Observation arena

Design

A graphical description of the model can be found in the file ‘Model-KAWARASAKI-2022.pdf’ in the GitHub page of DIMEhttps://github.com/fernan9/DIME

Lasser cut

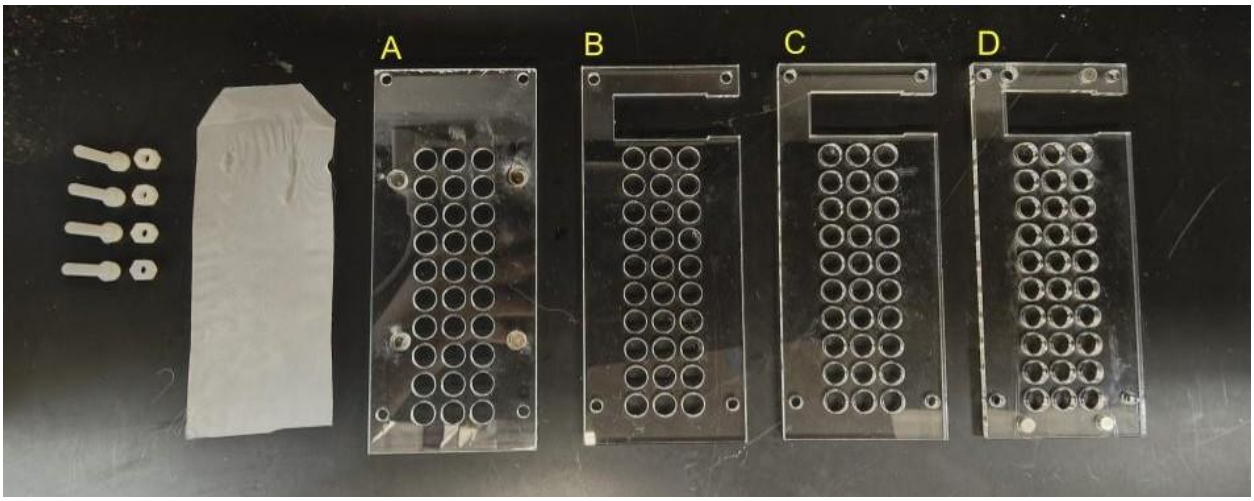
Download files Arenas_sheet1_1.5mm.pdf and Arenas_sheet2_3.0mm.pdf. Print in Acrylic 12x24 inches sheets of 1.5 and 3.0 m., respectively. This should provide enough materials for 4 arenas in total. Files can be modified in a vector editing software (Inkscape) to fit a smaller acrylic sheet if less arenas are desired. A small piece of thin nylon mesh, nylon screws and bolts of 5 mm, and 5 mm circular magnets are also necessary for assembly.

