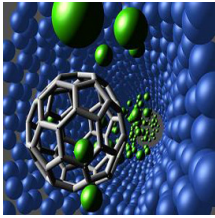


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By: Sci/Tech News Staff, -



[New Solutions For Fog From Nanotech Coating](#)

How to eliminate foggy windows and lenses

Foggy windows and lenses are a nuisance, and in the case of automobile windows, can pose a driving hazard. Now, a group of scientists at the Massachusetts Institute of Technology (MIT) may have found a permanent solution to the problem. The team has developed a unique polymer coating - made of silica nanoparticles - that they say can create surfaces that never fog. Researchers have been developing anti-fog technology for years, but each approach has its drawbacks. Some stores carry special anti-fog sprays that help reduce fogging on the inside of car windows, but the sprays must be constantly reapplied to remain effective. Glass containing titanium dioxide also shows promise for reduced fogging, but the method only works in the presence of ultraviolet (UV) light, researchers say. The transparent coating can be applied to eyeglasses, camera lenses, ski goggles ... even bathroom mirrors, they say. The new coating was described today at the 230th national meeting of the American Chemical Society, the world's largest scientific society. "Our coatings have the potential to provide the first permanent solution to the fogging problem," says study leader Michael Rubner, Ph.D., a materials science researcher at MIT in Cambridge, Mass. "They remain stable over long periods, don't require light to be activated and can be applied to virtually any surface." The coatings consist of alternating layers of silica nanoparticles, which are basically tiny particles of glass, and a polymer called polyallylamine hydrochloride, both of which are relatively cheap to manufacture, Rubner says. He has applied for a patent on the manufacturing process and says that the coating could be available in consumer products in two to five years. The military and at least two major car manufacturers have already expressed interest in using the technology, he says. The same coatings also can be engineered to have superior anti-reflective properties that reduce glare and maximize the amount of light passing through, an effect that shows promise for improving materials used in greenhouses and solar cell panels, the researcher says. So far, the coating is more durable on glass than plastic surfaces, but Rubner and his associates are currently working on processes to optimize the effectiveness of the coating for all surfaces. More testing is needed, they say. Funding for this study was provided by the Defense Advanced Research Projects Agency (DARPA) and the National Science Foundation (via the Materials Research Science and Engineering Centers, or MSREC). It's highly unlikely that among your favorite applications, there isn't an IM client. There's a broad offer, and even Google has entered the market. This week, [Softpedia News is inviting you to choose your favorite IM client.](#)