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Effect of neutron and gamma radiation on the interface electrode-piezoceramics*

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Synthesized ceramics of the composition 0.64BiScO₃-0.36PbTiO₃ with deposited gold electrodes were subjected to irradiation with fast neutrons and gamma rays with a fluence of $\sim 5 \cdot 10^{19} \text{ n/cm}^2(\gamma/\text{cm}^2)$ at an energy E > 0.1 MeV. The elemental composition of the electrode and the electrode-ceramics interface, as well as the crystal structure of the interface after irradiation, were studied. The experimental results indicate a significant effect of irradiation on the gold electrode and the crystal structure of the interface.

Keywords: piezoelectric ceramics, radiation resistance, electrode-piezoceramics interface.

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