EFFECT OF ELECTRIC FIELD ON THE EXPLOSIVE SENSITIVITY OF SILVER AZIDE

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In this paper studied the effect of the weak and super weak electric (from 1 mV / cm to 100 V / cm) fields on speed of a chemical reaction in a silver azide. It is shown that weak electric field can be considered as a «catalyst» of a chemical reaction and as «inhibitor» of a chemical reaction, and, hence, as an instrument of control of stability and reactionary ability of the «energy-saturated» of materials. Influence of the super-weak electric fields on the process of explosive decomposition of materials (explosion was initiated with the help pulse duration of 10 ns, the first harmonic (1064 nm) YAG: Nd laser and contact electric field by intensity 300 KV/m) was shown in this work. The practical significance of the work is determined by possibility of the use of the obtained experimental data for the purposeful change of reactionary ability of explosive materials. The work is one of the first attempts of development of effective methods of management of explosive sensitivity of explosives by means of the weak electromagnetic fields.

Keywords: silver azide, electric field, explosive sensitivity.