





# ARS ELECTRONICA 2020

Festival for Art, Technology & Society

**Garden HELSINKI/ESPOO**

**9.–13. Sept.**

CHRONICLES of an ART & SCIENCE COLLABORATION  
13 SEPTEMBER 2020 LIVE SESSION 19:00–19:45 (CET)

Curation and exhibition catalog

*Lily Díaz-Kommonen*

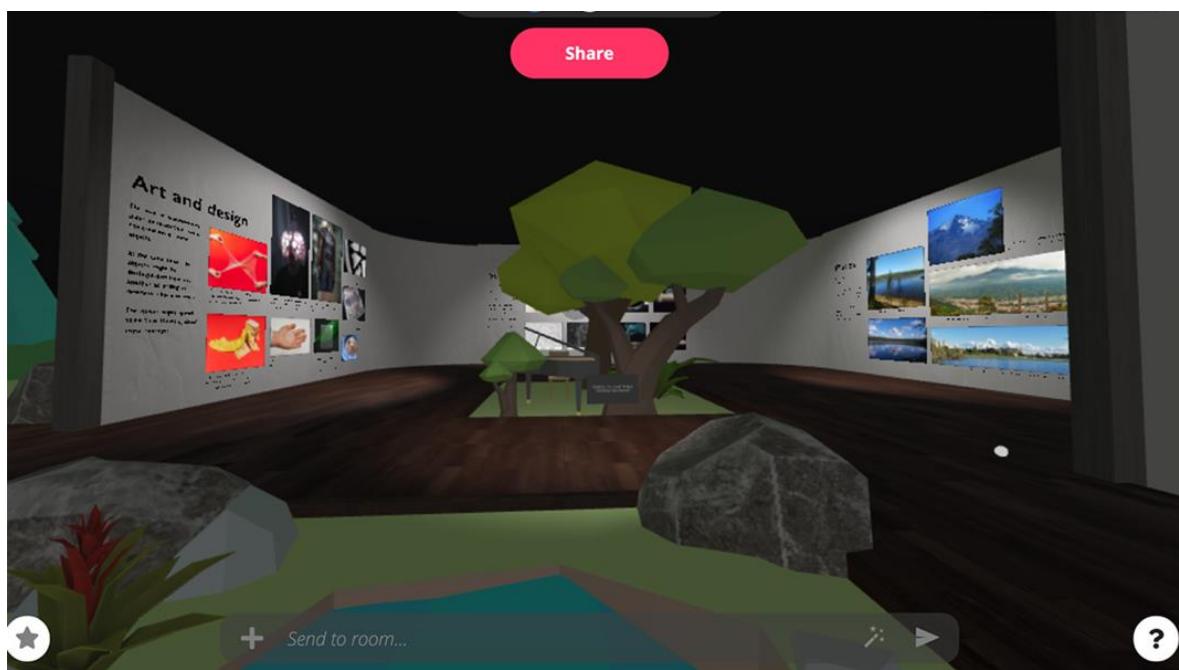
There are two major sections in the virtual garden exhibition. In the Video section visitors can watch a 14-minute video documentary with narratives about the lives, practices and aspirations of the three scientists who worked with us during the project. Selected images of works are exhibited in the Photography section.

Works in photography are organized into three categories: Art and design, Scientific photography and Places. In Art and design, we have included photographs depicting works that use bio-cellulose and/or nanocellulose. These items might be distinguished from one another according to preconceived aesthetic characteristics. Also, the notion of sustainability has been a key factor in how these objects have been created. A key question would be that one of whether we should continue to think of nature as a resource to be used and not as something that is an intrinsic and connected part of our lives.

