

Viscosity of Confined Water inside Silica Nano-Pores

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Confined water in nano-pores of different materials is a subject which appears in geological, physical, industrial and biological systems. In many studies confined water shows significantly different behavior than bulk water and it motivates many researchers to study effects of confinement on structural and dynamical properties of confined water. To investigate this hypothesis, we try to study viscosity of confined water inside nano-pores of silica. If motion of water molecules alters with confinement inside silica, it should change its viscosity amount respect to bulk water. Molecular dynamic simulation is a very vast used tool for these kinds of studies which allows both looking at the big picture and thermodynamic properties of structure beside looking at individual atoms or groups and studying their evolution in time.