

# New Technologies in Building Materials



## SOLAR THERMAL CLADDING

A cladding system that combines wood, louvers and back-vented glazing. **Designed as a thermal storage device for use in colder climates**, the system consists of prefabricated panels that can be installed onsite via an aluminum cladding mounting system. **The wood slats are angled to deflect the summer sun while inviting the winter sun's radiant energy into an interior cavity, storing winter heat long into the night to reduce heat loss from interior spaces.**



## BIOPLASTICS

Though still very much in the research stage, new bio plastic made from discarded shrimp shells **matches aluminum in strength, at only half the weight**. It is also biocompatible, biodegradable, inexpensive and may be molded to a variety of 3D shapes. Researchers are optimistic about the material's ability to **replace fossil fuel-based plastics** in consumer and medical applications.



## NOISE REDUCING GLASS

Noise Reducing Glass is used in windows to **reduce noise, insulate, stop drafts and soundproof**. These types of windows offer **more benefits than replacement windows** at a significantly lower cost.



## STRUCTURAL 3D PRINTING

A method for **fabricating buildings** or construction components.



## SELF-HEALING CONCRETE

There are **three types of self-healing concretes**: one with shape-memory polymers activated by electrical current, one with healing agents made from organic and inorganic compounds, and one with capsules containing bacteria and healing agents. These materials will be **able to repair themselves** without human intervention.

