HR-GAGG

(High Energy Resolution $Gd_3(Al,Ga)_5O_{12}(Ce)$)

High light output &
High energy resolution &
Non hygroscopic nature
Scintillator

HR-GAGG

Patent No.:EP2671940(B1), US8969812(B2), RU2622124(C2), JP5952746(B2)
EP3138891(B1), US10174247(B2), RU2670919(C9)

Product Information

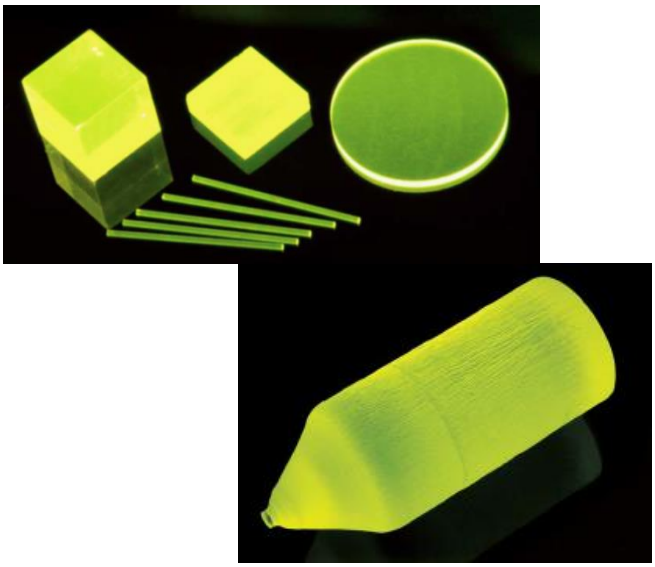

Fig.1: Photograph of HR-GAGG scintillator.

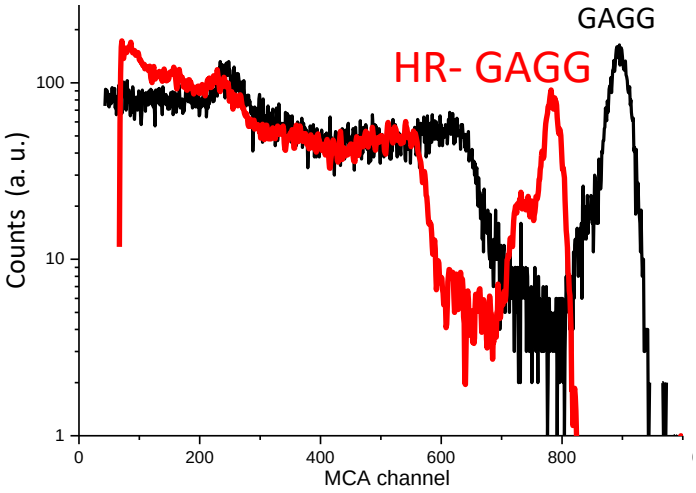

Fig.2: Pulse height spectra of HR-GAGG and GAGG irradiated with gamma rays from a ^{137}Cs source.

Outline

HR-GAGG is GAGG based scintillator with highest energy resolution among oxide.

HR-GAGG scintillator has also high light output and high density.
HR-GAGG has no hygroscopic and no self radiation nature.

2-inch-diameter HR-GAGG bulk single crystal is available now.

Scintillation Properties*1

Light output [photons/MeV]	40,000～50,000
Energy resolution*3 (662 keV, FWHM) [%]	≦5*2
Decay time [ns]	～400
Emission wavelength [nm]	520
Density [g/cm^3]	～6.3

*1 All scintillation properties were measured using 5 x 5 x 5 mm^3 sample.
*2 P. Sibczynski et. al., Nucl. Instrum. Methods Phys. Res., Sect. A, 772 (2015) 112.
*3 Energy resolution was measured with APD.

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