

*Windscreen Technology*

## Upper Glass - Windscreen Technology hits new heights

**A surge in technological advances stemming from the smart glass movement has changed the form and function of the modern windscreen. Gone are the days a windscreen simply separates a car's inhabitants from the wind, rain and bugs. These days the comfort, functionality and safety of a vehicle depends on the technology embedded in the windscreen.**

Murray McGrath, President of the Auto Glass Association, says, "On a weekly basis our industry receives news of scientific glass 'breakthroughs' predicted to change the way we drive, often reading like pages from a sci-fi novel. Over the last ten years the auto glass industry has changed more than it did for the fifty years prior, and I don't see the rate of progress slowing any time soon."

Here the Auto Glass Association looks at some of the areas of study in window technology that will impact the way we use our cars.

### Healing power

'Self-healing' glass will revolutionise the auto glass market, predicts NanoMarkets. The idea is that smart glass windscreens will repair their own scratches. The technology is still in very early stages, yet some self-healing glass products have already been developed for mobile phones. NanoMarkets forecasts the self-healing auto glass market could be worth more than \$300 million by 2021.

### Invisible bonnet

At this year's New York International Auto Show Land Rover revealed a concept car featuring a camera system that appears to make the bonnet invisible to the driver by projecting onto the windscreen an image of what's below the front of the car.

### Not so dim

This year's Aircraft Interiors Expo in Hamburg, Germany was abuzz with displays of electronically dimmable aircraft windows using SPD-Smart light control film technology. Passengers can simply tap the window to instantly adjust it to whatever tint they want. The window is not only self-powered, it can also charge a smart phone, tablet or other electronic devices.



### Wiped out

The good old windscreen wiper may be a few swooshes away from redundancy. McLaren, maker of the famed F1 supercar of the 1990s, is currently working on a windscreen that uses constantly active, high-frequency sound waves to blast water droplets and other debris from the windscreen. This military technology is currently used in fighter jets.

### Windscreen as computer screen

Heads-up displays (HUDs) are already a staple in high-end vehicles. Using an under-dash mounted screen, they reflect information such as speed, driving warnings or directions onto the inside of the windscreen so the driver doesn't have to take their eyes off the road. HUDs that are actually embedded in windscreens are set to become one of the next big upgrades to dashboards, thanks to the advent of thin flexible OLED screens.



Murray McGrath advises, "Choosing the right auto glass specialist to fix your windscreen is crucial in this ever-evolving field. The professional you entrust with repairing or replacing your windscreen or car windows should be fully updated on the new technologies that impact the processes, tools or materials they use, and must also comply with all relevant Australian safety standards."

For a list of contacts that abide by a strict code of practice and have committed to all Australian Standards, please visit the Member Search page of the AGA website: [www.autoglass.org.au](http://www.autoglass.org.au).



*Fast facts about developments in auto glass...*

**What do gelignite, penicillin and laminated glass have in common?**

They were all discovered through fortunate accidents, or 'scientific serendipity'. In 1903 French chemist Edouard Benedictus dropped a flask that had held an early form of plastic onto the floor of his laboratory.

The vessel shattered, but the plastic film inside the flask held the pieces together. Up until that time motor cars had been fitted with windscreens made from ordinary glass.

**By 1939 the Ford Motor Company was producing 600,000 feet of "Indestructo" plastic-coated (laminated) glass for windscreens every year.**

**Do your car windows have a water droplet icon?**

If they do your car has been fitted with water-repellent glass (WRG). WRG is a chemical film that is baked into the factory-fitted glass to disperse water into tiny droplets that quickly slide off the windows of the car.

Improves visibility and eases pressure on the windscreen wipers to clear the critical vision area during a rain or snow storm.

