

Built like the Dreamliner: 2013 debut of carbon composite cars

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The revolutionary material used to build the Boeing 787 Dreamliner, the Airbus A350 super-jumbo jet, and the military's stealth jet fighter planes is coming down to Earth in a new generation of energy-saving automobiles expected to hit the roads during the next few years. That ultra-strong carbon fiber composite material — 50% lighter than steel and 30% lighter than aluminum — is the topic of the cover story in the current edition of *Chemical & Engineering News*, ACS's weekly newsmagazine.

In the story, C&EN Senior Correspondent Marc S. Reisch describes how carmakers such as BMW, Mercedes, and Audi are turning to carbon fiber composites to reduce the weight and improve the mileage of their next-generation of electric and hybrid vehicles. Carbon fiber composites are plastics containing fine strands of carbon that are spun into fibers and woven into a fabric. Manufacturers lay the fabric into a mold with the shape of the final part, and soak it with epoxy or other resin to produce parts for aircraft and other products.

Despite concerns about the high cost of carbon fiber composites, automakers are embracing this energy-saving material, even though it may increase the cost of small electric or hybrid cars by \$5,000 or more, the article notes. It describes major auto manufacturers' plans for marketing vehicles made with [carbon fiber](#) composites, and research underway to reduce the cost of the material.

More information: “Getting the Steel Out”

pubs.acs.org/cen/coverstory/89/8939cover.html

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