

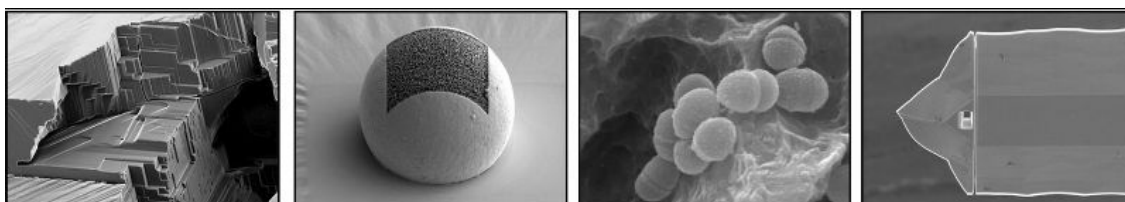
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# NANO IMAGING LAB

## Newsletter

December 9, 2020



Dear Nano Imaging Lab users,

despite the Corona crisis, the Nano Imaging Lab is fully functional. We offer full service by our specialists, but also allow individual working of clients at our instruments. Our labs are equipped with an excellent climate and air control system. Therefore we are able to allow two persons working together at one instrument. Wearing masks is of course mandatory. All contacts are recorded using control sheets for later reconstruction, if necessary.

In 2020 we finished developing Ultra Rapid Freezing and optimized the Ultra Rapid Freeze Drying (URFD) method. It is ready to use for multiple applications exclusively at the Nano Imaging Lab. To our knowledge no other lab offers this preparation method.

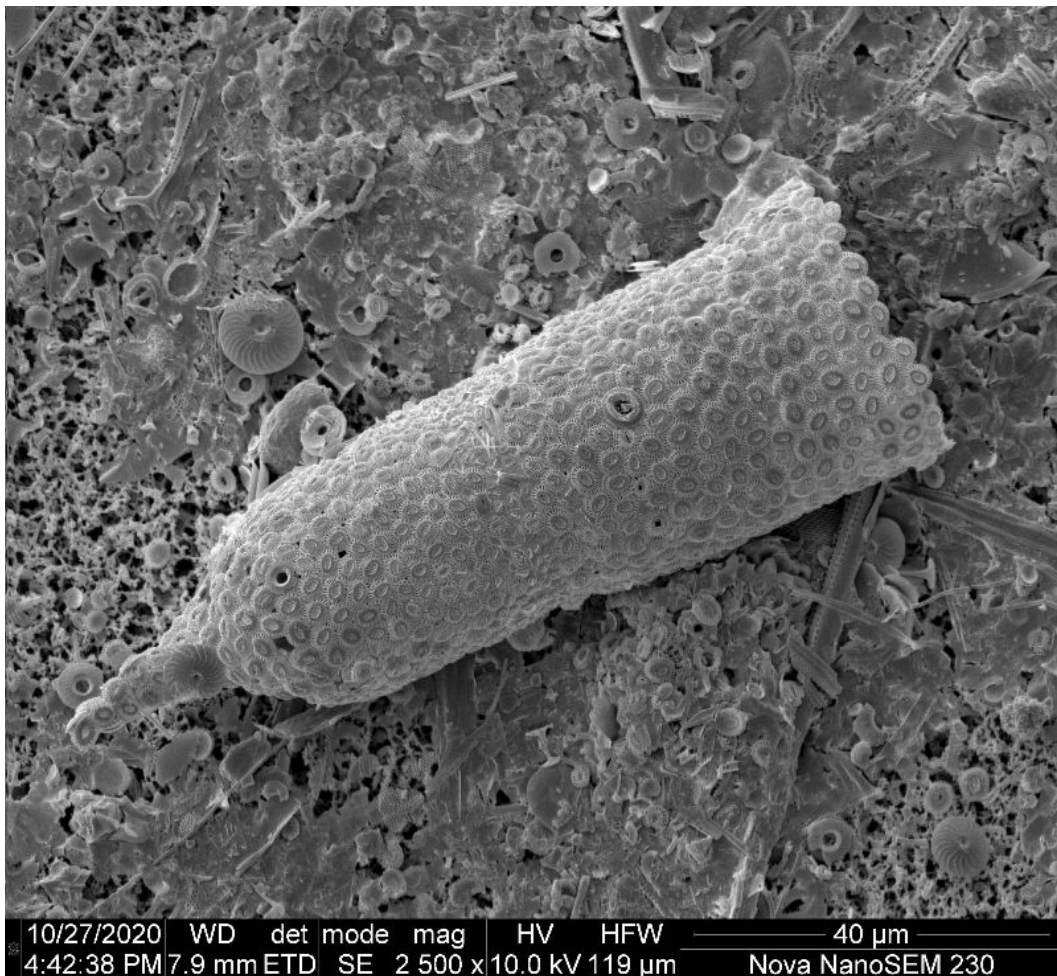
Due to the Corona crisis, the rebuilding of the designated room for our new 200 kV TEM is considerably delayed. The machine has already been delivered, but can't be brought into service because of this delay. That's why we very much look forward to 2021, which will certainly bring us the first time operation of the new microscope.

