

art exhibition

Casting the Ephemerality

Photos made from scans of snow crystal replicas

by Yvonne Weber

at the Maritime Museum of Ushuaia

during [SCAR Standing Committee on the Humanities & Social Sciences \(SC-HASS\)](#)

opening: 01.04.2019 / exhibition: 02.-30.04.2019

«The fact that someone is travelling all the way to Antarctica, to the most remote and wild place on earth, to catch a snowflake in order to answer one of the most important contemporary questions, namely climate change, is very touching and bears a poetical gesture.»

Yvonne Weber is a Swiss artist based in Ascona and Berlin. Since 2010 she has worked at the intersection of art and science. Her aim is to interpret and visually represent the process of computer based modeling in the natural sciences. Since we spend our lives with information created by science and calculations, it's necessary to increase people's understanding of how computer based simulations function and how they influence with our perception of the environment in everyday life. From the artist's perspective, scientists are not only creating the most powerful pictures of our contemporary world, they are also shaping our awareness of the world.

The exhibited photographs, from the series «Casting the Ephemerality» are developed from a scientific dataset realised during the Swiss Antarctic Circumnavigation Expedition (ACE) as part of the science project «quantifying precipitation and its contribution to surface freshening in the Southern Ocean».

A team of international scientists collected formvar replicas of the detailed characteristics of snow falling over the Southern Ocean. The formvar replicas were afterwards scanned at high resolution to create 2.5 dimensional digital models with up to 51 focal planes.

Yvonne Weber's interest in collaboration with scientists is in what artist and scientists have in common, such as applied methods and instruments.

The scientists are using this data to develop models to explain precipitation in Antarctica and trying to generate scientific knowledge to be implemented in larger scale climate models. The artist is using the same data set to demonstrate in the exhibited photo series the transience of these objects. Documenting with her photos a fragile, ephemeral natural world undergoing constant changes, which we both affect and are attempting to predict. However what we see in the photographs are not the real snowflakes. We are looking at resin casts, or replicas, a method used by scientists and artists to understand their environment. Here the art piece is referring to this crucial point in modeling. A cast was made and the original has evaporated away.

This is not the only difference to traditional snowflake photography, which these images refer to with the choice of a black background color. The play between the sharpness and the blurriness of the pictures should let the observer understand that these are 3 dimensional objects in a 3 dimensional space, usually occurring as conglomerates, what we call snow. And their appearance changes depending on the focal plane we choose to view.

In the end we can only be left with wonder and awe, humbled by this beauty and confronted by how little we know about these common but extremely short-lived snowflakes.

Collaborators:

Dr. Katherine Leonard, University of Colorado, Boulder, United States
Prof. Michael Lehning, École Polytechnique Fédérale de Lausanne EPFL and WSL Institute for Snow and Avalanche Research SLF

Dr Irina Gorodetskaya, University of Aveiro, Portugal

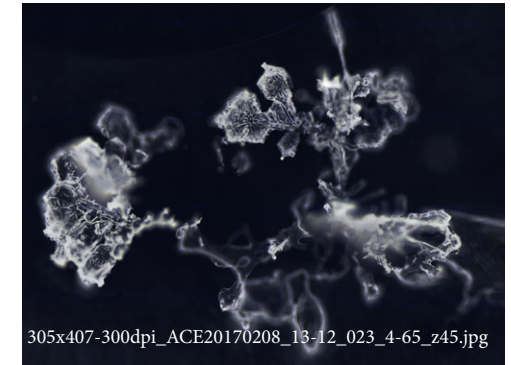
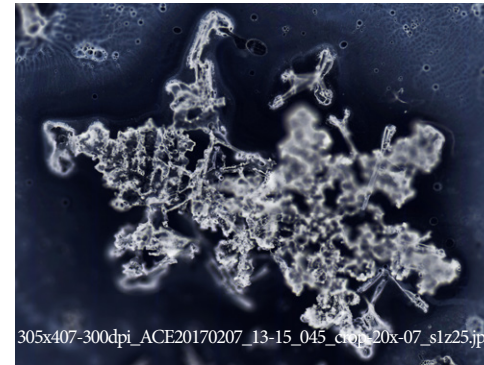
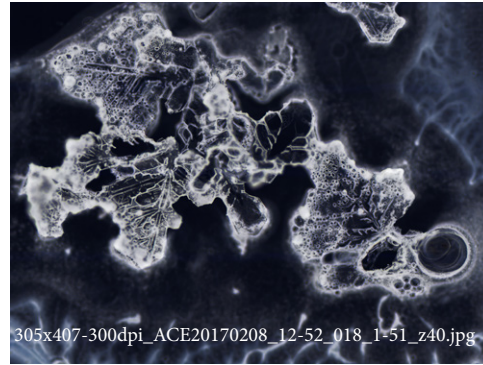
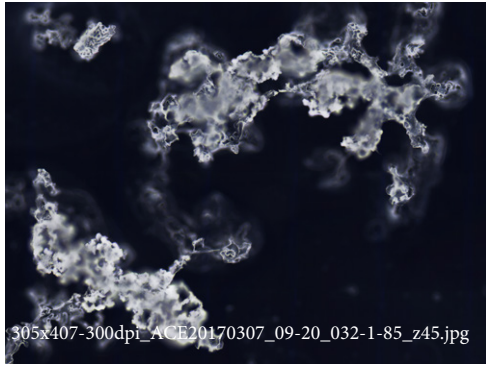
Thanks to:

