

Proposal: Old Materials in New Dimensions

In theory, there are no bad materials, all materials have pros and cons, costs and consequences. All materials are important, however, some materials have been around for thousands of years and some are very new. Some materials had time to be tested on humans and for some, we are still learning their effects on our health.

To make a careful materials selection, designers need to see the whole picture: where material is coming from, how far it travels, how much energy is used to transport and manufacture product, etc...

So we will assign design students to look at old and proven materials for inspiration to create products for future. Such materials are: organically grown cotton fibers, bamboo and other woods, terra-cotta, felt, silk, etc.

First, students will learn traditional technologies of working with those materials. In collaboration with fibers and ceramic specialist they will get familiar with those techniques. Then, they will conceptualize practical uses of those materials through the adoption of more environmentally friendly approaches. Then, students will experiment with those materials using new technologies such as vacuum former, lathe, laser cutter and CNC, etc.

Finally, students will create scenarios and objects for those materials for the future. Using experimental techniques and research, new objects will be just a tile in a mosaic of a bigger scenario of material culture in the sustainable future.

The installation will feature prototypes and concepts that will be created by students at Maryland Institute College of Art (MICA) in Spring 2010. Inna Alesina will lead two object design studio classes dedicated to this project.

Inna Alesina is a product designer and a member of MICA's Environmental Design faculty. She recently co-authored a design book with writer, curator, and director of the Graphic Design MFA program at MICA, Ellen Lupton. "Exploring Materials – Creative Design for Everyday Objects" is due to be published in spring 2010 by Princeton Architectural Press.



Student learning traditional pottery at MICA



Example of traditional use of felt in piano.

Background and inspiration

Examples shown on this page are the results of the material workshop at MICA object design studio. We asked students to address a particular problem: make a person comfortable while sitting. Also, we asked them to focus on a particular material (foam, rope, wire, cardboard, metal rods, etc). The designers explored each material, uncovering its properties as a surface, structure, and fastener. By exploring rather than pursuing a preconceived end product, these designers began thinking in new ways.

This time we will do something different, we will limit our exploration to “good materials”. Similarly to the materials workshop, students will experiment with structures, surfaces and fasteners.

**BELOW: EXAMPLES OF PAST WORKS AND INSPIRATION,
NOT ACTUAL PROTOTYPES TO BE SHOWN AT ICFF**



Plywood as material. Designed by Irina Dukhnevich, MICA.



Steel wire as material. Designed by Whitney Campbell, MICA



Cardboard chair. Designed by Hyeshin Kim, MICA.



Industrial felt chair. Designed by Hwei-Ting Wu, MICA.



Sliced hardwood. Designed by Antoine Heath, MICA.



Bike inner tubes. This objects can be used as a chair (similar to bean bag) or as a place to sleep. Designed by Katie Coble, MICA.

Background and inspiration

BELOW ARE A RANGE OF CONTEMPORARY AND HISTORICAL REFERENCE POINTS THAT WILL SERVE AS A LAUNCHING POINT FOR OUR DESIGN STUDIOS IN SPRING 2010.



STYROFOAM ALTERNATIVE. Negative Volume is an alternative for conventional foam packaging. Like a mushroom, this remarkable substance grows indoors, in the dark, from local biomass waste products. It can be grown into almost any shape and it is cost competitive with EPS foam. It biodegrades via composting when no longer needed. It is manufactured without petrochemical materials. It can be used to insulate shipping containers and as a protective shipping material. Shown here is the Greensulate cooler for shipping frozen goods. Design: Eben Bayer. Photo: Ed Browka.

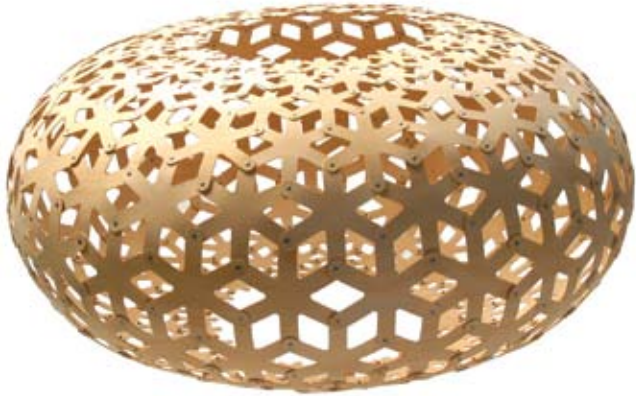


SPONGE CLOTH is made of cellulose and can absorb and hold liquids ten times its size. The material is also biodegradable.



WASP NEST is a natural honeycomb structure.

Background and inspiration



SNOWFLAKE hanging lamp is made of hoop pine plywood and aluminum rivets. All timber is from sustainably managed plantations. All pieces are designed to use the minimum amount of material for the maximum effect. The product ships in a flat pack for low-energy freighting. Design: David Trubridge.



BUILDING WITH TENSION. The tents we use today were inspired by the Native American ti pi (or teepee). Native Americans harvested wooden poles on site from available trees.



MOLDED PULP is plentiful source of structural and biodegradable material. Shown here is an experiment in home made compostable planter.



BAMBU PLATE is an alternative to paper plates. It is made by peeling bamboo into veneers and molding them into plate shapes.

BAMBOO RINGS are connected with metal rods to create a chair. Bamboo is a naturally occurring tube form; here, tubes are married with a structure made from solid steel rods. Design: Ezri Tarazi for The Nature Conservancy.



PROPOSAL: OLD MATERIALS IN NEW DIMENSIONS

Background and inspiration



Mesh made by hand-knotting natural fibers.



HOMEMADE PLASTIC. Most designers are not chemists; the experiments shown here came from the designer's kitchen. She gathered every kind of starch she could find, including tapioca, soy, green bean, potato, and corn. She added natural fibers for structural purposes. She tried cooking, baking, frying, microwaving, and air and sun drying to find a workable technique. After several months of trial and error, she created compostable food packaging that communicates the freshness of the product inside. Design: Hyeshin Kim, MICA.



WOVEN RUSH is strong and beautiful. Many people don't realize that rush is often made of paper.



CRAFT PAPER HONEYCOMB is used to create a light-weight structure for shipping of fragile objects.

PAPER SOFTSEATING is made from folded kraft paper. Each piece fans open to create functional stool, bench, or lounger. The furniture units can be easily folded back down into compact volumes that are small enough to store on a bookshelf. A similar principle is used in paper party decorations. Design and photo: MOLO inc.