

## News

### First undulators reach the SwissFEL building



The first undulator frames have arrived at the SwissFEL building. They will take around six months to assemble, after which the finished undulators will be taken to the SwissFEL accelerator tunnel for installation.

The undulators are now being assembled and optimised magnetically in the SwissFEL building. The high precision of the undulator components required for a smooth operation does not allow for any change to the materials that the undulators are composed of; the tiniest of temperature fluctuations would already be sufficient. Consequently, the safety

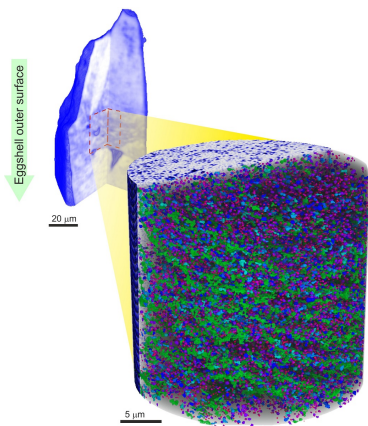
entrances and the rooms prepared for the complete assembly are already at the eventual operating temperature of 24 degrees Celsius. The transport container with the undulator frame are being given time to become acclimatised before the container is finally opened.

Read more on: <http://www.psi.ch/media/first-undulators-reach-the-swissfel-building>

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## Research highlight

### From inside an eggshell



With the aid of a blurred overview image, the scientists were able to render a sharp image of the inside of an eggshell. The colours represent the different sizes of the pores or voids, from green (1 micrometer or larger) down to red (100 nanometres). Image: Paul Scherrer Institute.

**Manuel Guizar-Sicairos et al, *Optica* 2, 259--266 (2015), [DOI:10.1364/OPTICA.2.000259](https://doi.org/10.1364/OPTICA.2.000259)**

Tiny voids inside eggshells supply the materials that stimulate and control the shell's growth. Using a novel imaging technique, researchers from the Paul Scherrer Institute (PSI), ETH Zurich and the Dutch FOM Institute AMOLF have succeeded in imaging these voids in 3D for the first time. In doing so, they lift an old limitation of tomographic images and hope that one day medicine will also benefit from their method. <http://www.psi.ch/media/from-inside-an-eggshell>

Researchers from the Paul Scherrer Institute (PSI), ETH Zurich and FOM Institute AMOLF in the Netherlands have developed a method that enables them to produce extremely detailed 3D images of sections of an object with the aid of x-ray light. They used the technique to render visible a network of nanometre-sized holes in the shell of a chicken's egg, for which only two-dimensional pictures were previously available. The x-ray images were produced at the beamline cSAXS at PSI's Swiss Light Source (SLS).