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For the Creative Professional Working in Hot, Warm, and Cold Glass

January/February 2022



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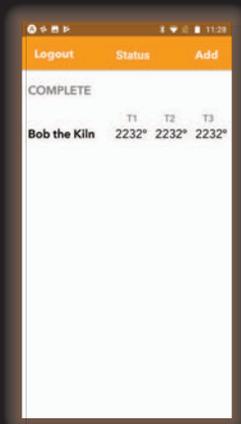
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GLASS ART®

January/February 2022

Volume 37, Number 1

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March/April 2022

Editorial Due	December 20, 2021
Ad Closing	January 20, 2022
Ad Materials	January 30, 2022
Issue Mails	February 18, 2022

May/June 2022

Editorial Due	December 20, 2021
Ad Closing	January 20, 2022
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Katya Izabel Filmus

Navel gazing

by Dr. Julie Anne Denton

I first met the Israeli artist Katya Izabel Filmus in 2007 at Yilmaz Yalcinkaya's teaching facility, the Glass Furnace in Beykoz, Turkey. She was participating in a hot glass casting course with another instructor, and I was teaching flameworking. From the moment I met her I could see the drive etched into her face, and that has not changed even in 2021. Sitting opposite each other in her studio, her eyes contemplated me intensely as if she could taste my innermost thoughts and gaze into my soul—searching, keen, alive!

From Glass Revulsion to Compulsion

Katya Izabel Filmus is a 40-something fine artist living and working in Tel Aviv, Israel, who predominantly works in kiln cast glass. She is a master mold maker, and during her lengthy career in glass, she worked on complicated projects for Ai Wei Wei through the National Glass Centre in the UK and Berengo Studio in Venice, Italy. She has worked for Glenfiddich, the Scottish whiskey producer, creating a series of life-size stag heads in clear acid-polished solid lead crystal, which can be seen to this day in major airports throughout the world, including my home airport, Zürich Flughafen in Switzerland. These are but a select few of the prestigious commissions she has been cherry picked to work on.

When asked where it all began, Katya answered that she hated, *hated*, **hated** glass to begin with. "In Israel a bachelor's degree takes four years, and I completed my degree in ceramics and sculpture. In the first year you must try every process before you start to focus in the years to come. When I worked with glass, I was coming away from each class with new burns, cuts, and even stitches, and at the end of the first year I vowed never to touch that awful material again. I concentrated on ceramics and sculpture. My degree show encompassed an installation of latex 'human' skins that had been peeled from the body."

Katya Izabel Filmus, Mila, kiln cast glass, 83 cm x 40 cm x 36 cm, 2021.

Photo by Yona Shlay.



I find this such a strange thing for her to say, because I know from having spent many hours with Katya that glass is a material that delights and excites her. When asked how she went from revulsion to compulsion, she explained, "As I finished my bachelor's in 2002, a nonprofit art organization rehabilitating children at risk approached me to work for them, initially as a teacher. The medium they were using to get through to the youths of Jerusalem was glass!

"With the little knowledge I had of the material, I endeavored to find out everything I could in a bid to work out what would be the best process to work with. Due to that, I am mostly self-taught, and due to the mold making skills I acquired while studying sculpture, it was only natural that I gravitated toward kiln forming. I had to learn the characteristics of glass and what makes it different from other materials. Since then, I have made every possible mistake in glass—*every single one!*—and I learned from that the most. That was a funny journey. It's ironic that I hated glass that much in the beginning."

After her first year in the nonprofit as an instructor, Katya was given a studio in their factory to work on her own practice and create designs on behalf of the charity. "For the studio, I was designing plates from float glass that were screen printed." Luckily for Katya, all of the tools and facilities were provided, and she was given the freedom to do what she wanted. Her artistic journey went on from there, and after attending Pilchuck in 2006 as a student and later as an artist in residence in 2008, she left the company in 2009 to complete a master's degree at the National Glass Centre/University of Sunderland, UK.

Expansive Kiln and Cold Working Techniques

During a short tour of her large studio in Tel Aviv, Katya described her techniques. "I use all the applications that are performed in a kiln—mostly glass casting, my specialty, plus slumping, fusing, and a bit of *pâte de verre* too!" When asked if she also uses cold processing techniques, she replied, "Yes, all types of cold working. For removing glass reservoirs, I use a saw. I am hand grinding and polishing, have recently bought a rociprolap, and have a linisher, which I love. I use a pneumatic hand grinder. Other equipment I have in the studio include a sandblaster, numerous kilns, and all of the other basic requirements involved with kiln forming such as a steamer for lost wax casting and a good deal more besides."

Katya's spacious studio is a dream for any artist working in glass. While there, we passed some of the pieces she was currently working on that had just come out of the kiln the day before. They were shaped like enormous capsules, the kind that would normally contain medicine, created in two parts that fit perfectly together using a mold-maker's key system. According to Katya, that is "challenging to do but so satisfying!"

Finding Inspiration and an Artistic Language

As we reflected on her new work, this intelligent, proud woman shared where her artistic language and inspiration are derived. "My work deals with identity and memory and the correlation between the two. I use the body a lot, because it is indicative of my themes. The body is a biological marker itself, but it also carries marks of memory such as scars, for example, that every individual accumulates over time. These marks are a map to your life, and these memories create part of your individuality. Memories are integral to the formation of personal identity in the same way that the history of a nation constitutes its national identity. My work is a journey that resides in that space between the two." This deep subject is close to Katya's heart.



Katya Izabel Filmus, Omphaloskepsis 4/4 Violin, kiln cast glass, 58 cm x 20 cm x 10 cm, 2020. Photo by Yona Shlay.



Katya Izabel Filmus, Omphaloskepsis Backpack, kiln cast glass, 32 cm x 35 cm x 17 cm, 2020. Photo by Yona Shlay.



Katya Izabel Filmus, *Kmusot, kiln cast glass*, 160 cm x 100 cm x 20 cm, each capsule 36 cm x 12 cm, 2021. Photo by Yona Shlay.

Delving a little further, I asked her to inform me a little about what she is currently working on. “I am remaking *Pain Killers* a piece exploring personal and national identity I made in 2010 that was sold to the Tyne and Wear Museum, UK. The work is comprised of eight glass pill capsules that function like time capsules. Each pill has a different personal component inside such as my hair, a cast of my navel, nail clippings, etc.—elements that designate identity.

“Written on the plinth is my Israeli identity number. Now that I have moved back to Israel in 2018, I wish to showcase my British identity that I have developed in tandem with my native country. I am creating ten pills, some of which allude to the time I spent in Britain, such as my English national security number and my handwriting in English. These all combine to create an identity, a unique self-portrait. These portraits show a dichotomy between the Israeli piece from 2010 and the new British one, a natural progression of the self. I want to express that our identities are in a constant state of flux.”

A lot of forensic material is incorporated into Katya’s pills. “In a thousand years’ time, society will have all the information preserved in my pills to clone me. People might be cloned in the future, but the one thing they wouldn’t have is a navel.”



Katya Izabel Filmus, *Glenfiddich Stag, kiln cast lead crystal*, 90 cm x 85 cm x 70 cm, 2010–2014. Photo by Chris Blade.

Katya also happens to be a very talented cello player, an instrument she took up seriously when she moved to the UK. I pointed out to Katya that upon moving back to her home nation, she didn’t know how to “speak” music in Hebrew. She hadn’t seriously learned to play and read music in Israel and told me that she has included a piece of Bach sheet music in one of her pills for exactly that reason!

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Discovering the Versatility of Glass

While Katya was deciding to leave the UK and move back to Israel, she was offered a job in Murano, Italy, at the eminent Berengo Studio. There she began consistently using her navel to create art. For Katya, the navel represents a connection to mother and is a symbol of contemplative transition. Katya Filmus arrived in the glass motherland of Murano with just two suitcases and a cello. All the things she had accumulated in her life had been whittled down to that. She began to systematically make molds of her belongings and cast them into glass with her navel included in each of those casts—a cathartic ritual symbolically composing a requiem to her forsaken life in the UK.

As I sat with Katya enjoying and savoring the tales of her personal journey, I asked her what her favorite thing in glass is at the moment. “In my practice I am most enjoying opaque black glass. As a material, glass never ceases to amaze me. I used to use transparent glass to get my ideas across. It was immense work to grind and polish my pieces to perfection, but the black glass fits me and my ideas. My work is about the body, and black glass shows every tiny crease and texture of the skin. After a small amount of finishing and a slight sandblast, it comes out completely perfect. I love it.



Katya Izabel Filmus, Omphaloskepsis Handbag, kiln cast glass, 19 cm x 20 cm x 8 cm, 2020. Photo by Yona Shlay.



Katya Izabel Filmus, Omphaloskepsis Ash, kiln cast glass lead crystal, 32 cm x 18 cm x 10 cm, 2020. Photo by Yona Shlay.



Katya Izabel Filmus, 1984, kiln cast glass lead crystal, 29 cm x 29 cm x 16 cm, 2008. Photo by Chris Blade.

“People come into my studio, and I ask them what they think my pieces are made from? They say anything except glass such as bronze, polymer, or clay until they touch it. That’s what fascinates me so much. Glass is such a versatile material, and I discover something new every time. That’s what I love about glass. You learn all the time. There is no end. There is no limit to the amount of knowledge you need to make glass. I work in fine art, though, and when glass doesn’t serve me I will turn to other materials, and I don’t feel like a traitor or anything like that.

“I think that the material should serve the purpose. Currently I am using cement, plaster, latex, and bronze as well as glass in my practice, although glass is the chief material. It is part of my DNA. Sometimes it is very liberating to use another medium, because every other material is so much easier to work with.”



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Success through Passion, Determination, and Innovation

When the subject of success came up, Katya described what she feels that an artist needs to succeed. "What you need to prosper is firstly determination, a belief that no matter what others say, that's what you will do. You must have immense passion, and you must be willing to make tough sacrifices. If someone can live without making art then they should, because it's such a difficult profession and takes so long to get recognized. Months can turn into years when developing a body of work in your own language. You obviously have to be talented, but talent is open to interpretation. Someone said that genius is 1 percent inspiration and 99 percent perspiration, and I believe that.

"Secondly, you must have something interesting to say—something new. You must stand out. There are plenty of gifted people out there. You have to develop your own personal interest from within your practice, and that voice has to be different and authentic."

In terms of subject matter, Katya Izabel Filmus realizes that hers does not appeal to the masses. "It is more for art connoisseurs. My audience includes glass collectors, museums, galleries, women's organizations, and public spaces such as hospitals and airports. I am patronized less by private collections and more by public ones.

Toward the end of our time together, Katya shared what she would have told her younger self. "Everything I wanted and dreamed of is going to happen, but it is going to take a long time and I have to be patient!" As we closed our meeting, it occurred to me that Katya's entire body of work is a bid for immortality in more ways than one. Keep an eye out for her traveling solo show, which will open in 2022.

G/A



Katya Izabel Filmus, *Body Mapping, Israel*, kiln cast glass, 41 cm x 36 cm x 5 cm. Photo by Yona Shlay.



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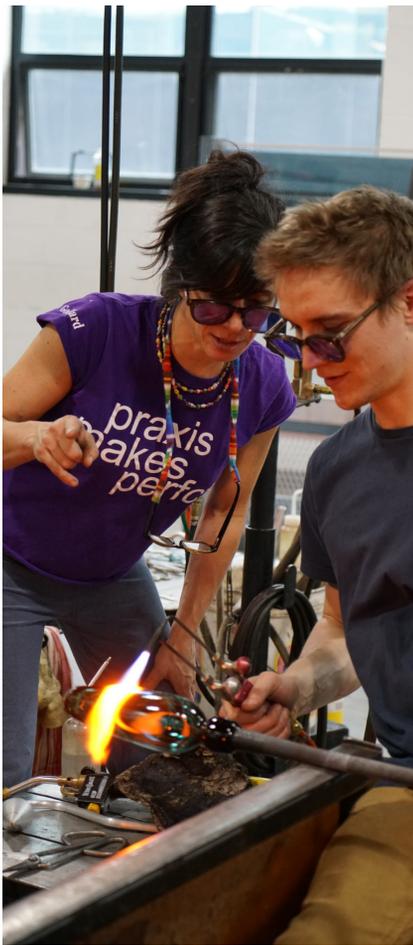


Dr. Julie Anne Denton received her doctorate in the combination of sandcast and flameworked glass for artists from the National Glass Centre, UK. She has learned from and worked with the best flameworking artists in the world including Emilio Santini, Lucio Bubacco, Vittorio Costantini, Gianni Toso, Shane Fero, Loren Stump, and Sally Prasch, to name just a few. She rounded off her education with Bertil Vallien of the renowned Swedish design house Kosta Boda (est. 1742).

