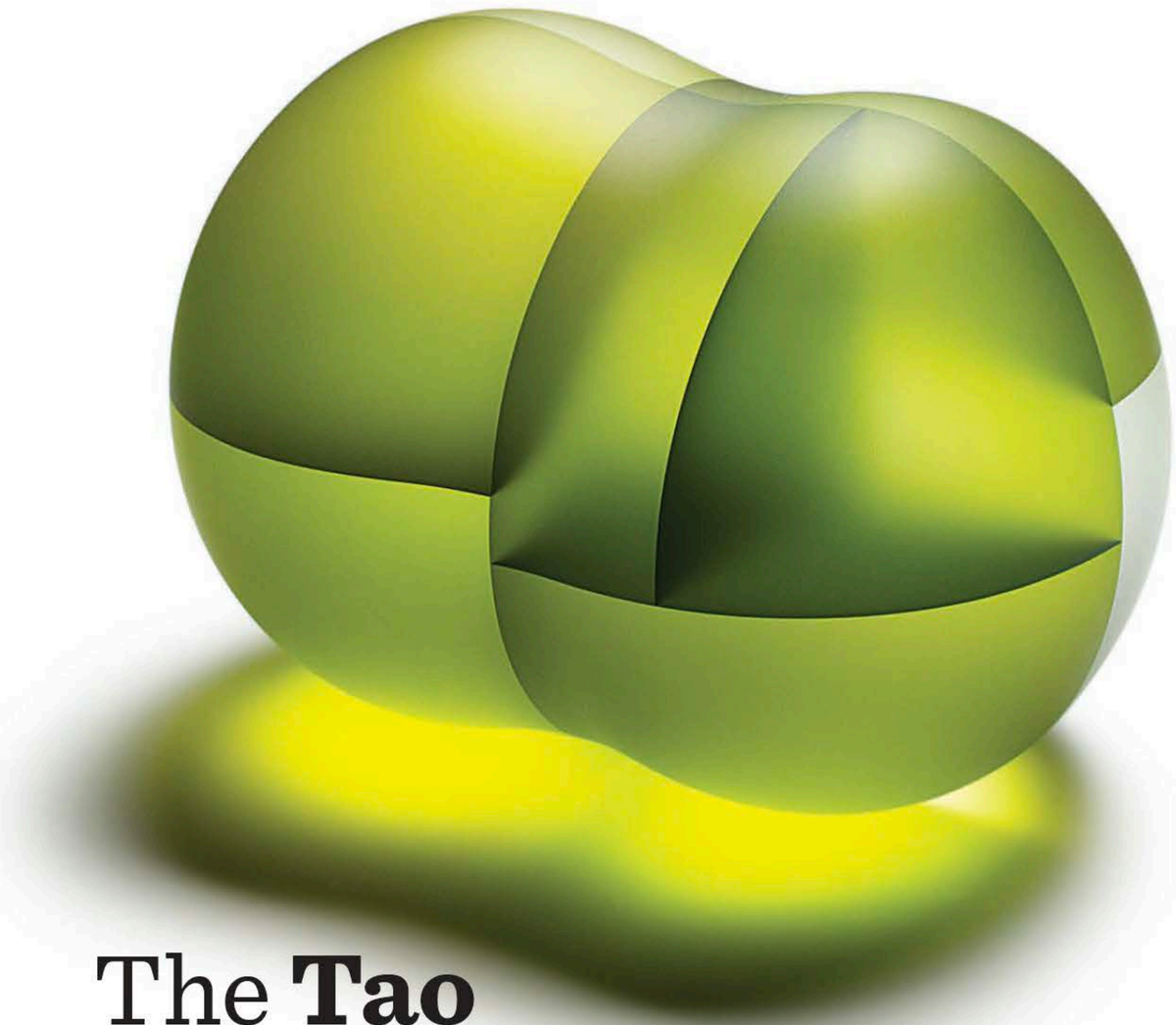


Green Cosmarium Segmentation, **2018. Hot-sculpted, cut, color-laminated, carved glass. H 7 ¼, W 10, D 7 ¼ in.**

The **Tao** of Glass

Based on cellular biology and the product of hours of painstaking work, **Jiyong Lee**'s intricate interplays of color and light could be rigid and stiff, but their execution and balance make them seem effortless, balanced, and unburdened.

