

Evaluation of radiation shielding parameters for optical materials

ABSTRACT

In this work, we have evaluated the mass attenuation coefficient (μ/ρ), half value layer (HVL) and exposure buildup factors (EBF) for Bi-doped tellurite glass, and Dy-doped borate glass. The results show that the Bi-doped tellurite glass has higher μ/ρ and HVL than Dy-doped borate glass. These results could be useful in the construction of active shielding against hazardous gamma radiation.

Keyword: Amorphous materials; Radiation damage; Mass attenuation coefficient; Half value layer; Exposure buildup factors