Julie settled in Zürich, Switzerland, in 2010. From the center of the city she runs her design firm, www.Atelier315.ch, and www.ZurichGlassSchool.com, her online learning platform for sculptural flameworking skills. She works with a small team beside her who all care deeply about quality education, creativity, and business.

Dr. Julie creates glass and bronze work that resonates beauty, workmanship, and authenticity. Her key themes are people, folklore, nature, and counterculture. She has also received worldwide recognition for her storytelling skills as an artist and her technical skills as a glassmaker.

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<p>South America (8 Countries)</p> <ul style="list-style-type: none"> 36 Academic Institutions 6 Associations 16 Companies 61 Museums and artists 9 R&D Centers 	<p>80 Countries, 5 Continents</p> <ul style="list-style-type: none"> 406 Academic Institutions 217 Associations 553 Companies 269 Museums and artists 82 R&D Centers 	<p>Africa (9 Countries)</p> <ul style="list-style-type: none"> 25 Academic Institutions 5 Associations 6 Companies 3 Museums and artists 3 R&D Centers
		<p>Oceania (2 Countries)</p> <ul style="list-style-type: none"> 6 Academic Institutions 9 Associations 14 Companies 3 Museums and artists

Messages to My Younger Self

by Vicki Schneider

Think back to when you started out as an artist. If you could talk to your younger self, what advice or insights would you give yourself? Perhaps you would share words of encouragement, things to look out for, or ways of navigating through the challenges that you would face. How would you have benefitted from knowing those things earlier in your life? Would they have made your journey easier, more fulfilling, or perhaps even altered your direction entirely?

We asked four established glass artists to travel back in time to the beginning of their careers and tell us what they wish they had known then. Even though each artist's journey has been different, their lessons and words of wisdom might help us all as we blaze our own creative trails.

As we look forward to future "Artist to Artist" columns, we welcome hearing from you. If there are artists you would like us to contact or any questions you would like us to ask, please email theflow.maureen@gmail.com.

Carol Milne

Kiln Casting, Using the Lost Wax Casting Process
21 Years Experience in Glass Art

I would tell my younger self to think about why I want to make art. I'd ask myself, "Why do you want to do this?"

If, like most artists, you want to sell your work, then your art becomes a commodity, and your art making is a business. Unfortunately, I received no business training in art school. Why didn't I? Artists are supposed to be elite and above the fray of everyday life. That's great if you're independently wealthy. If you're not, you'll be left floundering. I suggest taking some business and marketing courses to be prepared.

Carol Milne, *Traverse*, lost wax casting,
LED lighting, 18" x 14" x 16", 2021.
Photo by the artist.



Carol Milne, *Wrapt*,
lost wax casting,
19" x 33" x 18", 2020.
Photo by the artist.





*Carol Milne, Sphere Delight, lost wax casting, 19" x 19" x 19", 2019.
Photo by the artist.*



*Carol Milne, Radiant, lost wax casting, 18" x 15" x 6", 2020.
Photo by the artist.*

I'd caution myself not to wait to "be discovered." Most artists are never discovered. Take control of the reins yourself and have a plan for how to pay your bills. Don't depend upon your art to be that plan. I probably worked for 20 years before I made any money from my work. That's a long time to go without food.

Most importantly, I'd advise my younger self that if your ego and your artwork are too intertwined, then you'll be forever fragile, always vulnerable. Keep the two separate. If someone dislikes your work, it does not mean they dislike you personally.

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Jen Fuller, Dandelion, pâte de verre, 12" x 12" x 3", 2021.
Photo by Alice Christine Walker.

Jen Fuller

Kiln Formed Glass Artist
with Specialties in Slumping and Pâte De Verre
10 Years Experience in Glass Art

Be fearless! Hold your vision, ignore naysayers, and expect that you'll have to be tougher than you ever imagined you'd have to be. I found, as a burgeoning glass artist, that it is easy to get mired in the imposter syndrome. Artists can spend too much energy perseverating on not having the right credentials, the right studio, or the right opportunities, and even on feelings of being unworthy to call themselves an artist.

As someone who has experienced debilitating fear at the workbench, I would tell myself and all artists that nobody knows better how to make your work than you. As simple as it seems, the less time you spend feeling that others know the way better than you and the more time you spend experimenting with process in daily practice, the faster you will move into the deeply innovative spaces of art making. Creativity is not just for the glass. It's an ethos to apply to one's entire approach to life. Invent yourself while inventing the work. The glass world has so much unexplored terrain yet to be unleashed, so be fearless.

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Jen Fuller, Lan Su Begonia, pâte de verre,
11" x 14" x 2", 2021. Photo by Alice Christine Walker.



Jen Fuller, Still Life of a Garden, pâte de verre,
6' x 4' x 3", 2021. Photo by Alice Christine Walker.



Jen Fuller, Nature Mandala: Autumn Burst, pâte de verre,
20" x 20" x 3", 2021. Photo by Alice Christine Walker.

Leslie Rowe-Israelson

Kiln Cast Glass and Fusing
40 Years Experience in Glass Art

Looking back, I would tell my younger self to never give up, to listen to others, but to follow your own path. Never let someone else tell you that you cannot achieve something. Forge on until your dreams are a reality. You are the leader of your destiny and with a little hard work and perseverance, the sky is the limit.

Be inspired. Let others give you small gifts of their creative spirit, but make sure you find your own creative insight. Never stop experimenting, as this will take you to new places you thought were unattainable, and your heart will soar.

Try to hang with like-minded individuals who inspire you, and you will feel joy from the interaction and hopefully trigger emotions that will be life changing.

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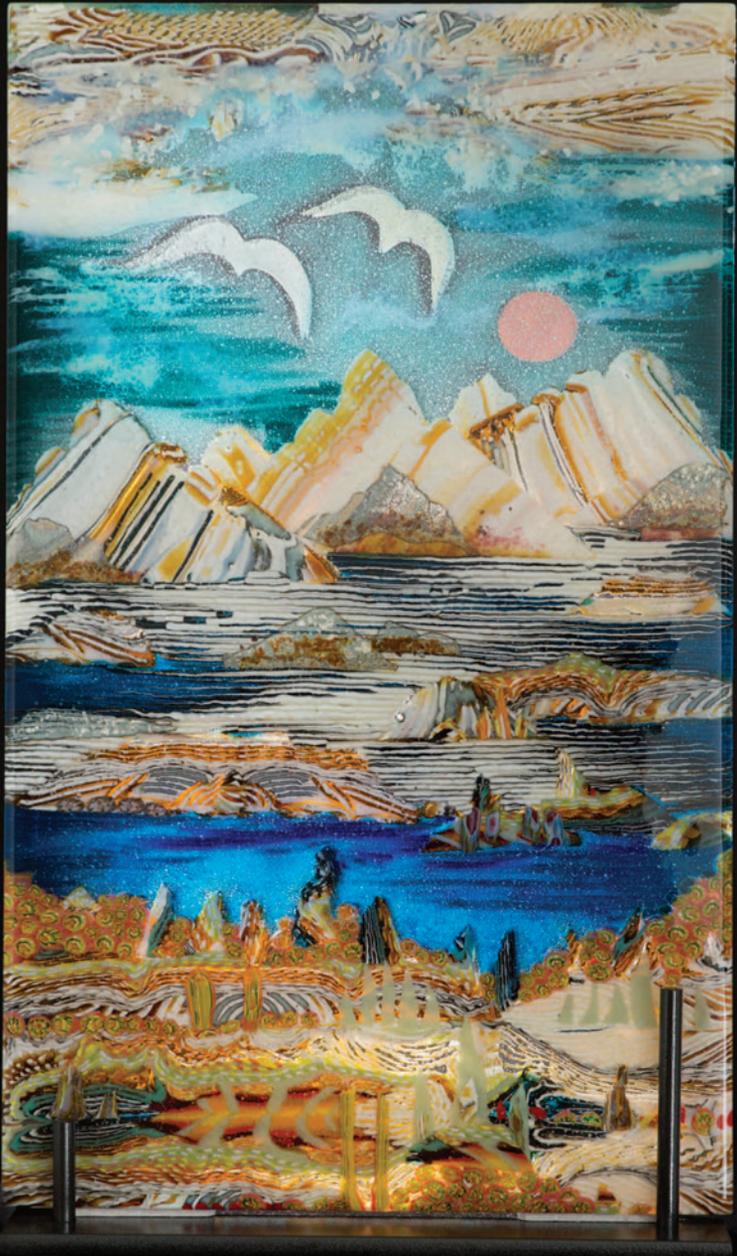
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*Leslie Rowe-Israelson, Orbs, blown out Bullseye Glass
Color Bars, 15" x 10", 2020. Photo by Kimberley Rae.*



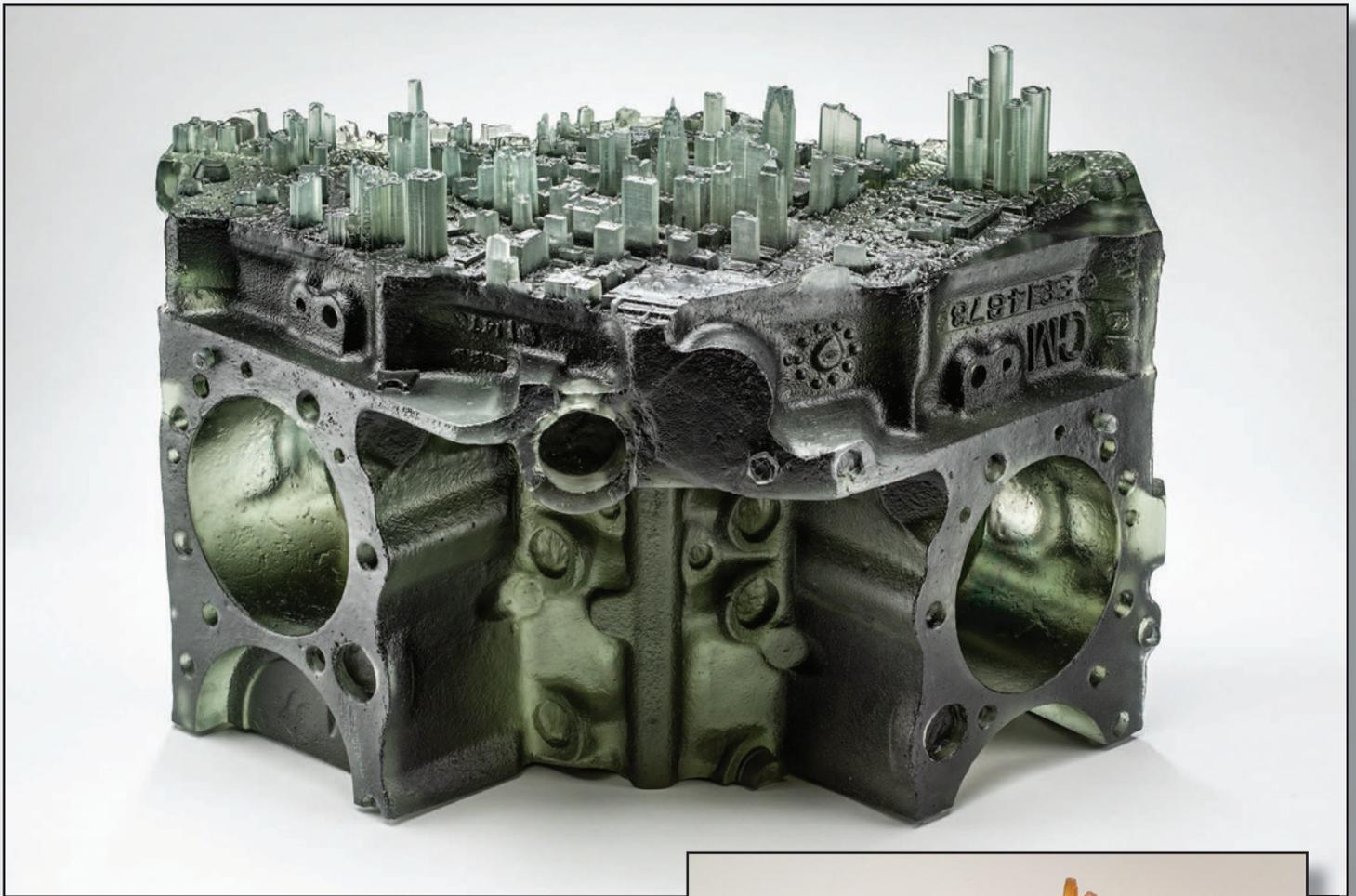
*Leslie Rowe-Israelson, Flight, blown vessel with feathers,
15" x 17", 2021. Photo by Kimberley Rae.*



Leslie Rowe-Israelson, *Flight Over the Rockies*, kiln cast glass, 30" x 17", 2021.
Photo by Kimberley Rae.



