

# Researchers Develop a Better Coating Solution

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Innovative researchers at The University of Queensland have come up with **a way to stop your bathroom mirrors, spectacles and swim goggles from ever fogging up again.**

UQ physicists Dr Paul Meredith and Dr Michael Harvey have developed a new type of coating technology with widespread applications including anti-fogging coatings for bathroom mirrors, car windscreens, swim goggles and anti-reflection coatings for spectacles, windows, computer screens and architectural glass.

The team has recently received financial support (\$121,000) from the

Queensland Sustainable Energy Innovation Fund, administered by the Environmental Protection Agency.

The grant will enable them to use this technology to enhance the performance of solar cells, with new improved solar cell prototypes expected by January 2005.

Dr Meredith said existing technology for applying anti-reflection coatings was proving too expensive for application over wide areas of solar collector surfaces.

"This innovation is set to revolutionise the use of solar energy by making it cheaper and more effective," he said.

A company, XeroCoat, has been formed to develop and market the technology, which he said offered a better coating solution to those currently in use. As the technology matures, Dr Meredith expects that many more applications will emerge, including enhancing food production by improving the function of greenhouses.

The technology is based upon nano-porous silica, with the whole process extremely simple, low-cost, and environmentally friendly and clean.

Dr Meredith said the coatings could be applied to virtually any substrate, including plastics and odd shapes such as tubes. They were resilient to chemical attack and were as hard as ordinary glass. Optical quality thin films (highly transparent, uniform and with a controlled thickness) could be applied to virtually any substrate using simple solution processing. The refractive index of the films could be "tuned" for specific applications, creating perfect anti-reflection coatings for glass and plastics. The coatings were also anti-fogging, and the process could also be tuned to create a "frosting effect".

The XeroCoat technology is being commercialised by UniQuest, the main technology commercialisation company for The University of Queensland.

Source: [The University of Queensland](#)

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