Assembly

Components

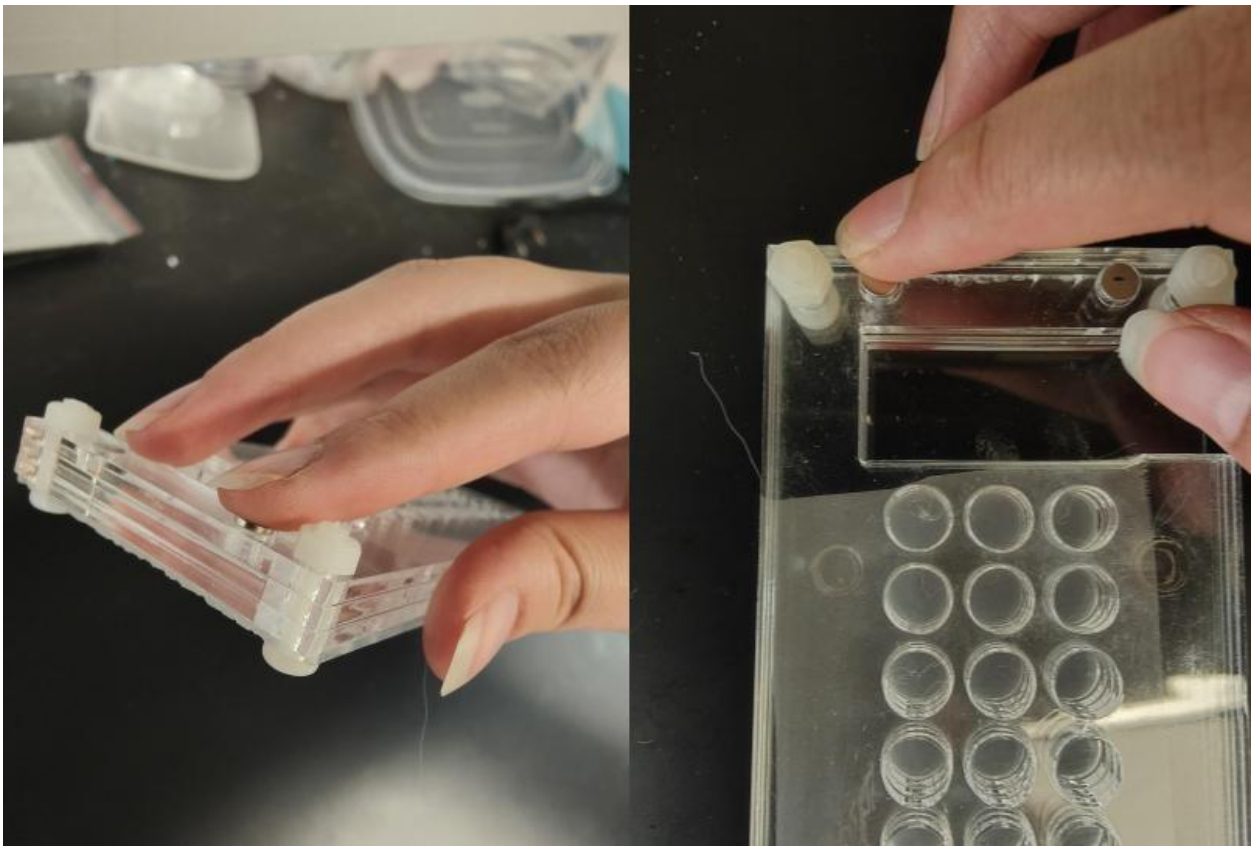
30-well plate

The 30-well plate is made up of 4 screws, 1 piece of mesh, 4 acrylic plates, and 8 magnets.



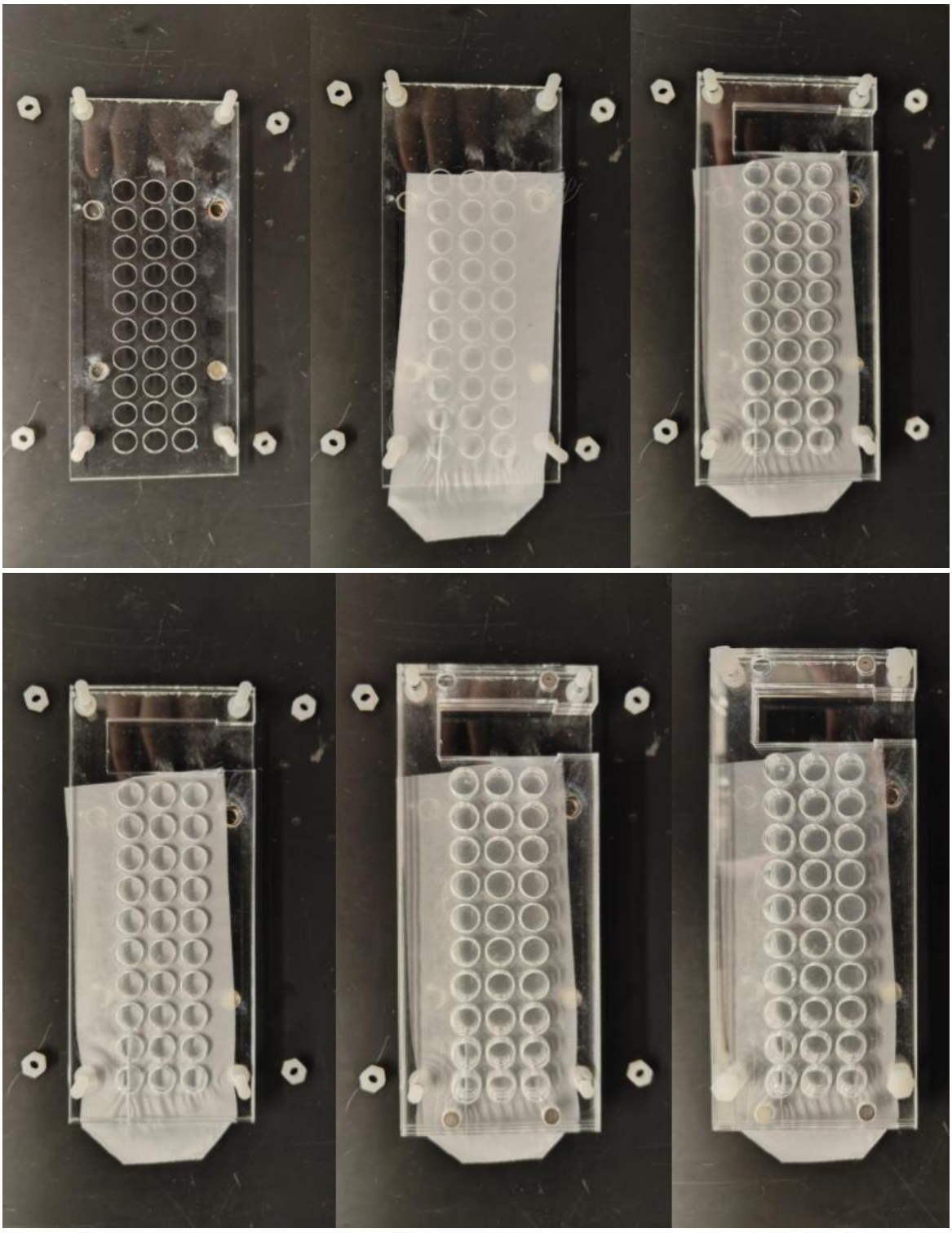
Magnets

Magnets are pushed into plates D, C, and the acrylic covering.