Leslie Rowe-Israelson, *Nesting*, blown egg, fused and slumped, 12" x 25", 2020.
Photo by Kimberley Rae.



Norwood Viviano, *Recasting Detroit*, 3-D printed pattern, kiln cast glass, 16.5" x 13.5" x 11", 2021. Photo by Tim Thayer/RM Hensleigh. Courtesy of Heller Gallery.

Norwood Viviano

Kiln Cast Glass

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Stay the course and truly learn from the challenges and mistakes that happen in the studio. I've gained most of my mold making experience through trial and error and by reaching out to peers in the field. Since leaving school, it's been critical to find supportive relationships within the larger glass community to facilitate continued dialogue about techniques and content.

Make time for research, whether it's experimentation in the studio, reading, or writing. It's so important to be inspired and take risks in the studio and in life. Understand and appreciate how life is connected to the things we create. As I've developed as an artist, I have a much better understanding of the work I create, which further helps as I develop and share new projects.



www.norwoodviviano.com

www.instagram.com/NorwoodViviano



Norwood Viviano, *Recasting Grand Rapids*, 3-D printed pattern, kiln cast glass, 22" x 17" x 29.5", 2020. Photo by Tim Thayer/RM Hensleigh. Courtesy of Heller Gallery.



Norwood Viviano, Recasting Pittsburgh, 3-D printed pattern, kiln cast glass, 16" x 10" x 13", 2021. Photo by Tim Thayer/RM Hensleigh. Courtesy of Heller Gallery.



Norwood Viviano, Recasting Houston, 3-D printed pattern, kiln cast glass, 14" x 14" x 13", 2019. Photo by Tim Thayer/RM Hensleigh. Courtesy of Heller Gallery.



Vicki Schneider follows the tradition of Venetian flameworking artists to produce decorative solid and blown glass art. Mainly working off-hand in COE 104 soft glass, she is inspired by her childhood spent on the Jersey shore. Her current bodies of work include *Mama's Garden*, composed of lifelike blown and solid flowers, and *Childhood*, vignettes celebrating the innocence of youth.

In 2009, Schneider opened Expressive Glass, her teaching studio in Buffalo, New York, to share her passion for glass with novice and skilled glassworkers. Since 2006, the artist has introduced more than 500 students to the magic of glass art and has studied with and hosted many of the world's most respected artists. Learn more about Vicki's work and her studio at www.expressiveglass.com.

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Featuring the latest from
the International Society of Glass Beadmakers

Bringing Glass Education Online Launching the New ISGB Education Platform

by Floor Kaspers, ISGB Education Director

As the new Education Director of the ISGB, I will admit that I was hesitant when we started discussions about our online education platform. Being used to in-person classes with a full hands-on experience made me question the benefit of online learning for glass art. However, doing a complete online version of *The Gathering* last June that included five online workshops was not only a steep learning curve for us as the ISGB, but also a great testing ground. That test had a clear outcome. Online education is here to stay!

Online Benefits to Students

Discussion participants pointed out several major benefits to the online classes. The obvious one is that without having to travel, it is more cost effective. Second is that the class can be taken at a time that is convenient to the student, which can even include the middle of the night. A third benefit is the ability for all students to see the process at the torch up close. A fourth benefit is to be able to watch sections again to get a better understanding. Here are a few quotes from our participants.

- "It is helpful to have the views that video recordings offer. Sometimes when viewing demos in person, it is hard to get a good view."
- "I am really pleased to be able to access the workshops in my own time and at my own pace. While I love in-person classes for the direct attention from the teacher, this method is less stressful for the time and very convenient."



Providing a Satisfying Experience for Teachers and Students

For several of the instructors, this was the first time they offered an online class. Their feedback was also important for us at the ISGB to learn how to make online teaching easy for the instructor while providing high-quality content for the student.

We used the feedback from the students and instructors to launch the ISGB Education Platform for a full experience of glass education online. Some of the highlights of opportunities available are yet to come, including:

- free online tutorials on making beads for Beads of Courage,
- relaunching our 2021 classes from *The Gathering* to a wider audience, and
- introducing new classes, including a beginners' class as well as some more advanced classes.



Corina Tettinger, Rain Forest Beads, an example from the artist's ISGB January 2022 workshop.



Marcy Lamberson, Bobbleheads. These are from the “Movers & Shakers Bobbleheads” class that will be offered in February.

Added Perks

Our online classes will be available for viewing for the students for a year. Every class will also include a private Facebook group for discussion and a live Zoom session. That way, we feel that we can achieve the best of both worlds—allowing students to work at their own pace with the online content but also letting them have interaction with other students and the teacher. The paid classes will be available to both ISGB members and nonmembers, with ISGB members receiving a discount.

In 2022 ISGB will be bringing a lot more educational content right into beadmakers’ and glass artists’ homes and studios through this new educational platform. We also look forward to offering many new workshops at our next online Gathering, June 9–12, 2022. You can check out the platform on www.isgbeducation.org

Visit www.isgb.org to learn more about the International Society of Glass Beadmakers, upcoming events, and how to become a member.

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NEW YEAR NEW HORIZONS

Photo courtesy of Maggie Bean Glass
Taken in Yosemite National Park

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ANTHONY AMOAKO ATTAH, A CONDUIT FOR CULTURE TELLING STORIES WITH FRAGILE FABRICS



by Joe Samuelson III

Storytelling is among the oldest methods of conveying history. The allegories, throughout time, have taken on forms such as song, dance, visual arts, and the written word. In Afghanistan, major historical events are documented with small handmade carpets often called “War Rugs.” Since its birth, hip-hop has been the vehicle used to spread the suppressed stories of black communities.

Western culture prides itself on the use of the written word to document history, but Ghanaians choose fabrics adorned with bright colors and vivid patterns known as Kente cloth as a part of their historical preservation. According to Ghanaian artist Anthony Amoako Attah, “In Africa, it’s hard for you to find the history of Africa in books. We can look inside a fabric, however, and tell which year it was made, what happened, and why they made that fabric.”

Kente, Adinkra, and the Akan

When you first happen upon Attah’s work, the vibrant colors and flow of the material are likely enough to grab your attention. However, a deeper understanding of the shapes and colors therein will offer the opportunity to interpret the artist’s work as intended.

Raised in the gold mining town of Obuasi, Ghana, Anthony identifies as Akan, an ethnic group spanning Ghana and several West African nations. Though differently styled Kente cloths exist across Africa, the brightly colored cloths patterned with geometric shapes are that of the Akan. Both the colors and the patterns project deeper meanings. For example, yellows and golds represent prosperity or fertility, whereas green denotes growth.

The patterns are unique in that they are each created for individual events or even people, as in the case of the fabric created for the first prime minister of Ghana, Dr. Kwame Nkrumah, and his wife Fathia. “There’s a cloth we call Fathia Fata Nkrumah (Fathia Deserves Nkrumah). The first prime minister of Ghana married a woman from Egypt. They made that cloth during his regime, but then they overthrew him. That’s when it became a political fabric, so I made a piece in glass to match the real cloth. I was trying to reference what happened during that time.”

Anthony Amoako Attah, Mirror, Bullseye glass, powder screen printing, 40 cm x 50 cm, 2020. Set on a rotating base, this piece is a self-reflection of the artist as well as an opportunity for viewers to ask how they see themselves. Photo by Araceli Rodriguez Álvarez.

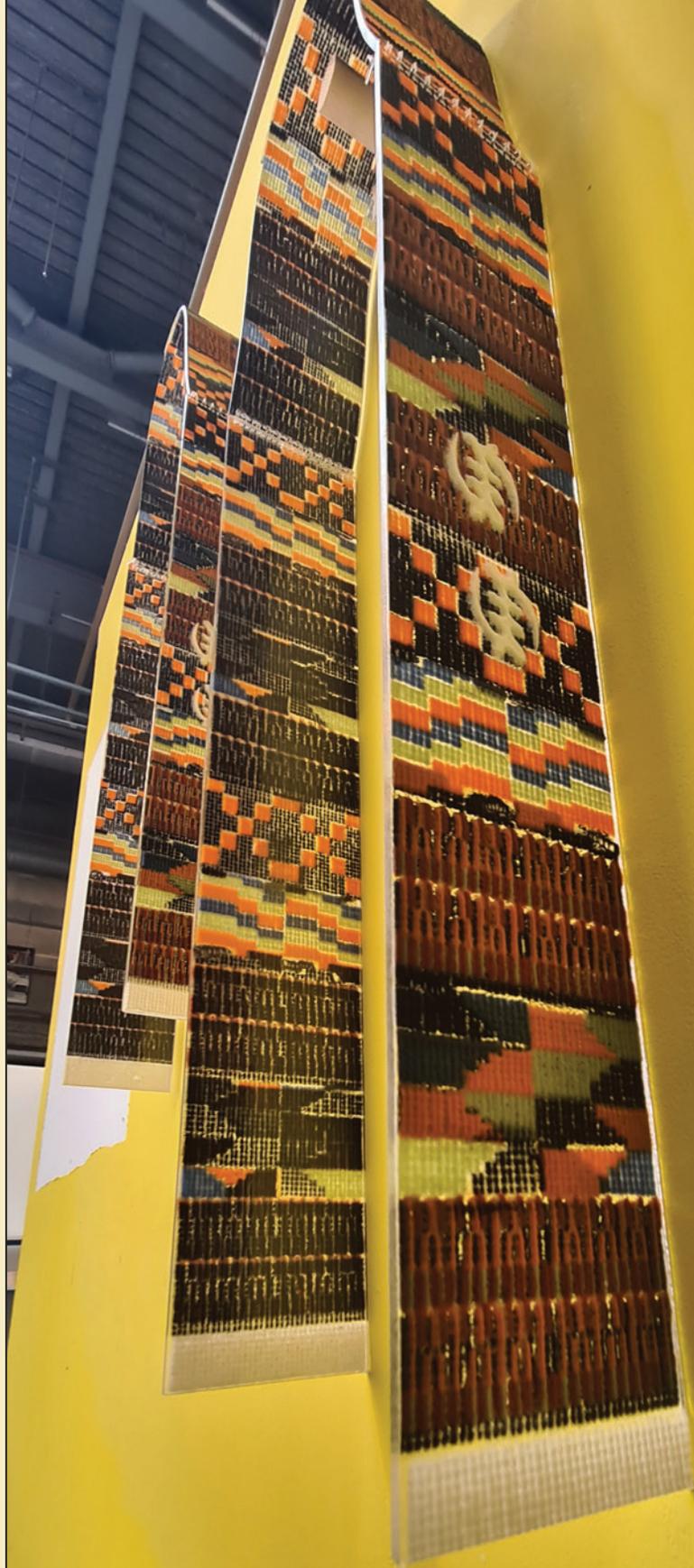
In addition to the representation offered by Kente colors and patterns, Akan Adinkra symbology offers a method of conveying sacred Akan philosophies. The Adinkra symbol of the fern, for example, represents endurance and resourcefulness. There are dozens of symbols that represent ideas like skillfulness, transformation, friendship, or the supremacy of God. Attah speaks to the use of the symbols in his work. "The symbols are trying to give more light to the fabric and add more value to it."

