



Right

The

Materials

BY JEFF BERGER

Nothing is out of bounds today. Grass, PVC pipe and an uncanny array of other options are on the constantly changing menus of serious designers and are sought after by clients who want comfort, durability, functionality and beauty – and want something different to deliver them all.

Take New York interior designer Thom Filicia, Thom Filicia Inc.,

whose work you may see weekly on Bravo/NBC’s “Queer Eye for the Straight Guy.” He typifies a significant trend among many designers: He doesn’t shy away from materials just because they’re “different.” For example, when Filicia was confronted by dining room chairs slightly lower than standard height, he needed to create a table to accommodate them. “I needed a material that would be easy to cut and work with and that would be

interesting and fit a young, modern, urban aesthetic.” Filicia chose PVC tubing – definitely not a standard item for creating table bases – because it delivers “an interesting texture when you look through the glass at the three-inch diameter circles in their triangular shape.” Also, he says, the profile was great looking. PVC was a reverent nod to Eero Saarinen, he says, referring to the son of renowned Finnish architect Eliel Saarinen.

In new materials selection and execution, outrageous and impractical aren’t necessarily synonymous.

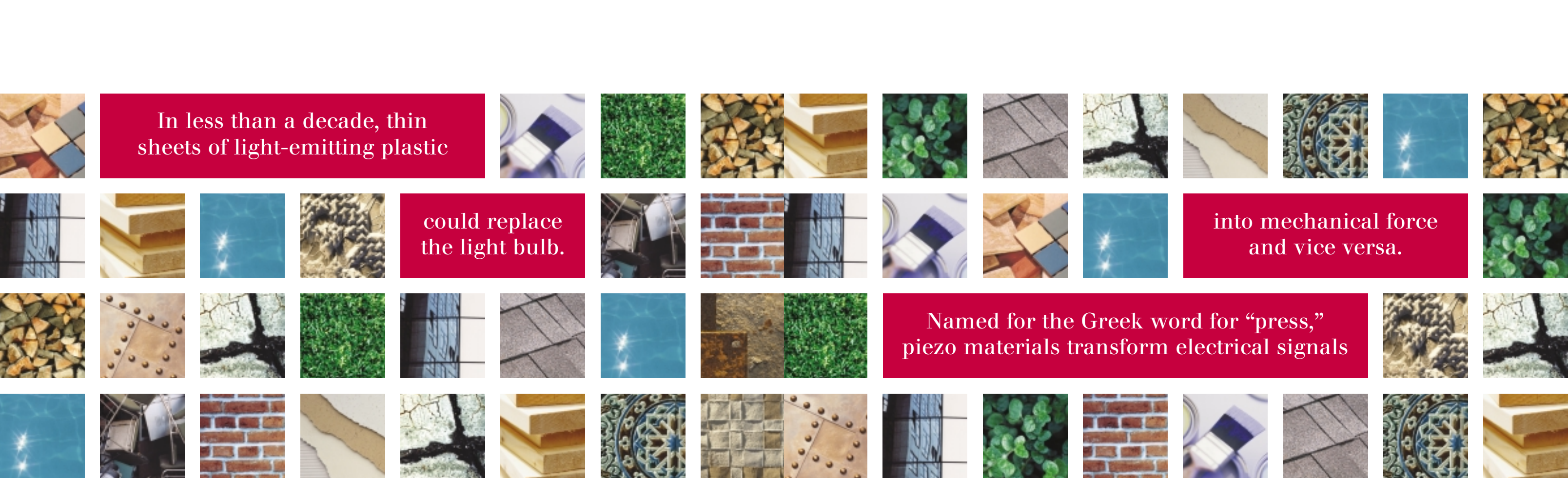
Filicia isn’t alone in selecting PVC tubing for unusual applications. Princeton, N.J.-based architect Michael Graves, FAIA, used it in his library of 2,500 architecture and decorative arts books. Graves used 2- to 3-inch PVC piping for colonnettes between library shelves. The PVC piping was treated with *faux bois* paint finish to match medium-density fiberboard shelving, yielding the appearance of bird’s-eye maple.