The Swiss National Science Foundation,
the US National Science Foundation,
the Swiss Polar Institute,
and the University of Zurich Center for Microscopy and Image Analysis

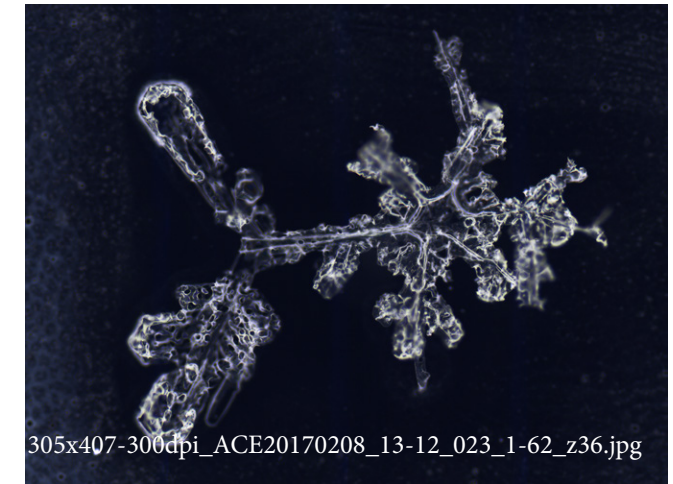
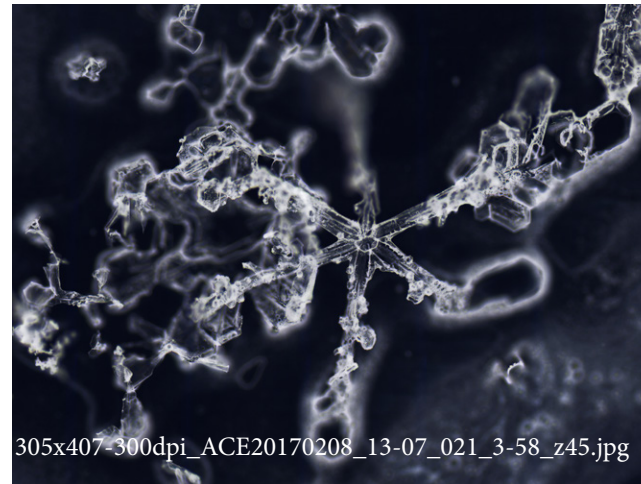
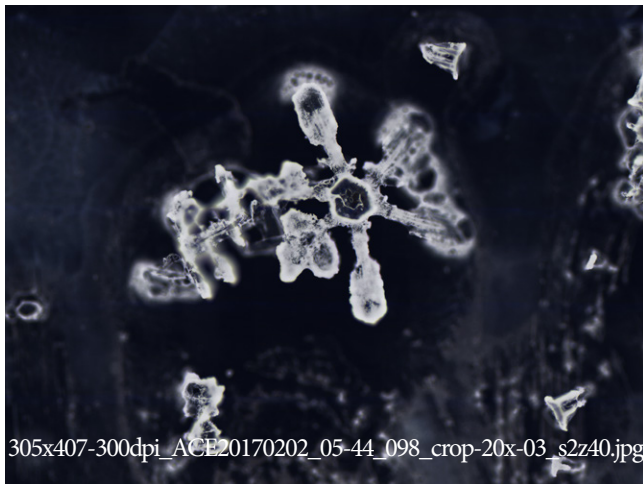
Cell 1 - morning dew

size of photograph: 40 x 30cm

wall right hand side (lenght 2.75m / height 2.80m)

