

Sixteen students at Pasadena's Art Center College of Design participated in a hands-on, year-long workshop to produce prototypes of high-design lighting products from low-tech materials. Working with materials as diverse as loofah plants and plastic bags, they created functional wall- and ceiling-hung luminaires, and even an LED-powered woman's jacket.

The course, entitled "Light, Materials and Technology," was made possible by a \$20,000 grant from the Nuckolls Fund for Lighting Education, initially awarded in 2007. "Recent developments in LED technology have resulted in smaller, cooler, brighter LEDs and flexible LED strips," says Penny Herscovitch,

who co-directs the Center's Environmental Design Department with Dan Gottlieb. "We urged our students to invent ways in which these LEDs could be integrated into tactile, flexible and sustainable materials for objects that can be used in interiors, or for one student's project, worn," she indicates.

Students participating in the Art Center course conducted experiments to determine low-tech manufacturing techniques to illuminate their lighted objects. "The course offered the students an opportunity to practice a whole new way of thinking about and utilizing light," says Herscovitch. Completed projects also had application to the students' other courses such as hospitality and exhibit design.

BUY LOW, SELL HIGH

A studio course at the Art Center College of Design shows how low-tech materials can be woven—in one case, quite literally—into high-end lighting

BY VILMA BARR



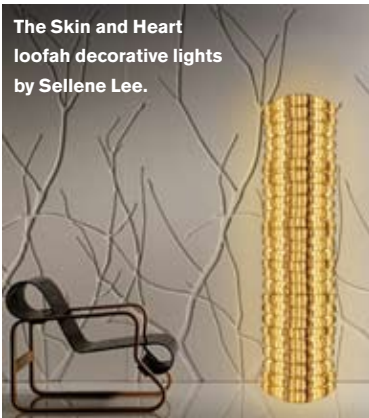
EDUCATION

Lecture sessions were held where invited experts discussed and demonstrated lighting technology and material fabrication techniques. Dr. Eve Edlestein spoke on “Light, Health and Well-Being.” Light artist Jim Campbell showed excerpts of his interactive LED video pieces. Examples of “translucent materials innovation” were described from concept to installation by Jennifer Silbert of 3Form Architectural Division. David Cawley, director of the Art Center’s 3D Lab, showed

how LEDs can be cast into silicone and other translucent materials.

Herscovitch and Gottlieb co-managed the course for the fall 2008 and spring 2009 terms. They documented the students’ projects from early concept through fabrication and final presentation.

What follows are six examples of student concepts from the class held during the summer 2009 term.



LOOFAH LIGHTS. Student Sellene Lee created two luminaires made from natural loofah sponges. The “Skin and Heart” pendant light, made from inner loofah hearts sewn together, emits a warm, tactile glow from a 25-W incandescent G-16.5 lamp. The “Skin and Heart” linear lights are made from the outer loofah skin, turned inside out and wrapped in a spiral around a T5 fluorescent lamp with remote ballast. They are installed at dynamic angles, intended as a custom installation for a retail, restaurant or hospitality environment.



SHIRT LIGHTS. The “La Crespi” group of floor, table and pendant lights are made from ribbed tee shirts that were manipulated, twisted, wrapped, treated with non-toxic fabric stiffener and then sculpted into a circular form. A 32-W CFL provides illumination. Student Jason Pi proposed teaming up with Homeboy Industries, a nonprofit organization dedicated to teaching gang members new skills to help them escape the streets and earn a living wage.



The Plastic Bag Pendant
by Yoo Seon Hyun.

PLASTIC PENDANT. The “Plastic Bag Pendant” light from student Yoo Seon Hyun was fabricated from heat-fused plastic bags and folded into an intricate origami form. This project is an example of a functional recycling use for the 100 billion plastic bags that are thrown away each year in the U.S. The fixture contains an 11-W CFL lamp.

The Ghost Walker illuminated vest by Soo Kwon.



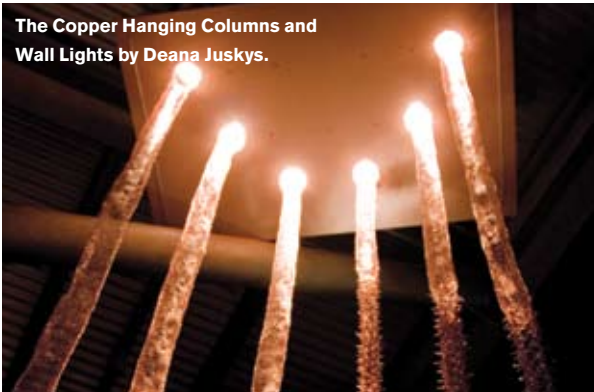
THE ILLUMINATED VEST. The “Ghost Walker” illuminated vest from student Soo Kwon creates a ghost-like silhouette of the wearer as she zips up the vest. The garment is constructed of an inner and outer layer. Several surface-mounted LED ribbons are affixed to a fabric substrate and connected to the zipper via stitched conductive thread and wire. As the zipper passes by each ribbon, it closes the circuit and illuminates them sequentially. The surface-mounted flexible LED ribbon has three LEDs spaced every 2 in. The nylon fabric functions as a diffuser.

The Licht family of desk and floor lamps by Soo Kwon.



LAMPS OF STEEL. The forms of “Licht”—a family of contemporary floor and table lamps from Soo Kwon—capture how a beam of light is projected onto a surface. The process for making these lamps is the same used for producing the frame of a conventional lampshade from powder-coated galvanized steel wire. A 50-W R-20 lamp was used.

The Copper Hanging Columns and Wall Lights by Deana Jusky.



COPPER REFLECTIONS. The “Copper Hanging and Wall Lights” from student Deana Jusky use copper mesh to create radiating patterns of reflected light. The hanging columns are envisioned for a custom installation in a lobby or stairwell, while the wall lights create a warm ambiance for living or dining. The columns use 30-W PAR 36 spotlights in recessed 35-W cans. The sconce is lighted by a 60-W T10 lamp.

Vilma Barr is a regular contributor to LD+A and has written, co-authored or edited 15 books on retailing and design.

At LIGHTFAIR 2009, Nuckolls Fund president Jeffrey Milham announced a new grant of up to \$50,000 for 2010. Proposals for grants are reviewed by the Fund's board which selects recipients based on concept, originality and a summary of proposed benefits. Submittals for the 2010 awards, including \$20,000 awards for the development of new college- and university-level lighting education courses, are due on February 5, 2010. For more information, visit www.nuckollsfund.org.