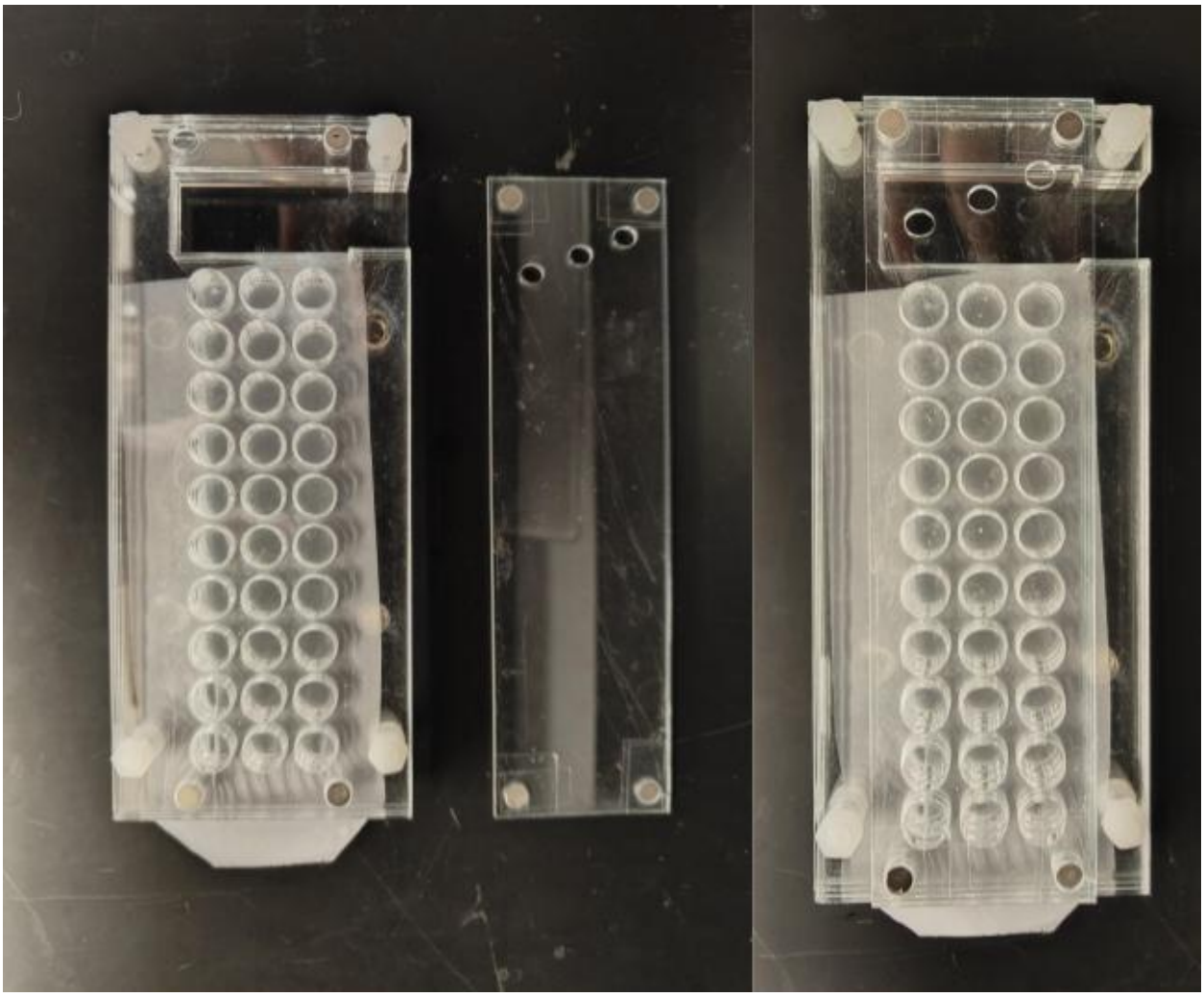
Stacking

The 4 acrylic plates are stacked starting with plate A on the bottom. Then, add a piece of mesh before stacking plate B followed by plate C. Finally, the top plate will be plate D. Then, the four screws will be screwed on in the four corners of the stacked plates A-D.



Slide covering

Slide the acrylic covering into place and the 30-well arena is assembled.



Fly loading

To load the wells, start loading from the bottom rightmost well. Using the acrylic cover, load the first individual, then slide the cover up just enough to enclose the filled well. Next, load the next well to the left and repeat.