The Future of Car Manufacturing? Sticky 'Velcro' Car Parts

August 20 2008

(PhysOrg.com) -- It may sound improbable but plastic car parts could one day be joined together like Velcro, and peeled apart when it comes to recycling or disposal.

Engineers from the Warwick Manufacturing Group are developing a new technique that involves coating the surface of car components, such as bumpers and wing mirrors, with a surface of nanometre-sized “hooks and eyes”.

Gordon Smith, the lead researcher of the project told The Engineer Online that: “We were able to show that microscale and even nanoscale indentations were picked up and reproduced by the plastic surface. The idea was then born that if you could somehow engineer those surface to have the same sort of hooks and eyes as Velcro, it would be an ideal way of bonding surface together.”

The challenge now is to see if this technique applies to the large scale production of car parts, and also to make the components hard to steal or vandalise.

Smith and colleagues were recently awarded £60,000 by the Warwick Innovative Manufacturing Research Centre to develop their technique, and the project has received some initial interest from Jaguar Land Rover.

Visit the Warwick Manufacturing Group website: