

Image Credit: Yoko Shimizu

Yoko Shimizu

Vibrant Matter Phase II: Tides of Light

BioBAT Art Space

Opening: Saturday, May 6, 6-9 pm

May 6, 2023 - September 9, 2023

Free and open to the public Saturdays from 12-5 pm BioBAT Art Space
140a 58th Street, Brooklyn Army Terminal, Building A

Brooklyn, NY —

Nature / Biology / Technology

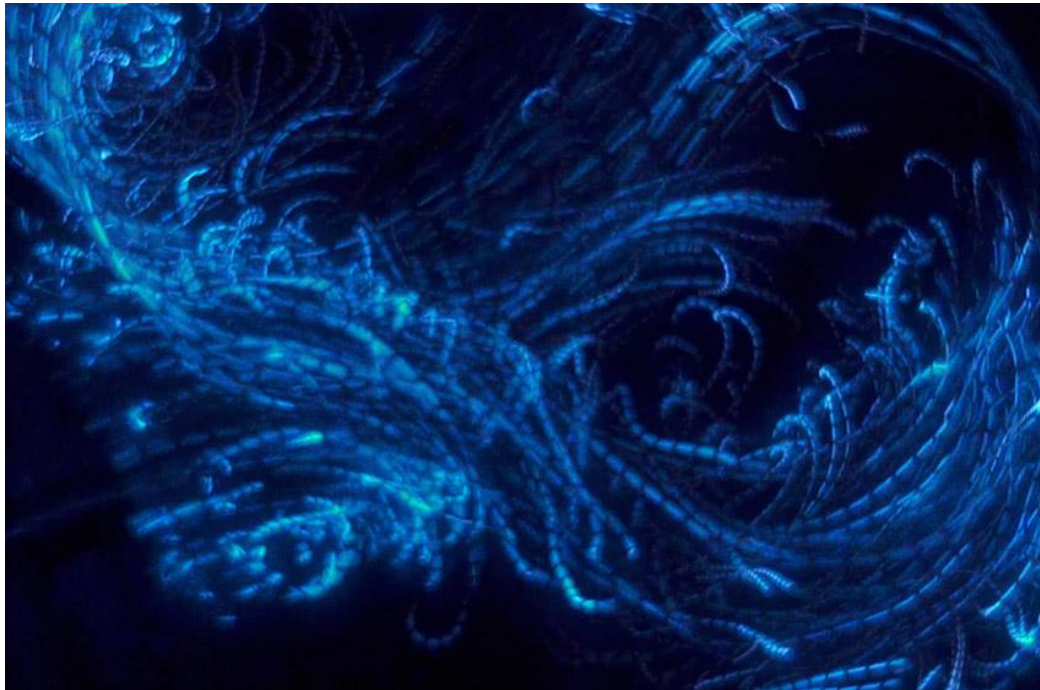
"Tides of Light" is a contemplative exhibition by Japanese bio-artist and scientific researcher Yoko Shimizu. This collection of work invites viewers to appreciate how non-human life can inform the artistic process and be welcomed as an intelligent and creative collaborator. Drawing inspiration from the scientific exploration of natural elements, Shimizu makes the invisible visible, creating a series of installations that explore the intelligent properties of living systems.

Using Artificial Intelligence and biotechnology, Shimizu co-creates with organisms such as slime mold, acetobacter, and other microorganisms. She translates their patterns into sound-pieces and stunning

visualizations that can be experienced in the dark. In her work “Tides of Light,” Shimizu collaborates with the remarkable qualities of bioluminescent algae.

Through the delicate use of materials such as paper, glass, and water, Shimizu creates a tranquil and immersive environment evoking the transience and fragility of life. The exhibition offers new perspectives on the artistic exploration of scientific research methods and biological data. Shimizu visualizes non-human perception, creating empathy for the non-human world and allowing us to learn from and collaborate with nature. "Tides of Light" is a poetic ode to the beauty of impermanence and the power of nature to inspire and rejuvenate the human spirit.

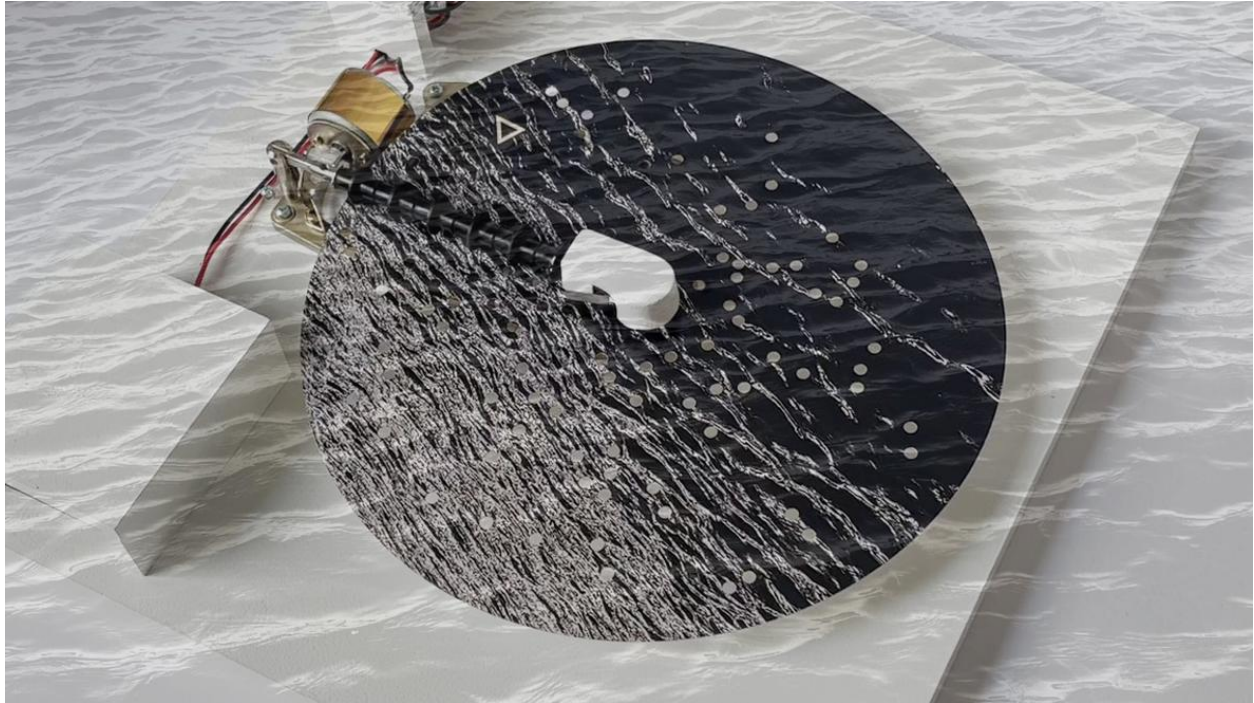
Tides of Light (2023)



Video Still from *Tides of Light*
Image Artwork Credit: Yoko Shimizu

New work featured by Shimizu includes ***Tides of Light (2023)***, a video installation where the artist collaborates with the remarkable qualities of bioluminescent algae. This multi-media installation includes aluminum prints from the video, video installation, and real vials of bioluminescent sea algae.

Echoes from the Danube (2023)



Echoes of the Danube (2023)
Image Credit: Yoko Shimizu

This installation explores the use of art and music to analyze and express the health of river environments. Water samples from the Danube River were tested on chromogenic media for the detection of microorganisms. The resulting patterns were then encoded onto music discs and played, with their echoes resonating through the timeless sound of chimes on a music box.



Photosynthegraph (2015 - Present)

Shimizu combines photosynthesis and photography to print high-resolution images on plant leaves using the plant's own organic chemistry as the photo-sensitive agent. Photographic negative transparencies are attached to plant leaves and exposed to LED UV lights, allowing the plant's chloroplasts to create starch in the negative space of the graphic patterns. The leaves are then treated with Iodine to render visible the images created by the chloroplasts.

The work harnesses the power of photosynthesis, one of the most important chemical reactions in the history of our planet, as a novel photographic instrument, revealing nature as a creative collaborator.

