

The CAD files used to produce the molds for the work in Bender et al. have been provided in the Bender et al. Microfabrication GitHub repository. However, one can use custom files designed to create molds. Some notes to consider when designing one's own mold are provided below:

- Design the walls surrounding the pattern so that there are walls on only 2 of the 4 sides. This will allow for easy PDMS removal after the curing process. Tape can be used to form temporary walls when pouring in the liquid PDMS.
- Hollow out the base of the mold. Resin printing does not automatically hollow out solid masses like other forms of 3D printing, and solid objects can consume large amounts of resin. Manually hollowing out the base allows for one to save on materials
- In the molds used by Bender et al. the pattern depth is extruded 300um, which helps ensure that the pattern is clear but not so fragile that it breaks during the removal process

For printing, Bender et al. recommends the following to ensure the best results

- The printer with the highest possible resolution should be used for the best results of the pattern
- When slicing the file, select the smallest possible layer height
- Some slicing softwares, such as PreForm, have automatic slicing options. While these options can be helpful, they will often print the file at an angle to help with adhesion issues. This has the unintended consequence of visible layer lines in the print, which can then transfer to the PDMS stamp, leading to uneven micropatterns. To avoid this, manually change the orientation of the file to print on one of the flat surfaces and ensure a smooth top surface