Enshrining Culture with Glass

When Anthony first arrived as a new master's student at the University of Sunderland in 2015, he had yet to work with the material. The bold move to choose a medium in which he had no experience kept him engaged virtually 24/7 his first year. "I had only one year, so I was always at the university. Always. I didn't have any social life. My concentration was just on how to learn the material, go back home, and teach."

Between hot glass methods and cold glass, two distinct themes emerged in Anthony's pursuit of his voice in glass. He found that the imagery and beliefs of his culture offered a form of expression unique to him. He also saw that the ever-changing nature of his own life would be the starting point for his work. "My work is mostly about life chances. It's about immigration. It's about integration. It's about the movement of life, and I'm using my Kente patterns and my Adinkra symbols to talk about it."

Anthony Amoako Attah, The Stole, Bullseye glass, powder screen printing, 80cm x 0.4 cm x 10cm, 2020. This piece represents the black community and the artist's own personal identity within the glass art world. Photo by Colin Davison.





Anthony Amoako Attah, Transition II, Bullseye glass, powder screen printing, 100 cm x 100 cm, 2020. The artist talks about his life from childhood to the stage where he finds himself now, referring to Kente designs, Adinkra symbols, and tartan fabric as stages of his life. Photo by Araceli Rodriguez Álvarez.

Attah's Ghanaian cultural identity grew even more important to him as a source of inspiration. Glass proved an ideal medium in which to preserve that identity, that story. "Glass has mostly been used as a container for storage. When you go to a museum, the most expensive pieces are all stored in glass to see through. With that concept in mind, I'm not going to put my piece in transparent glass. I'm storing the culture within the material itself."

Preserving Ghanaian culture in glass is a major aspect of how Attah plans to translate his western education into something with which his fellow Ghanaians can identify. In his preliminary PhD research, he read of a Chinese colleague who essentially copied and pasted the university's Western-focused education into her Chinese university back home. "When she taught her students, all the ideas and concepts were European concepts of art. I was thinking, how does she change that kind of attitude so it can adapt to a Chinese culture. I thought that the possibility of my going through the same process is high. I would be teaching a foreign culture instead of using my own culture. How would my people back home understand the material?"

Attah sought ideas for how he could incorporate his cultural identity into the material that he hoped to teach to his people one day. He found inspiration in African artists like Yinka Shonibare CBE, who brings African inspired garments to modern expressive forms, or El Anatsui, who takes iconic bottle caps native to his home in Nigeria and creates massive fabric-like installations. Attah also found inspiration within his chosen medium as he was drawn to Preston Singletary's use of Native American symbols etched into glass. "I started to do more research about how to use my own culture, blended with this material, so that when I go back home it will be very easy for my people to understand. When I looked at El and Yinka, and coming from the Akan, I told myself I could also weave my culture into glass. In my industrial arts foundation back home I did textiles, ceramics, and metals. I had a basic knowledge about weaving, so I decided to weave glass."



Anthony Amoako Attah, Puberty/Adolescence, Bullseye glass, powder screen printing, 80 cm x 50 cm, 2021. This work represents the adornment of girls with Kente designs during their initiation into adulthood within the rites of passage by Ashanti's of Ghana. Photo by the artist.

Fusing the Textures of Textiles

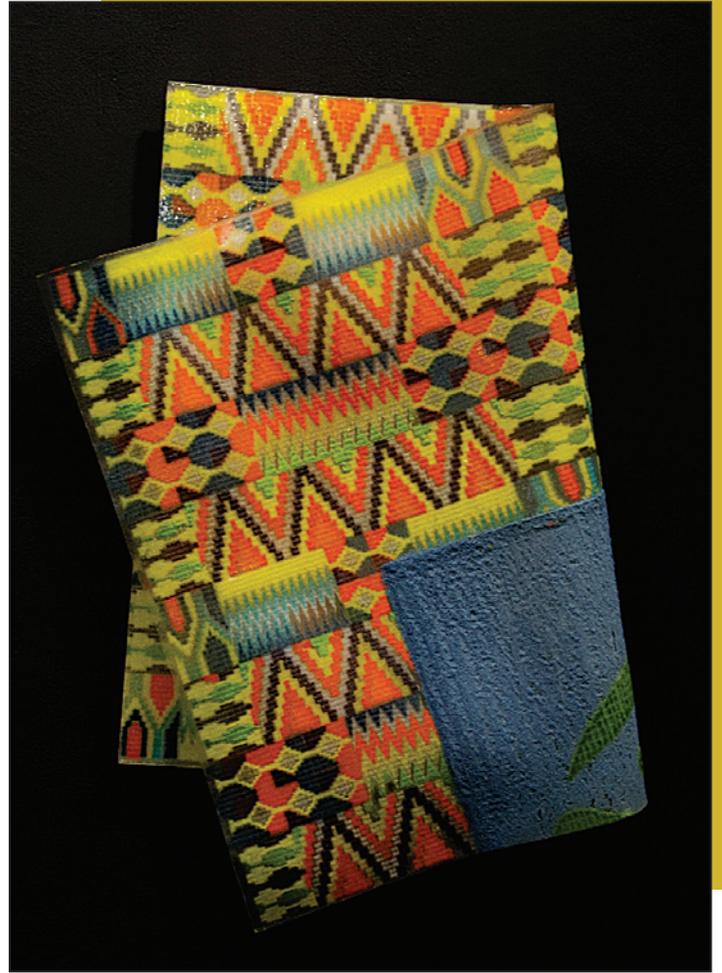
The initial idea was to be quite literal in the weaving of thin glass strands. Another experiment was the cutting, layering, and fusing of strips of glass to achieve the desired patterns. These methods, while practical in a logistical sense, were simply too expensive to play with in the hopes of finding his voice within the material. Anthony explains his vision: "I wanted a woven fabric. I wanted to feel that kind of roughness and texture, but I didn't know how I was going to do it."

Along with his academic supervisor Jeffrey Sarmiento, Anthony sought a different path in which he could create a crisp image that was also textured to the touch. Attah remembers the origins of what is now a style unique to him. "My supervisor Jeff is into screen printing with enamels on glass. I had done screen printing back home on T-shirts, but I didn't know how to do it in glass. With that, we were trying to find means to make glass look like the fabric.

"There was one student who was printing with powders. I told myself I was going to try. I went home, created my design, made my own screens, and did the first one. When it came out, ooooooh, it was so nice. When people saw the test piece, it was so nice. It was so nice." Repeating himself, on the other end of the Zoom screen, Attah was smiling like a schoolboy as he remembered opening the kiln that day.

Attah ran several tests of various methods and muses. "I went straight from my culture to the English culture. I was thinking this is a new culture I've put myself within, so I have to blend these two cultures together. I was looking for a fabric that represents the British people. I saw a fabric that is particular to the Scottish people—the tartan fabric—so I made a test piece of that. When it came out, oh man, my supervisor was happy."

With a bit of fine-tuning, Anthony settled on a technique of building his patterns on the computer, creating his screens, layering the powders, and fusing somewhere between a tack fuse and a medium fuse in order to maintain the physical textures he was searching for. "When I made those first pieces, they were smooth—still textured, but I wanted that woven nature. When I got the texture I wanted, I started on a larger scale"



Anthony Amoako Attah, *Myself, Bullseye glass, powder screen printing, 40 cm x 50 cm, 2021*. Part of *Rites of Passage*, this section represents the marriage stage of life. With Attah living in the north of England, the tartan fabric pattern is incorporated. Photo by Araceli Rodriguez Álvarez.

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Rite of Passage, a Life Cycle of Color

The Akan have a rich history of celebrating growth through the various stages of life. Attah explains these stages as seen through the eyes of Ghanaian culture. "You have birth, puberty, marriage, and death. When they're born, we believe it is coming from the ancestral world and they will go through this process again."

The artist has taken the cycle of life and applied aspects of his own experiences to one of his signature pieces entitled, *Rite of Passage*. Incorporating 20 panels in total, the piece is a meandering lifeline of experiences. The variation of Kente patterns and Adinkra symbols are the guides to the artist's life story.

- Birth. "When the child is born, we don't give them a name. After seven days, if the baby is alive, then we give them a name. On the eighth day we do the naming ceremony. When the baby survives, it's a kind of a victory. White and gold mean victory and happiness, so during that ceremony we wear white Kente. Therefore, I made a piece of white and gold to represent a newborn baby. The next color was green along with the patterns and symbols to show the growth of the child.

- Puberty. "From there you enter into puberty. This is when men and women are taught about adulthood. During this time, they are presented with gifts like Kente and other colorful things. I used the Kente and the other bright colors to represent that time.

- Marriage. "Marriage is beautiful and is celebrated with bright colors. Therefore, I represent that one with Kente as well. Also, because I am trying to put myself within it, I incorporated the tartan fabric. I am in the adult stage where I could get married, but I'm over here in England. I incorporated the tartan pattern to show this stage of my life. With that, I've gone with the dark colors of the traditional tartan.

- Death. "In Ghana, we believe that God has given you the age limit of 70. If you pass 70, it's a grace period. When someone dies in the grace period, we wear white and black. If you are younger, like in your 60s, we wear red and other colors, so I put them together in the piece.



Anthony Amoako Attah
amoakoattahanthony28@gmail.com
Instagram @Kente_Glass

Anthony Amoako Attah, *Marriage, Bullseye glass, powder screen printing, 12.7 cm x 20 cm x 30 cm panels, 2021*. Part of *Rites of Passage*, this section represents the marriage stage of life. With Attah living in the north of England, the tartan fabric pattern is incorporated. Photo by the artist.



A Parasol Built for Protection

When Anthony was finally able to return to his work after a Covid-forced hiatus, he found himself living near a less than desirable neighborhood. When he returned to a newly purchased car after having left it parked for a few days, Anthony found what was now a battered, rain-soaked shell of the former vehicle. "One day I woke up to see my car smashed. They smashed my car! Everything was gone. It was about racism. In that area, there are white people who are into drugs. They thought I was into that kind of thing. They feel like if you're a black person you're selling that kind of stuff. They thought I was competition."

Attah is a kind person. In speaking with him, the depth of both his compassion and vision are apparent as he relays his stories. With that type of mentality, it didn't take much for him to translate something terrible into something beautiful. "That was when I developed the umbrella. I call it 'The Protection.' I'm in a different culture, so with this piece I'm trying to embrace myself within my own culture. The umbrella represents a means of protection, and it reminds me about what happened."

Shaping a Future with Glass

Attah's vision is 20/20 and always has been, even in the face of the doubters. "Coming from Africa, you meet fellow African students. Most say they're doing engineering, science, or business programs. When I tell them I'm doing glass art and design, the question is, 'Huh?!' You see that kind of expression on their faces. It's strange to see someone coming from Ghana to do a program that's completely new to them, and then in art. They're thinking, 'What are you going to do? Are you going to get a job? Is there a market?'"

"My focus has always been to learn this material and to teach. I want to show my identity and also to expose my culture to a new medium. I want to represent the African identity within glass and say yes, we are also coming, and we want our presence to be felt within the material."

Joe Samuelson III has been a borosilicate lampworker intermittently for 20 years, both professionally and as a hobbyist. The focus of his work has largely been on functional glass in which he enjoys taking his own style and collaborating with artists who have unique aesthetics. In addition to his functional work, he produces a wide variety of glass both lampworked and fused. For more than a decade, Joe has been an avid collector of murrine focusing largely on glass butterflies.

Originally from Buffalo, New York, Joe has been an expat living across East Asia and the Middle East for 15 years, both teaching and managing English language programs. He is proud to be utilizing his BA in Journalism and experience as a writing instructor to venture deeper into the world of glass and glass art through his work with *Glass Art*® magazine. A variety of his glass art can be found on Instagram @number3glass.