BY WILLIAM V. GANIS

The images accompanying this article—all of them taken by the artist Jiyong Lee himself—are a disappointment. "But wait!" you might say. "Look at the razor-sharp focus, which is precise enough to capture the hand-sanded surfaces. What about the exacting exposures that reveal the soft shift of colors, as intense hues are mediated by the thick optical crystal? And see how the depth of field has been expertly set to document how the painstakingly precise cast, cut, and laminated constructions resonate with the capture and diffusion of the light."

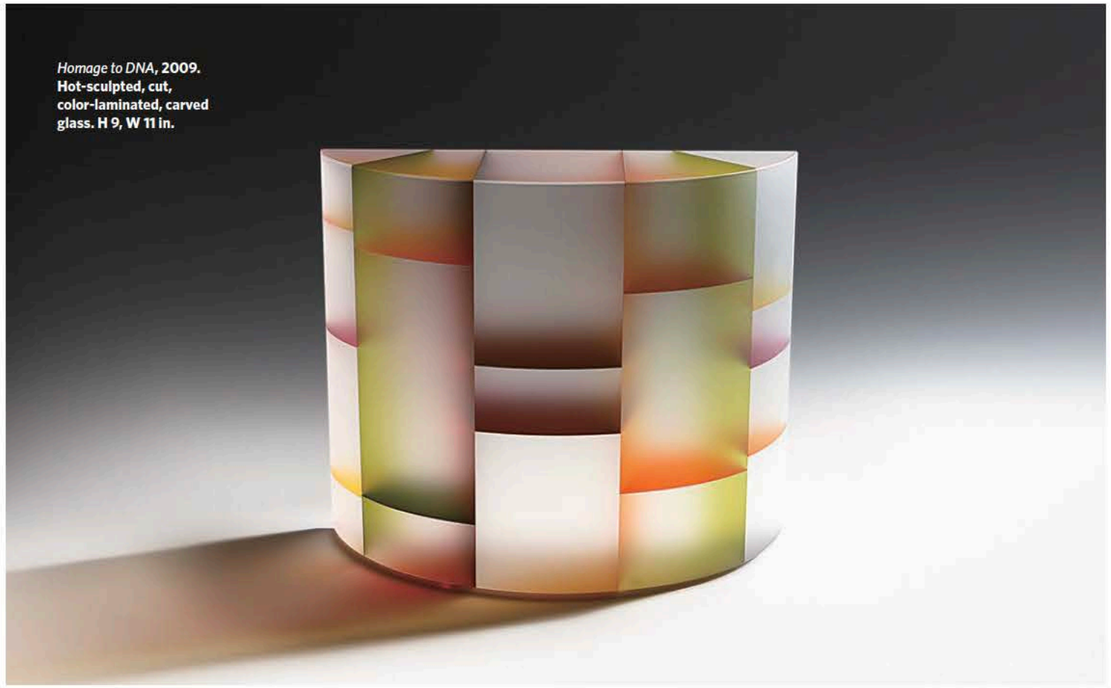
And you'd be correct. There's nothing technically wrong with the images in this magazine. In fact, they are excellent and draw you in with the complexity they faithfully document. But not even these expert images can compare to the actual experience of the work in real life.

Jiyong Lee's art can be truly understood only by experiencing it. Photographs can only ever hint at the entrancing visual paradoxes that are animated through active observation. If you've never seen a Lee work in person, seek it out. More than most, his sculptures require the viewer's presence. The optical revelations are the point. Lee challenges what we think we know about glass and the making processes.

Because we have experienced so much colored or etched glass, it's difficult to pinpoint what's different in his high-chroma laminates, or how a seemingly uniform, hazy surface treatment yields controlled and shifting perceptions of depth. We can understand the technical processes by which he achieves these effects, but such demystification takes nothing from the magic and only helps us to appreciate his exacting executions.