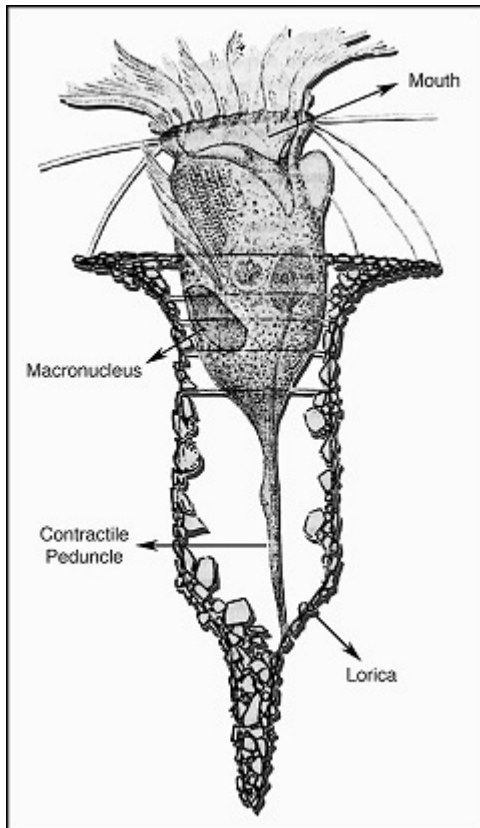
I wish you all the best for Christmas and the New Year! Stay healthy!

## Blockcourses Microscopy 2020

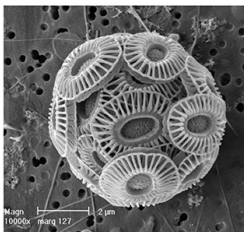
Unfortunately our block course in May had to be cancelled due to this years Corona situation. The more enthusiastically the nanoscience students started the November course in the Nano Imaging Lab, only to learn after three days of attendance, that we needed to cancel again.

But this short presence was enough to take a sensational picture from the world of the marine zooplankton, which we want to share with you: in one of the sediment samples provided, the students found a so called lorica, which was built by a sessile ciliate ([Tintinnids](#)).

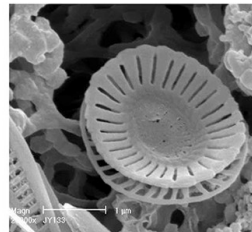




A [lorica](#) is a shell-like protective outer covering that some protists are able to build to reinforce the outside with sand grains or other sediment particles. These constructs are often quite elaborate and show fascinating minute artworks. In our case the organism used coccoliths of the single celled algae [Emiliana huxleyi](#) to build its vase-shaped domicile, into which it retracts when disturbed.



coccosphere



coccolith

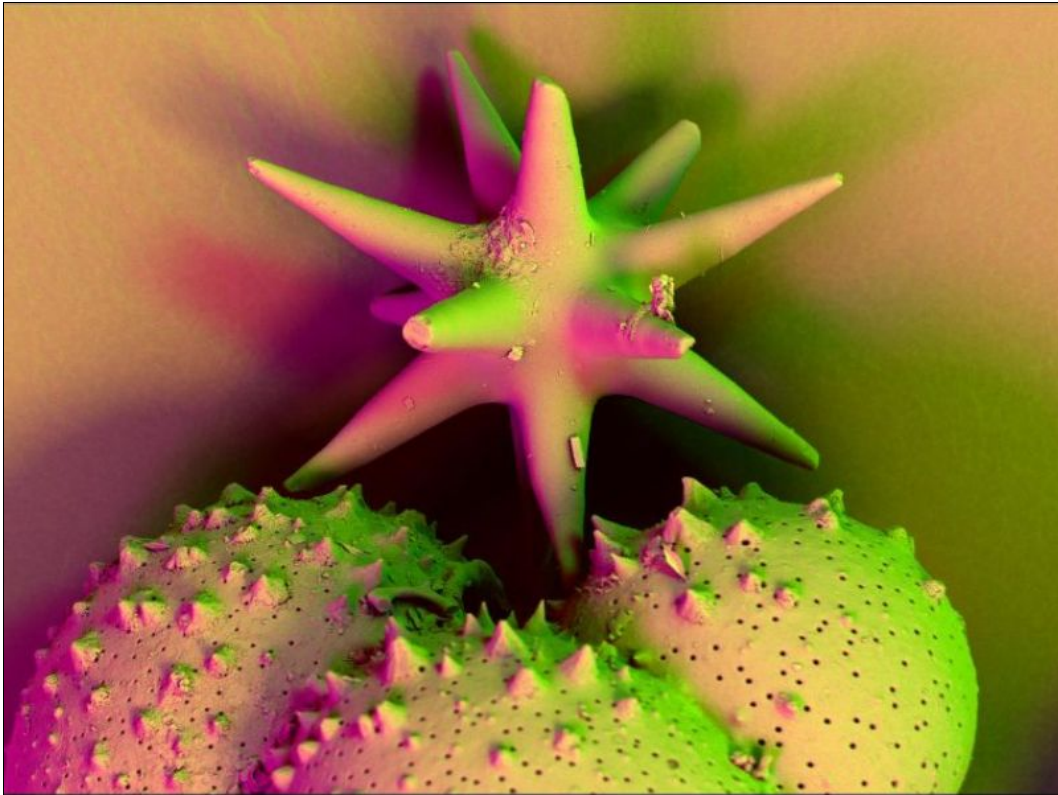
[Coccoliths](#) are individual plates of calcium carbonate formed by coccolithophores (single-celled algae such as *Emiliana huxleyi*) which are arranged around them in a coccosphere.

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**Merry Christmas to all and a happy and healthy new year !**



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