Powering the future -- solar cells by the meter

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Victorian Minister for Energy and Resources Mr Peter Batchelor (right) and CSIRO's Future Manufacturing Flagship research leader Dr Gerry Wilson examining a trial print out of flexible organic solar cells. Image credit - Tracey Nicholls, CSIRO

(PhysOrg.com) -- Trials commencing today promise a new era of solar cells that are printed like money.

World leading research from CSIRO's Future Manufacturing Flagship as part of the Victorian Organic Solar Cell Consortium (VICOSC) aims to develop flexible, large area, cost-effective, reel-to-reel printable plastic solar cells. Victorian Minister for Energy and Resources, Peter Batchelor, announced today the start of printing trials by Securency

International, a banknote printing company.

"The production of these film-like solar cells will be literally as easy as printing money," Mr Batchelor said.

"These solar cells are cutting edge technology and offer advantages over traditional solar technology because of the potential to mass produce the cells cheaply and install them over large areas such as rooftops.

"The technology used for these cells is still in its infancy, but this project aims to speed-up the development of this technology and take it from research to rooftops as quickly as possible."

The Minister for Innovation, Industry, Science and Research, Senator Kim Carr said the trial was an exciting development for the solar industry in Australia.

"This research is at the forefront of polymer technology, which has already brought to the world the banknotes used in Australia and 21 other countries. It is an important step in building up the solar industry in Australia," Senator Carr said.

"To be able to manufacture flexible, organic solar cells which are 'printed' on to polymer in much the same way as money is made, quickly and cheaply, has enormous potential.

"The trial could also lay the ground work for a world leading Australian industry in printable electronics."

CSIRO Executive Dr Steve Morton said the technology for the solar cells was the result of work by CSIRO researchers on advanced polymers.

"We have assembled a team of world-class scientists spanning chemistry, physics and materials science to develop the molecular building blocks which will form the basis of this solar energy revolution," Dr Morton said.

"This research will act as a catalyst to the creation of world-leading Australian businesses in the field of printable electronics."

The three year $A12 million VICOSC solar cell project is 50% funded by the Victorian Government through an Energy Technology Innovation Strategy Sustainable Energy Research and Development grant. VICOSC includes researchers from the CSIRO Future Manufacturing Flagship, University of Melbourne, Monash University, with industry partners Securency, BP Solar, Bluescope Steel and Merck.

Mr Batchelor said the project was at the half way point and the progress being made was extremely good with these printing trials occurring six months ahead of schedule.

Source: CSIRO Australia