

Stanford



Nicholas A Czapla

Associate Scientist, SLAC National Accelerator Laboratory

Bio

BIO

I am interested in high peak power and high energy lasers and the High Energy Density systems they make accessible. I strive to make the two main lasers of the Matter in Extreme Conditions (MEC) LCLS end station more user friendly and robust. I also work towards improving the performance and/or the diagnostics provided by the laser team working at the MEC end station. In the event that a potential experiment requires, or would benefit from, a new or temporary laser diagnostic, please reach out to me to discuss the feasibility and technical requirements for the request.

After working for a few years as a structural and vibrational analyst at General Atomics and Aerojet Rocketdyne, I started graduate school at the Ohio State University. There I worked on the Scarlet Laser Facility, a 400 TW Ti:Sapphire laser system, under Doug Schumacher. My research was on relativistic laser plasma physics focusing on plasma optics and Relativistically Induced Transparency through ultrathin targets using Gaussian and Laguerre-Gaussian laser profiles.

CURRENT ROLE AT STANFORD

Matter in Extreme Conditions, Laser Scientist, Linac Coherent Light Source

EDUCATION AND CERTIFICATIONS

- PhD, The Ohio State University , Physics (2022)
- MS, California Polytechnic State University, San Luis Obispo , Mechanical Engineering (2015)
- BS, California Polytechnic State University, San Luis Obispo , Physics (2012)

Professional

PROFESSIONAL INTERESTS

Nick's primary research interests include:

- development of novel optical sources and diagnostics
- novel high power laser system performance and protection
- utilizing structured light profiles in light matter interaction
- plasma optics and diagnostics