

BULLETIN

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A technical visit ! The Australian Synchrotron

Friday 7th May 2010

We are offering our members and friends a different function for May; a visit to the only Synchrotron in the southern hemisphere!

What is a synchrotron?

In simple terms, a synchrotron is a very large, circular, megavoltage machine about the size of a football field. From outside, the Australian Synchrotron, for example, looks very much like a roofed football stadium. But on the inside, it's very different. Instead of grass and seating, there is a vast, circular network of interconnecting tunnels and high tech apparatus.

Synchrotrons use electricity to produce intense beams of light a million times brighter than the sun. The light is produced when high-energy electrons are forced to travel in a circular orbit inside the synchrotron tunnels by 'synchronised' application of strong magnetic fields.

The electron beams travel at just under the

speed of light – about 299,792 kilometres per second. The intense light they produce is filtered and adjusted to travel into experimental workstations, where the light reveals the innermost, sub-microscopic secrets of materials under investigation, from human tissue to plants to metals and more.

With this new knowledge that synchrotron science provides about the molecular structure of materials, researchers can invent ways to tackle diseases, make plants more productive and metals more resilient – among many other beneficial applications of synchrotron science.

Officially opened in July 2007, the Australian Synchrotron is one of fewer than 40 similar facilities around the world. It is the largest stand-alone piece of scientific infrastructure in the southern hemisphere.

As the Australian Synchrotron has limited resources, they are unable to offer general public tours, so please take advantage of this special visit for AFAS members & friends.

WHEN:	Friday 7 th May 2010	RSVP before Tuesday 4 th May 2010 to Philippe Lesage, Ph 03 9894 1749 (BH) Mobile 0408 330 878 plesage@versalux.com.au
TIME:	Start 3:30 pm – Finish 4:30 pm	
WHERE:	The Australian Synchrotron 800 Blackburn Road, Clayton 3168. Mel Ref: 70 H11 Refer to attachments.	