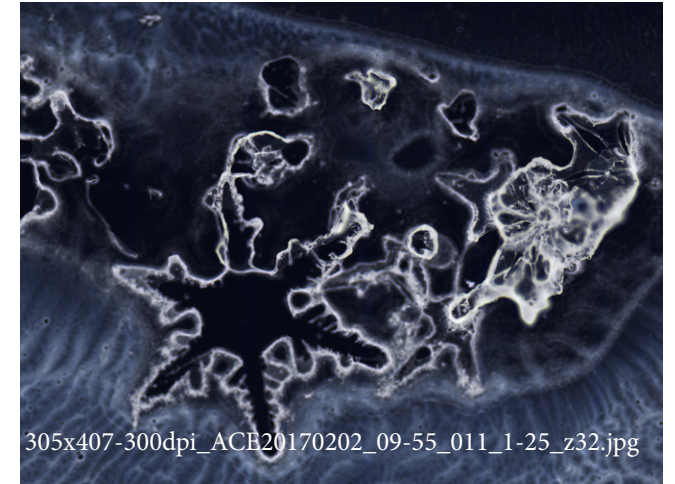
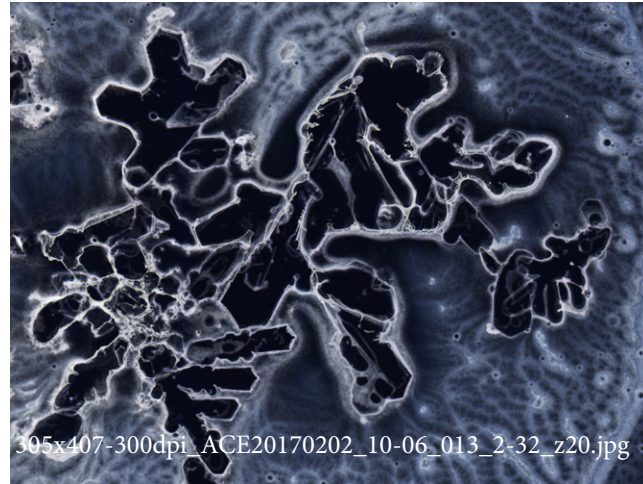
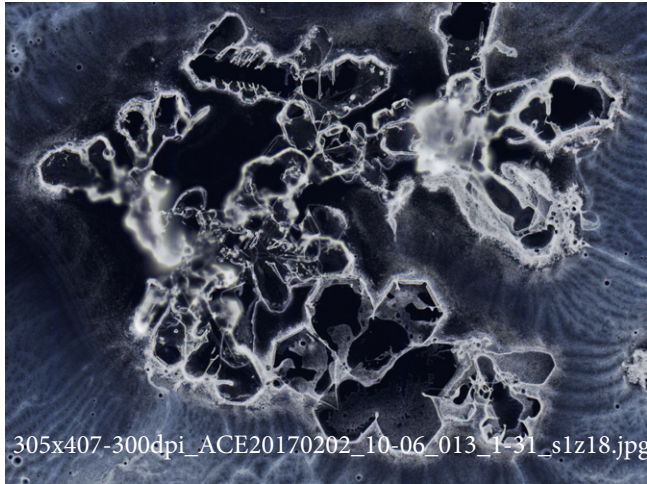


wall left hand side (lenght 2.75m / height 2.80m)

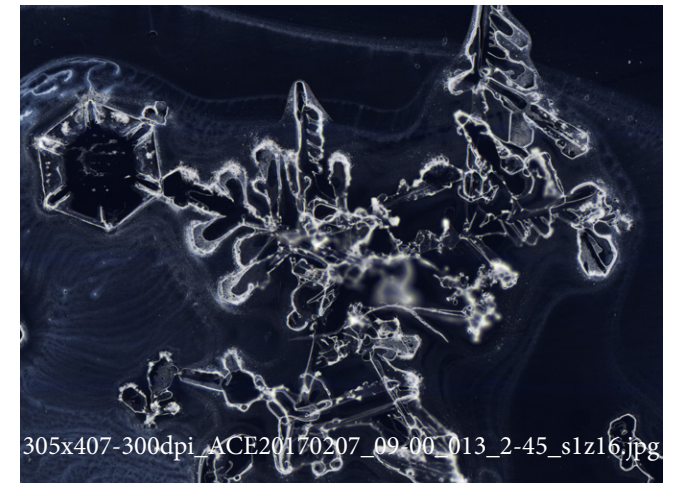
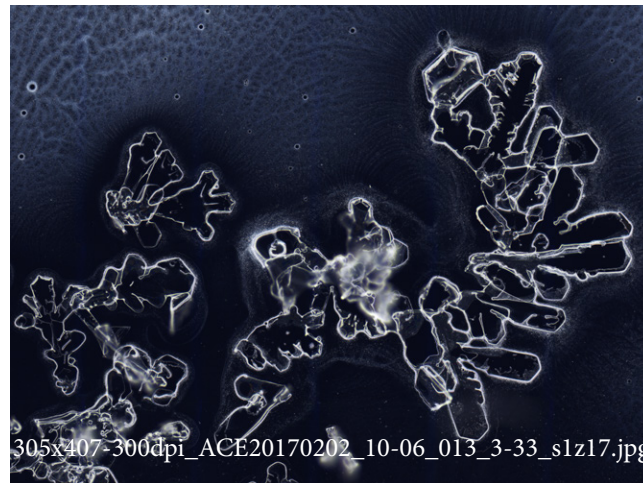
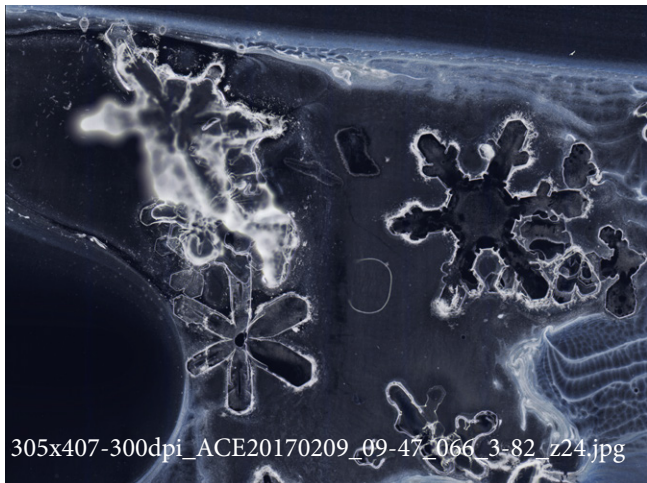


