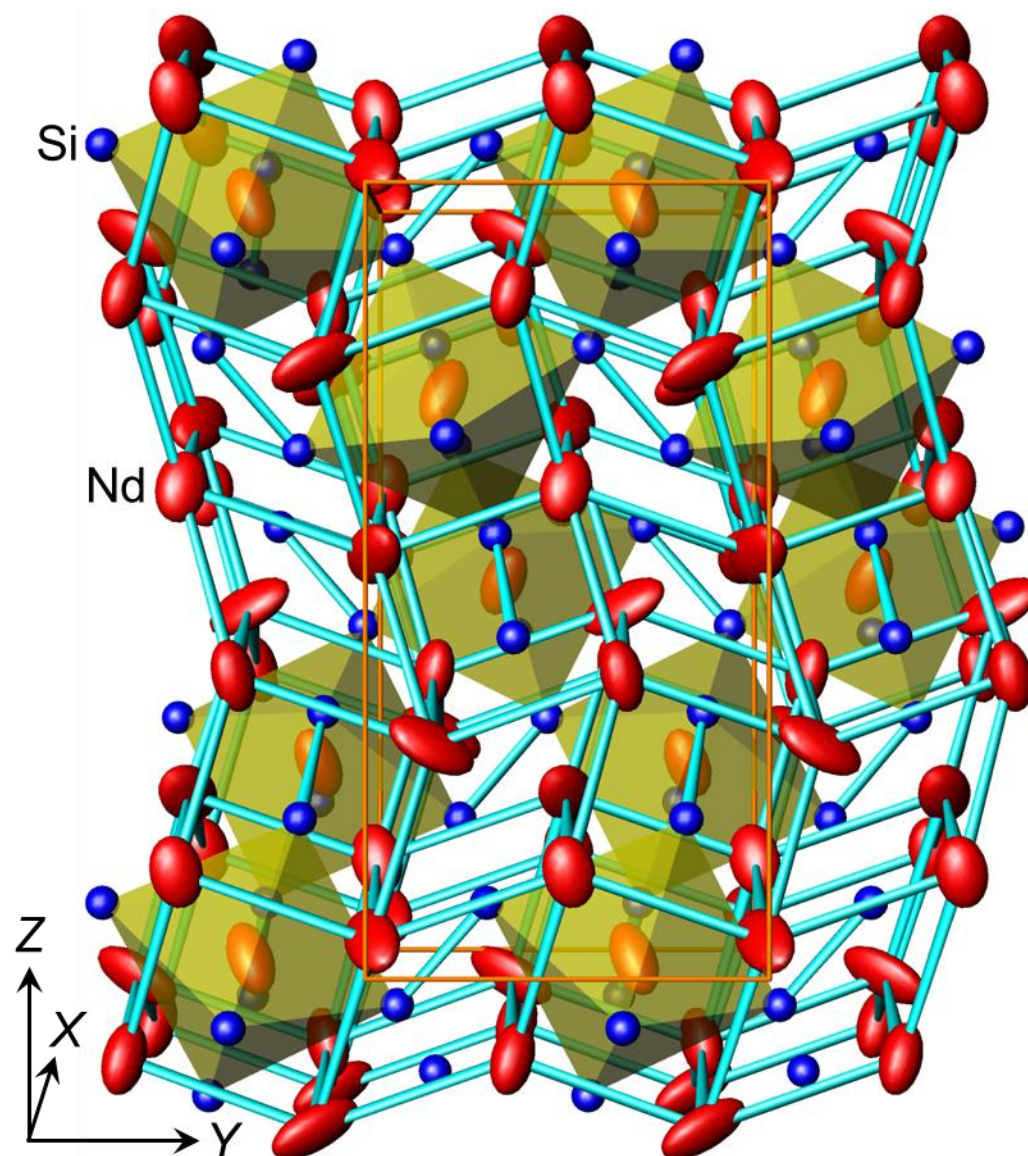
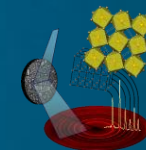


Figure 18.2. The model of the crystal structure of Nd_5Si_4 shown with displacement ellipsoids of Nd atoms at 99% probability as determined in the process of the Rietveld refinement. Sizeable displacement anisotropy of Nd atoms may be indicative of the presence of unidentified experimental errors.

