
DR. TAMMY MA



Dr. Tammy Ma is an experimental plasma physicist in inertial confinement fusion (ICF) and high energy density physics at the National Ignition Facility (NIF) at LLNL. She leads experiments aimed at achieving fusion ignition by using NIF's 192 laser beams to compress fuel capsules containing deuterium and tritium

(isotopes of hydrogen) in a ICF process. The goal is to achieve sustained thermonuclear fusion, where the fuel fuses into heavier elements, and many times more energy is released than it took to initiate the reaction.

She graduated from Caltech in 2005 with a B.S. in Aerospace Engineering, then received her M.S. in 2008 and Ph.D. in 2010 both from the University of California, San Diego. Tammy subsequently completed a postdoc at LLNL before transitioning to a staff scientist in 2012, where she now leads a number of the fusion experiments at the NIF and currently heads the X-Ray Analysis Group for the ICF program. She has authored or co-authored over 135 refereed journal publications and is strongly committed to education and scientific outreach. Tammy was recently awarded the Presidential Early Career Award for Science and Engineering (PECASE), the highest honor bestowed by the United States government on science and engineering professionals in the early stages of their independent research careers, as well as the 2016 Stix Award for Outstanding Early Career Contributions to Plasma Research from the DPP for her work in quantifying hydrodynamic instability mix in ICF implosions and for contributions to experiments demonstration fusion fuel gains exceeding unity.