Cell 2 - dark matter

wall right hand side (lenght 2.75m / height 2.80m)



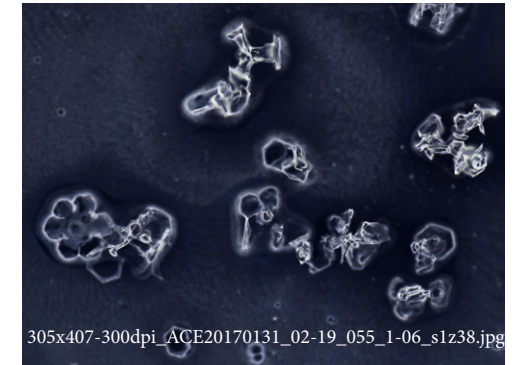
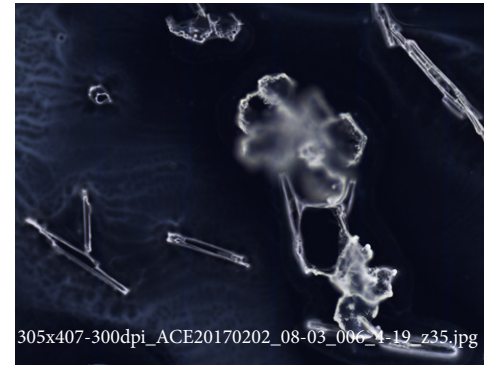
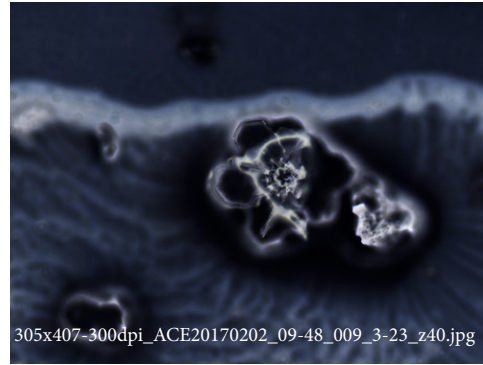
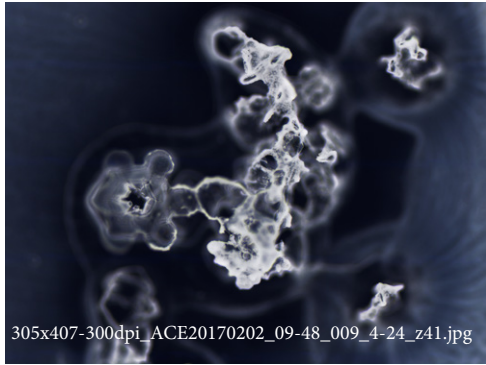
wall left hand side (lenght 2.75m / height 2.80m)



