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ABOUT ONE ELECTRICAL COMPOUND AS A SOURCE OF ENERGY

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Using tactical terrain features increases the efficiency of using equipment, including military equipment, improves maneuverability and stealth, and reduces vulnerability in combat conditions. Tactical terrain features are determined by the relief and other geographic features. Prompt receipt of coordinates of ground objects and targets is extremely important for solving various tactical problems [1–5]. This information can be used in high-precision combat correlation and extreme navigation systems [6]. Information about topographic elements of the terrain is obtained in various ways, including remotely using mini aerial vehicles (MAV) [7]. The efficiency of using MAV depends largely on the duration of autonomous flight, which is directly related to the capacity and stability of the MAV power supply. This article presents the results of a study of an electret composite polymer-ferroelectric ceramic with high dielectric constant in order to manufacture a high-capacity and stable power source for a mini aerial vehicle on its basis.

Thus, the conducted studies show that preliminary crystallization of the electret element based on fluorine-containing polymer matrices and the piezoelectric phase of the lead zirconate titanate family increases the value of the electret potential difference and its stability. This allows it to be considered a promising material for use as a highly efficient and high-capacity energy source, including for mini aircraft.

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