

# SCULPTURE IN GLASS

*Jiyong Lee works with glass, but his true medium is light and memory.*

*by Marilyn Davis; all photos courtesy Jiyong Lee*



**O**n a table in Jiyong Lee's studio sits a larva-shaped artwork, more than a foot long, made of five glass segments joined together. Run your palm over it: The piece is so finely ground, so smooth, that the joints can't be felt. The segments are beautifully colored, a gradient of tints running from a deep dark red in one end segment, through rosy orange hues, to near-white in the other end segment. But when Lee turns the piece around, everything reverses: the white and dark ends seem to have traded places and the gradient of tints is running the other way.

When you get up and stand directly over the piece, you see that the glass itself is clear, from end to end. The only color is in the epoxy resin that glues the glass segments in place. Different segments reflect different depths of color depending solely on the angle of the light coming through the joints.

Memory can be like that too, illuminating things differently at different times. And memory, Lee says, is what his work as an artist is all about.

Many of his pieces draw upon the sights he remembers from his physician father's office, which was part of the house where Lee grew up. "He had all these medical books, he did compounding of drugs," Lee explains. "I got sick quite often when I was a kid and my dad had to compound all the medication for me because I couldn't swallow tablets. Syrup wasn't widely used for children's medicine in Korea at the time, so I carried folded parchment papers with me with the powdered medicine to mix with water."

Those packets became a kind of metaphor representing his childhood and his father's love for him. Last fall Lee exhibited a two-piece work based on that experience at the Cheongju International Craft Biennale in Korea.

**Left: "Red Embryo Segmentation 2," 2008. Hot-sculpted, cut, color-laminated glass.**

One piece consists of a glass mortar and pestle sitting next to rows of partially folded paper packets, each with a bit of fused glass powder in the middle to simulate medicine. The other piece takes the form of a monumental "days-of-the-week" pill holder, each compartment stuffed with packets. Flecks and slashes of black paint on the box's surface make this modern object appear old and fragile, like a relic of an ancient culture.

"The pillbox is something very convenient, very American," Lee says. "I enjoy going around giant grocery stores and Walgreens, seeing things I didn't see in Korea." Thus this piece, called "Take Every Day As You Need," fuses elements of his home culture and his adopted culture. Together, the two pieces are called "Memory."

Lee also creates a lot of segmented pieces in various shapes. These are often geometric, but recently they have also

taken on biological shapes reminiscent of cells and embryos. "I like the way cells start to segment and it becomes a life," Lee says. "I started being interested in this cell segmentation series when my son was born."

Lee has come a long way for someone who's worked with glass for only about 10



**Jiyong Lee grinding glass parts on a flat silicon carbide grinder.**

years. In high school, he was interested in product design, and he earned his bachelor of fine arts degree in ceramic product design from Korea's Hong-ik University. He then got a job working in a ceramics studio run

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by two well-established Korean artists. One of them was doing more sculptural, artistic work, and Lee too began to feel drawn to the idea of creating his own sculptural work—original pieces, not functional wares.

At the same time he was becoming intrigued by the idea of using glass as a



**Top:** “Take Every Day as You Need,” 2007. Cut, engraved glass; paper; paint.  
**Bottom:** “Mortar and Pestle,” 2007. Blown, solid-sculpted, fused glass; paper.  
 The two pieces were conceived together as a work called “Memory.”

medium. His employers encouraged him to go to graduate school abroad; at the time, there were no glass programs in Korea. Although Lee still likes ceramics, he prefers the hardness and “precision” of glass. Above all, he says, “Glass can hold the light. Glass can give you transparency, translucency, or opaqueness. Metal, clay, stone can’t give you that.”

Lee was accepted into the master of fine arts glass program at the Rochester Institute of Technology, where he began playing catch-up to his fellow students. “The first year at RIT I definitely struggled to learn [glass techniques],” he says. “I was in the studio all the time. My professor, Michael Taylor, was also a ceramicist who had turned to glass, and we did a lot of experimenting with technique.”

