

***In situ* redox determination at high-temperature by XANES spectroscopy**

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The X-ray absorption spectroscopy is a specific and interesting way to determine the structure of melts at high temperature, and to use it to follow structural changes. The changes observed at HT with X-ray absorption spectroscopy can be directly connected to changes in macroscopic properties, such as viscosity, specific heats, Redox state, diffusion coefficient and of course the structural organization of the melts at high temperature.

By combining new XANES investigations at the L and K-edge on heavy and light elements give the possibility to follow redox variation for different couples like Eu/Fe, Ce/Cr, U/Am and get informations on the mechanisms and redox kinetics.