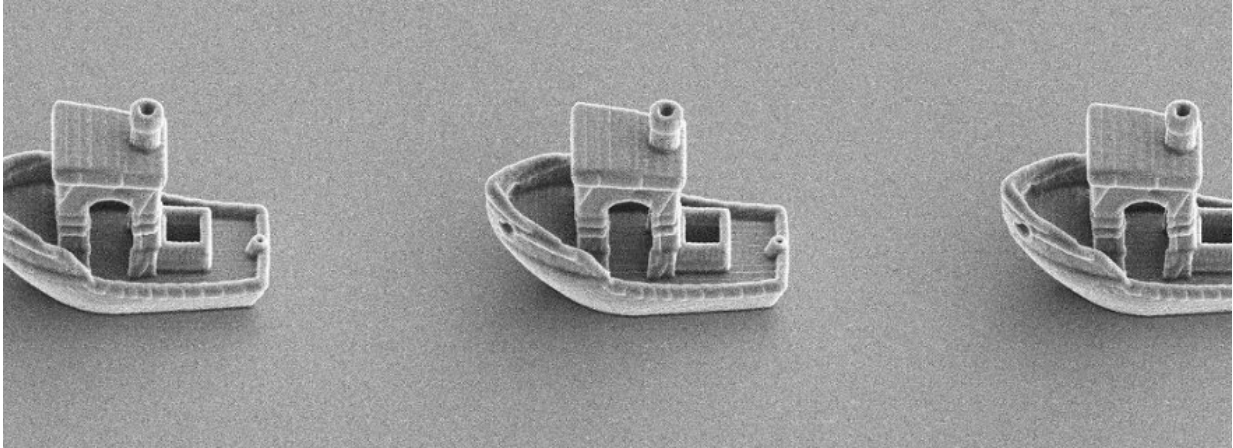


Physicists create 3-D printed microboat

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Credit: Leiden University

From prow to stern, this little boat measures 30 micrometers, about a third of the thickness of a hair. It has been 3-D-printed by Leiden physicists Rachel Doherty, Daniela Kraft and colleagues.

The image was made using an [electron microscope](#) and can be found in their article about 3-D printing synthetic microswimmers in the [scientific journal](#) *Soft Matter*.

Microswimmers

Kraft's research group researches microswimmers, [small particles](#) moving in fluids like water, that can be followed using a microscope.

One of their goals is understanding biological microswimmers, such as bacteria.

Most research of this type is carried out on sphere shaped particles, but 3-D printing offers new possibilities, as the researchers show in this article. They also printed spiral shaped particles, which rotate along while they are propelled through water.

3DBenchy

The microboat doesn't have a propellor. 3DBenchy is a standard 3-D design for testing 3-D-printers. The group's new Nanoscribe Photonic Professional printer has passed this test with flying colors, while establishing a new record building the smallest ship on Earth (which is even able to set sail in water).

More information: Rachel P. Doherty et al. Catalytically propelled 3D printed colloidal microswimmers, *Soft Matter* (2020). [DOI: 10.1039/D0SM01320J](https://doi.org/10.1039/D0SM01320J)

Provided by Leiden University

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