About CSIROpedia

www.csiropedia.csiro.au

Telling the story of CSIRO's achievements and achievers.

Images left to right: Flooded Barmah forest, Murray region, Victoria. © CSIRO; Remote sensing image of Canberra/Snowy Mountains, 23/2/78 © Satellite Images of Australia ; Wind powered electricity generator at Crookwell, NSW. © Gregory Heath.

CSIROpedia explores some of CSIRO's greatest innovations and discoveries across the decades.

Since 1926, CSIRO has been helping Australia and the world through science. We work with our partners on a vast array of research into space, energy, health, climate change, manufacturing, materials, minerals, agriculture, the environment and information and communication technology.

Through CSIROpedia you can learn how science has contributed over the years to the nation's wellbeing and prosperity and read brief biographies of the researchers responsible.

In addition to the detailed accounts, CSIROpedia provides brief summaries of the 122 companies, 960 products, 240 industrial processes and 180 industrial systems that have arisen from CSIRO's research. Some of these have been in use now for over 50 years and many for over 25 years.

Read about how CSIRO:

- eliminated iodine deficiency disorders, a massive health problem, with more than two billion people at risk in 130 countries.
- developed new approaches to mineral exploration, resulting in discoveries worth billions of dollars.
- discovered RNAi gene silencing, one of the most fundamental gene control pathways in plants, with numerous biotechnology applications.
- developed the technique of atomic absorption spectroscopy, hailed as one of the most significant advances in chemical analysis in the 20th century, and is routinely used in medicine, manufacturing and mining.
- developed the world's fastest and most spectrally efficient multi-gigabit system for wireless communication.

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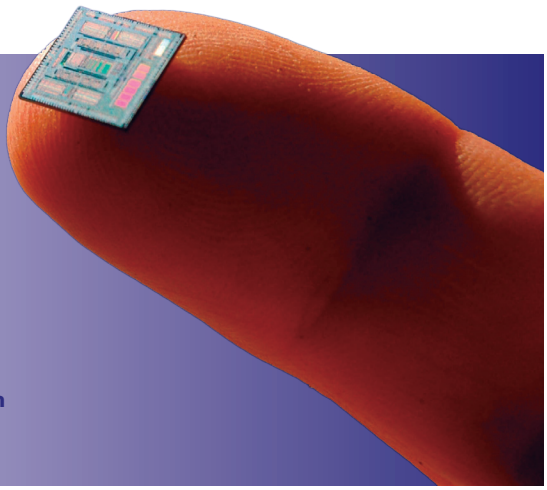
CSIRO technology used in WIRELESS devices WORLDWIDE

CSIRO's **PIONEERING WORK IN RADIO ASTRONOMY** led the way to what is now the most popular method to connect computers without wires. CSIRO-developed technology underpins the wireless local area network systems used in **ALMOST EVERY LAPTOP COMPUTER** and most other wireless devices produced today, and is used in homes and offices **around the world**. The invention and widespread adoption of the technology has enabled a **global revolution** in mobile computing and in the way we live and work.



The Ultimate battery

CSIRO's UltraBattery is a hybrid car battery that *lasts four times longer, costs 70 per cent less* and *produces 50 per cent more power* than conventional batteries. In a UK trial a hybrid electric test vehicle clocked up **160,000 kms** (100,000 miles) **using the UltraBattery.**

Discovery of the first known double pulsar

CSIRO played a pivotal role in the identification of the only double pulsar. Discovered using the Parkes Radio telescope, the double pulsar is about **1,000 light years away** in our Galaxy. The two pulsars are 800,000 kilometres apart, or about twice the distance between the Earth and the Moon and orbit each other every 2.4 hours. A pulsar is the collapsed core of a massive star that has ended its life in a supernova explosion.

Polymer banknotes

In 1988, Australia introduced the world's first **polymer banknotes** to protect against forgery. Almost 20 years in the making, CSIRO helped develop the banknotes which included **security features** such as a see-through panel and hologram, making **counterfeiting much more difficult**.

Relenza™: the universal anti-influenza drug

CSIRO's expertise in determining protein structure and therapeutic design led to the development of Relenza™, **the first drug** successful in treating the 'flu. Influenza affects as many **as 500 million people** each year.