



**CRUK Microfabrication Facility: Photolithography and Soft Lithography
Training Process for New Users**

In order to get the best results from the training, we require all new users to confirm having either a photomask or a 2D design ready before arranging the training sessions. The 2D design should have the following specifications. (**Note: the training sessions cannot be initiated until you have your designs or photomasks ready.**)

- Having a single layer. (For multiple-layer photolithography, you should have separate design files)
- The smallest feature is larger than 5 μm
- All the points are connected as a polyline.

After having your design files or photo masks ready please follow the following steps:

- 1- You should check the specifications using the Klayout free software and send us (s.forouzanfar@imperial.ac.uk and f.seichepine@imperial.ac.uk) a screenshot for confirmation and arranging the sessions.
- 2- Make an account on PPMS : <https://ppms.eu/imperial/areq/?pf=5>
- 3- Request a training using the PPMS system : <https://ppms.eu/imperial/req/?pf=5&training=true&form=114>

Note: BSc students are not allowed to work independently in the facility and need to be accompanied by a Master student, PhD student or other senior members of their team.

For users with zero experience in photolithography, the training will include these sessions:

Session1*: The Maskless UV printing training. (~2 hours)

Session 2:** Introduction to photolithography. In this session, facility managers Florent (@Seichepine, Florent) or Shahrzad (@Forouzanfar, Shahrzad) will perform the photolithography alongside you and guide you through each step. (2-3 hours depending on the thickness)

Session 3: Photolithography assessment. In this session, you will do the photolithography while facility managers supervise you to determine whether you are confident and comfortable doing photolithography independently. (2-3 hours)

Session 4: PDMS soft lithography training. In this session, you will learn to fabricate PDMS chips using the master mold you have fabricated. (3 hours)

* You won't need this session if you have a photomask

**You can skip this session if you have experience in SU-8 photolithography