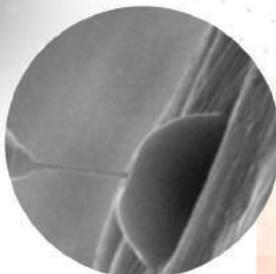
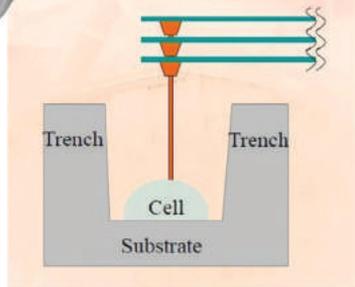


NANONEEDLE

NOVEL RIGID NANONEEDLE FOR
SINGLE CELL SURGERY AND DRUG
DELIVERY APPLICATION
(PI 2013 002540)



SOLUTION:
The rigid nanoneedle could overcome the problem.



DESCRIPTION

The first Nanoneedle that successfully perform a precise and clean cutting at single cell. The first product that possesses a high rigid Nanoneedle structure for applications on cell stiffness profiles, drugs delivery, dissection, severing, implanting of single cells, Deoxyribonucleic acid (DNA) manipulation Nanotech other applications.

Needs

- Much rigid and small enough to puncture a single cell cut cleanly or delivers drugs into the cell.
- Multiple uses ability.
- Made of inorganic material able to withstand the sterilisation process.
- Withstand handling vibration.

Application

- Multiple uses as it is possible to sterilise the Nanoneedle after uses.
- Small enough that it can be seen at naked eye, below micron size.
- Electro-conductive materials.
- Produced in house laboratory with a very cost effective method.

Benefits

The rigidity and extremely small size give the advantage to the Nanoneedle to be used in microscopy, as it is a superior device in comparison with current (AFM cantilever), it brings forward the frontier of research as it allow to act in a single cell only.

Targeted Market

- Forensic
- Research in microbiology
- Tissue engineering.
- DNA studies and other application that requires an extremely small tool to operate under Scanning Electron Microscope (SEM) conditions.



PROJECT LEADER : Assoc. Prof. Ir. Dr. Mohd Ridzuan Bin Ahmad
EMAIL : ridzuan@fke.utm.my