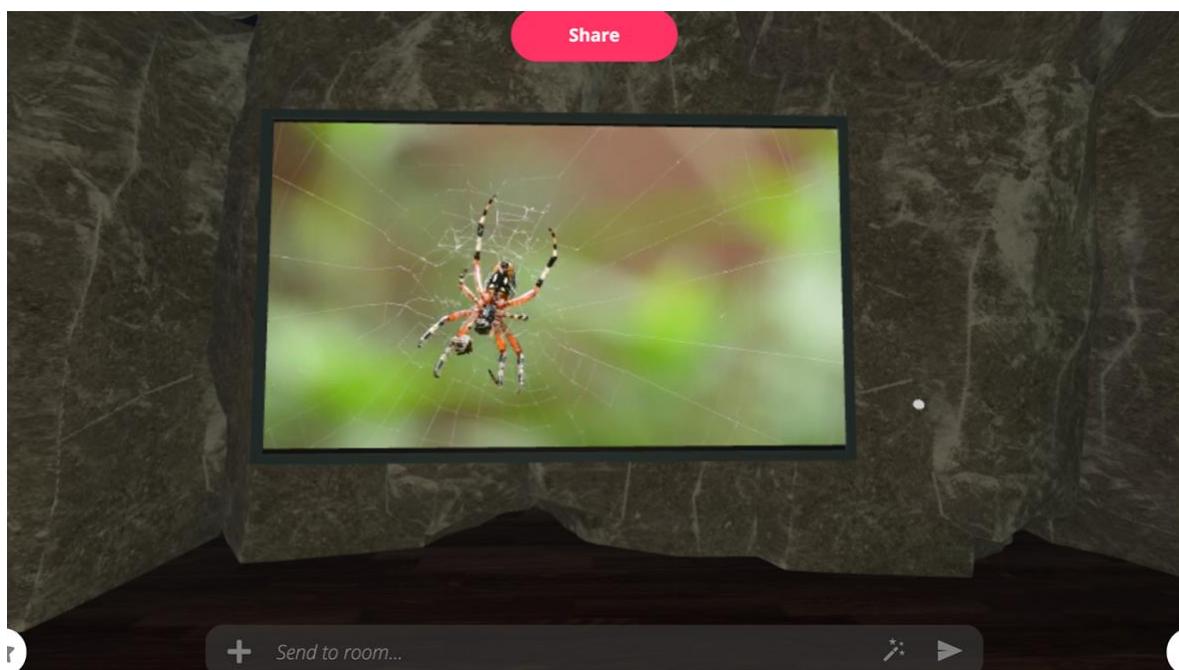
Then there are the scientific photographs which include images produced by scientists as part of their laboratory practices. How is science made? What are the characteristics that make these images intrinsically, “of science”? These are puzzling issues to think and discuss. As one of the authors stated,

[the work] “...is intended to provide new fabrication tools that expand the current morphological limits of nano-cellulosic materials. Thus, clarity and accuracy—fidelity of representation—are the fundamental characteristics. Good aesthetics are an important part as well, but are never self-sufficient.” (Luiz Greca)

Lastly, there are photographs of places that one could regard as connective tissue. In these places, participants interviewed in our video have spent significant time of their lives. Their function is to portray the diversity in a knowledge community providing a glimpse of nature’s beauty.



View 1: Inside the virtual garden gallery.



View 2: The video screening room

## ART AND DESIGN

1. Bioslime, (Hands Stretching Materials) by Chiao-wen Hsu and Chen Yu. Photograph by Eeva Suorlahti, CHEMARTS 2019.
2. Self-assembly, 3D printed PLA coated with micro fibrillar cellulose by Megan McGynn. photograph by Eeva Suorlahti, CHEMARTS 2019.
3. Blindphones, Bio-based sonic head-mounted display by Andrea Mancianti, Media Lab, Aalto University. Image credit, Vog photo, 2018.
4. Bio Iridescent Sequin by Elissa Brunato, 2019. In collaboration with RISE Research Institutes of Sweden. Image credit, Elissa Brunato.
5. Nata de coco, Wikipedia, photograph by Midori, 2008.
6. Wound dressing by BiCMaT research group, Aalto University, 2018.
7. Transparent wood in Sarah Wild “Transparent wood the building material of the future?”, *HORIZON – The EU Research and Innovation Magazine*, 26 November 2019, image credit - WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim. Image licensed under CC BY-NC-ND 4.0.
8. Pile of fabrics dyed with natural dyes by Aleksandra Hellberg and Jenny Hytonen, photograph by Eeva Suorlahti, CHEMARTS 2019.
9. Naturally Dramatic project hosted by BiCMat research group and sponsored by Aalto Materials Platform. Photograph by Eren Öztek, 2020.

