

Scintillator material

To provide a scintillator crystal having high-density exceeding existing scintillators

Overview

Scintillators are used for detectors of X-ray, γ -ray, α -ray, β -ray, and neutron. In particular, high-density scintillator crystals have characteristics such as a) high radiation blocking ability, b) high effective atomic number, and c) high density. Although PbWO_4 single crystal is widely used in existing high density scintillator materials, new scintillator materials are required for further improvement of detector performance and environmentally friendly lead-free scintillator materials.

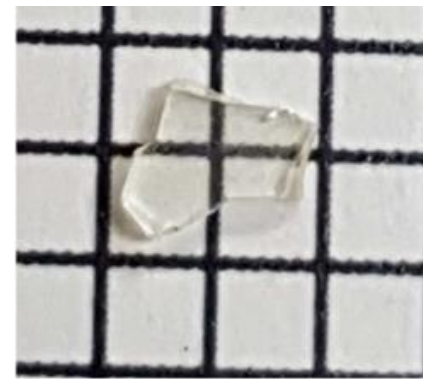
The present invention makes it possible to provide new materials beyond existing scintillator materials as a result of utilizing the excellent crystal growth technology possessed by the inventors. Generally, high-density scintillator materials are known to have high melting points, but the difficulty of crystal growth overcame to complete the present invention (an example is shown on the right). At present, a large-diameter technology is being developed for mass-production of the crystal.

Product Application

- Cerenkov detector
- Radiation detector for cosmic rays
- Radiation detectors used in medical devices

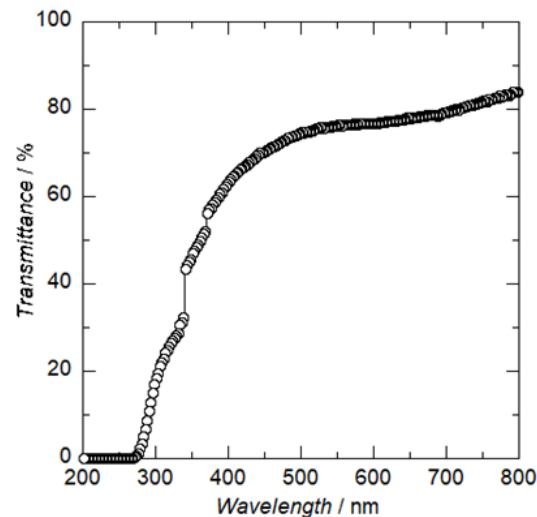
IP Data

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Growing crystal

Transmission spectrum



More than 70% transmittance over 400 nm

Related Works

[1] A paper related to the patented technology is currently being written

Contact



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