



## **Lepton-id Technology**

Lepton-id uses microscopic layered photonic particles ranging in size from nanometer to micrometer as the building block for our authentication technology.

The Lepton-id building blocks are man-made, crystalline structures produced to very accurate, temperature, pressure and time under a very controlled ISO 9001-2015 process developed over the last 20 years. Most of the crystals we grow and organic materials we synthesize are custom made.

Lepton-id taggants provide a fluorescence response (not able to be seen under any light source) and forensic proof for our identification technologies. Our taggants consist of a multiplicity of microscopic crystal particles built in layers from different elements/compounds. Customer specific taggants are also available and encouraged.

Our taggant are physical marker added to customers finished products to allow various forms of testing insuring brand protection. We can tailor our materials into any shape and size and design the materials to convert energy almost anywhere in the electromagnetic spectrum.

The Lepton-id crystal surface chemistry provides the capability to bind it to various materials. The Lepton-id taggants / physical markers can be added to most anything, including ink, paper, perfume, paint, metal, plastic, ceramic, medication, rubber, labels, glass, or your product.



Lepton-id can also be printed using bubble jet printers allowing covert track and trace lot numbers, date codes, secure images etc.

Lepton-id taggants can withstand temperatures exceeding 1500 degrees C.

We are building the secure Lepton-id structures in two different New Jersey locations, providing our own product backup.

The Lepton-id patents include real time detection that identify and distinguish our crystals. Lepton-id detection systems are proprietary verification methods, designed and manufactured in New Jersey. The detection methods are optically based and include a pass-fail line of scanners and a line of track and trace terminals.

Lepton-id technologies have been developed and patented over the past 20 years at ZBA, under secure, customer developed custom programs.

We are now marketing, commercializing our technology turn-key solutions to thwart the threat of counterfeits and security.