## SCIENTIFIC PHOTOGRAPHY

10. Mold for growing the 3D bacterial nano-cellulose, close-up photography by Luiz Greca, 2018.
11. 3D-grown bacterial nano-cellulose, macro-photography by Luiz Greca, 2018.
12. 3D-grown bacterial nano-cellulose, close-up photography by Luiz Greca, 2018.
13. 3D-grown bacterial nano-cellulose, macro photography by Luiz Greca, 2018.
14. 3D-grown bacterial nano-cellulose, macro photography by Luiz Greca, 2018.
15. 3D-grown bacterial nano-cellulose, close-up photography by Luiz Greca, 2020.

16. 3D-grown bacterial nano-cellulose, electron microscopy by Luiz Greca, 2020.

17. Bacterial nano-cellulose, macro photography by Janika Lehtonen, 2017.

For more information see article, Luiz G. Greca, Janika Lehtonen, Blaise Tardy, Jiaqi Guo and Orlando J. Rojas, “Biofabrication of multifunctional nanocellulosic 3D structures: a facile and customizable route”, in Mater. Horiz., 2018, 5, 408-415.  
<https://pubs.rsc.org/en/content/articlelanding/2018/MH/C7MH01139C#!divAbstract>)

## IMAGES OF PLACES

18. Ciudad de Mérida, Wikipedia, by MarcocramVnz, 2014. Licensed under CC-BY-SA-3.0 unported.

[https://commons.wikimedia.org/wiki/File:Ciudad\\_de\\_Merida,\\_Venezuela.jpg](https://commons.wikimedia.org/wiki/File:Ciudad_de_Merida,_Venezuela.jpg)

19. Panoramic view of Barigui Park in Curitiba (Parana) Brazil. Image by Mario Roberto Duran Ortiz, Wikipedia, 2015, Licensed under CC BY 4.0,  
[https://en.wikipedia.org/wiki/Curitiba#/media/File:Barigui\\_Panorama.JPG](https://en.wikipedia.org/wiki/Curitiba#/media/File:Barigui_Panorama.JPG)

20. Urho Kekkonen national park in northern Finland, photograph by Janika Lehtonen, 2019.

21. Pico Bolívar, by Wilfredor, Wikipedia, 2011. Licensed under CC-BY-SA-3.0 unported.

[https://commons.wikimedia.org/wiki/File:Pico\\_Bol%C3%ADvar.JPG](https://commons.wikimedia.org/wiki/File:Pico_Bol%C3%ADvar.JPG)

22. Lake Palojärvi, Kokemäki, Finland, 2018. Image by Joe K. licensed under CC BY SA 4.0.

[https://commons.wikimedia.org/wiki/File:Paloj%C3%A4rvi,\\_Kokem%C3%A4ki\\_\(001\).jpg](https://commons.wikimedia.org/wiki/File:Paloj%C3%A4rvi,_Kokem%C3%A4ki_(001).jpg).

## VIDEO

“Chronicle of an Arts and Science Collaboration”, 14-minute mini-documentary realized by Lily Díaz-Kommonen (interviews, research and scriptwriting); Andrea Mancianti (sound realization) and Juan Duarte (video editing). In the video we use auto-ethnography methodology to enable the scientists to share aspects of their lives, work and hopes for the future with the audience.

## ACKNOWLEDGEMENTS

The gallery is hosted and realized by Media Lab at Aalto School of Arts, Design and Architecture in collaboration with Aalto Studios and DigiPlatform.

Lily Díaz-Kommonen – producer, scriptwriter, concept design.

Juan Duarte Regino – video editing and motion graphics

Emil Lindfors – Mozilla hub design and technical realization

Gautam Vishwanath – Mozilla hub design and technical realization

Many thanks to: Orlando Rojas, Janika Lehtonen, Luiz Greca, Blaise Tardy, Rubina Adjari, Meng Yang, Philip Dean, Marcus Korhonen, Pirjo Kääriäinen.

Front photograph by Luiz Greca, 2019.

