

FY 2019 Nanotech Career-up Alliance

Kyoto University, Laboratory course of micro fluidic device fabrication

■ Purpose:

In various fields such as medical and biological science and so on, micro fluidic devices are applied for drug development, biological science and bio-sensor. This course is held for researchers of enterprise, research institute and university including student to learn the MEMS basic technology fabricating the micro fluidic devices. The participants will use mainly Nanotechnology Hub's photolithography process including cutting edge equipment and tools to fabricate the micro fluidic device which works for 2 liquids mixing and finally evaluate it.

■ Number of participants: 3persons (maximum)

■ Time and period: From October 16 (Wed) to October 18 (Fri), 2019 3 days in total

■ Venue: Kyoto University Nanotechnology Hub (* Yoshida Campus, Kyoto University)
<http://www.nanoplat.cpier.kyoto-u.ac.jp/access/>

■ Contents:

Day 1 – October 16 (Wed)

- [1] Introduction of the program schedule and outline of the micro fluid device fabrication using MEMS technology
- [2] Designing micro fluid device and make the pattern data by CAD soft (L-Edit).
- [3] Fabrication of photo-mask based on micro fluid device CAD data.

Day 2 – October 17 (Thu)

- [4] Fabrication of the photo resist master for micro fluid device using photolithography.
- [5] Mixing up of PDMS and forming the PDMS micro fluid using the resist master.

Day 3 – October 18 (Fri)

- [6] Processing the PDMS micro fluid device and observe the photo resist master micro fluid and measure the resist height corresponded to micro fluid depth.
- [7] Attaching the tubes and small tools to the micro fluid device and observe
- [8] Observation of 2 fluids behavior through designed micro fluid channel

■ Tuition: 10,500 yen

■ Contact:

Kyoto University Nano/Micro System laboratory, CUPAL secretariat
(cupal@nms.me.kyoto-u.ac.jp Phone: +81-75-383-3693)