

Shining a Light on Biosciences





We help life scientists push the frontiers of biofabrication



Technology

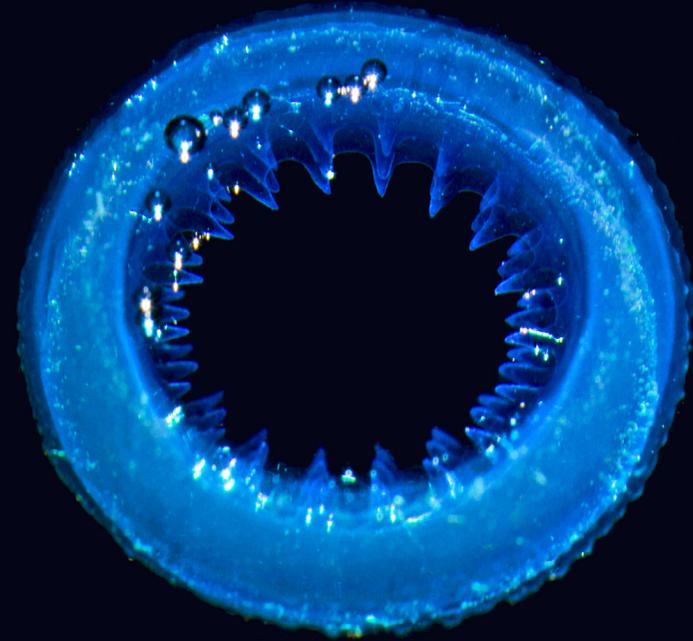
Tomographic 3D printing rapidly solidifies photosensitive inks in three dimensions, using shaped light beams from multiple angles. As the entire build volume is illuminated simultaneously, centimeter-scale biological systems are produced in just tens of seconds. After printing, the object is simply separated from the uncured ink and collected.

Our printing method is light-based, so it does not induce any shear stress on the printed cells. The remarkably low photoinitiator content (eg 1mg/mL LAP) and low light dose (<600 mJ/cm²) make tomographic bioprinting a cell-friendly technique.



Tomolite

Complex living
constructs
shaped by light





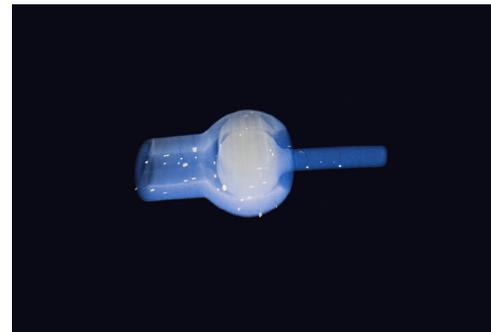
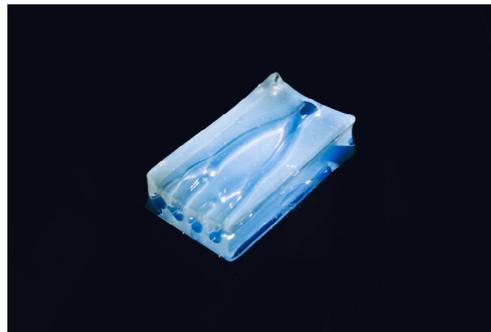
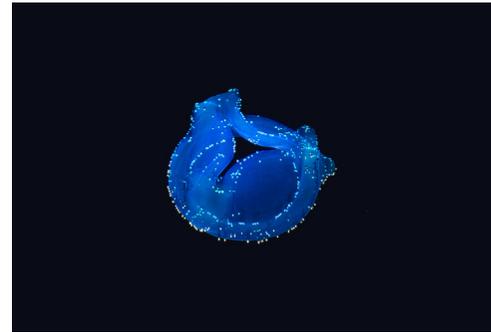
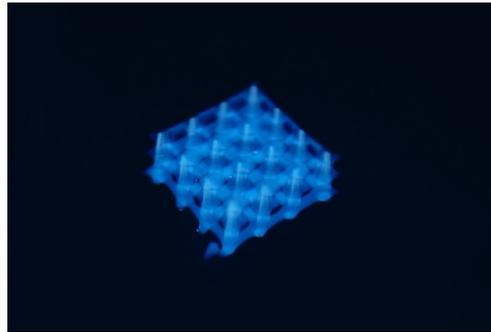
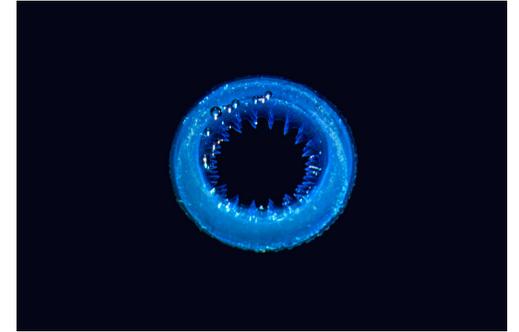
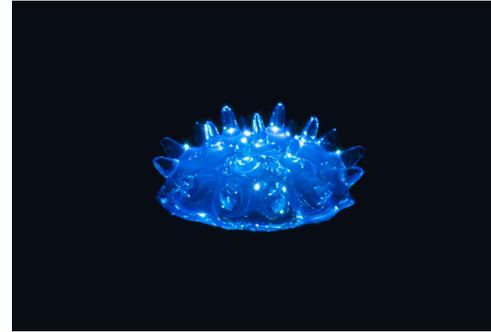
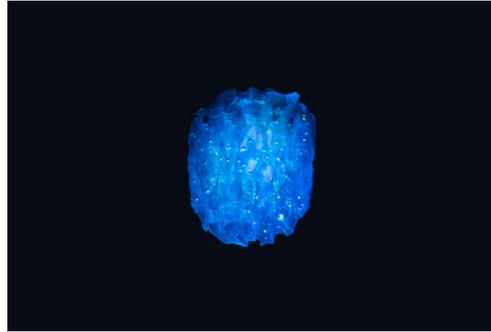
Readily bioprinted