Cell 3

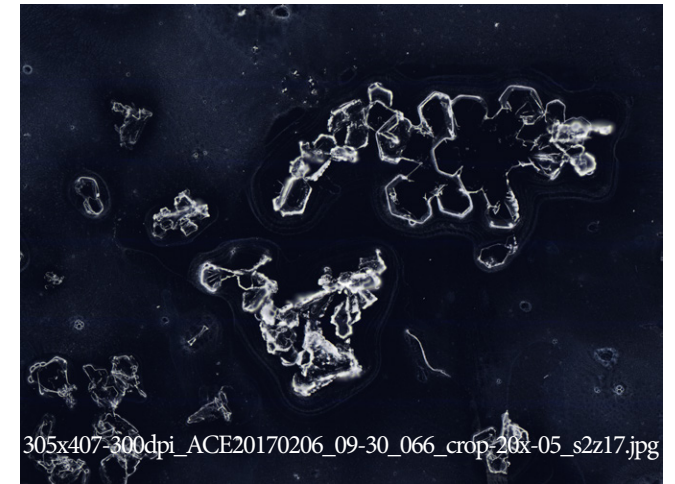
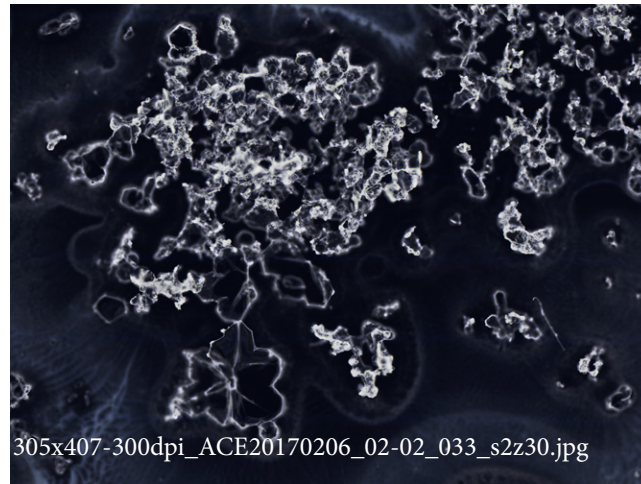
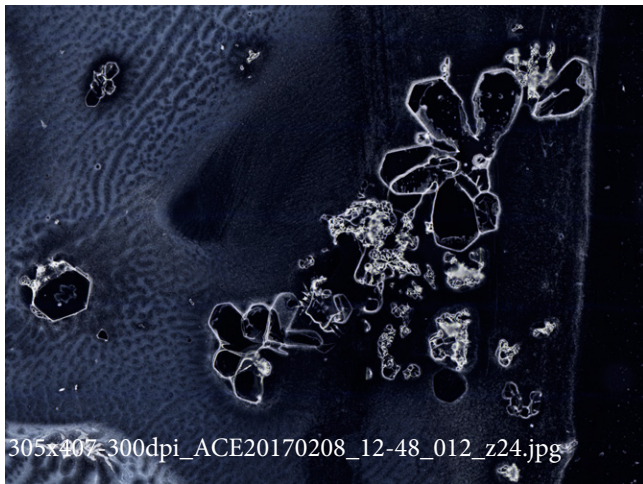
- rose garden

wall right hand side (length 2.75m / height 2.80m)



