



## **High pressure and temperature properties of silicates especially $\text{MgSiO}_3$ and $\text{SiO}_2$**

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We discuss the High pressure and temperature properties of Silicates with special reference to  $\text{SiO}_2$  and  $\text{MgSiO}_3$ . The Z method for melting is used within ab initio molecular dynamics both in NVE and NPT/NPH simulations to ascertain properties like melting curve, conductivity diffusivity and structure. Some relevance to lower mantle properties are discussed.