

Jodi McKay

Minister for Tourism
Minister for the Hunter
Minister for Small Business
Minister for Science and Medical Research
Minister Assisting the Minister for Health (Cancer)



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SYDNEY MICROSCOPE UNIT FOCUSES ON 50th ANNIVERSARY

Minister for Science and Medical Research Jodi McKay today congratulated the University of Sydney's Electron Microscope Unit (EMU) on its 50th year of operations.

Speaking at the launch of an Excellence in Microscopy symposium to mark the "Golden Jubilee" anniversary, Ms McKay said the EMU has made major contributions to research, education and innovation over its half century.

"Congratulations to the EMU on 50 years of successful operations during which it has made significant contributions to the training of thousands of new scientists and engineers and supported innovation in our community," Ms McKay said.

"The NSW Government understands the critical role science plays in growing our economy and fuelling innovation, and that's why we're investing in these types of research facilities.

"With the EMU, it has been very much a case of from little things big things grow.

"When the EMU started back in 1958 it had one electron microscope. Today it has almost 30 major instruments and over 40 academic, research and technical staff as well as nearly 20 PhD students.

"Microscopy and microanalysis involve the study and analysis of materials and are integral to research and development in a range of fields.

"The world class skills EMU teaches equips researchers for careers in areas including forensics, environmental science, biotechnology and nanotechnology, engineering, manufacturing and more.

"Its work can support innovation in a range of industries such as agriculture through the development of drought tolerant crops; the aerospace and communications industries; advanced infrastructure and building design; and new drug delivery mechanisms for diseases like cancer and diabetes.

"The EMU is today considered the largest and most comprehensive facility of its type in Australia providing public and private sector researchers with an outstanding collection of analysis equipment.

"It incorporates the Australian Key Centre for Microscopy and Microanalysis (AKCMM), the headquarters of the Australian Microscopy and Microanalysis Research Facility (AMMRF), and is also a node of the ARC Centre of Excellence for Design in Light Metals."

Ms McKay said the NSW Government has been a strong supporter of the EMU.

"Last year the NSW Government through its Science Leveraging Fund provided \$4 million to help support the establishment of the AMMRF, including \$2 million towards a laser atom probe facility and research and technical staff support," Ms McKay said.

"The atom probe facility enables 3-D mapping of elements in semiconductors, ceramics and polymers, which are critical components in products like mobile phone batteries, lightweight car materials, and solar panels.

"The Office for Science and Medical Research has also provided \$7,000 to the EMU to assist in running its Golden Jubilee Symposium which has attracted world class microscopy researchers from around the globe."

Ms McKay said during its 50 years the EMU has not only demonstrated expertise and leadership in electron microscopy but has pioneered the use of many new analytical technologies including:

- atomic force microscopy (allows scientists to image and in some cases move individual molecules or atoms on the surface of a specimen)
- x-ray diffraction (provides information on the arrangement of atoms enabling scientists to understand the structural differences between objects)
- vibrational spectroscopy (provides information about the molecular composition of substances)
- optical microscopy (to study the structure and anatomy of specimens)
- tomography (provides a 3-D map of the distribution of atoms).

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