- hidden flowers

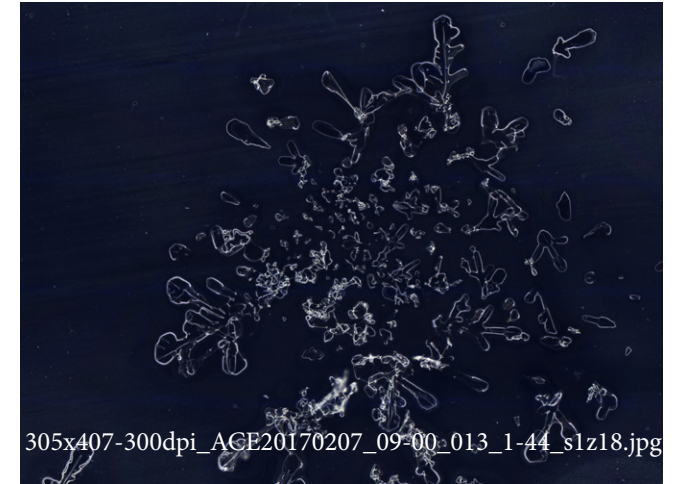
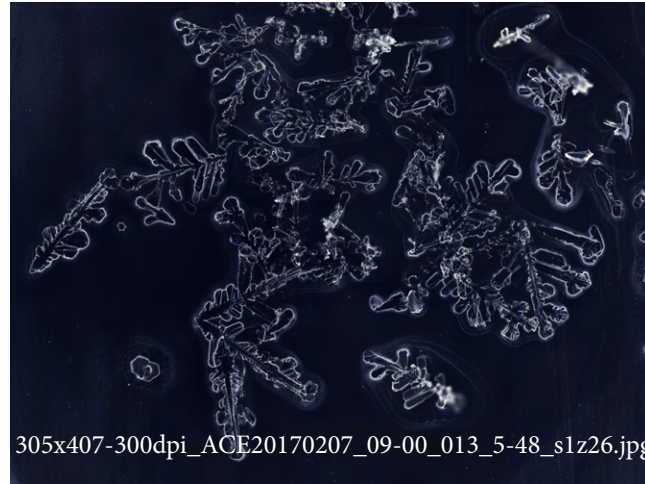
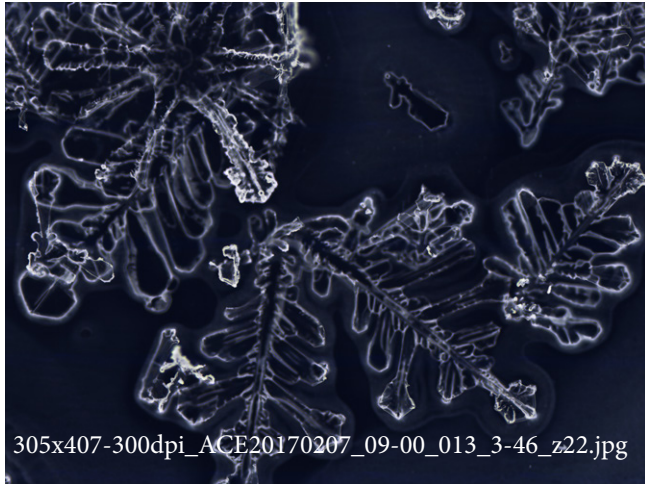
wall left hand side (length 2.75m / height 2.80m)



Cell 4

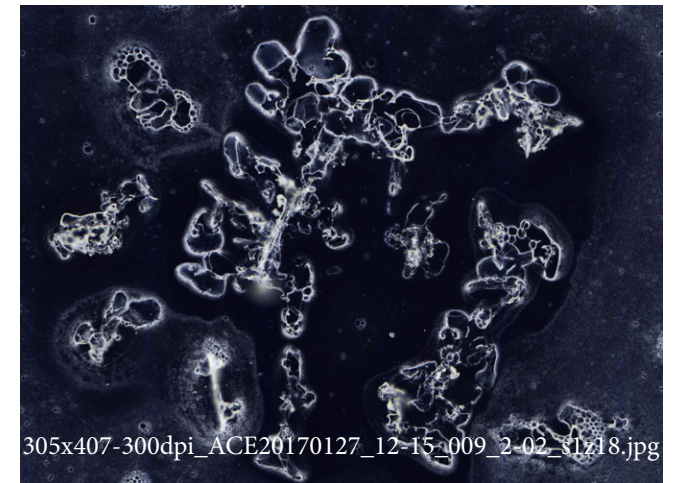
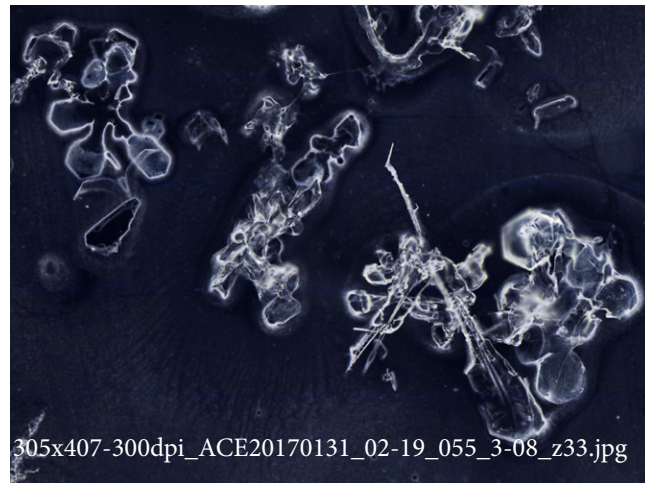
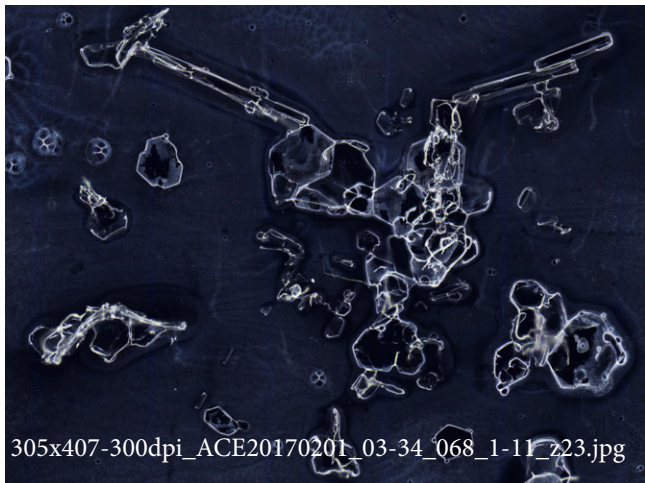
- fern leaves

wall right hand side (lenght 2.75m / height 2.80m)