Image Installation shot of *Photosynthegraph*
Image Credit: On White Wall

In the Balance (2022)



Installation shot of In the Balance
Image Credit: On White Wall



Installation shot of In the Balance
Image Credit: On White Wall

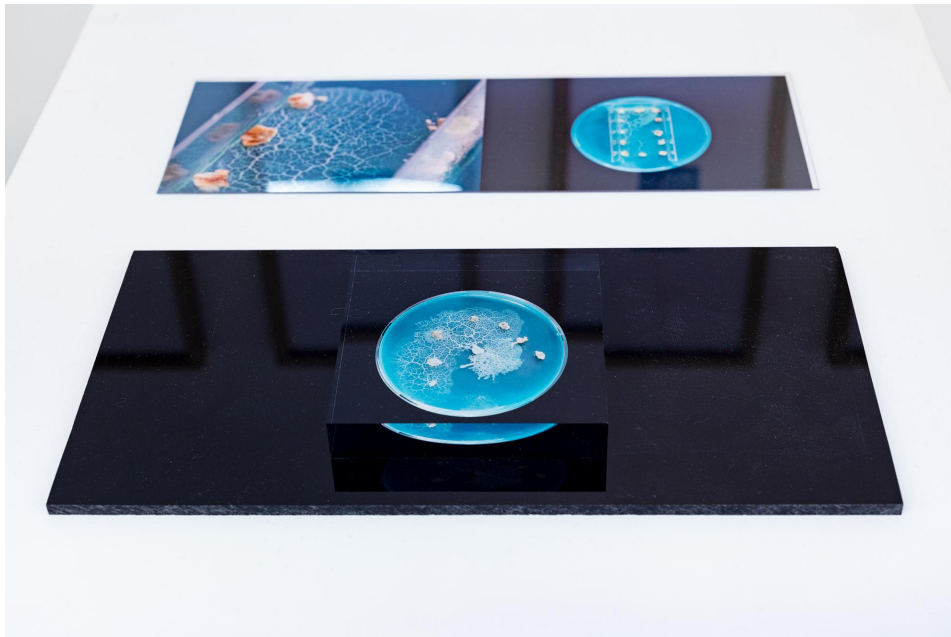
A gravity-defying installation of 168 water-filled borosilicate glass test tubes designed by the artist, this piece suspends water in upturned open vials through the delicate interplay of atmospheric pressure and water's cohesive and adhesive properties known as "capillary action."

Luna (2023)



Installation shot of *Luna*
Image Credit: On White Wall

Luna (2023)



Installation shot of *Luna* (pedestal detail)
Image Credit: On White Wall

Luna (2023) Photographic prints, Acrylic Block Print, Laser cut Paper, Piece A multi-part installation created from slime mold, a single-cell organism that has been shown to possess the ability to solve complex computational problems. This piece comes from Shimizu's current body of research, which asks: What is the minimum unit of creativity and intelligence? This work invites us to re-examine how we define and recognize creativity and intelligence in non-human life forms.

To Space, From Earth (2023)



(2021) 40 x 40 inch, aluminum print with DNA Capsule, provided by Twist Bioscience

This piece explores biodiversity, space and our potential to become a multi-planetary species. It is composed of two parts:

Part 1: A digital collage of photographs from *Anatomy of Flora*, printed on an aluminum panel.

Part 2: An aluminum capsule containing dehydrated silicon-based synthetic DNA on which the digital collage (above) is encoded.

This visual message to space stored in a capsule is one of four created by [Beyond Earth](#), a female artist collective exploring the frontiers of art, biology and space, Co-Founded by Yoko Shjimizu. One of these capsules (not the one exhibited here) was launched to the International Space Station (ISS) in 2022 on a SpaceX mission in collaboration with the Moon Gallery Foundation, and will be planted on the moon in 2024.

To store the artwork in DNA the image is first digitized into binary digital code (eg, 001101). This code is then converted into a DNA code sequence represented by the letters A, T, G and C. The encoded DNA is synthesized using a silicon-based platform and preserved in a specialized aluminum capsule built for spaceflight.

DNA is nature's oldest and most resilient, and stable data storage method. Preserving information in DNA form requires no energy inputs or maintenance. The format is ultra-dense, space efficient, and lasts hundreds of thousands of years, making it the ultimate time capsule for any digitized artwork. For these reasons, *To Space, From Earth* will endure the test of time and serve as an important record of human history and the biosphere.

