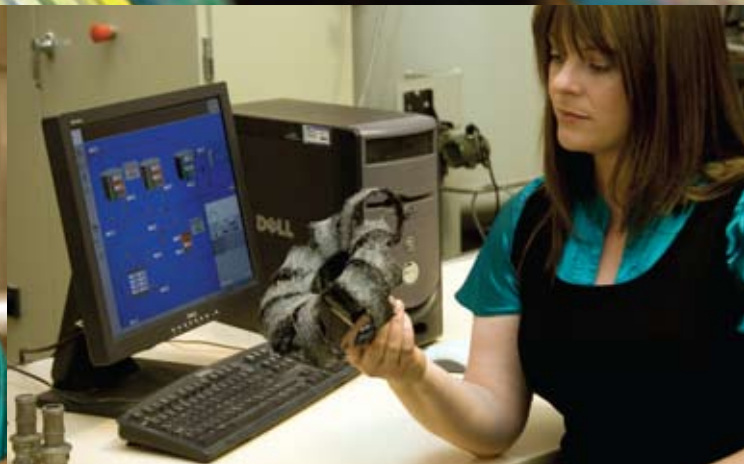


# FORMULA ONE TECHNOLOGY GOING MAINSTREAM: EVERYDAY CARS BUILT FROM LIGHTER, STRONGER STUFF



Dr Bronwyn Fox



It's the stuff of Formula One vehicles that could eventually be used in your everyday car. Today's racing cars are built largely of super strong and lightweight materials known as carbon fibre composites.

While the automotive industry is interested in using the composites in mainstream cars, the cost has been prohibitive. Until now these materials have generally been produced in giant, gas pressure ovens known as autoclaves. These ovens "cook" the carbon fibre, transforming it from a cloth-like state into a solid material, but they are expensive to run and buy.

A new Australian-developed technology now being tested by researchers at Deakin University's Centre for Material and Fibre Innovation could dramatically reduce the time, and cost, of production.

The Quickstep technology works like a giant sandwich press, using two bladders filled with high temperature oil to clamp down and cook the fibre.

Research leader Dr Bronwyn Fox, a senior lecturer in the Centre, says Quickstep could reduce production time from hours to just 20 minutes. The research has also revealed that Quickstep could increase the toughness of the product in some cases.

Bronwyn believes the technology would be ideal for the car industry, providing a cheaper method of producing lighter, more fuel-efficient cars. "We now understand that there is a very urgent need to produce more fuel efficient cars in order to protect the environment and one of the best ways to do this is to make them lighter," she says. "The car industry has always loved composites, but making them has been too expensive and too slow. With these new technologies for making composites a lot more quickly, there's an opportunity to introduce them into mainstream cars."

Besides their use in racing cars, carbon fibre composites are also in demand in the aerospace industry. These composites were used in the new Boeing 787 Dreamliner, making the passenger aircraft lighter and reducing fuel consumption by 20 per cent.

**'One of the best ways to produce more fuel efficient cars is to make them lighter.'**



#### FURTHER INFORMATION:

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