- branches

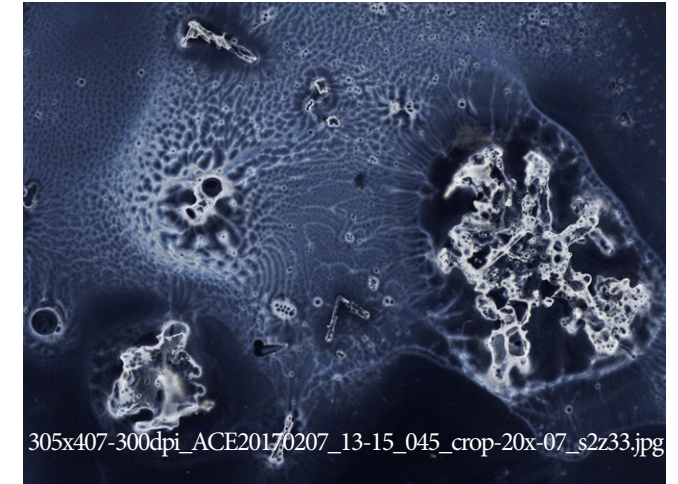
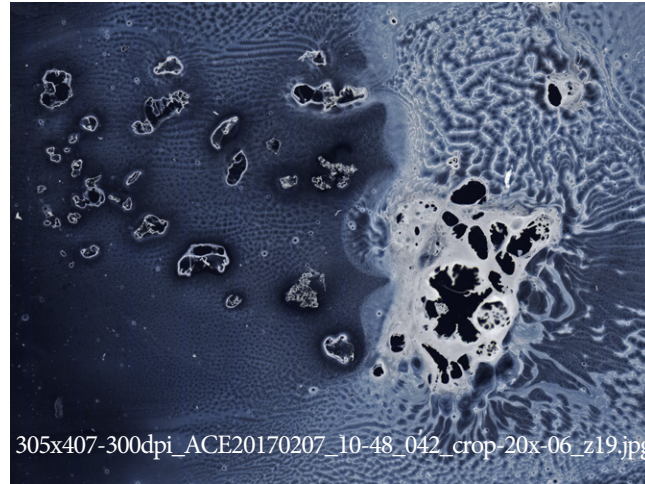
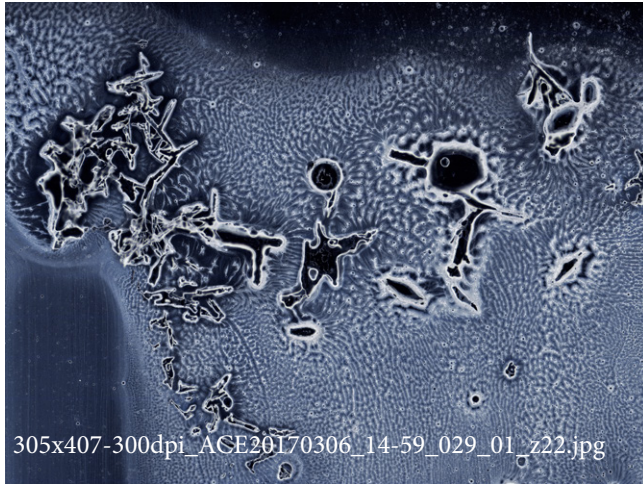
wall left hand side (lenght 2.75m / height 2.80m)



