

## Electron microscopy of ultrahigh pressure materials prepared by ultramicrotomy

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Ultramicrotomy was applied to the ultrahigh pressure materials to overcome the problems met in the electron microscopy studies of these materials. The samples synthesized by multianvil cell and diamondanvil cell apparatuses were successfully cut into the foils of several tens nm thickness using a diamond knife in ultramicrotomy, and with those foils we could get electron images. In the chemical analyses, so far we could get compositions whose stoichiometry is not bad for  $(\text{Mg,Fe,Al})(\text{Si,Al})\text{O}_3$  perovskite, but for  $\text{CaSiO}_3$  perovskite the obtained compositions were significantly deficient in Ca.