

Phase relations of $\text{Ca}(\text{OH})_2$ under pressures

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Portlandite ($\text{Ca}(\text{OH})_2$) has a simple structure (CdI₂-type). It is one of the prototype of hydrous layered silicates. The melting reactions under high pressure were successfully detected by the high-temperature differential thermal analysis (HP-DTA) system that we set up. The melting curve of portlandite was drawn up to 6GPa. X-ray in situ observation confirmed the melting reaction and a transition to a high pressure phase.