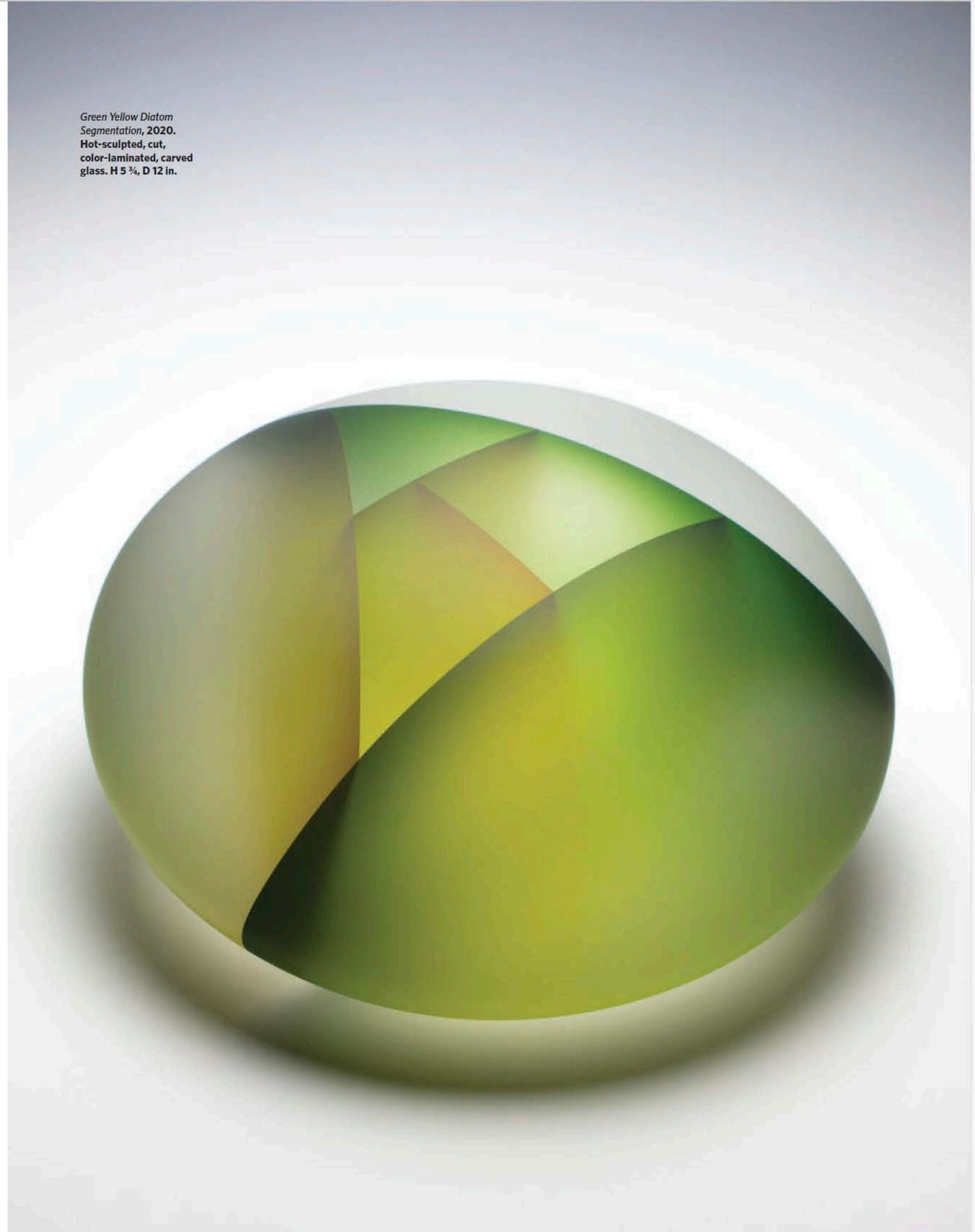
Lee has articulated in several statements and interviews how his work is informed by biological structures and imagery, notably cellular segmentation and multiplication. The son of a doctor, his choice to become an artist instead of following his family's expectations to pursue a career in the sciences hints at psychological sublimation— and as an artist he's found a way to freely interpret these expectations.

Some early objects such as *Take everyday as you need* and *Compounding memories* (both 2007) are literal renderings in glass of a weekly pill organizer or mortars and pestles with frit-powder medicine. Steeped in iconographies of scientific imaging, Lee's works often have overt biological references. *White structural trace embryo* (2015) enlarges and faithfully reconstructs a microscopic phenomenon. The white pigmentation



Homage to DNA, **2009. Hot-sculpted, cut, color-laminated, carved glass. H 9, W 11 in.**

Chromosome Segmentation, **2023. Hot-sculpted, cut, color-laminated, carved glass. H 9, W 17, D 13 in.**



Green Yellow Diatom Segmentation, **2020. Hot-sculpted, cut, color-laminated, carved glass. H 5 ¾, D 12 in.**

and biomorphic contours evoke a fruit-fly egg, and the translucent surfaces and faint arabesques correlate to the see-through, microscopic imagery of cells and organelles.

