

Laser printing speeds parts on demand to manufacturers

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Pull into the auto repair shop with a smashed bumper, and there's no wait while they order a replacement. Instead, the technician downloads specifications from the manufacturer's database. You both watch as a laser beam probing a container of liquid plastic material almost magically builds a new bumper inch by inch.

The scenario may sound like science fiction, but advances in polymer materials are moving the technology for 3-D printing" of <u>prosthetic</u> <u>limbs</u>, <u>hearing aids</u>, designer furniture, surgical tools and other products out of the designer's studio and into the marketplace. That's the topic of an article in the current edition of Chemical & Engineering News, ACS' weekly news magazine.

In the article, Alexander H. Tullo, C&EN senior editor, explains that the technology — termed stereolithography, laser sintering, rapid prototyping, and additive manufacturing — has been in limited use for decades to produce models of new products and for other design-shop applications. With polymer manufacturers developing new raw materials for the process, this so-called "additive manufacturing" technology is now moving into a new phase — making actual products. The market has been expanding at an average annual rate of 26 percent, and exceeded \$1 billion in 2009.

More information: "Parts on Demand" This story is available at pubs.acs.org/cen/business/89/8917bus1.html



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