This exhibition is supported by The Japan Foundation of New York, Ars Electronica Futurelab, The Hall Family Foundation, SUNY Downstate, New York Economic Development Corporation, and BioBAT Inc.
Special Thanks to: Tom Hall, Doug Chapman, David Jadric, and Eve Barro,

ABOUT



Yoko Shimizu (Japanese, born 1977) is an artist and researcher based in Linz, Austria and Tokyo, Japan. Shimizu studied Biology and Chemistry in Kobe University. Yoko has received numerous awards for biology-inspired installations that integrate art and science, and has held exhibitions in countries around the globe. She is also a media personality on international art and music programs in Japan, and has given talks and performances in global events such as TED, FITC, and Ars Electronica. Yoko is the founder/director of the Matsudo International Science Art Festival and a co-founder/director of Beyond Earth. She is currently an artist and researcher at the Ars Electronica Futurelab in Linz, Austria, managing creative innovation projects for corporations and government organizations worldwide.

Vibrant Matter is Shimizu's first major solo exhibition in the United States. It is informed by over a decade's worth of Shimizu's artistic research exploring the intersection of biological systems and emergent technology. Shimizu has received numerous awards for biology-inspired installations that integrate art and science and has held exhibitions in countries around the globe. yokoshimizu.com

Image of the artist Yoko Shimizu
Image Credit: Laura Merrill

Elena Soterakis, is a multifaceted creative professional and recognized thought-leader in the international contemporary bio-art world. As founding Director of BioBAT Art Space, a one-of-a-kind art gallery embedded in a biotechnology incubator, she established a vibrant community of artists, scientists, and technologists who collaborate on innovative projects that create new knowledge and future literacy.

With her own artistic practice, Soterakis explores the complex relationship between humanity, technology, and nature, creating thought-provoking creative productions, including paintings, sculptures, and large-scale installations. Her work invites viewers to reflect on their role in society and the potential for positive future building. Her work has recently been exhibited at the Museum of Design of Atlanta, Torrence Art Museum, San Luis Obispo Museum, and Spring Break Art Show LA.

Soterakis, along with Shimizu, is the Co-Founder and Director of Creative Productions at Beyond Earth, a collective co-founded with fellow artists Yoko Shimizu and Richelle Gribble to create space-bound artworks with a feminist anti-colonist perspective on space exploration. Beyond Earth has collaborated with Space Perspective/NASA and Twist Bioscience. On June 18, 2021, Beyond Earth launched their large-scale art installation *Living Light* to the stratosphere and was retrieved from the ocean of Cape Canaveral, FL. *Living Light* celebrates ocean life and AI technologies. This space flight was made possible with Space Perspective, a commercial space-flight company.

beyond-earth.org

BioBAT Art Space is an art gallery that catalyzes creative experimentation at the intersection of Art and Science through exhibitions, artist residencies, educational programs, and free cultural events. We believe in the power of the arts to enhance creative and critical thinking, make connections across disciplines, and expand knowledge. Biobat Art Space is located in the historic Brooklyn Army Terminal in the underserved neighborhood of Sunset Park, Brooklyn and is housed in the ground floor lobby of BioBAT Inc., a nonprofit biotechnology incubator. biobatartspace.com

BioBAT Art Space has waterfront views and 18,000 sq ft of exhibition space which is generously donated by BioBAT Inc. BioBAT Inc. is a partnership created by the Research Foundation for SUNY, on behalf of Downstate Health Sciences University and the New York City Economic Development Corporation. biobat.nyc

GALLERY DIRECTIONS

BIOBAT ART SPACE

140A 58th Street
Brooklyn Army Terminal, Building A
Brooklyn, NY 11220-2521
*Main entrance is located on the waterfront

GALLERY HOURS:

Saturdays, 12- 5 pm
By Appointment: info@biobatartspace.com

SUBWAY: N, R trains to 59th Street in Brooklyn.

FERRY: Sunset Park/Brooklyn Army Terminal stop. From Wall Street, take the ferry toward Far Rockaway or Bay Ridge. NYC [Ferry Schedule](#)