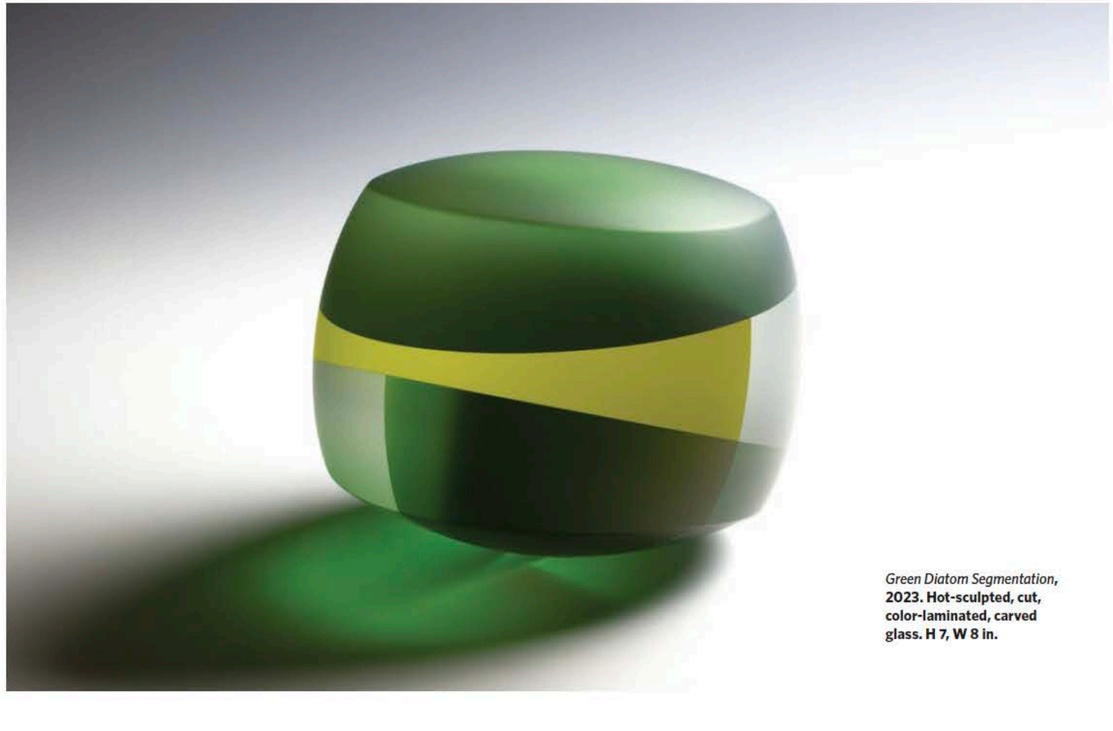
A similar work, *White Drosophila embryo segmentation* (2014), maintains Lee's idiomatic abstraction; he forsakes the details to deliver the developing creature's essence. The varied optics and perceptions of depth suggest the instability, growth, and multiplication that are closer to his interests in the "mysteriousness, difference, and imperfect aspects"[1] of cellular development on its way to forming individuals. A Georgia O'Keeffe quote comes to mind for explaining the differences between the two *embryo* compositions: "Nothing is less real than realism. Details are confusing. It is only by selection, by elimination, by emphasis, that we get at the real meaning of things."[2]

Lee alludes to other building blocks of life in works such as *New Chromosome Segmentation* (2023), a two-part sculpture, each referencing a chromatid strand of DNA. The segmentations in this and similar works are all cut parallel to one another and call to mind the ombré stripes that result from the gel electrophoresis often used to analyze DNA. The artist's *Homage to DNA* (2009) is a clear reference to this laboratory process. The staining of laminates with intense pigments also evokes the microscope dyes appropriate to the artist's scientific imagery.