Tomolite leverages our contactless tomographic illumination technology to shape sensitive cells and biomaterials into biological systems, without impairing their viability. Volumetric printing not only preserves cells but also makes research more efficient by simplifying design iterations and statistical studies.





Examples





Specifications

Optical resolution	40µm
Indicative print time	20s - 120s (depends on material)
Build diameter	up to 12.5mm
Build height	27mm
Light intensity	1 to 20mW/cm ² (average at container) 50mW/cm ² (maximum peak intensity)
Wavelength	400nm ± 1 nm
Rotation speed	10 - 360°/s
Container materials	Autoclavable and reusable glass or polystyrene consumables
Container diameter range	8mm - 22mm
Compatible materials	hydrogels, acrylics and silicones
External footprint	31cm x 41cm x 60cm
Initial accessories kit	Precision chuck adaptor for vials Vial extraction tool
Laser class	Class 1 laser product

Cell types printed to date

Parameters	Articular chondroprogenitor cells
Viability	>80%
Cell concentration	Max. 10 ⁷ cells/mL
Largest construct	12 x 12 x 3 mm

Parameters	Mesenchymal stromal cells
Viability	>85%
Cell concentration	Max. 10 ⁶ cells/mL
Largest construct	8.5 x 9.3 mm <small>Cylindrical</small>



