Phase relations in the system CaTiO3-CaSiO3 and structural variations of Ca(Ti xSi1-x)O3 perovskite

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Phase relations in the system CaTiO3-CaSiO3 and structural variations of Ca(Ti xSi1-x)O3 perovskite have been investigated using a multi-anvil apparatus combined with micro-area X-ray diffraction, EPMA and analytical electron microscopy. In this study, phase relations in the pressure-compositon space at 1500 degree were almost determined, and the superstructure of double cubic perovskite was recognized in the intermediate composition.