Even the Japanese and German optical glass Lee uses, from Ohara and Schott, respectively, directly reference science not only in the chemistry of the glass but in the precision application of lenses for cameras, medical equipment, and making semiconductors. Each year he sources much of his solid borosilicate optical glass (such as the material used for his cuboid and cylindrical works) by acquiring remnants from greater industrial applications. While a graduate student at the Rochester Institute of Technology, Lee studied with expressive optical-glass artist Michael Taylor. For nearly five years (2000-2005), Lee worked in Taylor's studio, where he mastered the precision-cutting, shaping, and laminating that he has further developed and applied to his own *Segmentation* sculptures.

When he creates the sectioned, faceted works in his biomorphic series, Lee doesn't start from optical-glass blanks; rather he teams with gaffers to shape the seeds, chromosomes, and embryos from heavy masses of molten soda-lime glass gathered on punties. This process was recently documented at the Museum of Glass, Tacoma, and can be viewed on YouTube.[3] While Lee makes this concession to the hot shop, coldworking comprises the preponderance of his endeavors. He works in a studio at the edge of Southern Illinois University Carbondale's campus. By reinforcing floors and installing anti-vibration mats, he's modified a modest house into a workspace that accommodates industrial glass cutters, grinders, and polishers. One room is kept quite warm to

White Green Diatom Segmentation, **2020. Hot-sculpted, cut, color-laminated, carved glass. H 8 ½, W 10, D 8 ½ in.**



Green Diatom Segmentation, **2023. Hot-sculpted, cut, color-laminated, carved glass. H 7, W 8 in.**

create an optimal environment for epoxy bonding and curing. As prolific as Lee is, it's surprising to learn his practice is mostly a solo operation.

With the "Segmentation" series going back to 2002, there's been multiple evolutions in which the approach has—like the cells the artist evokes—split into distinct subseries that include cuboids, diatoms, genetic building blocks, seeds, and chromosomes. Lee continues to explore these forms, from time to time departing and leaving open the possibility of coming back to add new installments within each.

The colors in Lee's works come from Orasol dyes that are mixed with the HXTAL NYL-1 epoxy adhesive holding together each sculpture's constituent parts. His Carbondale studio has dozens of test blocks in which the artist has experimented with blending pigments and varying saturations. For all the colors produced by suppliers such as Reichenbach or Bullseye, the studio glass palettes can seem limited and familiar. Lee liberates his colors from the usual silicate chemistries, resulting in transmissive high-chroma colors.

It's astonishing how a few micrometers of dyed laminate create misapprehensions that the pigmentation is "in" entire blocks of optical glass. The most surprising effect among the *Segmentation* works, as seen in *Monochromatic Cuboid* (2023), might show a block of intense, immersive red that partially or completely desaturates with a shift in the viewer's perspective. Of course, glass artists often use colored frit or casings on glass surfaces that yield the illusion of pigments impregnated throughout, but the effects can seem extreme in Lee's case when color perceived as essential becomes discerned as transmitted, refracted, reduced to a supersaturated plane, or seems to disappear altogether. The effects come across as visual paradoxes on which one can meditate about phenomena and reality.

There's another, far less obvious optical modification that's likely misunderstood as a uniform surface treatment. While the milky surfaces can seem to be the result of acid etching or sandblasting, Lee meticulously sands each of the surfaces by hand. Doing so allows him to vary and manage the diffusion of light in each facet, and the results can create astonishing perceptual variations, making parts of the sculptures seem weighty or immaterial and the colors intense or dispersed. His sentiments about these effects are summarized as "diverse qualities of transparency, translucency, and opacity ... symbolize the known and unknown aspects of life science."[4] These scoured surfaces can also seem to become infused with color from the laminates and, depending on the level of abrasion, Lee can control the color permutations.

Lee's art contains paradoxes, contradictions, and tensions typical of the Taoist aesthetics that inform both traditional and contemporary Korean art.[5] Perhaps the most obvious of these purposeful incongruities is that his sculptures at once are simple and complex. It's easy to grasp the concept of a cube or seed and to understand how Lee has cleaved it into interlocking parts, but it's difficult to comprehend how because of the momentary optical

Gray Segmentation Construction, **2022. Cut, color-laminated, carved glass. H 9 ¼, W 14, D 13 ½ in.**

Monochromatic Cuboid, **2023. Cut, color-laminated, carved glass. H 8 ¾, W 8 ¼, D 8 ¼ in.**

