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# A Protective Hydrophobic Coating for CsI(Tl) Crystals

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A composition and method for applying a hydrophobic protective coating on the radiation input surface of CsI(Tl) crystals is proposed. The coating is a composition of polymer (fluoroplastic varnish) and solvent (ethyl acetate). The optimal composition of the coating composition with a thickness of ~2 µm was determined. The method of application involves the preliminary exposure of the sample in pairs of hexamethyldisilazane to increase the adhesion of the coating to the surface. It is shown that the replacement of a 5-μm-thick acrylic film with a 2-μm-thick fluoroplastic coating allows an increase in the light output of the α-detector by 14%, while the energy resolution improved from 6.28 to 4.96%.

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