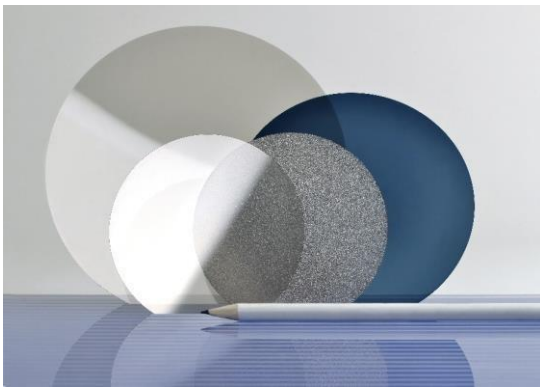




## **Innovative material to outperform natural diamond properties**

*Specialised in manufacturing diamond discs with similar or even better properties than natural diamond, Diamond Materials improves the transmission of high-power beams. Such an innovation shows great potential for application in a wide variety of fields of interest.*



### **The technology**

Diamond discs are produced through an industrial process based on chemical vapour deposition (CVD) which slowly grows diamond coating on an appropriate substrate at temperatures around 800°C.

After the coating process, the diamond layer is separated from the substrate to form a free-standing disk of pure diamond.

## **The innovative potential of optimised surfaces and diamond-like properties**

In addition to obtaining similar or even better properties than natural diamond (low absorption, hardness, the extremely high thermal conductivity, broad band optical transparency, chemical inertness), this innovative technology offers the possibility to manufacture diamond in the form of plates up to 100mm in diameter and 1500µm in thickness.

## **Thinking forward instrumentation, optics and heat spreading**

This material will show full potential in applications such as windows for high power radiation (microwave, X-ray, laser), Heat Spreaders, Speaker Membranes, Optical Elements (lenses, ATR Crystals, beam splitters for space applications) and Fluorescence screens, opening new markets and widening the scope of innovative business opportunities.

## **Collaboration opportunities**

As an innovative company Diamond Materials is open to seek and develop new applications in close collaboration with existing and new customers.

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