Photo by Waku Ari Sasaki

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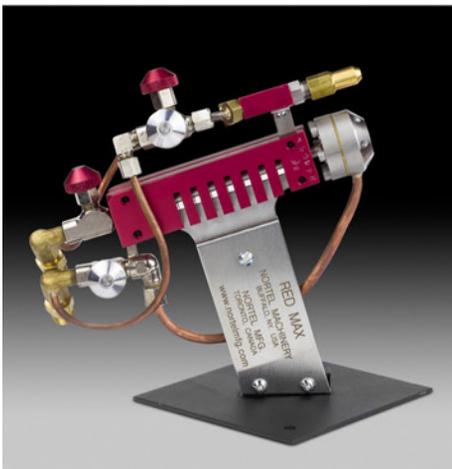
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The Contemporary Glass Society

Turning Twenty-Five and Getting Better Every Year



by Susan Purser Hope, CGS Chair

What a spectacular year 2022 is going to be for the Contemporary Glass Society (CGS). Not only has the United Nations designated it as the International Year of Glass, but it is also our 25th anniversary supporting studio glassmakers! From humble beginnings 25 years ago, CGS has grown over the years into a thriving and proactive society supporting a membership of over 1,000. Our members mainly live in the United Kingdom, but we have a growing international contingent as well.

Celebrating Contemporary Glass

To commemorate our quarter century representing and promoting contemporary glass, we are presenting a fantastic program of both online and live exhibitions held around the country plus a series of monthly themed events. These are in collaboration with other national glass organizations, galleries, and colleges that celebrate and promote the strength and glory of the glass community within the UK.



Ayako Tani, *Vision*, 2014.
Photo by Jo Howell.



Bruno Romanelli, *Solaris*, 2008.
Photo by Alan Tabor.



David Reekie, *Follow My Leader*, 2003.
Photo by the artist.

One of the major highlights is our featured exhibition, *CGS—Then, Now, the Future*. The last 25 years have seen dramatic changes and advances—political, technological, environmental, and social. This exhibition tells the history of both CGS and the world that it reflects with a chronological range of glass artwork from 25 of the United Kingdom’s greatest glass artists spanning from Peter Layton, David Reekie, Catherine Hough, Colin Reid, and Bruno Romanelli through to Christopher Day and Ayako Tani. Also featured are Elliot Walker, winner of the second season of *Blown Away*, and Erica Poyser, winner of our latest Graduate prize and a symbol of the future of studio glass.

The years are represented by a piece made during that year and demonstrate the advances and changes that happened each year as well as in the development of contemporary glass. People who visit the exhibition will be able to see modern history reflected through glass art!



Elliot Walker, *Bodge Job*, 2021.
Photo by Simon Bruntnell.

Collaborating to Promote Modern Glass Art

CGS was delighted to be asked to open the exhibition in the new Glass Museum, which is located in the Grade II listed former Stuart Crystal Glass Works in the national Glass Quarter in Stourbridge, England. The Museum, which opens in April 2022, will house the Stourbridge Glass Collection, one of the finest worldwide holdings of British and international 17th, 18th, 19th, and 20th century glass. *CGS—Then, Now, the Future* will run from July 22 through October 31, 2022.

Because we represent so many contemporary glass artists, CGS is also collaborating with the Museum to make a significant contribution to its growing Contemporary Glass Collection by commissioning a new piece of work in a competition open to all CGS members. During our anniversary year and the opening year of the Museum, we thought this was a wonderful opportunity to promote contemporary glass.

The winning artwork will be on permanent display in the new Museum, celebrating both contemporary glass and Contemporary Glass Society’s role in actively promoting it for over a quarter of a century. It will be installed and unveiled during the International Festival of Glass in August. Look out for *CGS—Then, Now, the Future* in 2022

G&A

Visit www.cgs.org.uk for more information on the Contemporary Glass Society its upcoming events, and becoming a member.

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Glass Lifeforms 2021



Evan Kolker, My Darlings.
Photo by Donald Felton.

by Sara Sally LaGrand

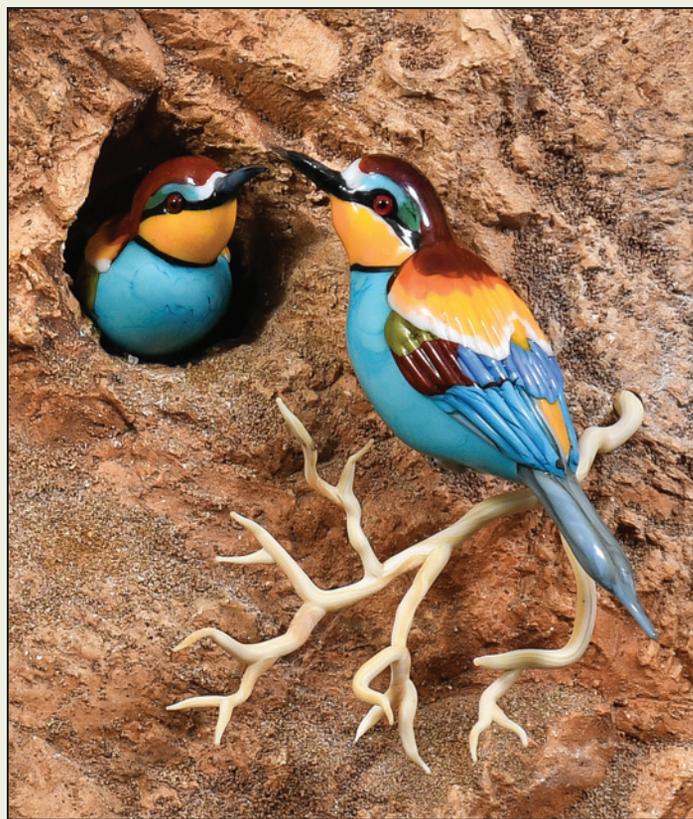
The other day I found myself trying to explain the kind of love affair glass artists have with the 19th century scientific glassworking father and son, Rudolf and Leopold Blaschka. I was struggling to articulate the depth of the passion that modern glass artists have for the collection of botanical and invertebrate glass models, so I finally whipped out the newest book of the Ware collection, *The Glass Flowers*, produced with startlingly perfect images by the Harvard Museum of Natural History in Boston. Harvard houses the largest collection of models in the world, mostly botanical but some marine. Of course, “Is that **really** glass?” is the first thing you hear from visitors. However, those of us who know, *really* know. The Lifeform 2021 exhibition is the love affair come to fruition.

Now in its third iteration, the Lifeforms exhibit is currently on display at the Fuller Craft Museum just outside Boston, Massachusetts. This year, the curator’s torch was handed off to artist and scientific glassblower Sally Prash. She inherited this honor from artist Robert Mickelsen, who curated the first two exhibits in 2013 and 2016. The purpose of Lifeforms is not only to pay tribute to the Ware collection, as well as the numerous collections of marine specimens in museums and university science departments around the world. It’s also an opportunity for artists working in glass to exercise their skill sets and use the Blaschka models as the inspiration point.

The Beginning of Glass Lifeforms

Founder Robert Mickelson says of the very first exhibition, “It was my idea, but I could not have done it without Heather McElwee and the Pittsburgh Glass Center (PGC). I raised the funds by myself for the first Lifeforms, set up the Web page, and selected the jury. Heather offered up the Hodge Gallery at the PGC and helped manage the enormous task of handling all the artwork. The first show was up from July to November of 2013 and was a smash success!”

The next version of Lifeforms was in 2016. Mickelsen explains: “The next year, in 2014, the GAS conference was in Chicago, Illinois. It was there that I heard about the Blaschka Exhibition that the Corning Museum of Glass was planning for 2016. It just so happened that the GAS conference would be held in Corning that same year. I suggested to Heather that we hold another Lifeforms show in the Hodge Gallery that spring and move it to a yet-to-be-determined space in Corning to coincide with the conference, and the second Lifeforms exhibition was born.



Kimberly Fields & Ronald King,
European Bee-Eater Nesting Colony detail.
Photo by Julia Fernandez.

“This time Heather wrote a grant to fund the show, and PGC took an even greater role in managing the show. It was held in the Hodge Gallery from February through May 2016, then moved to the Cedar Arts Center in Corning, New York, for May and June, so it was up during the conference. Again, the show was very well received, and we were bombarded with questions about when the next one would be.”

The current exhibit opened to the public on November 6, 2021, and runs through April 24, 2022. The Fuller, located 27 miles south of Harvard University in Brockton, Massachusetts, is the perfect place to house the exhibit and was picked specifically for location. “I wanted to give viewers the chance to see both Lifeforms and the models that inspired it,” says organizer Sally Prash. “The Fuller is the perfect location because of its proximity to the Ware collection.” It is also a delightful building nestled in a wooded area and wrapped around a pond. The building has excellent space for the collection. Its pieces are displayed with botanicals in one section and the invertebrates in the other.



Jessica Tsai,
American Cockroach
(*Periplaneta americana*).
Photo by the artist.

A Year of Exceptional Quality

The jurors for 2021 included Jennifer Brown, Collection Manager for the *Glass Flowers* at Harvard; Heather McElwee, Executive Director of Pittsburgh Glass Center; Astrid Van Giffen, the Associate Conservator at the Corning Museum of Glass; Susan M. Rossi-Wilcox; and Ginny Grieb. Before retiring in 2007, Susan curated the Ware Collection of Glass Models of Plants (*Glass Flowers*) at Harvard University’s Museum of Natural History. Ginny Grieb is a research scientist and lab manager who currently studies development of the spinal cord using a zebra fish (*Danio rerio*) model system at Syracuse University.

In a recent zoom session that replaced an opening event cancelled because of Covid, the jurors lamented that the exceptional quality of the work submitted made their jobs as jurors very, very difficult. Prash asked the jurors to judge the work using these four points—accuracy, aesthetics, presentation, and originality. All of the pieces needed to be accompanied by the scientific model’s name as well as a photo or drawing of the specimen depicted. While 123 pieces representing 16 countries from all over the world were submitted, only 52 were selected for the show. Lifeforms has the distinction of including all of the submissions on their website, and a quick perusal will help you understand the dilemma the jurors faced. “It could have easily been two exhibitions,” Heather McElwee lamented, “because the quality of the work was so high.” The rest of the panel quickly agreed.

Heather has the distinction of serving as juror for all three shows since 2016. “I didn’t think the criteria had to be weighted,” says McElwee, “so I leaned toward originality and creativity. It needed to be technically executed but not necessarily making a perfect rendition. While you still needed to understand what it was they were trying to recreate. I was also interested in how the piece was presented and how the artist positioned the piece or incorporated additional elements. It was that quality that really rose to the top for me.”

Jennifer Brown chose to view the pieces “blind,” which was an option using the Art Call jury software chosen by Prash. The software allows viewing either with or without artist bios and statements. Brown says she preferred to look for “accuracy and creativity” without knowing who the artists were but found the process more difficult than she expected. “Ranking and comparing the works was really challenging, and it was much more difficult than I thought it would be. I found myself revisiting the images over several days just to examine how I was ranking the criteria.”

Brown also felt that the quality of the work submitted was very high and expressed her gratitude for being chosen to help jury the exhibition. In her work with the Ware models at Harvard, she is often asked about practices of modern glass artists. “I often have visitors to the Ware collection ask if artists today still make work like the Blaschkas, and I point to this project as proof that they do.”



Deb Crowley, Clown Trigger Fish
(*Balistoides conspicillum*) detail.
Photo by the artist.

The Harvard Museum of Natural History was able to use images from recent publications to create visual displays for the Fuller exhibit. “Sally Prasch had requested a few models for display at the Fuller, but the governing board, Harvard University Herbaria and Harvard Museum of Science and Culture, decided against that,” says Brown. “Honestly, in my 10 years of managing the collection, we have only loaned out models once. The logistics and delicate nature of the models means that they do not lend easily. We were happy to provide images from our 2020 *Glass Flowers* book and the Museum of Comparative Zoology’s 2016 book to provide references for the inspiration of Liforms, “We were really happy to support this project and cross-promote for both our exhibit and theirs.” Brown says that currently they also have a new “Hands of the Makers” exhibit showing how they preserve and care for the precious models currently at the Museum.

Astrid Van Giffen also echoed this sentiment. While she weighed each criterion equally, she really wanted to understand what the artist was trying to convey. “I really looked for the joy, humor, and life they brought to each piece, while still looking for accuracy,” she says.