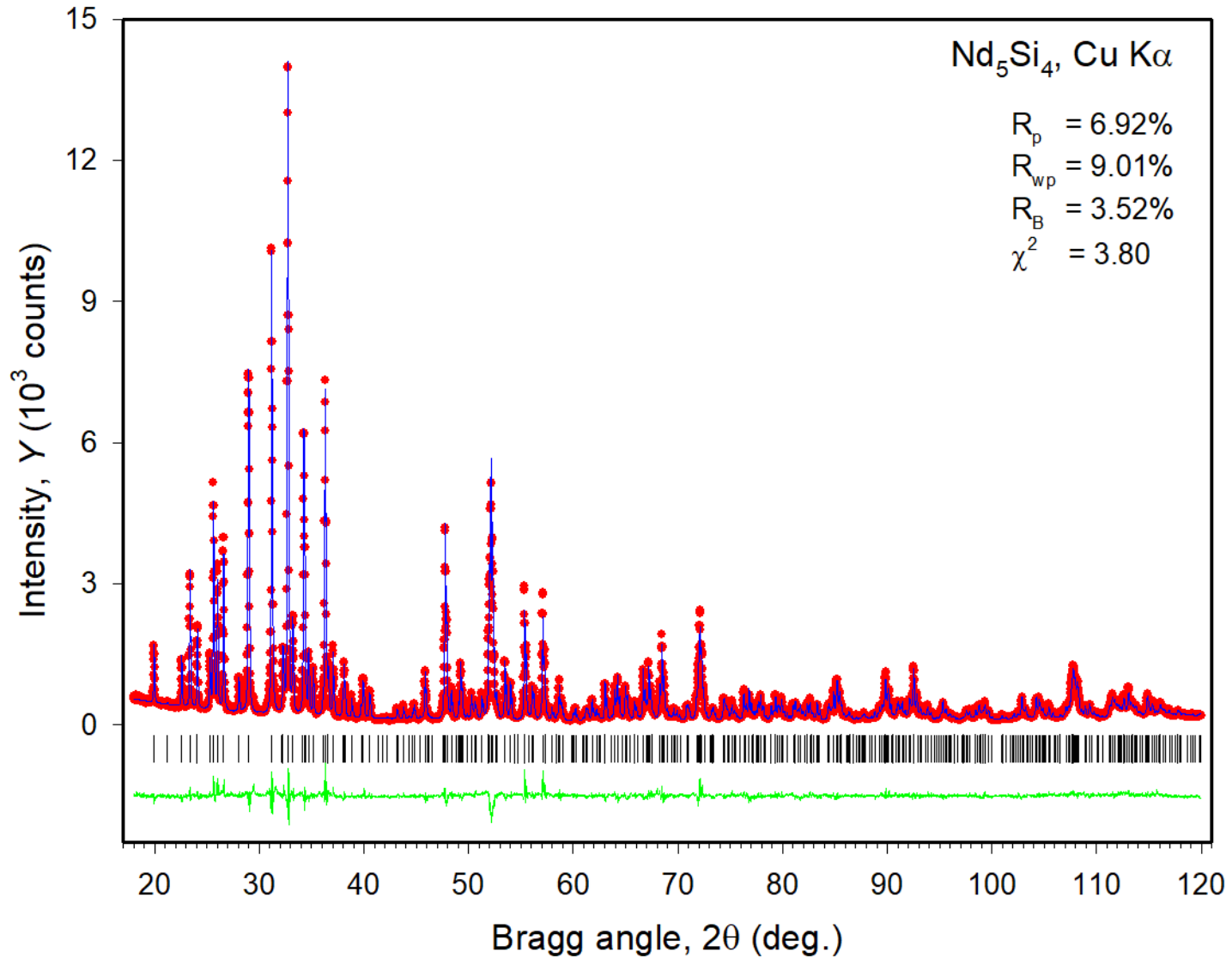
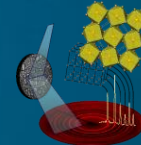


Figure 18.3. The observed and calculated powder diffraction patterns of Nd₅Si₄ after the completion of Rietveld refinement. The data were collected from a ground Nd₅Si₄ powder dusted on a flat sample holder using a rotating anode Rigaku TTRAX powder diffractometer in a step scan mode with a step $\Delta 2\theta = 0.02^\circ$.