

Tyre chewer leaves useful crumbs

New tyre recycling technology promises to dramatically reduce the significant number of used tyres sent to land fill or illegally dumped.



Credit: CSIRO/ Tracey Nicholls

More than 20 million used tyres are disposed of in Australia each year. Of those, less than a quarter are recovered and recycled, while the remainder are dumped as waste, where they pose environmental and public health problems.

The new patented process enables used tyres to be turned back into high quality rubber powders free of metal contamination for redevelopment as new products, such as rubber and elasto-polymer based items.

It was developed in Victoria by the Advanced Manufacturing Cooperative Research Centre (CRC) with Melbourne-based company, VR TEK, in partnership with Deakin University and the CSIRO.

Due to their metal content, shredded tyres could not easily be recycled in an economically viable and environmentally sustainable manner. VR TEK overcame this problem by working with the CSIRO to develop a device which segments old tyres into sections of specific known material composition.

The mechanical segmenting method is highly energy efficient and is the first part of a process developed by Deakin University that results in high quality rubber powders.

The rubber crumb produced by the new process is cheaper than 'virgin rubber'.

The research project was funded by the Australian Government (\$516,000) through the Advanced Manufacturing Cooperative Research Centre, in addition to support from the Victorian Government's partnership with the CSIRO and Deakin University through the Victorian Centre for Advanced Materials Manufacturing.

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