Celebrating the Creation of Realism in Glass

What about the future of Liforms? Heather McElwee bemused that she believed artists being inspired by nature is forever and that realism with a twist is what Liforms is all about. “We once had an exhibition at Pittsburgh Glass Center that was reviewed by an art critic by saying that realism is dead. I would disagree. This Liforms is not an exhibit of artists making exact replicas. It is inspired by the Blaschkas, whose job was to make exact models. These artists are not doing that. They are taking inspiration and putting their own spin on that. Whether it’s by placement or technique or even environments, these are incredible artists doing incredible things. I think Liforms will go on forever, because artists in history have always looked to nature for inspiration. I don’t see that going away ever!”

Robert Mickelsen echoes that sentiment. “As far as the Blaschkas being the inspiration, it has long been said that they set the bar, and no one has been able to match their technical or artistic prowess since. That sure sounds like a challenge, and sometimes that is all it takes. I think glass artists everywhere imagine themselves to be able to take nature as subject matter and interpret it in original and compelling ways. The scientific model idea is a particularly difficult challenge. Not everyone is up to it, but enough people are to make for a stunning exhibition.”

From the artist’s perspective, Italian glass artist Mauro Vianello says, “I have always participated in this competition, because it is a competition that tries to bring glass to extreme realism. I personally struggle to understand conceptual glassworks, even if I understand very well the difficulties in creating them. Realism in glass is very difficult. You must have the technique to do the work and the skill for the subject matter. I find this competition very interesting from that point of view.”



Demetra Theofanous
& Dean Benson,
Unbroken Hands of the Vine
detail. Photo by Dean Benson.



Wesley Fleming,
Pink Ladyslipper
(*Cypripedium acaule*).
Photo by the artist.

Robert Mickelsen,
Executioner Wasp detail.
Photo by the artist.



Emanuel Toffolo, Goliathus Composition.
Photo by the artist.



Caterina Urrata Weintraub & David Weintraub,
Mus musculus familia detail.
Photo by the artists.



Jupiter Nielsen, Vanilla tahitiensis.
Photo by the artist.

McElwee went on to say, "I don't think this exhibit could exist if it were not made of glass. There is no other material that can be stretched so thin that the petals of a flower appear translucent or make the texture of a lemon so precise. Only glass can achieve that."

G/A

The Harvard Museum of Natural History exhibit, Glass Flowers, reopened to the public November 26, 2021. The Fuller Craft Museum reopened November 6, 2021. Visit the following websites for more information on attending these exceptional exhibits.

- www.glasslifeform.org
- www.hmn.harvard.edu/glass-flowers
- www.fullercraft.org

Sara Sally LaGrand, award-winning artist and author, has had the great fortune to study glassmaking with many gifted teachers, both in America and Italy. She holds a BA in Glass Formation from Park University, Parkville, Missouri. Honors include awards from Art Westport, State of the Arts, The Bead Museum of Washington, D.C., Fine Line Gallery, Images Art Gallery, and the Kansas City Artists Coalition.



LaGrand has taught flameworking all over the world and has work published in many books and magazines. Her art can also be found in international public and private collections. Visit www.sarasallylagrand.com to find out more about the artist.

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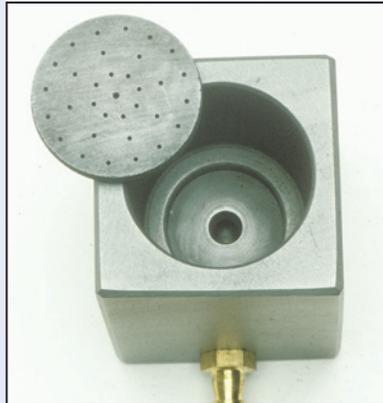
Creativity

NEW TECHNIQUES AND EQUIPMENT: VACUUM ENCASEMENT

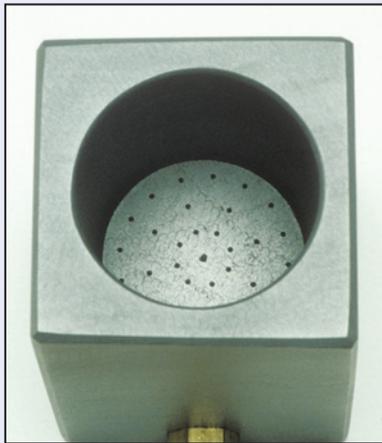
by *Milon Townsend*



Stump sucker



View in cup, disk on edge



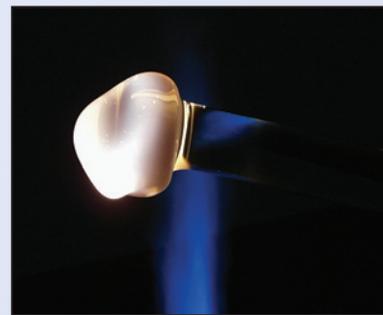
View in cup disk in place



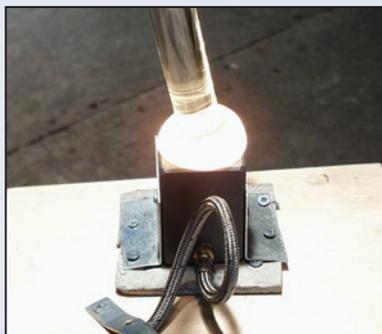
Horse with quarter



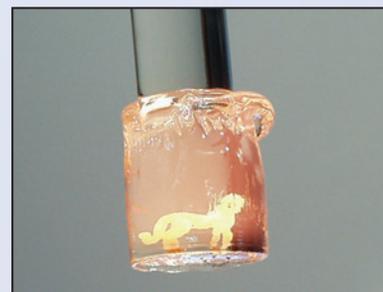
Preheating object before encasement



White-hot glass



Dropping hot glass over cup



Horse, encased



Horse in simple marble

Learning a new technique opens a world of possibilities and new ways of thinking. I'll usually just incorporate something new into my existing vocabulary until I get used to how it works, then get a good handle on how to do it quickly, effectively, cleanly, and successfully. Once I've been doing it for a while and have pieces using that technique lying around, it's had a chance to infiltrate itself into my subconscious way of seeing the world and my progress in it. The new technique begins to inform my process of ideation when the images and ideas of new work are first formed. I think that it is natural to take some time to digest and internalize what can be done with a new skill, and make it a part of how you see, understand, and conceptualize your process.

Simple Versus Easy

Encasement, or encapsulation as Paul Stankard refers to it, is the process of creating a finely detailed miniature glass sculpture and surrounding and embedding it in a clear mass of glass. That element may then be incorporated into various sculptural forms, from a simple rounded paperweight to complex cold worked and laminated assemblages.

Soft glass is an ideal material for the encasement process itself, as it is so well suited to flowing around the artwork being encapsulated with minimal distortion of the image inside. Hard glass, also known as borosilicate glass, is a much harder row to hoe. It is much stiffer and flows less well around the internal image element. If, however, you can figure out how to do that step successfully, using a borosilicate encasement seems to have much broader applications that are much easier to accomplish.

Glass artist Loren Stump, a great innovator in our field, engineered a simple inexpensive tool that makes encasement available to the common glassworker without expensive heating and vacuum machine components. It is simply a graphite cup with a perforated internal base. Connected to a hose, the artist creates the vacuum by sucking just as the hot, clear glass is dropped over the top of the cup, encasing the colored miniature object inside the cup.

Simple and easy are not synonyms. It can be brutally difficult to get the temperature of the object just right and to get the clear glass hot enough to flow well. Loren demonstrated the method for me, and I then proceeded to dive right in. Occasional successes kept me going, but after a couple of years and literally thousands of encasements, I was only up to about 20 percent being satisfactory pieces. I had incorporated them into a series of perfumes and paperweights that we took orders on from the galleries that represented our work. After two years, I'd carefully and painstakingly made and then thrown away hundreds and hundreds of pieces. It was like hitting your head against a brick wall—it feels so good when you stop. I stopped.



Two scenes from Milon's Area 51 series



Gaining Insight Over Time

Sometimes I find that by giving it a break, I can gain an insight into the process by providing distance and emotional separation so that I'm not all caught up in subjective concerns. Time provides distance, which in turn provides objectivity, making it possible to make much better decisions about current challenges.

I had let the encasement process lie for some years—five or six, maybe—and one cold, wintry night I had some students from the glass program at Rochester Institute of Technology visit my studio. I wasn't feeling great, but I wanted to entertain them with something moderately interesting, so I did an encasement. It was perfect! Over the next six months or so, I did the occasional encasement, with pretty good success. Those pieces turned into interesting work, my *Area 51* series, for a show at Tom Philabaum's gallery in Tucson, Arizona.



(Clockwise from bottom left) *Midnight Mother* (detail), *Space Dragon with Astronaut*, *Double Fish Vortex Marble*, and *Martini Glass with Floating Olive*

Over the following 15 years, I had good success with the technique, using it only to create specialized elements for complex sculptures, such as *Midnight Mother*. I also developed a series of shot glasses with clean lines and an encased element in the bottom. Those started as a result of my coming across some encasements I'd thrown in a drawer all those years ago, then figuring out what I could do with them. This was a typical experience during the 2020 Covid-19 situation, when we had time to noodle old ideas into fresher, newer work. It's also nice that glass doesn't ever go bad, so no matter how long it's been languishing in a dark corner of the shop, it can always come to new life with a new way of looking at it.

Opening Doors to New Possibilities

More recently, I've done some collaborations with Raven Copeland, who is well known for his marbles. I can prepare an encased element and give it to him to incorporate into the deep center of one of his vortex marbles, which he can then return to me to add outside embellishments. The *Space Dragon* is a good example of that, with an astronaut inside a marble, around which is wrapped a dragon with rocket engines on his wings and wearing a complete air breathing system. We've done a couple dozen collabs, all of which have sold. That does provide motivation for doing more, I must admit.

We just finished a piece that had an encased scuba diver deeply embedded in a dichroic vortex marble for a special client. I knew that I had another customer who would be interested as well, so we did two. The first will remain a simple, round, clean sphere, but the second will be embellished externally on top of the marble with shallow fish and corals found near the surface. Below it will have the creatures and sea life found in deeper waters.

When we posted images of the diver, we had many responses asking for something in the same vein with an astronaut. Since we'd done one in the past and I'd done some shot glasses with little space men, that's a direction we're going to pursue soon, say this winter.

Having the ability to add encapsulated figures and images in the work has both deepened and broadened what I have to offer, as well as opening doors in my mind to new possibilities so that I perceive more potential wherever I go and in whatever I see. With a very high success rate, I am now able to use this approach to add an element of depth and visual complexity to my work that had seemed inaccessible to me before.

GA



Scuba Diver Marble



Milon Townsend is a self-taught artist with over 45 years of experience in the field of glass artwork and education. He is known for his torch and kiln worked sculpture featuring the human form. Visit www.intuitiveglass.com or Google "Milon Townsend images" to view more of his work and go to thebluemoonpress.com for his educational materials. You can also e-mail milontownsend@gmail.com. The sequence presented here is excerpted from Milon's upcoming book on Creativity.

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Artist credits: Christopher Jefferies, Cathy Shepherd, Robin Larson, Helen Badarak, Gerald Spehr, Michael Panetta, Carmella Jarvi, Tim McFadden, Peter Wright, Marcus Thesing, Gordon Huether, Sarinda Jones

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Achieving Fine Detail in Stained Glass Flat Panels

Techniques for Maximizing the Use of Copper Foil Tape and Overlay



The final pattern, numbered and color coded.



Cutting the pattern using foil shears.



Cutting the pattern using a combination of foil shears and craft knife.



Precision cutting only using a craft knife.



Lee Richards, *Birds of a Feather*, 27" x 27".
The final composition contains 508 pieces and is mounted on a custom-made light box hung on the wall.

by Lee Richards, PhD

Stained glass, unlike most art media, has limitations for what is possible when designing and constructing a composition. When using lead came construction, the widths of the seams are very consistent by virtue of using machine-extruded lead. There is some flexibility in fitting the pieces together, but there are limitations in terms of complexity of the shapes and sizes of the glass pieces, because the came can only bend so far. Copper foil, on the other hand, offers more freedom to introduce intricate bends and turns, thus forming pieces that cannot be accomplished using came.

