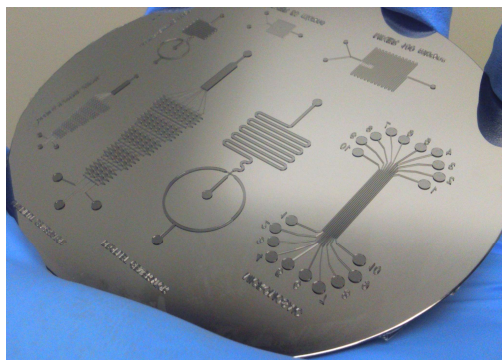
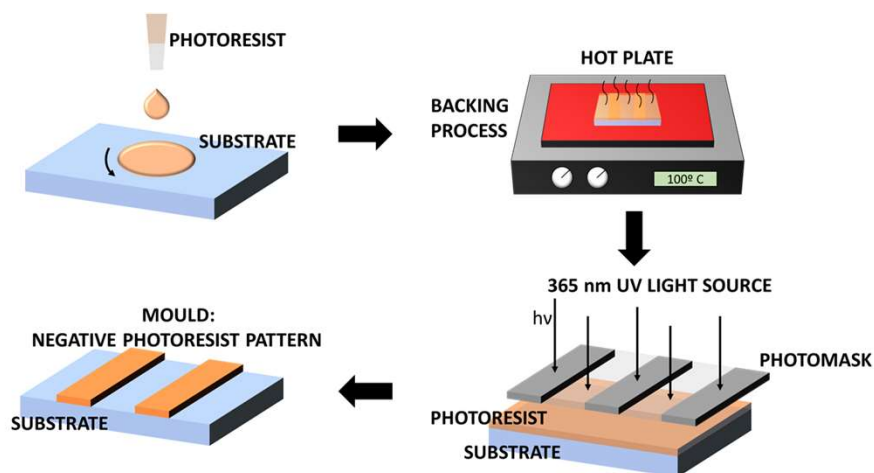


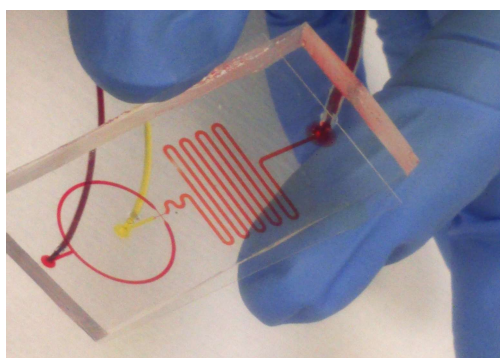
Microfluidic moulds and chips

From design to final device, we fabricate microfluidic chips for cell culture, diagnostic systems, etc. Clean room conditions and lithography tools are employed for the creation of such devices.

A typical lithographic process to create a mould includes: the spin coating of the photoresist on the working substrate, a resist baking process to evaporate residual solvent traces and a UV exposure through a photomask, with the pattern to transfer. A posterior bake of the sample is usually required to finish curing the photoresist. Finally, after a development process, the mould is obtained, mimicking the photomask pattern.



SU-8 mould on 4" silicon wafer.
 We can build SU8 moulds with micrometric accuracy and aspect ratios up to 1:10. Moulds are treated with a protective molecule (silane), which assures easy PDMS replication of the mould, maintaining its performance over time.



PDMS microfluidic chip, fabricated from a given silicon mould.
 First, we replicate the mould in PDMS and later, we make up the chip by sealing the replica to a desired surface (PDMS, glass, etc.), in what is called bonding process.