Cell 5

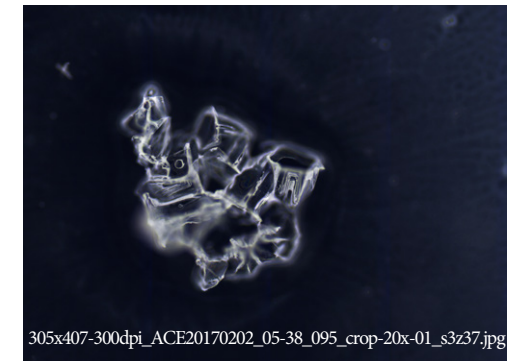
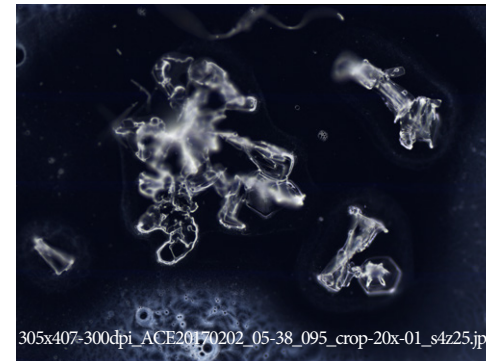
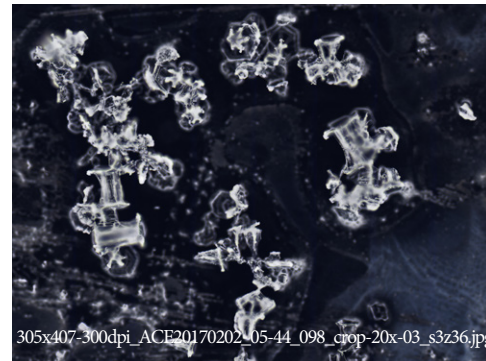
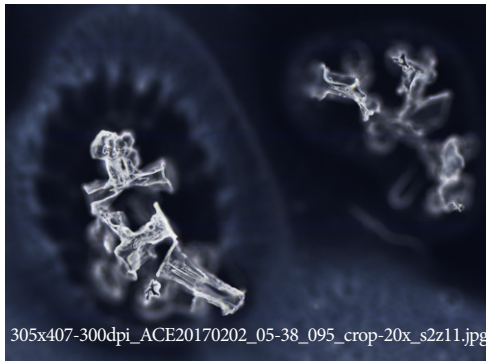
- melting

wall right hand side (lenght 2.75m / height 2.80m)

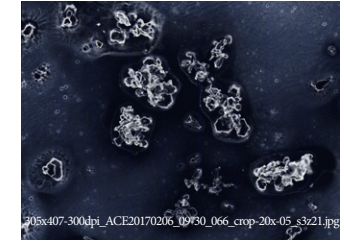
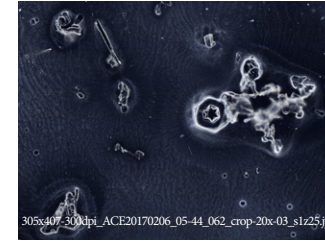
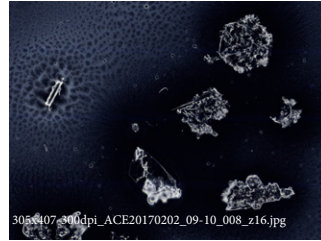
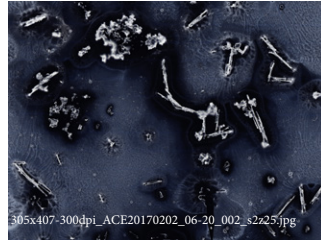


- colums

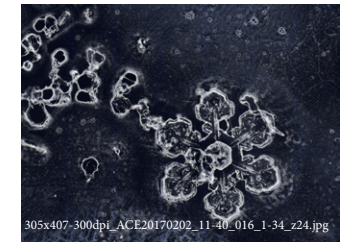
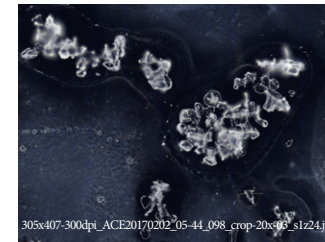
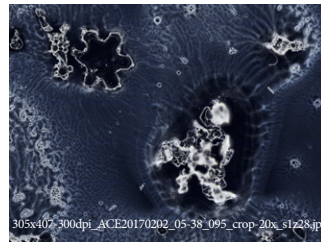
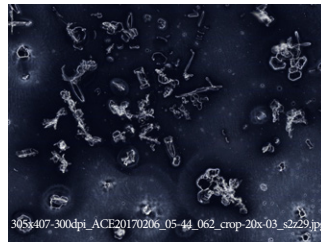
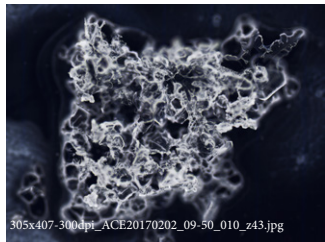
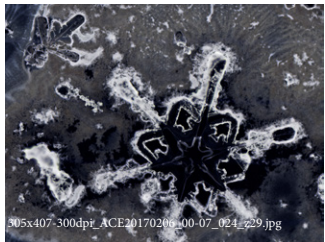
wall left hand side (lenght 2.75m / height 2.80m)



Corridor - left hand side (one picture between each door)



Corridor - right hand side (one picture between each door)



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