



Micro-Robot Fabrication and Characterisation

The Hamlyn Centre Micro-Robot Fabrication and Characterisation platform is articulated around our clean room for microfabrication equipped with a NanoScribe system and expertise in both untethered and tethered microrobots. In addition, a multimaterial fiber platform allows for integration of those tethered robot into complex systems. Precision assembly tools complete the platform. Characterisation tools adapted to those devices allow for full characterisations and development of the prototypes. Finally, various micro and nano manipulation devices, both mechanical and optical, and micro force sensors can be used for the robots actuation and operation.



Key Features

- Clean Room for microfabrication and 3D lithography
- SEM/FIB micromanipulator and force sensors integrated system
- Microfluidics and manipulation equipment

Possible Applications

- Tests and demonstrations of microrobot design
- Micromechanical test for micro-robotics
- Optical tweezer micro-robots control
- Fiber tethered microrobot and fiber based optics.

Access information

Corresponding infrastructure	Imperial College London The Hamlyn Centre
Location	Bessemer Building, Kensington, London SW7, UK
Unit of access	Working day



Technical specifications

Microfabrication Platform	Nanoscribe, Dilase 250 laser lithography, HEX thin film deposition system
Characterisation	Various Microscope, SEM/FIB Tescan with Kleindiek force sensors and Bruker EDS, high-speed camera
Manipulation	Optical tweezer, Imina MiBot, Kleindiek SEM in-situ manipulators
