



Summer 2008



Foreword:

Innovative Futures

The future prosperity and productivity of a nation hinges on its capacity to innovate. Innovation drives the creation of new businesses and sectors and revitalises existing industries. Innovation is the melting pot in which great ideas are turned into reality, and where important issues facing Australia are addressed with scientific and engineering rigor.

The Government is committed to a major review of our national innovation system including the CRC Program. The forthcoming CRC review will assess the appropriateness, effectiveness and efficiency of the CRC Program, as well as restore public benefit as one of the principle objectives.

The CRC Review will involve close consultation with all stakeholders and I encourage all interested parties to contribute.

Since 1991, CRCs have worked as incubators of Australian innovation. CRCs have focussed their collaborative expertise and resources on building a better Australia across six national sectors: mining and energy, environment, medical science and technology, advanced manufacturing, agriculture and rural based manufacturing, and information and communication technologies.

Within these six sectors, CRCs have created innovative, new products and services, patents and intellectual property, encouraged businesses and industries to become involved in research commercialisation, and played a vital role in building talent and state-of-the-art industrial infrastructure for Australia's long-term economic growth.

Such innovation milestones include: advanced carbon composite manufacturing for jet aircraft such as Boeing's new 787, the utilisation of unique genes for drought tolerant wheat, 30-day contact lenses, the Cochlear 'bionic' ear, new radar sensors that improve mine productivity and safety, and numerous software

products that help manage Australia's inland rivers and catchments and assist in identifying mineral resources.

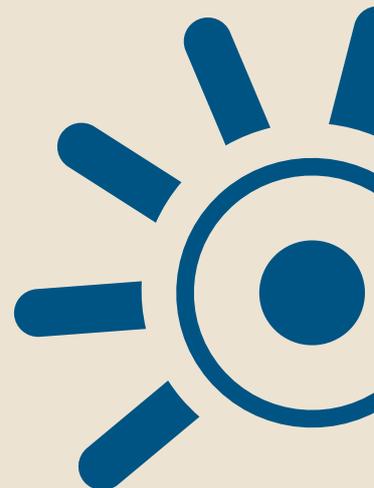
This summer edition of the CRC Program newsletter celebrates ongoing innovation in Australia's CRCs. The CRC for Coal in Sustainable Development, and partner CS Energy, have designed the world's first pulverised-coal, 'oxy-fuel' power station to be built at Callide, Queensland. Innovative technologies will be used to produce and capture a carbon dioxide gas stream for a cleaner, greener electrical power future. CAST CRC has developed unique light-weight, high-temperature magnesium alloys for use in engines and power-trains to make cars and trucks lighter, greener and more fuel efficient.

CRC for Wood Innovation has developed a process to seal preservative chemicals within timber products to prevent environmental leaching. Desert Knowledge CRC has developed telemetry and telecommunication products to assist farmers in the management of their remote water supplies and stock. Environmental Biotechnology CRC's nitric-oxide process has multi-million dollar implications for cleaning membranes and pipes in desalination and water recycling plants worldwide.

These innovations reflect a vibrant, dynamic CRC Program capitalising on the energy, creativity and productivity of Australia's diverse research, engineering and technical talent and resources.

It is my hope that CRCs will continue to act as centres of synergy and multi-disciplinary enterprise where ideas, people and resources meet for an innovative Australia.

Senator the Hon Kim Carr, Minister for Innovation, Industry, Science and Research



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Sea Ice Physics and Ecosystem Experiment

Sea ice plays an essential role in regulating global climate.

With concerns that Antarctic sea ice may be thinning, a team of international researchers, led by the Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC), conducted a six-week winter expedition - Australia's first in 10 years to the Southern Ocean, locked in sea ice.

The earlier than usual foray into far southern waters was designed to gather sea ice measurements over the long, cold, dark winter before the summer thaw.

ACE CRC researchers completed ground-breaking tests of airborne and satellite methods, to determine whether sea ice in the Southern Ocean is changing in response to climate change.

The voyage was a major field component of the Sea Ice Physics and Ecosystem Experiment (SIPEX) - a multidisciplinary research project jointly organised by the Antarctic Climate & Ecosystems CRC and the Australian Antarctic Division. SIPEX is one of Australia's major project contributions to the International Polar Year (IPY).



SIPEX - Setting up an ice-monitoring station.

As part of this signature project, two Tasmanian teachers - Caroline Lapworth and Jane Dobson - joined the expedition to communicate their sea and ice experiences around the world. The teachers' web site featured daily reports from the cruise, blogs from the field scientists and a detailed description of the science program.

While the scientists are only just beginning to analyse the mountain of data gathered on the trip, the comprehensive SIPEX website continues to provide a lively forum, from primary schools to research institutions, for discussing the latest science on sea ice and its response to climate change.

More information: www.acecrc.org.au

CRC Association's 2008 May Conference



The CRC Association's 2008 Annual Conference will be held in Sydney at the Australian Technology Park, 21-23 May 2008. The Conference theme is 'Cooperative Research: The Engine of Innovation'.

More information at www.crca.asn.au