Electrical

Listed in this section are the technology findings that directly or in part could be applied to the mechanical infrastructure (electrical) of housing.

New Efficient Lights

Incandescent bulbs offer warm but inefficient light. Fluorescent lights save energy and last longer but cast a green glow. Researchers have developed a new light combining the best of both types. It's a tiny, solid-state laser that delivers a longer lasting white light with minimal electricity. The device emits an ultraviolet light, which strikes a phosphor coating. The coating glows with an eye-pleasing white light. Light bulbs made with these chips would last 10 times longer than fluorescent bulbs and 50 times longer than incandescent bulbs. The chip, only 20 micrometers square, will be ready within two years as a prototype and pilot, with commercial models in 5-10 years. This technology has application for industrial, commercial, and residential lighting.

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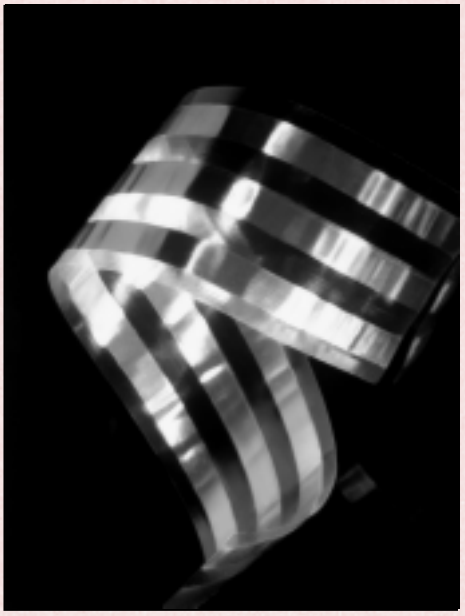
http://www.sandia.gov/LabNews/LN10-06-00/uv_story.html

Ultra Thin Electrical Wire

FlatWire is a technology consisting of three flat conductors insulated on either side with a film. It's thinner than a business card. Today it carries 12volt audio or 120v line current. It applies flat to a wall similar to drywall tape, and can be covered with drywall compound or paint. The manufacturer is seeking UL approval. They are also working with the National Electrical Code on an internal wiring system for new construction, especially those houses built with foam-core panels or insulated concrete form technology.

Contact:
DeCorp America
Nashville,TN
www.decorp.com

DeCorp America's FlatWire consists of three flat conductors insulated on either side with a film.



Courtesy: DeCorp America

Fast-Cooking Technology

Developed for space station living, this will find its way into the home over the next several years. This technology cooks foods faster with focused, less wasted energy. The technology, called Enersyst, uses jets of hot air on the top and bottom of the oven focused on the food. This eliminates warm-up times and the energy to heat the whole oven cavity. Enersyst air impingement technology is being tried in restaurants (Domino's, Pizza Hut, Lincoln Food Services), and vending machines where hot, fast, oven-fresh food is desired and now possible.

Thermador has been working with Enersyst to develop a line of residential energy saving, fast cooking ovens for the consumer.

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Technology Scanning

One of PATH's major research support services is PATH Technology Scanning. *Technology Scanning* tells us about technology developments in other industries, from other nations, from federal laboratories, and from other building sectors. PATH looks for breakthroughs in other industries that could be transferred and applied to housing. *Technology Scanning*–published by the U.S. Department of Housing and Urban Development/PATH and prepared by the NAHB Research Center, Inc.–are updated as technology developments dictate. The Research Center works to unite technology developers from outside of residential construction with manufacturers in the residential housing sector.

This issue of *Technology Scanning* is one in a series. Each issue in the series falls into one of the following categories:

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- *Safety*
- *Surfaces and Interior Finishes*
- *Building Envelope Technologies*
- *Electrical*
- *Plumbing*
- *Heating, Ventilating and Air Conditioning*
- *Energy/Power Systems Generation*
- *Basic Materials*
- *Information Technology*
- *Sustainable Design Strategies*
- *Materials Recycling and Reuse*
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