

# XAFS Study of Molten $\text{ZrCl}_4$ in LiCl-KCl Eutectic

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Z. Naturforsch. **57a**, 277–280 (2002); received April 4, 2002

The local structure of molten  $\text{ZrCl}_4$  in LiCl-KCl eutectic was investigated by using an X-ray absorption fine structure (XAFS) of the Zr K-absorption edge. The nearest  $\text{Zr}^{4+}-\text{Cl}^-$  distance and coordination number from the curve fitting analysis were  $(2.51 \pm 0.02)$  Å and  $5.9 \pm 0.6$ , respectively. These suggest that a 6-fold coordination  $(\text{ZrCl}_6)^{2-}$  is predominant in the molten mixture.

*Key words:* XAFS; Molten Salt; Zirconium Tetrachloride; Coordination.