

μMLA Manual (Tricks / Annotations / Troubleshooting)

1. Writing Electrodes without Alignment Marks:

Idea: Find a recognizable shape of your structure, defining this point as origin in your CAD file.

a. Pattern Preparation

- i. You only can write one structure at a time.
- ii. In Klayout/AutoCAD *etc.*, to move a distinct position* of the structure you want to pattern to the origin of your file, read out your actual position with cursor and x,y readout on the bottom right of program. Select your pattern you want to move. Click in Klayout: Edit -> Selection -> move to -> enter target coordinates for x and y (In AutoCAD: Select your structure, enter, specify base point, type "0,0,", click somewhere else in your file for confirming). *Be aware that not all materials covered with a layer of photoresist are clear to see with the uMLA camera.
- iii. Insert the structure within the HIMT MLA program. (Check other manuals on how to do that.)

b. Positioning

- i. Load your substrate. **There won't be an angle correction! So, try to position your sample as accurate as possible!**
- ii. Move to your desired structure, select the same spot as your set origin with the crosshair and click below the arrows "Set Zero". (This has to be done as precise as possible!) The design structure should be moved. (Check other manuals on how to do that.)
- iii. Select your "Dose", set your "Defoc" and "Start Exposure".
- iv. Unload Substrate and proceed.