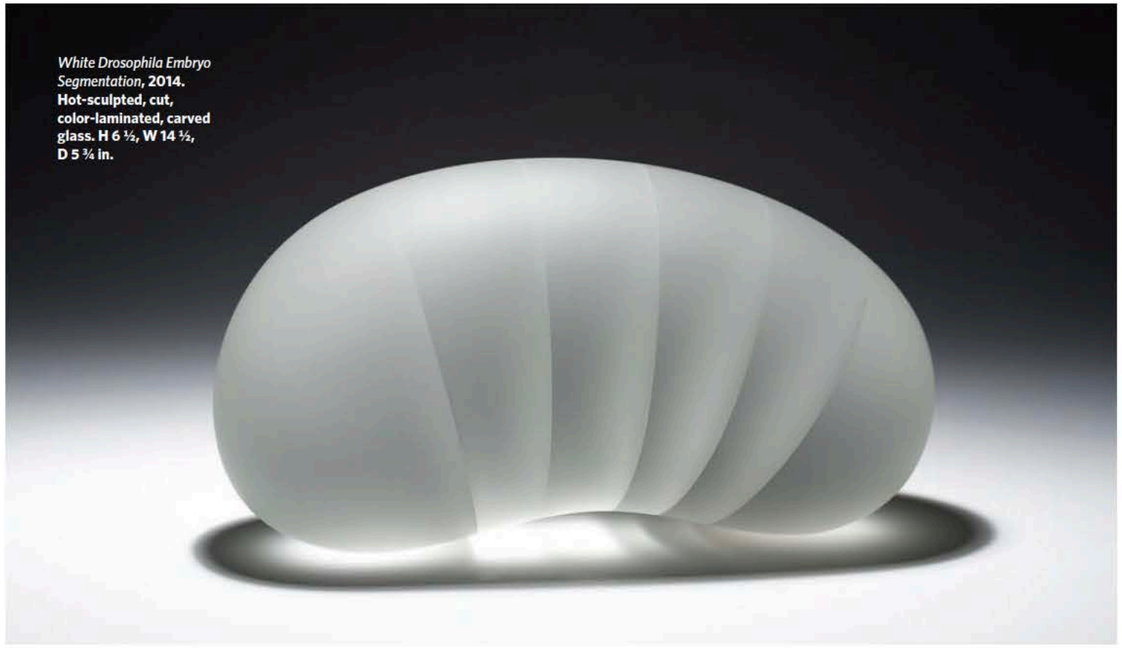
phenomena. The parts appear to plumb depths beyond their sculpted forms, or may seem solid and then immaterial. Though they require meticulous planning and execution, the segments can seem spontaneous and playful in their arrangements and coloration. Lee creates seamless seams throughout his works, and one might not ponder how or why the components fit together perfectly. We don't see the gaps caused by the width of a diamond cutting blade or the resulting interrupted outer edges or curves, because he accounts for these in his process, smoothing down the lips of incised segments so each is integrated into a coherent whole. The other great, purposeful contradiction is the considerable effort that comes across as effortless. Each of Lee's creations requires countless hours of grinding and polishing, some by machine (which still requires his engagement or close monitoring), some by hand. In the end, any evidence of process is eliminated in the pursuit of perfected joints, surfaces, and bevels.

While Lee takes great inspiration from cellular imaging, it's easy to see an affinity with the prevalent late-20th-century Korean painting of the *Dansaekhwa* movement. These artists, such as Lee Dongyoub and Lee Ufan, made canvases often featuring subtle marks, restrained palettes, spatial ambiguities, and nonobjectivity. Underscoring this connection, Jiyong Lee's monochromatic *Green Cosmarium Segmentation* (2018) was selected in 2019 for a Seoul exhibition, "Homage to Park Seo-bo," dedicated to this Dansaekhwa master. This is not at all to say that Lee's art is derivative, but suggests that he has absorbed the aesthetics and interpreted them anew. While Lee's work can seem overwhelmingly sculptural because of the heavy glass and subtractive processes, his application of liquid color, no matter how uniform, is ultimately an act of painting—an understated, unorthodox form of *Hinterglasmalerei*. Reflecting on his oeuvre, there's a host of painterly choices that include skillful pigment selection, the physical mixing of dyes, and optical blending within the works as well as their diffusions through softened surfaces.

