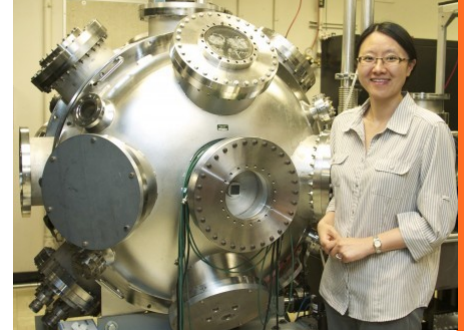




Energy Transport in High-Energy-Density Matter

High energy density (HED) science is an emerging interdisciplinary research field where properties of matter are of broad interest in geophysics, planetary science, inertial confinement fusion and astrophysics, etc. HED states are generally defined as pressure larger than 1 Mbar (one million atmospheres), or energy density larger than $100\text{kJ}/\text{cm}^3$. Recent advancements in supercomputers and laser facilities have enabled proper modeling of HED matter and creation of such matter in a laboratory. Many unexpected behaviors of materials have been discovered under these extreme conditions. This talk will give a brief overview of this new field, highlight some recent discoveries, and focus on energy transport in HED matter. Studies of radiation transport, ionization and thermal conduction will be presented.



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Dr. Ping received B.Sc. and M.Sc. degrees from University of Science and Technology of China, and Ph.D. from Princeton University. She has broad research interests in High-Energy-Density (HED) Science which is generally defined as pressure $> 1\text{Mbar}$ or 100GPa . She performed pioneering experimental work on Raman amplification in plasmas, laser-matter interaction and non-equilibrium warm dense matter. She is recipient of **2011 APS/DPP Katherine E. Weimer Award**, DOE Early Career Research Program Award, and became an APS fellow in 2015.