

Big Science Future for Australia

Australia could soon benefit from highly sensitive coloured x-ray imaging and powerful new tools to reveal the structure of materials in unprecedented detail and provide major advances in medicine and technology.

Together with a linear collider that will help unlock the mechanisms of how the universe was formed, this is the aim of a new collaboration announced today by The Hon. Kim Carr, Minister for Innovation, Industry, Science and Research.

The Australian Collaboration for Accelerator Science (ACAS) will unite some of Australia's brightest research talents in physics and help train a new generation of young Australians to continue our contribution to this critical area of research. As accelerator science underpins the development of new materials and processes in nanotechnology, environmental science and medicine amongst many others, this collaboration will help keep Australia at the forefront of science and innovation well into the future.

ACAS will bring together the Australian Synchrotron, the University of Melbourne, The Australian National University (ANU) and the Australian Nuclear Science Technology Organisation (ANSTO).

"As individual organisations we have been doing world class research, but by formally coming together, this will really strengthen Australia's position as a global leader in this field and provide benefits for all areas of science," says Dr Adi Paterson, CEO of ANSTO.

Professor David Hinde head of the department of Nuclear Physics at ANU says: "The synergy of this Australian team will enable great scientific developments in the coming years."

ACAS Deputy Director, Dr Mark Boland of the Australian Synchrotron, says "Over the past ten years, international assistance has helped us build local knowledge. We have created our own unique skills and expertise to improve the science undertaken in Australia. We feel that it is now time to give back to the international community and share our knowledge."

ACAS Director, Dr Roger Rassool from the School of Physics at the University of Melbourne, says: "ACAS will nurture and train the next generation of scientists, helping to secure Australia's future. A critical part of the development of young students is exposure to international research so they can learn from others and share our unique systems and expertise. ACAS will make this possible in accelerator physics."

This collaboration will support exciting developments in Australian research and innovation, with projects proposed including development of;

- a linear collider, in which scientists will be able to probe, in finer detail, the discoveries of the Large Hadron Collider and in doing so, unlock the mechanisms of matter and how it was formed in the universe
- technology enabling high speed images of single molecules dramatically expanding our knowledge of important biological molecules and other substances that are impossible to study with current technology
- highly sensitive colour x ray imaging, allowing more specific imaging of the human body and in particular improving the delivery of therapeutic radiation and medical imaging for targeted tumour therapy

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