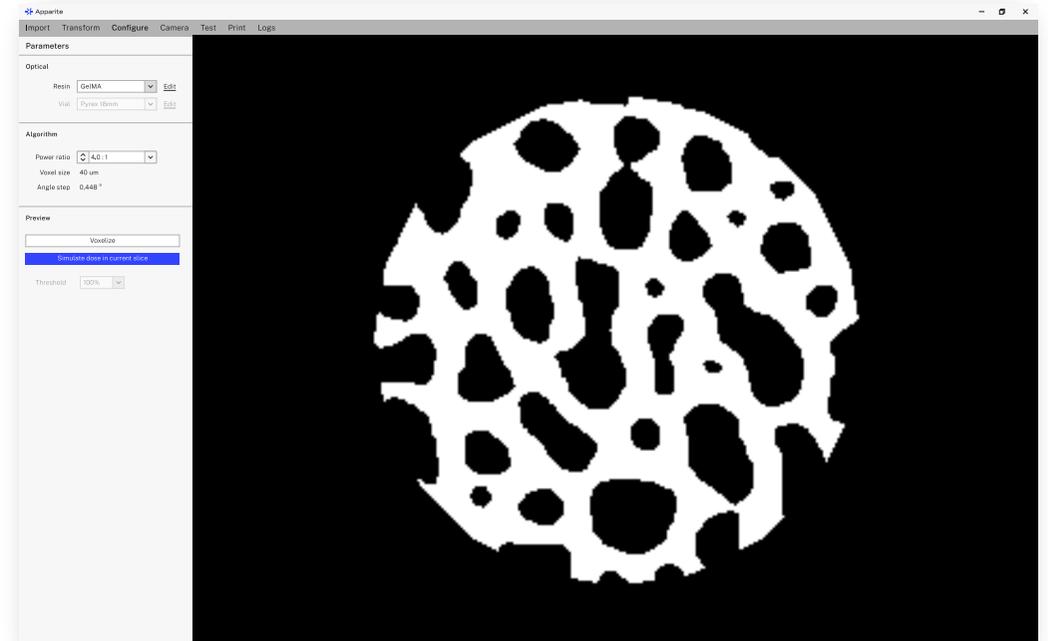
Apparite
Rapidly configure
and launch
your 3D bioprint





Load, Preview, Print.

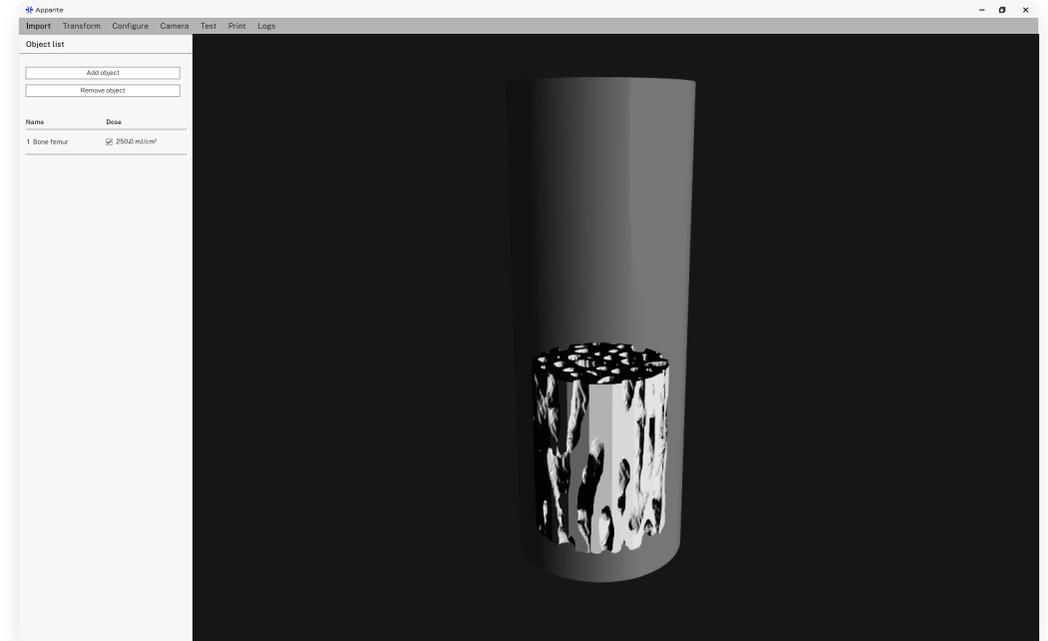
Apparite facilitates the preparation of a print while giving users full control over the process parameters. In a few clicks, import the STL geometry of your constructs, configure the material properties and preview the computed light dose distribution.





Specifications

3D object format	STL, image stacks
Multi-object printing	Supported
Transformations	Position Rotation Scaling
Beam computation time	Approximately 30s -90s (cloud-accelerated)
Print parameters	Dose Intensity Exposure time Print speed Number of rotations Projection rate
Computation parameters	Voxel size Angular step Dose contrast Resin compensation
Build volume monitoring	Live camera feed
Print log	Automatic
Dose estimation	Preview of dose distribution before printing Dose test procedure (with small volume of ink)
Supported operating system	Windows 10 and 11





Contact us

Let's work together

Learn more

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