

biotINK - the bioprinter of tomorrow

a novel DIY bioprinter via hijacking an ordinary 3D printer

Julian Hofmann

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DESCRIPTION

DETAILS

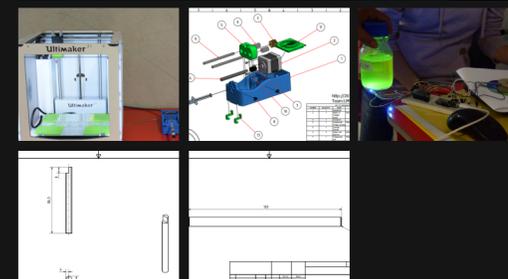
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DESCRIPTION

We are a team of students from the Ludwigs-Maximilians-Universität and the Technische Universität München developing a novel approach to bioprinting utilizing a hijacked Ultimaker 2+ instead of expensive specialized labware. This documentation describes the development of our Bioprinter.

DETAILS

! This section can be used to explain everything about your project.

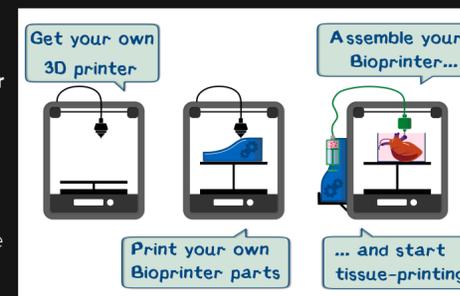
What we're all about



It is our goal to be able to print **biological materials** and **even cells** in a high precision manner for an affordable prize to assist scientist like us to hopefully allow for practicable **3D bioprinting** for skin grafts and in the future maybe organs. As our team takes part in the **iGEM competition** and for this tries to **modify cells** in order to make them printable, we will be the first to test the device will be able to help us make bioprinting work.

So therefore we developed a system that will allow us to make use of the already proven capabilities of the easily obtainable **Ultimaker 2+** print platform.

Instead of having to acquire expensive building blocks the end user, e.g. researchers and doctors, will be able to cheaply print nearly all parts by himself except some simple metal parts and standard wires. Due to the minute effort required for the **transformation** from **FDM printer** to **bioprinter** our system can be utilized and fitted to its user's needs without extensive mechanical knowledge.



Why Bioprinting is an important future technology

One of the major limitations in medical care is today the shortage of graft transplants.

In 2015 there were 120.000 patients waiting for a graft organ and only 1/4 of these patients received a new organ in this time period.

TEAM (6)

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