PHOTOGRAPHY’S COMEBACK For many years, mounting color photography on residential walls was not an option for serious interior designers because color

photographs faded quite dependably. Improvements over the years have made fading less offensive, but still painfully apparent. Thanks to innovative paper, however, photography as an interior design element has returned from relative obscurity. In fact, Wilhelm Imaging Research, a company that tests the color permanence of photo papers, concludes that Fuji Crystal Archive paper retains its color for 60 years, long after most residences decorated with color prints will have changed ownership.

“Large-format photography enables people to view photographs on a wall and see reality,” says award-winning fine-art landscape

photographer Franklin B. Way. “Everything is sharp and in focus even in 40-inch by 50-inch enlargements. That can’t be done with enlargements from 35mm originals.” In addition to nonfading photo paper, other new materials are used in mounting. “MDF [microdensity fiber] is a fabricated core for frames that makes them lighter and more affordable,” says Harriet Sesen, Principal of Harriet Sesen Associates in Brookline, Mass. “Paper wraps are being used for frames instead of staining to reduce costs. Both acid-free and non-acid-free mats are offered in many different textures today. Some simulate fabric, like silks and linens.”



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could replace the light bulb.

Named for the Greek word for “press,” piezo materials transform electrical signals

into mechanical force and vice versa.

NANOTECH AND TEXTILES

Where fabric is concerned, think “nano.” A nanometer is a billionth of a meter – that is, about 1/80,000 of the diameter of a human hair or 10 times the diameter of a hydrogen atom. It’s hard to imagine something that small has such grand potential.

Nanotechnology, or the application of science to developing new materials and processes by manipulating molecules and atoms, is becoming less science fiction and more science fact. For example, Greensboro, N.C.-based Nano-tex and other companies are using the technology to protect fabrics used in furniture and for other residential uses.

Nanotechnology enables products to offer better liquid and stain repellency. Nano-tex’s NANO-PEL fabric

protection is built on a submicron scale, making liquid and stain repellency inherent to the nature of the fabric. What’s more, other innovative uses for nanotechnology include superior wicking properties to move perspiration away from the body and even enhancement of synthetic fabrics to exhibit a cottonlike feel.

While nanotechnology has been used almost exclusively in clothing thus far, furniture-friendly fabrics, floor coverings and drapery can’t be far behind.

INNOVATIVE LIGHTING

Emerging technology won’t influence just what customers feel; get ready for other sensory standouts. Plastic may eliminate light bulbs from your home forever, if General

Electric has anything to say about it. In less than a decade, thin sheets of light-emitting plastic could replace the light bulb.

GE’s Global Research Center has government support for a project that utilizes sheets of plastic to create thin, mechanically flexible, flat lighting panels that can be applied directly to walls, included in paint or even used as parts of furniture. “One day,” GE prognosticates, “these devices will set a new standard in how we light our homes and offices.” GE reportedly is the first company to use Organic Light Emitting Diodes (OLEDs) as a light source.

GE says that although the technology is still five to 10 years away from commercialization, the U.S. Department of Energy (DOE) says

the solid-state lighting (SSL) category has the potential to conserve 50 percent of lighting consumption by 2010. OLEDs are a form of solid-state lighting, an alternative to traditional LEDs. OLEDs potentially may be made in an inexpensive, roll-to-roll manufacturing process.

And while plastic may revolutionize the way we see, metal may change what we hear. Named for the Greek word for “press,” piezo materials transform electrical signals into mechanical force and vice versa.

Manufactured from ceramic material, piezofibers respond to the application of voltage by stretching or contracting. Used in conjunction with sensors in the roof of your next home, they could easily dampen vibration and reduce noise. Expect

to see this application soon in the roofs of luxury cars to achieve improved sound-deadening.

Other exotic materials are invading residential interior design in rapid succession. Memory metals, for example, are being used by adaptivronics engineers in such devices as dishwashers, with more to come. According to Siemens, a memory metal actuator – a wire made of nitinol (a nickel-titanium alloy) – already has gone into production. The wire is part of an optical sensor in the latest range of dishwashers produced by Bosch and Siemens.

The “optosensor” measures the calcium content of water up to 10 times during the dishwashing program and uses the data to regulate the release of a special salt, according

to Siemens. The memory wire opens a small valve that expels water from the sensor, eliminating the need for complicated control technology. The entire mechanism is about the size of a small pocket calculator.

