Progress in mercury recycling

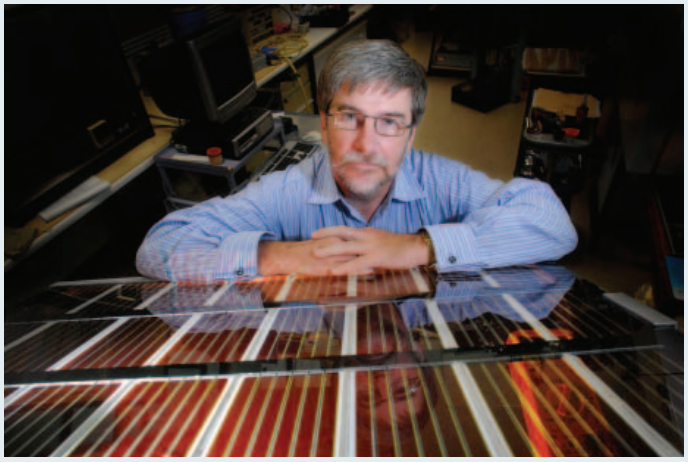
Metals recycling business CMA EcoCycle has opened Australia's first EPA-licensed mercury recovery and distillation plant in Melbourne.

The $10 million plant has the capacity to recover and process the mercury, aluminium and glass from most of the 90 million energy-efficient light bulbs and fluorescent tubes disposed of each year in Australia, as well as mercury from the dental, medical, mining, defence and chemical industries. By-products from recycling include dental amalgam, aluminium ingots (from tube ends), glasswool insulation and fertiliser (from phosphor).

CMA is also marketing a point-of-use tube and lamp recycling unit called the Tube Terminator, developed and manufactured in Australia. The modified 240-litre wheelie-bin is equipped with a microcomputer-controlled robotic feed system and sophisticated monitoring to ensure safe operation. By reducing waste tubes and lamps into component materials and safely capturing mercury vapour in a sealed carbon filter, the Tube Terminator reduces the cost and carbon footprint of the specialised transport currently used to collect used lighting products.

www.cmaecocycle.net

The Tube Terminator is an Australian invention that crunches discarded lamps and captures materials for downstream processing. CMA EcoCycle



Professor Bell with the translucent solar samples in the lab. QUT

Clean electricity from solar windows

A Queensland University of Technology researcher is developing a transparent solar power cell to be used in place of windows and skylights in homes and offices. The solar cells contain titanium dioxide coated in a dye that increases absorption of solar energy.

Professor John Bell says the pale-rose-coloured glass could be used to construct an entire house. 'As long as a house is designed throughout for energy efficiency, with low-energy appliances, it is conceivable it could be self-sustaining in its power requirements using the solar-cell glass.'

Australian company Dyesol, which has been collaborating with Professor Bell on the research, says a product could be on the market within three years.

Office retrofits a climate-friendlier option

Twenty-five commercial property groups that collectively manage 75 per cent of Australia's leased corporate office space have responded to a Total Environment Centre (TEC) invitation to learn how to reduce greenhouse gas emissions by retrofitting office buildings.

Under the TEC's Existing Buildings Project, five groups that between them account for 10 per cent of Australia's office floor space have already committed to reducing emissions by up to 40 per cent over four years.

'Organisations looking to reduce their carbon footprint should not be commissioning the construction of new "green buildings". They should be asking for the upgrading of existing buildings,' said TEC Executive Director, Jeff Angel.

Conservationists to buy Borneo rainforest

The Orangutan Fund International (OFI), established by primatologist Dr Birute Galdikas, reports that the provincial government of Central Kalimantan (Indonesian Borneo) has proposed a five-year plan to convert four million hectares of tropical lowland rainforest – prime orangutan habitat – to palm oil plantations.

An infant orangutan from Tanjung Puting National Park, home to the world's largest wild population. Ralph Arbus

The OFI predicts half the rainforest in the province will disappear into plantations as a result, including peat swamp forest next to Tanjung Puting National Park, home to the world's largest wild orangutan population. The OFI has called for donations to enable it to purchase rainforest land so that it can set up wildlife corridors.

Clearing, draining and burning of Indonesia's carbon-rich peat forests contributes to 4 per cent of global greenhouse gas emissions annually. Indonesia has become the world's third largest emitter of carbon dioxide after the US and China.

www.orangutan.org/index.php