Advantages of Using Copper Foil Over Came

The challenges with using copper foil are three-fold. The first is to achieve a consistent solder seam thickness and smooth intersections. The second, which is a function of the first, is to wrap the foil tape evenly so that each edge of each piece is equal in width. The third is to cut each piece of glass so that they all fit snugly and evenly together over the entire composition.

When using copper foil, intricately designed and cut glass pieces can be made allowing fine details while retaining the essence of a stained glass panel or three-dimensional construct. However, the greatest advantage of copper foil versus came is the diminutive scale of individual pieces that are possible. In this article, we'll look at techniques I have developed that enable individual pieces smaller than 1/8" (3.17 mm) in length and width. Furthermore, by using a combination of tape and foil overlay, individual pieces as small as 1/16" (1.59 mm) are possible.

These techniques are especially useful when creating a pattern that requires six to eight pieces per square inch to achieve the amount of detail desired in the composition. Working with glass pieces this small is a challenge that requires a great deal of patience, extremely high cutting and grinding skills, and the proper tools, materials, and technique. With all of the design and construction steps included, it typically takes me about two and a half hours per piece from start to finish.

Unlike traditional flat panels with full solder joints on both the obverse and reverse sides, the special overlay details described here are only soldered on the obverse side. If the piece is hung at a window with natural glass behind the panel, the result is indistinguishable between the two when viewed from the obverse side. When viewing the reverse side, the viewer would have to look very closely to realize that there is no solder joint in the finely detailed areas of the panel. This is not a consideration for many of my pieces, because they are designed to fit into custom-made LED light boxes that hang on the wall like conventional artwork. The reverse side is not designed to be seen.

Designing a Stained Glass Panel

The process of designing a flat panel is very much the same as any other stained glass artwork. The difference is largely in the amount of detail added to the composition. For example, designing animals can be done with very fine expression that can show individual scales on reptiles or feathers on birds. Rather than relying solely on the patterns and textures of selected art glass to create "impressions" of these details, the artist can actually create them as individual pieces of glass.

A deviation from the standard way to design is in the method used to transfer the pattern to the glass. Many artists use a light box and trace the pattern directly onto the glass using a Sharpie or ink pen. For high definition and intricate detail, however, this method does not work well due to the precision required. I finalize my designs by placing graphite transfer paper between the design drawing and using 80-pound Piper's Pattern Paper. The paper is available in 5 foot by 24 inch rolls as well as 8 inch by 11 inch or 24 inch by 36 inch sheets. Some have a water-resistant adhesive-backed coating that keeps the paper from slipping off the glass while sawing or grinding. The pattern paper, once transferred, can then be cut with foil pattern shears.

For very intricate bends, the cutting is best done by hand with a sharp blade such as a No. 11 blade X-Acto knife, keeping in mind the required 1/32" spacing to accommodate the foil thickness. Lastly, the individual pieces are either glued or otherwise applied to the selected glass area using a light table or LED flatbed tablet. Since art glass can be quite expensive, I try to position the individual pieces of the same type of glass to maximize efficiency. This isn't always feasible, but the illustrations show some examples.

Another factor is the type of glass selected. Many highly textured glass sheets are difficult for accurately cutting small or intricately shaped pieces. I paste the cut pattern piece on the underside of the glass sheet, which is usually flat. This requires the paper to be pasted or glued on the reverse side.

Glass Cutting and Grinding

Glass cutting is typically done in many ways and artists usually have their own preferred method and sequencing. Keeping in mind that high precision is required, it often takes a good deal of back-and-forth cutting and grinding to get the finished shape exactly right. The process usually takes me three or four trips to the saw or grinder to make it fit as closely as possible.

My tools vary from piece to piece, but generally I cut glass in four steps. First, I rough-cut with a hand pistol grip cutter and trim the pieces with mosaic nippers, both wheeled and flat. Breaking is accomplished with grozer and running pliers, but small complex pieces are impossible to break by hand.



An example of pattern pieces glued to the glass and ready to rough cut.



Pieces that have been rough cut and are ready for the grinder or saw.



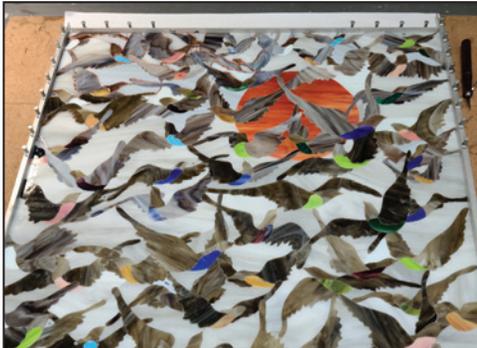
An illustration of the precision that is required for difficult cuts to fit together.



Starting the layout on the base pattern.



A progressive shot of the layout on the base pattern.



Beginning the foiling process.



An illustration of the overlay design patterns.

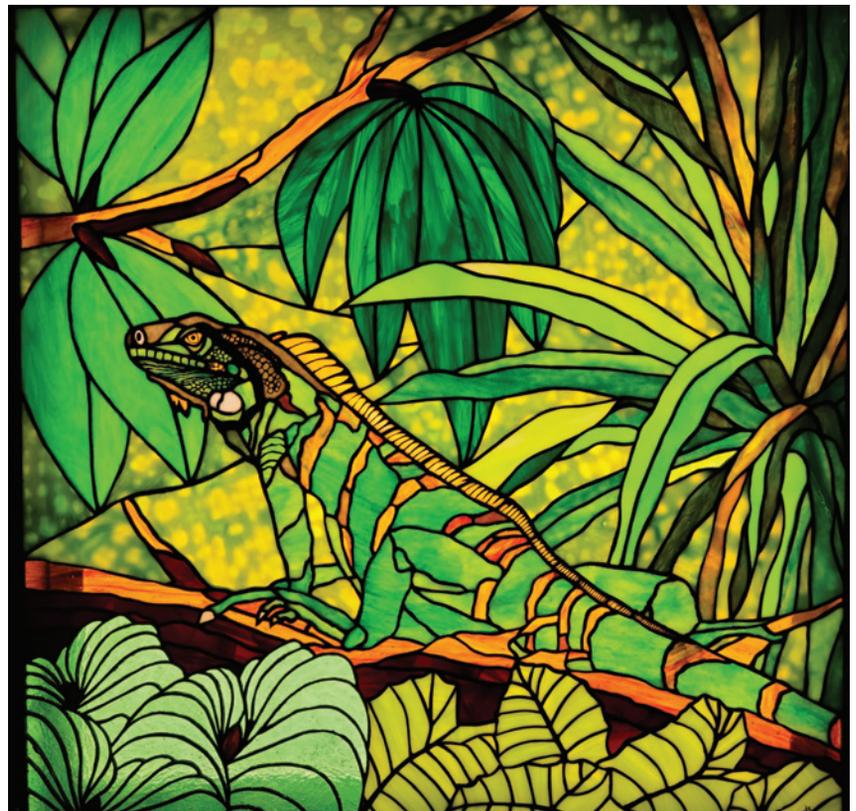
I try to keep pieces of the same part of the composition together in my cutting sequence—for example, background, vegetation, etc. Next I use a ring saw in combination with three grinders with 1", 3/4", and 1/8" bits, respectively. To achieve square and parallel cuts, I use a precision band saw. Third, I align adjacent pieces together before laying them down on my base pattern. I then fine-tune them so they fit together as precisely as possible. Finally, I use diamond-coated hand files to ensure that the fit remains precise before and during the foiling process.

Basic Copper Foil Tape and Overlay Techniques

Leaded panels use extruded double U-shaped lead called came to fit the design pieces together. The glass edges fit into the U-came, which is sized slightly wider than the thickness of most art glass. Finishing the seams requires glazier putty to hold the glass together firmly and add weather resistance. Solder is used where the pieces of came abut each other. The copper foil method requires that each piece of glass be wrapped fully around its entire perimeter with the foil folded over equally on the front and back sides of the glass. When the pieces are abutted together, the resulting seam is soldered along the entire perimeter to hold everything together. The former method is excellent for geometric patterns with lots of straight line seams and glass that will be painted and fired. The latter method is what we look at here.

Depending on the complexity and shape of the design, foiling is perhaps the most difficult and time-consuming aspect of the entire process. The type of foil tape selected is dependent on several factors. With apologies to professionals and artists who are familiar with this information, I want to cover a few basics to inform casual readers or hobbyists what the choices are.

Copper foil tape comes in 36-foot length rolls and varies in widths from 3/16 inch to 1/2 inch and thicknesses from 1.0 mil to 1.25 mil (1 mil = 0.001 inches). The foil tape has an adhesive backing that comes in black, silver, or copper, and the choice of width is dictated by how wide the artist wants the finished seams to be. The color of the backing will make a difference if the glass is transparent, since the color will show through the edge of the glass appearing copper, silver, or black. The choice should be consistent with the color selected for the solder seams. Foil rolls are also available with scalloped edges for decorative seams.



Lee Richards, Iguana on a Branch, 27"x 27", another example using the overlay technique mounted on a custom-made light box hung on the wall.

Copper is also available in sheets, with and without an adhesive backing, in the three colors to match the tape. It is also available with dichroic coating for an iridescent finish. There are a wide variety of gadgets and tools to hold the foil tape to make it easier to dispense and apply to the glass edge. I prefer to do all of this by hand, because it gives me greater control over how the foil tape is applied. A final point to using these various foiling gadgets is that it is virtually impossible to accurately foil very small or complexly shaped pieces of glass.

When working with pieces that have sharp, tight curves, folding the foil tape around an inside curve is extremely difficult without breaking the tape. I apply finger pressure very gently against the edge of the glass, then use a fid to burnish the foil tape to the glass surface. For very small curves, I use a rather unorthodox tool that works beautifully, regardless of the radius of the curve. I cut off the bottom of an old sneaker sole and chisel it to a point. That piece of rubber is used to fold the foil tape evenly into the small curve without breaking it. With a little practice, it works extremely well. It doesn't work all the time, however.

Options for Applying Copper Foil Overlay Sheet

For inside curves with very small radii, I use overlay foil sheets. By applying a small piece that overlaps the portion of the curve that can't be foiled with tape, I use an X-Acto knife to hand cut the curve on both sides of the glass to match the tape edge. It must then be burnished down very well, or it will lift off of the glass when soldering.

For very small pieces, there are several options to successfully apply copper foil. The first method is to apply a piece of copper foil sheet overlay to each side of the piece. Trim the foil sheet to the approximate size of the piece and fold it over onto the edge of the glass. Then using an X-Acto knife, carefully cut around the perimeter of the piece to the same width as the other pieces. Once the foil is fully burnished, peel out the middle and you are left with what appears to be a fully wrapped piece of glass.

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The second method is used for creating small, intricate details. It is similar to the method described in the preceding paragraph, except I use a larger piece of glass. From this I will create very small details that appear to be individual components of a larger element. If, for example, I want to make scales on a reptile's chest, I would cover the entire piece of glass with sheet overlay. A pattern can be easily drawn directly on the copper face. Like the above example, I use an X-Acto knife with a very sharp point to cut the details into the copper. Using the knife as I would a pencil, I cut out my pattern, then peel away the unwanted area of copper to reveal the pattern on the glass. This technique lets me vary the width of the "seams" to any size and shape desired. Once soldered, it looks exactly like actual soldered seams between individual pieces of glass.

Using copper foil sheet overlay in this manner often increases the overall size of the piece and may require additional grinding of adjacent pieces. In order to make the pieces align perfectly, I hold the foiled piece over the adjacent unfoiled piece on my layout, and using a Sharpie fine point, I trace the exact outline. Finally, I fine-tune the unfoiled piece to that outline.

Soldering Basics

All of the fine work to this point in the process leads into the part that can make the piece look great. Soldering is the "glue" that creates the seams and holds everything together. You can always tell a well-done stained glass piece from a poorly done one by the quality of the soldering. Look for solder lines that are consistent in width and height and are without bubbles, wavy heat lines, or hot iron marks. Likewise, the intersections should be smooth and evenly flowing into each other.