CERAMIC TILE’S NEW LOOK

Low-tech is going through a renaissance as well. Take a look at tiles. “We’re reproducing many photographs on tiles,” Sesen says. “Natural ceramic tiles with photography are being used in kitchens, bathrooms and showers. Entire murals using photography on tile are being placed in swimming pools, where they are scrubbable and stand up to pool chemicals. We can use any art form on tiles, but photography reproduces especially well.”



Even precious stones are coming into use in slabs where

slate had been used before.

Sesen also employs digital reproduction, claiming that one of its advantages is that it can be successfully applied to many media. “Digital technology lets you reproduce on canvas, paper and almost any other substrate. You can simulate different surfaces. Simulate fabric, and you can create very effective wall hangings.”

Despite her dive into photo murals on tile, Sesen says that “tried and true” continues to be very popular even amid a flood of innovations. “We’re seeing fiber art, which resembles a quilting technique. We’re seeing a contemporary type of glass blowing. Old media with a new interpretation is well-received. People want the real thing, handcrafted, but many people don’t want to pay for it, so

we’re always looking for ways to interpret it and do it economically.”

FLOORING FADS

“Tiles are getting really huge,” says Maryland-based designer Sarah B. Jenkins, referring both to their size (up to 18 inches) and popularity. Jenkins’ firm, Chevy Chase, Md.-based Sarah Boyer Jenkins & Associates Inc., does business in Maryland, Virginia and Washington, D.C. “Now we’re even seeing a mosaic look, with little one-inch brilliantly colored glass squares increasingly used,” she says, referring to the same squares that in ceramic form we removed from homes years ago.

Color glass tiles with a sparkle-like appearance are being used widely in bathrooms. Glass tiles

require special cutting tools and adhesives but no special upkeep. “It has the same strength and durability as marble, except, of course, it’s not used on floors,” Jenkins says. “It was originally used in kitchen backsplashes because of the exceptional color it adds. It comes in every color imaginable including metallics and blends, and it offers a very different look from what we’ve seen before in baths or kitchens.”

Even precious stones are coming into use in slabs where slate had been used before. Marble is being used heavily for floors and walls, and limestone for walls. High-quality adaptations of Fortuny prints, fabricated by Groves Brothers, Brunschwig & Fils and others, are used increasingly as well.



Working like electric blankets,
the mats warm floor surfaces,
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and 90 degrees
Fahrenheit.

Floor covering also is in a state of flux. Carpet manufacturer Mohawk, for example, is offering a “Perfectly Soft” carpet with “Forever Fresh” technology. It incorporates Odor-Eaters’ odor-reduction technology to capture odors, Mohawk says, keeping carpet fresh.

Another innovation promises to rid us of the age-old scourge of cold floors on chilly winter nights. Vancouver, British Columbia, Canada-based Nuheat makes energy-efficient radiant heating mats that install directly under hard flooring surfaces like tile, stone or marble. Working like electric blankets, the mats warm floor surfaces, yielding temperatures between 80 and 90 degrees Fahrenheit.

Also related to foot comfort is Tufenkian Carpets’ Khooloo, the first handwoven wall-to-wall carpet.

It is a luxurious, cashmere-like alternative to traditional tufted carpeting and is the only hand-knotted wall-to-wall option. Khooloo is made from hand-carded and hand-spun wool. Because bleach is not used in processing, the wool’s inherent lanolin content acts as a natural soil and stain inhibitor.

EARTH- AND PEOPLE-FRIENDLY

Jenkins, like many other designers, is paying very close attention today to the health effects of floor coverings and paints. “The finishes on carpets and on fabrics are what make the difference in them being more friendly to the atmosphere,” she says, “and to our lungs.”

“What makers have realized is that they can make fabrics beautiful

and make them safer,” Jenkins says. “The silks and linens and cottons are biodegradable and have a minimum effect on air quality. Some chemicals used in mercerization are recovered in the process, and synthetic dyes meet colorfast requirements with reduced environmental impact.” Petrochemical-based fibers do damage the environment, but natural synthetics made from wood pulp such as rayons do not.

“It’s a trade-off,” she says. “If we used only that which is really safe and fireproof or fire-retardant, we wouldn’t have much in the way of beauty. If we take the things that can be done and that do have a major impact, then we have products that are healthier for the public and for ourselves.” 