

**Play Hide and Seek with Water in the Earth's Mantle**  
**Professor Baosheng Li**

While the Earth's deep interior remains inaccessible to direct sampling, much of our understanding about the transport and storage of water at deeper depths is from indirect inference through analysis of seismic waves propagated through the interior of the Earth, laboratory investigations on the capacity of water incorporation in mantle minerals at high pressure and temperatures, and theoretical and experimental studies on phase equilibrium and thermodynamic properties of hydrous phases as well as nominally anhydrous phases at mantle conditions. This talk will focus on the study of compressional and shear wave velocities of hydrous phases at high pressure and temperatures to understand their signature characteristics that can be used as a geophysical probe for hidden water at mantle conditions.

Baosheng Li received his PhD in Geophysics from Stony Brook University (SBU) in 1996. After a postdoc in the Mineral Physics Institute (MPI) at SBU, he joined MPI as a faculty member in 1997 and then the Department of Geosciences at Stony Brook University in 2018. His expertise lies in the study of the elasticity of mineral and rocks at high pressure and temperatures and its application in understanding the structure, composition, and dynamics of the interior of the Earth.