

Abstract Submitted  
for the OSF19 Meeting of  
The American Physical Society

**Shock experiments on a tabletop: a versatile technique for dynamic shock compression studies in condensed matter** MITHUN BHOWMICK, Miami University, ERIN J. NISSEN, DANA D. DLOTT, University of Illinois — In this talk we are presenting a shock apparatus on a tabletop as a versatile technique to be applicable to shock compression experiments in condensed matter. The apparatus has already been used in recent studies of shock compression of nitromethane as well as effects of sensitizers/desensitizers on the same. The compression experiments are based on laser driven flyer plates with optical pyrometry, photon doppler velocimetry, and high-speed video photography as probes to record wavelength and time-resolved emission, simultaneous shock propagation, and real time images of the shock front. The interdisciplinary nature of the apparatus makes it useful in a myriad of applications in overlapping areas of fundamental science and device applications.

Mithun Bhowmick  
Miami University

Date submitted: 25 Sep 2019

Electronic form version 1.4