



TRANSPORT AND DEFENCE

THE AUSTRALIAN SYNCHROTRON: YOUR PARTNER
IN PROBLEM-SOLVING AND INNOVATION

'The Australian Synchrotron enabled us to understand our material more effectively, putting us in the position to make a much more competitive product offering.'

WORLD-CLASS RESEARCH SOLUTIONS

The Australian Synchrotron empowers industry to problem-solve and innovate, revealing how matter fits together, moves, interacts and changes, in a way that outshines what can be achieved in any conventional laboratory.

We partner with industry to achieve world-class breakthroughs in areas as diverse as supporting the development of effective treatments for Alzheimer's disease and reducing impacts of environmentally intensive practices, to boosting the nutritional value of food and gaining new insight into the efficient storage and transport of energy.

Our experts harness light, a million times brighter than the sun, to examine and analyse the structure and behaviour of samples in unprecedented detail, with precision, accuracy and speed not available elsewhere, helping industry partners to interrupt, boost and manipulate the most basic of processes to overcome technical hurdles and roadblocks and drive product innovation.

WE PROVIDE A RANGE OF HIGHLY SPECIALISED AND UNIQUE SERVICES IN TRANSPORT AND DEFENCE

ENERGY STORAGE AND TRANSPORTATION:

- characterising novel materials such as metal-organic frameworks (MOFs) for safe storage and transportation of energy, as well as the study of new, more efficient battery systems, to increase productivity and efficiency in operations.

ADDITIVE MANUFACTURING:

- providing a deep visualisation and understanding of elemental and polymer distribution in coatings, surface treatments and structures that have been fabricated using a 3D printer
- characterising microstructures and nano-voids, to improve quality of products in the additive manufacturing market.

WHAT OUR CLIENTS SAY ABOUT US

'The Australian Synchrotron enabled us to understand our material more effectively, putting us in the position to make a much more competitive product offering.'

'Today, Hydrexia's breakthrough products provide significant savings with the potential to reduce hydrogen storage and supply cost by 30 per cent compared with conventional compressed gas storage and transportation methods.'

Mr Duncan Stovell, Chief Product Officer, Hydrexia Pty Ltd

COMPOSITE MATERIALS:

- analysing the structural characterisation of metal and ceramic composites for the optimisation of physical and chemical performance
- characterising metal alloys and ceramics through elemental mapping at micron resolution, which can be applied to polymer microstructures in materials such as carbon fibre composites with mapping resolution higher than 10 microns.

WE PROVIDE FULLY-SUPPORTED ANALYTICAL SERVICES BEFORE, DURING AND AFTER YOUR EXPERIMENTS, INCLUDING:

- identifying and tailoring effective synchrotron techniques for your sample to expedite detailed analysis
- delivering fast data acquisition from your sample, in unprecedented detail
- supporting timely data analysis and reporting.




For further information on how the Australian Synchrotron can help you problem-solve and innovate, contact:

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