As mentioned earlier, the width of the foil tape, when folded over the face of the glass and abutted to the adjacent pieces, determines the width of the joint. Because my patterns are typically landscapes or animals with a great deal of detail, I prefer to use 3/16 inch foil tape for the narrowest seams between the main pieces in the composition. The seams are even narrower for the details, because I hand cut the foil overlay to the desired thicknesses. The contrast between the two techniques of foiling and soldering allows the details to be delicately emphasized.

There are also choices in the types of solder alloys that can be used. They vary in the ratio of tin to lead for stained glass use. This ratio determines the melting point and the time the solder stays plastic, the period between the solid and liquid phases where the solder is workable. The ratios of tin to lead solders used in stained glass are usually 50/50, 60/40, and 63/37. The melting points for these are 402°F, 368°F, and 361°F respectively. The 50/50 solder is plastic for a shorter time than 60/40, whereas 63/37 turns liquid and back to solid immediately (the eutectic point) with no plastic range.

Solder is also manufactured in an alloy that is lead free. This is typically used in projects where your skin comes in contact with the finished pieces, such as jewelry, boxes, and kaleidoscopes. It also melts at a higher temperature than those used for stained glass. Lead-free solders may contain tin, copper, silver, bismuth, indium, zinc, antimony, and traces of other metals.

Soldering irons vary in size and wattage. Some types have built-in rheostats, or these devices can be purchased separately to control temperature. Also, there are models that are wireless with pistol grips. Many have replaceable tips that vary in size and shape.

Choosing the Right Solder and Tools

The composition that you create and the level of detail in the design will dictate which solder type and soldering iron will be the best selection for your construction. I prefer a temperature controlled soldering iron and use both 50/50 and 60/40 solder. The former works best for fine detailing, since it cools faster than the latter. The reverse is true for the main seams where a longer plastic period allows better workability, especially when running longer solder seams and intersections.

Tip selection is also important in a complex piece. I prefer to use chisel tips—3/8 inch for the main seams and 1/4 inch for the fine detailing. I have also used a 1/16 inch cone tip for the very tiny detailing to avoid solder "bridges" between two foil lines that are very close to each other. The technique for soldering these very small, tightly spaced foil lines is a bit tricky. I use the smallest tip available, and after fluxing I lightly load the iron tip with 60/40 solder and just touch the foil line rather than trying to run a seam. Care must be taken to not load the iron tip too much. I continue this throughout the area of fine detail. Once this area is completed, I solder the perimeter of the larger piece with a wider tip and load the solder so that I end up with a much wider, higher solder bead. The contrast between the two is dramatic once light shows through the finished piece.

I solder and clean the entire obverse side keeping the solder approximately 1/2 inch from the edges. If I am using a zinc U-channel for the edges, I attach them at that time. My preference is to miter the corners of the zinc rather than using a butt joint, since the former lends itself to a more finished appearance. Once all of the zinc is cut to fit the perimeter, I solder each intersecting seam to the zinc, taking care not to let the solder form unsightly blobs on the zinc.



Lee Richards, *Eagle at the Falls*, 24" x 36", another example of conventional copper foil construction mounted on a custom-made light box hung on the wall.

Now the panel has the rigidity to enable picking it up and flipping it to the reverse side. The entire soldering and cleaning process is repeated. It is important to note that neither water, soap, nor glass cleaner should be used until all of the soldering is completed and all of the flux removed.

Fluxing and Cleaning, Essential Final Steps

Before any soldering can be done, all copper surfaces must be fluxed. Flux is a chemical cleaning agent used before and during the soldering process. The main purpose of the flux is to prepare the copper surfaces for soldering by cleaning and removing any oxides and impurities. Oxides are formed when metal is exposed to air and may prevent the formation of good solder joints. The flux also protects the metal surfaces from reoxidation during soldering and helps the soldering process by altering the surface tension of the molten solder.

Flux may be solid, paste, gel, or liquid in form. I prefer the gel flux, because it remains in the semiliquid form longer and enables larger areas to be fluxed before it dries. Also, I can see where I have fluxed due to the higher viscosity on the surface of the copper. I find that the liquid form dries too quickly and the paste form is too messy and more difficult to apply to small copper seams. I apply the gel with a small paint brush for better placement control and find that it goes a lot farther than the other flux types.

There are various flux cleaners available, but they essentially all work the same way. Regardless of the type of flux used, once satisfied that the solder seams are cooled and finished to your liking, it is important to clean all fluxed surfaces very thoroughly. I work on relatively small areas at a time. Once I have soldered a portion that is about a 4 to 6 inch square, I let the solder cool and flush it with cleaner. It can be applied by spraying or gently dabbing with a lint-free cotton towel.

It is important to remove all of the flux remnants, so I go over the areas several times until the surfaces no longer feel sticky or oily. I take special care when cleaning the overlay areas, since it is easy for these very tiny solder seams to be pulled off the glass. If these seams of copper foil are well burnished during the foiling stage, they are less likely to lose their adhesion during cleaning.

Once the piece is finished and thoroughly cleaned, I apply a patina to all of the solder seams and joints. The most common patina I use is black, but I have used copper on some pieces. This is purely a matter of choice and another design decision the artist makes. I personally have found that once light is transmitted through the piece, all of the the seams look black anyway, but stained glass should be designed for high as well as low light transmission.

The final step is polishing the piece. I use a finishing compound similar to thin wax that I apply with a lint-free cloth, then buff it off. A buffing wheel attached to a Dremel device is useful, but care must be exercised due to the fragility of the thin overlay. I do this process over a light table or LED tablet pad to ensure that all of the fine joints are thoroughly cleaned.

G&A



Lee Richards, *The Peacock*, 19" x 24", designed and constructed before developing his overlay technique. All 1,250 pieces were cut and foiled by hand individually and illustrates the lower limit of what can be achieved using conventional methods of copper foil construction. This piece is made with various types of art glass using copper foil.

Lee Richards has been working with the difficult medium of stained glass for many years from his home studio and has developed unique techniques that enable very complex and realistic creations. Most pieces contain between 300 and 2,500 hand cut, intricate pieces of glass wrapped in copper and soldered together. His original design themes are animals in their natural environments, landscapes, seascapes, and a collection of "erotica" focusing on female figures in various milieus.



The artist has won numerous awards for his stained glass artwork in local and national juried shows and was recently awarded the title "Artist of the Year" by the Gargiulo Art Foundation for 2019. Many of his pieces are built onto custom-made LED light boxes, allowing them to be hung on walls and backlit. They are generally flat panels but also include three-dimensional pieces such as lamps. For more information on Lee and his glass art, visit www.facebook.com/lee.richards.108889.



SGAA 2022 Summer Conference



A class taking place at St. Joseph Church at the 2019 Conference in San Antonio, Texas. Photo by Mark F. Heffron.

Save the Date

SGAA 2022 Summer Conference
June 26–29, 2022
Renaissance Toledo Downtown Hotel
444 N Summit Street
Toledo, Ohio 43604

Due to federal travel restrictions, the Stained Glass Association of America (SGAA) Board of Directors was forced to cancel SGAA's 2020 and 2021 Summer Conferences. The Board is making plans for the 2022 Conference that, with luck, will take place as scheduled. We all crave and need a conference to get "caught up" and chart a new direction for the association.

Heading to Toledo

The General Assembly of the United Nations officially approved the Resolution to declare 2022 the International Year of Glass (IYoG). In the spirit of that resolution and with a focus on bringing together art, industry, and science, the SGAA will be heading to Toledo, Ohio, to partner with Pilkington North America and the Toledo Museum of Art for our 2022 Summer Conference.

Toledo, known as "The Glass City," is home to Owens-Corning, The Libbey Glass Company, and Pilkington North America. Toledo is also the home of "Klinger" of M*A*S*H fame, Katie Holmes, Scott Shriner of the band Weezer, and Gloria Steinem. The city's main attraction is the famous Toledo Museum of Art, which includes a significant glass collection and room to engage with the community as well as host our own workshops and events. If we are lucky, the Toledo Mud Hens will also have a home game scheduled during our stay.

A Treasured Tradition

For more than 100 years, The Stained Glass Association of America's annual summer conference has served a vital role in the industry, bringing together artists and studios from across the country to exchange ideas and perspectives. Each year's national conference provides an educational and creative hub for glass artists, historians, manufacturers, and architects.

Whether you're an established studio or just learning stained glass, an architect or a building caretaker, or making public art or small panels for private homes, our conferences have something for you. Please plan on joining your friends and colleagues, both new and familiar, for an exciting, informative conference that will bring every facet of our industry together in celebration. **G&A**

Visit www.stainedglass.org for more information on the Stained Glass Association of America, SGAA's upcoming 2022 Summer conference, and how to become a member.

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Celebrate the return of spring with the amazing glass art found in The Flow® 2022 Nature issue. From a gallery filled with striking reproductions of plant and animal life to tips and techniques that help artists take their own work to a higher level, there's something for everyone in this fabulous issue.

Above
Whispered Still Life
by Kathleen Elliot
Photo by Keay Edwards
Featured in the
2001 Nature Gallery

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Walking in a Winter Wonderland



Artist: Steve Granieri

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Artist: Gabriele Bryant of Glass ArtScapes LLC

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*From our Glass Art® family to yours,
we want to wish you a
Happy Holiday and a Joyous New Year!*

*Thank you to our readers for being part of our Glass Art®
community and to our contributors for sharing your glass
within our pages. Most of all thank you all
for your support of our publication!
Here's to new glass in the year ahead!*

The Staff of Glass Art® magazine

Introducing a new addition to the Cress line of Glass Kilns

GLS2618E Clam Shell Glass Kiln



Mark Hufford

The kiln I ordered from Cress far exceeded my expectations! Teaching in my home studio with smaller kilns just was not providing the space needed to fire students projects. This rectangle design is perfect! The shelf measuring 16 1/2" x 24 1/2" is just the perfect proportion! I highly recommend the GLS2618E for both home and retail studios. The combination of the brick base and 9" deep fiber lid allows more flexibility in my firings!

- 2.5" High temperature ceramic Fiber lid
- Firebrick floor and side walls
- 2.5" High temperature ceramic Fiber lid
- Slanted control panel for easy use and view
- Lid elements mounted in quartz tubes to help eliminate kiln dust
- Side elements for more even heat distribution
- Bartlett advanced 12-key controller with 6 programs (8 segments per program)
- Heavy duty built on stand with locking casters and bottom shelf
- Safety locking lid support
- Long-lasting solid-state relays

Model	Volts	AMPS	Temp.	Inside Dimensions	Outside dimensions	Plug type
GLS2618E	240VAC	26	1800 °F	26X17.5"X9 "	45" W x 30" D x 46"	6-30P

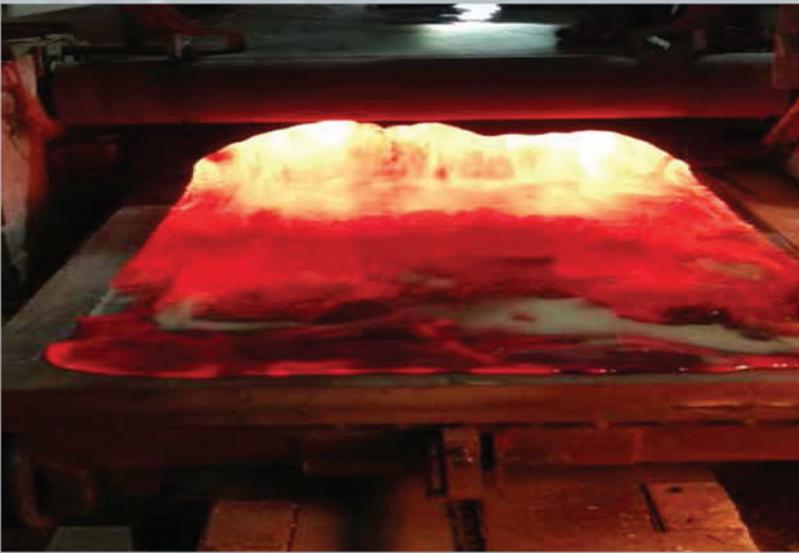


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