In recent years, Lee has enjoyed success as an exemplar of Korean craft. He exhibited alongside many other deceptively simple, compelling works derived from nature in the exhibition "Korea Now" at the Musée des Arts Décoratifs, Paris, in 2015; and in 2021 his work was exhibited with the Korea Craft & Design Foundation at the KIAF Seoul art fair. His work has been shown in the exhibition spaces of the South Korean capital city's Galleria luxury store, and since 2020, Seoul's Gallery Sklo has represented Lee's work in group shows and at the KIAF and Collect art fairs.

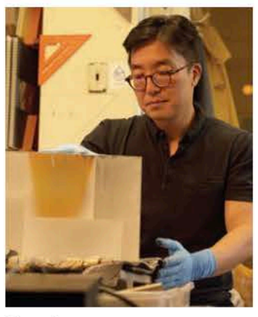
While Lee has enjoyed commercial and critical success in galleries, fairs, and international exhibitions, he is also well known as an educator. He has directed the glass program at Southern Illinois University (SIU) Carbondale since 2005, and many of his students, including Kit Paulson, Jing Li, Robin Rogers, Hoseok Youn, Hyunsung Cho, Adam Cohen, Su-yeon Kim, Erin Taylor, and Steven Hagen, have successfully transitioned into

Mitosis, **2019. Cut, color-laminated, carved glass. H 8 ½, D 14 ½ in.**



White Drosophila Embryo Segmentation, **2014. Hot-sculpted, cut, color-laminated, carved glass. H 6 ½, W 14 ½, D 5 ¾ in.**

professional work as artists, gaffers, and educators. The SIU program includes an international body of students and teachers, and Lee has been instrumental in attracting students as well as resident and visiting artists who bring many different skills, traditions, and perspectives. This diversity in identity and work is reflected in the alumni above and the three artists from the SIU MFA program, Chuchen Song, Eriko Kobayashi, and Timothy Spurchise, who recently showed in the "Cruising Glass: An MFA Exhibition" at UrbanGlass's Robert Lehman Gallery in Brooklyn. Lee has traveled far and wide conducting workshops in glass centers that include Pilchuck, Penland, Pittsburgh, Toledo, Canberra, and many sessions at Corning. He has worked as a visiting artist at educational institutions in Korea, China, Australia, Ireland, and France, and these visits have helped him to forge relationships that have led to the international faculty and student body at the SIU glass program. Lee has noted that relative to hot-shop classes, there are relatively few opportunities to learn coldworking techniques,[6] so he often shares the cutting, grinding, laminating, and finishing skills he has perfected through his creative endeavors.



Jiyong Lee

As Lee has been steadily creating, exhibiting, and teaching for more than two decades, his international reputation has grown, and his work is now found in public collections in France, Spain, China, Korea, and across the U.S. He has exhibited throughout the U.S., Europe, and Asia. Since 2010, Duane Reed Gallery in St. Louis has represented Lee at art fairs throughout the U.S., and the artist has new West Coast representation at Traver Gallery in Seattle. In 2017 he won the Bavarian State Prize at the International Trade Fair in Munich and in 2020 was honored as a finalist for the prestigious Loewe Foundation Craft Prize. ■

Contributing editor **WILLIAM V. GANIS** *is professor of art history at Indiana State University.*

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1 Jiyong Lee, email message to William Ganis, July 9, 2023.

2 "I Can't Sing, So I Paint! Says Ultra Realistic Artist; Art is Not Photography—It Is Expression of Inner Life!: Miss O'Keeffe Explains Subjective Aspect of Her Work," *New York Sun*, December 5, 1922, quoted in Jonathan Stuhlman, *Georgia O'Keeffe: Circling Around Abstraction* (Manchester, VT: Hudson Hills Press, 2007), p. 22.

3 Jiyong Lee, "Museum of Glass—Hot Shop Rental: Jiyong Lee," July 2, 2023, https://www.youtube.com/watch?v=7GUA5-InKJ8.

4 Deborah Alder and Jiyong Lee, "Invisible Microcosm," July 2023, https://www.travergallery.com/blog/jiyong-lee-invisible-microcosm-july-2023/.

5 So-Jeong Park, "Korean Aesthetic Ideals: *"Jayeon," The Journal of Aesthetics and Art Criticism* 80, no. 3. (2022), accessed July 9, 2023, https://academic.oup.com/jaac/article/80/3/357/6649939.

6 Jiyong Lee, "Instructor Highlight at the Studio: Jiyong Lee," March 21, 2020, https://people.cmog.org/bio/jiyong-lee.