

Viscosity of the albite melt at high pressure

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Viscosity of the albite melt has been determined up to 7 GPa at 2000 K using an MA8 type multi anvil apparatus. The falling sphere method was applied using a single crystal of diamond as a falling density marker. Viscosity of the albite melt greatly decreases from 5.28(1.78) Pa s at 3 GPa to 0.90(0.34) Pa s at 5 GPa, whereas it increases to 0.99(0.27) Pa s at 6 GPa with a viscosity minimum at around 5 GPa. We observed a further decrease in viscosity of the melt to 0.28(0.06) Pa s at 7 GPa. Our observations suggest that two types of the structural change might occur in the albite melt in the pressure ranges from 3 to 5 GPa, and above 6 GPa.