After graduating in 2000 with his M.F.A., Lee worked in Taylor’s studio for five years and also taught at RIT. By

attending workshops at such places as the Pilchuck Glass School in Washington State and the Studio of the Corning Museum of Glass in New York, he also learned a great deal from Eastern European artists using glassworking techniques not very common in the United States. In 2005 Lee joined SIUC, where he is an assistant professor and heads the School of Art and Design's glass program.

Americans who know a little about glass art are most likely to be familiar with the huge, fluted, brilliantly colored bowls and other work from the Seattle studio of Dale Chihuly, one of the founders of the modern art glass movement. Most of Chihuly's work involves glassblowing. In contrast, Lee most often uses two other techniques to create the basic shapes of his pieces: hot sculpting and kiln casting.

With hot sculpting, Lee begins just like a glassblower begins, by gathering molten glass on the end of a punty (a solid metal tube) or a blowpipe. Like a glassblower, he must spin the punty or pipe so that the glass won't drip off. ("It's like gathering honey out of the jar—you have to keep turning," Lee explains.)

Unlike a glassblower, he doesn't blow a bubble to begin creating a shape. Instead, he repeats the gathering and turning process until he has the amount of glass he wants. Then, wearing Kevlar sleeves to protect his arms from the heat, he uses cork paddles, metal tools, and even folded, soaked newspaper to start sculpting the glass into the shape he wants.

When he's satisfied, the glass piece goes into the furnace—not to be heated, but to be cooled down at a slow, carefully controlled rate. This annealing process, which takes an average of three weeks for Lee's works, gives the glass its ability to resist breakage. When the piece reaches a crucial temperature called the annealing point—where it starts to lose stress and begins to solidify, usually about 900 degrees Fahrenheit—it is held there, sometimes

as long as 48 hours. Then it is allowed to continue cooling to room temperature.

Each type of glass has a different annealing point, and each type of object requires a different annealing time, Lee explains. Glass suppliers provide the annealing point for the type of glass and some other general guidelines. Beyond that, annealing is a matter of experience.

For other pieces, Lee uses what's called kiln casting. He creates a form out of clay, builds a mold of plaster and silica around it, removes the form, and puts glass billets—rectangular pieces of glass bought pre-made—into the hollow space. He uses a water displacement technique to calculate the volume of glass he needs to put in. Then he puts the mold in the kiln to melt the glass, gradually cools it to room temperature, and removes the glass from the mold.

In either case—hot sculpting or kiln casting—that's just the beginning of the fun. Lee finishes his pieces by carving, grinding, polishing, and sometimes engraving them. Such procedures are called "cold working." He often uses a strong epoxy resin to join glass segments, frequently adding dye to the resin to give color to the artwork.

"When the glass comes out of the mold, it's like the raw diamond," Lee says. "When I grind and carve it, it's like finding the shape and making it valuable."

Lee also has used steel to laminate pieces; entrapped copper wire inside pieces; sand-blasted images onto the joints of glass segments; and even created one segmented piece, called "Seed of Life," in which each joint bears his own thumbprint.

Lee now teaches cold-working techniques at the various well-known glass schools and workshops where he once was a student. His work has been chosen for international exhibits in the United States, Korea, China, and Australia.

In 2003 he was among a handful of artists invited to be included in the



**Top: "Blue Segmentation," 2008, cut, color-laminated, carved glass.**

**Bottom: "Segmentation 2," 2003. Cut, color-laminated, engraved glass.**

Corning Museum of Glass's *New Glass Review 24*, the most prestigious juried publication in this medium. And in 2005 the Glass Art Society gave him their Emerging Artist Award.

Does he ever lose pieces in the kiln? "Sometimes something goes wrong, and I'm disappointed when it does," he laughs.

Nonetheless, glass suits his personality, he says. "The style of the work I do involves a lot of measuring, a lot of planning.

"I enjoy doing something precise."

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