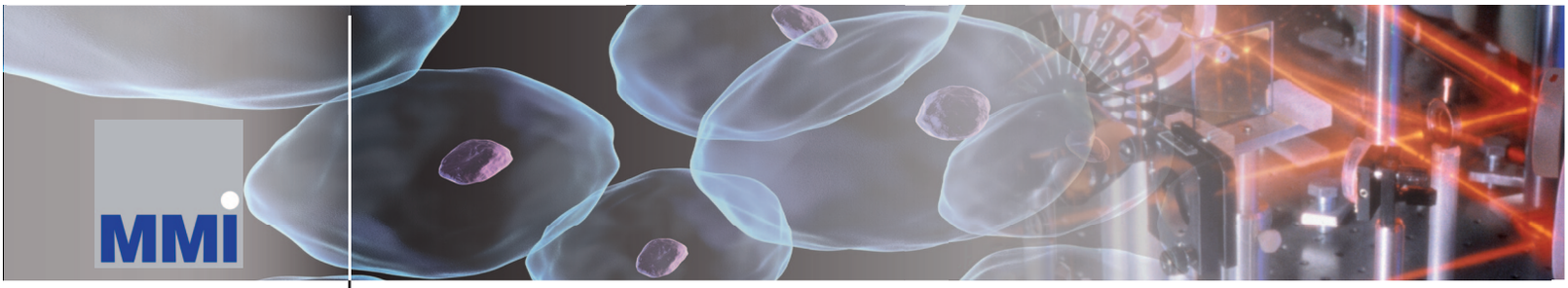


Microscopic Single Cell Isolation

Optical Trapping - MMI CellManipulator

Quantify minimal biological forces
Manipulate up to 20 living cells or microparticles

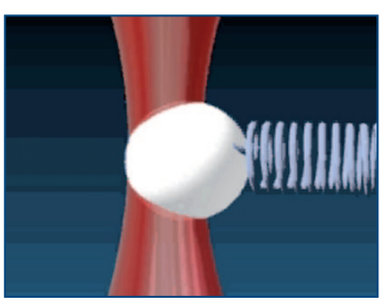
You want to hold, move, rotate, join, separate, stretch or otherwise manipulate cells and microscopic particles in a contact-free and ultra-precise way? You want to focus on your application to quantify biological forces?

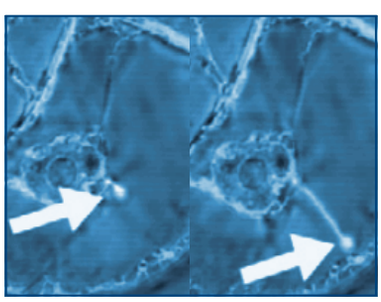
The MMI CellManipulator is a powerful optical multibeam tweezers system. It enables the most comfortable manipulation of up to 20 single and living cells, microorganisms and microscopic particles.

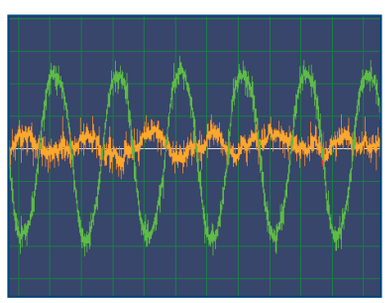
Optical tweezers are often used to study single molecules such as DNA and proteins, as well as molecular motors, folding and adhesion forces.

MMI CellManipulator: strong - flexible - precise

- Manipulate up to 20 microparticles and living cells with an intuitive point, click and drag routine
- Create strongest trap from 0.2 to > 800 pN to measure inter- and intra-cellular forces
- Perform force spectroscopy experiments with automatic calibration
- Combine your MMI CellManipulator with MMI CellCut and/or CellEctor system for single cell isolation in tissue and suspension







Optical Trapping - MMI CellManipulator

Applications

- Cell-based studies
  Cell interactions and intracellular manipulations
- Measurement of Binding Forces
  Bacterial and viral adhesion studies
- Molecular Motor Studies
  Actin & myosin, kinesin & dynein motors
- Laser Raman Tweezers
  Isolation of cells and microorganisms
- Lab-on-a-Chip Device
  Biosensor assays

The MMI CellManipulator can be applied in various different research projects:

- when **contact-free, precise and easy manipulation of multiple microscopic particles** is required
- when the **sensitve and straight-forward measurements of biological forces** is essential to address your questions

Customer Testimonial

imec

"The MMI CellManipulator optical tweezer was customized on an upright microscope upon our request. The tweezer has been working reliably, with excellent manipulation power and flexibility on various devices, from simply glass slides to microelectrodes on silicon. The MMI service was also professional, fast and considerate."

Chengxun Liu and his team aims to identify circulating tumor cells (CTCs) from human peripheral blood by their characteristic electrical and physical properties to facilitate the capture of viable CTCs for downstream genotyping. An upright MMI CellManipulator allows CTC manipulations directly in their nontransparent microfluidic chip.

Chengxun Liu, Ph.D.
Bio-Nano Electronics Department, Imec Belgium, Leuven, Belgium

Contact us

You would like to know more about our solutions and products?

Feel free to contact us.
We are happy to discuss your applications and projects!

About us

Molecular Machines & Industries (MMI) - your partner providing unique competence in microscopic single cell isolation. We specialize in

- Capillary-based selective isolation of single cells (CellEctor)
- Clear-cut laser microdissection to isolate cells in tissue (CellCut)
- Optical tweezers to quantify minimal biological forces (CellManipulator)

We understand that your lab equipment needs to meet the particular demands of your individual research projects in pathology, oncology, forensics, - in any project where you do not want to average out meaningful data, but focus on single cells.

Based in Eching near Munich, MMI has more than 25 years experience, representatives in over 65 countries and has established a broad instruments base all over the world.

Molecular Machines & Industries Germany | Switzerland | Hong Kong | USA

Microscopic Single Cell Isolation

Phone (Germany): +49 89 319 048 40
Phone (USA): +1 331 307 0273
Email: info@molecular-machines.com

www.molecular-machines.com