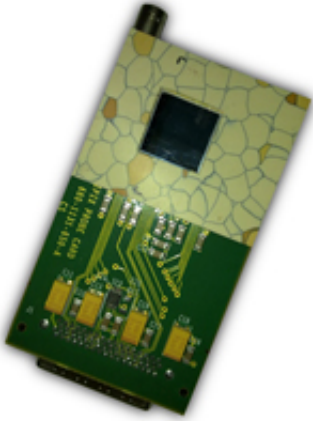


# X-ray vision to characterise mineral ores

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The Medipix device, shown here with protective plastic around the ultra-sensitive chip.

A new state of the art x-ray imaging detector smaller than a postage stamp is the key to a powerful new method of characterising mineral ores, according to an article published today in the October issue of CSIRO's Process magazine.

X-ray vision to characterise mineral ores The x-ray, photon-counting imaging device called Medipix can take high-resolution [images](#) of minerals, detailing the materials present in an ore sample.

Unlike conventional x-ray films and cameras, the new technique measures the energy of individual incoming [x-rays](#) and adds colour to traditional black-and-white snapshots.

Research scientist Dr Josef Uher said the new technique could revolutionise micro-imaging, and the mining industry. “In every single pixel of the detector, you gain information about what the x-ray spectrum looks like. If you analyse it properly, you can determine whether the materials in the sample were nickel, copper, zinc, gold or something else,” Dr Uher said.

Medipix could provide near real-time imaging of ores for plant monitoring and control in the mining industry. It was designed in collaboration with several universities and laboratories led by the European Organisation of Nuclear Research (CERN).

**More information:** [www.csiro.au/resources/ProcessOct11.html](http://www.csiro.au/resources/ProcessOct11.html)

Provided by CSIRO

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