OPTICAL REFLECTOR ELEMENT FOR X-RAY APPLICATIONS

Technology description

***Optical reflector system of X-Ray, gamma-rays or high-energy particles*.**
The system is composed by a stack of superposed and curved silicon plates. Each plate has a **reflecting top face** and a bottom face carrying ribs forming spaces between two successive plates. The formed stack of reflecting faces is **used to focus radiation based in a grazing incidence of the ray** (*i.e.* low angle between the ray and the reflecting surface).

Applications

This technology can benefit to any sector where measurement by X-Ray devices are relevant, such in **quality control** (materials testing) and **medical and scientific applications** (X-ray spectroscopy, X-ray photoelectron spectroscopy, X-ray crystallography). The system also applies to other wavelengths: gamma rays, and high-energy particles.

Added-value and benefits

- **Delivering lighter weight** than comparable devices
- **Reducing** production and integration **costs**
- Adopting “stack" configuration to obtain a **rigid structure**.
- Using the **optics for modular and low-cost solutions**.

Technology readiness

A prototype has been tested under industrial resembling conditions.

IP Status

This technology is protected by three patents (France, Japan, USA); FR2866438, JP2005234573, US2005185306