

Abstract Submitted
for the SHOCK17 Meeting of
The American Physical Society

Wavelength-Dependence on the Initiation of Iron-Based Photoactive Explosives KATHRYN BROWN, THOMAS MYERS, STEVEN CLARKE, Los Alamos National Laboratory — Photoactive explosives show promise to be relatively insensitive to impact and friction compared to PETN and other detonator materials, but can be more easily initiated with laser light. Metal-ligand charge transfer (MLCT) complexes have been shown to have tunable explosive properties and absorption profiles, making them strong candidates for laser detonator material. Here, we discuss the synthesis and characterization of several iron-based MLCT complexes, as well as results from recent experiments on their sensitivity to initiation from different wavelengths of laser light.

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Date submitted: 21 Feb 2017

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