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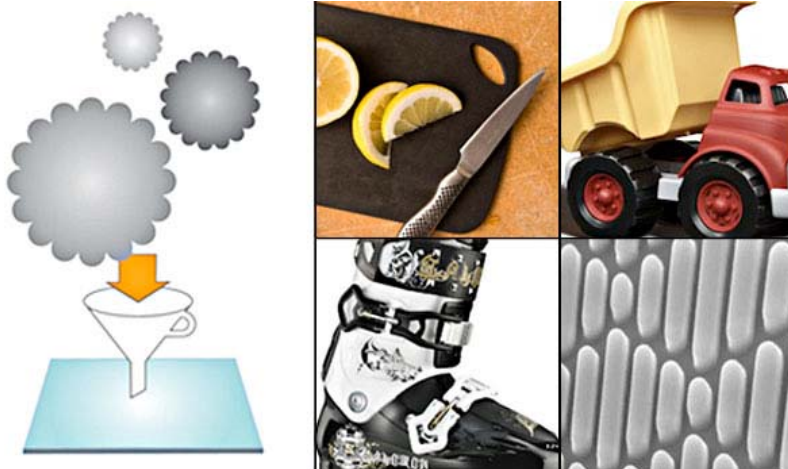
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## The Materials Driving Product Innovation in 2010

BY CLIFF KUANG Mon Mar 1, 2010

What innovations might fuel the next wave of product innovation?



Behind every great movement in design, there's a material innovation. In the 1930's, tubular steel begat the Bauhaus; in the 1950's, steam-bent plywood begat Eames-era modernism; and today, capacitive sensors have begat iPhones and touchscreen interfaces. So what materials innovations are afoot now, and might influence the product designs we memorialize 25 years hence?

[Material ConneXion](#) acts as a materials consultant to the design industry, connecting designers and materials manufacturers. As such, they're pretty well-placed to spot those coming trends. They offered *Fast Company* a sneak peak at their mammoth 2010 Materials Trends reports. And here's five of big developments they've identified, out of 20 included in the report:



1. Plastics are oil-intensive--you could almost think of them as oil, chemically manipulated to be solid at room temperature. So a great deal of research is going into making them carbon light. One such development is plastic made from carbon captured from coal-factory smokestacks and the like--already, some plastics can be made from 55% captured carbon; the goal is 100%. Pictured at left is a skiboot which performs as good as any other, but is made from Dupont's Hytel RS bio-plastic--part of a new generation of plastics made with plant-based derivatives rather than oil. (Previously, we covered that development [here](#).)

2. Recycled products used to be the province of cheap, low-end goods that would simply be thrown away once used. And the makers of recycled goods themselves used to lob their wares at consumers, without thinking twice. No more. Increasingly, companies are managing the entire product lifecycle. One example: Recycline's Preserve line of products, which can be returned, at any time, to the manufacturer for 100% reuse. Pictured, their "paperboard" cutting board--which mimics wood but is made wholly of recycled paper.

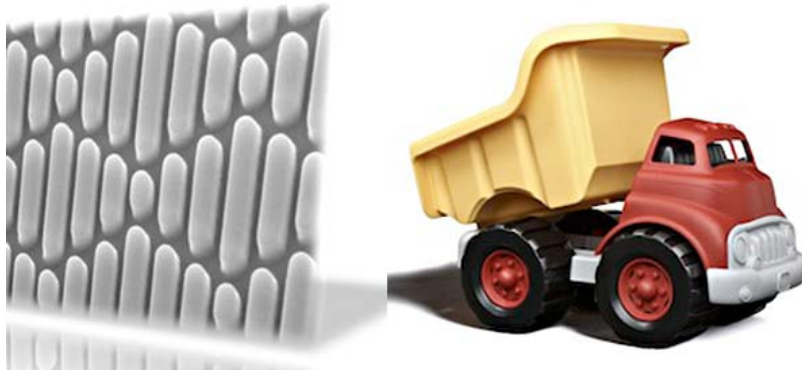


3. But for bioplastics, it's still problematic that these innovative materials can't be recycled, simply because they're not included in the waste streams recognized by the seven recycling symbols currently in use. The Society of Plastics, which developed the symbols, is creating a new designation for PLA, a corn-based plastic.

4. Biomimicry is finally becoming mainstream, through produces and materials cheap enough to make it into mass produced goods. One example of several outlines in the Material ConneXion report is Sharklet (pictured below, left). Sharks don't have to clean their skin because the skin itself prevents microbes from growing on it, thanks to its microscopic texture. Sharklet

mimics that in an adhesive film that can replace chemically based anti-microbial treatments.

5. Plastic, it turns out, is filled with all kinds of nasty stuff that can seep into our bodies; we've only now begun to understand all the disastrous effects that those can cause. But Plastic doesn't have to be toxic, and one company, Green Toys, is making an entire line of products that are free from BPA, phthalates, and lead paint. (Pictured below, right.)



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