

FY2021 Nanotech Career-up Alliance

Laboratory course of micro fluidic device fabrication / Kyoto University

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:

3 persons (Max.)

■ Time and Period:

From October 13 (Wed.) to October 15 (Fri.), 2021 (Practice: 3 days)

■ Venue:

Nanotechnology Hub, Kyoto University
#327 Faculty of Engineering Engineering Science Depts Bldg.
Yoshida Honmachi, Sakyo-ku, Kyoto
URL: <http://www.nanoplat.cpier.kyoto-u.ac.jp/access/>

■ Contents:

Day1 – October 13 (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 14 (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 15 (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 JPY

■ Contact:

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