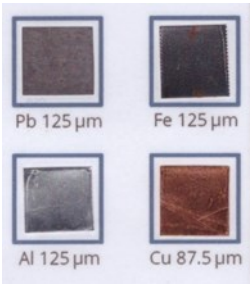
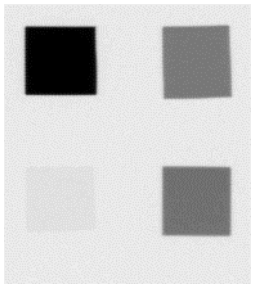
A REVOLUTION IN X-RAY IMAGING

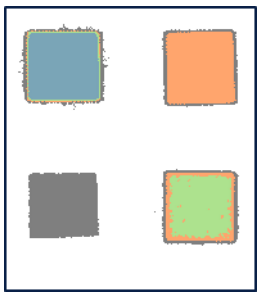
MATERIALS CLASSIFICATION USING STANDARD DETECTORS



Test foils



Standard
X-ray absorption contrast imaging won't differentiate between changes in both thickness and material



IBEX-equipped
X-ray detectors show both materials and thickness contrast and see the changes in energy of scattered X-rays at the material edges

Materials classification with any X-ray imaging detector

By recovering spectral information normally lost in indirect silicon line and area sensors, IBEX-equipped X-ray detectors effectively classify both materials and thickness changes in a sample, even in the absence of clear absorption contrast.

Compatible with all X-ray imaging cameras including large-area FPDs, IBEX technology delivers equivalent or better materials classification than direct X-ray detectors, but with none of their limitations.

The IBEX technology rapidly integrates into most existing detector types, and adds materials information whilst retaining the speed, signal-to-noise, spatial resolution and imaging area characteristics of the underlying sensors.

IBEX is making large-area spectral imaging a practical reality for the very first time. Contact us to find out how we can help you see more with IBEX in your application.

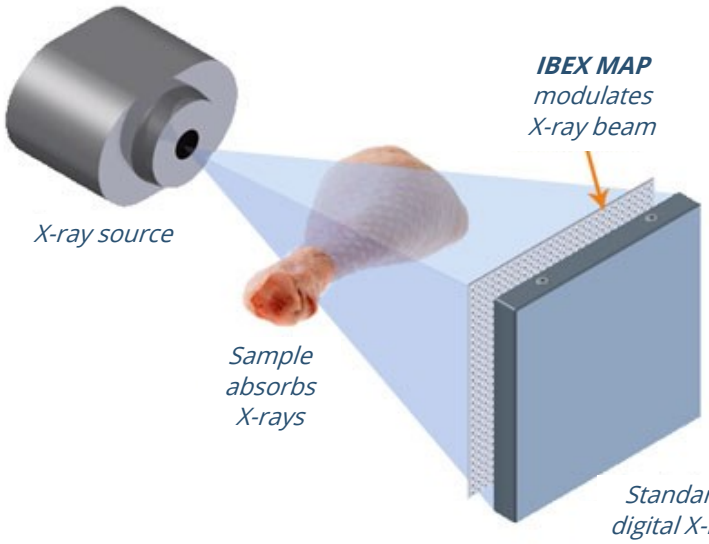
See more...

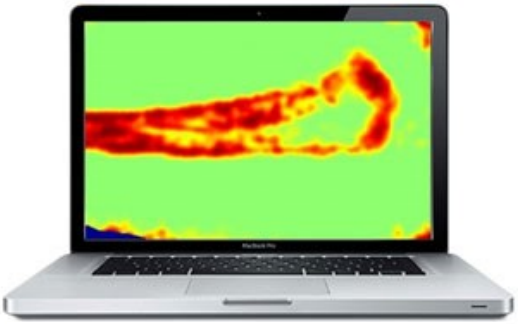
- Materials and thickness classification
- No loss of spatial resolution
- No compromise on imaging area or speed

...with IBEX

- Works with standard Flat Panel Detectors
- No need for expensive CdTe or Ge detectors
- Materials information in a single scan

DELIVERING ENHANCED DETECTION OF DEFECTS AND CONTAMINANTS





IBEX software *uses the effect of the MAP to calculate shifts in X-ray energy.*

This creates an image that shows both materials and thickness contrast

The IBEX Solution

The patented IBEX technology adds a precise three dimensional structure, the IBEX MAP, in front of an existing X-ray detector to modulate the X-ray beam in a predictable way over the area of a few pixels. Advanced software algorithms then deconstruct the effect of the MAP to determine pixel-by-pixel spectral content.

Using the additional spectral information returned by IBEX-equipped detectors, the IBEX Software Toolkit independently classifies the material type and thickness of features even where there is overlapping or no absorption contrast.

Supercharge your existing detector

IBEX technology seamlessly integrates into any X-ray imaging camera, including CMOS, TFT, Line-Array and even CdTe-based systems.

The power of IBEX materials classification imaging is delivered with no compromise to the spatial resolution, speed, or imaging area of the original detector.

Working with customers to integrate the IBEX Solution

The value of IBEX technology has been demonstrated in multiple applications including NDT, Food Inspection, Security and Medical Radiography.

We work closely with customers to optimise the IBEX system for their specific detectors and applications, and can supply the IBEX MAP and software APIs under license for integration into third-party detectors and systems.

Please contact us if you would like to assess the IBEX technology and see how it can add a new dimension to your X-ray systems.

Fully integrated detectors

IBEX technology is sold fully integrated into a range of high performance CMOS and large area TFT detectors.

Detectors are supplied with the powerful IBEX analysis software either as a GUI or as an SDK for incorporation into third party applications.

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