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**Recent advances in the development of FATP as a photoactive energetic material** CHRISTOPHER SNYDER, PATRICK BOWDEN, KATHRYN BROWN, MICHAEL BOWDEN, STEVEN CLARKE, Los Alamos National Laboratory — Iron(II) tris(3-amino-6-pyrazolyl-1,2,4-triazolo[4,3-b][1,2,4,5]-tetrazine) perchlorate (FATP) is an energetic material that has low sensitivity to mechanical stimuli [impact, electrostatic discharge (ESD), and friction] and is also capable of being readily ignited with a low-level 1064 nm Nd:YAG laser pulse, making FATP a potential candidate as a photoactive initiator material. Previous studies have shown that FATP is capable of detonating a PETN acceptor charge. However, the detonability of FATP itself has not been reported. Additionally, low thermal stability has been observed in FATP in both differential scanning calorimetry (DSC) and vacuum thermal stability (VTS) measurements. Herein, we report a modified procedure for the synthesis of FATP that results in improved thermal stability and also report detonability studies of this material.

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