

# The pointl nature of the initiation of liquid explosives under shock wave action.

**Rapota D.Yu<sup>1,®</sup>, Sosikov V.A.<sup>1</sup>, Torunov S.I.<sup>1</sup>, Utkin A.V.<sup>1</sup>, Mochalova V.M.<sup>1</sup>, Rapota D.Yu<sup>1</sup>, Sosikov V.A.<sup>1</sup>, Torunov S.I.<sup>1</sup>, Utkin A.V.<sup>1</sup> and Mochalova V.M.<sup>1</sup>**

<sup>1</sup> Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry of the Russian Academy of Sciences, Academician Semenov Avenue 1, Chernogolovka, 142432,

® daniil.yurievichr@gmail.com

Currently, one of the main methods of studying the course of detonation processes is the initiation of detonation in a condensed explosives by a shock wave. The study of the phenomenon of the transition of a shock wave into a detonation wave is of great practical and theoretical importance, as it touches on fundamental issues related to the origin and development of detonation in condensed systems. It is known that the process of formation and development of the detonation front of condensed explosives can proceed by two mechanisms: homogeneous and heterogeneous. This paper presents the results of observations in homogeneous mixtures of liquid explosives based on tetranitromethane and bis-(2-fluoro-2,2-dinitroethyl)-a formality (FEFO) with inert diluents of the focal detonation initiation process, which does not correspond to the classical concepts of detonation of such mixtures.