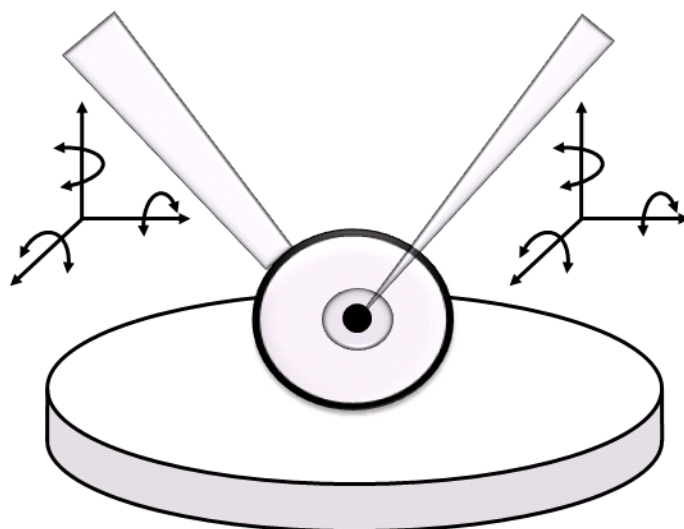
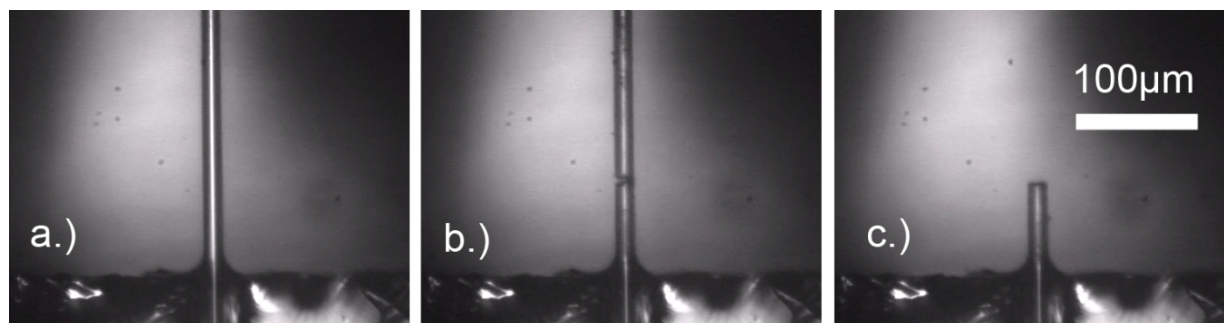
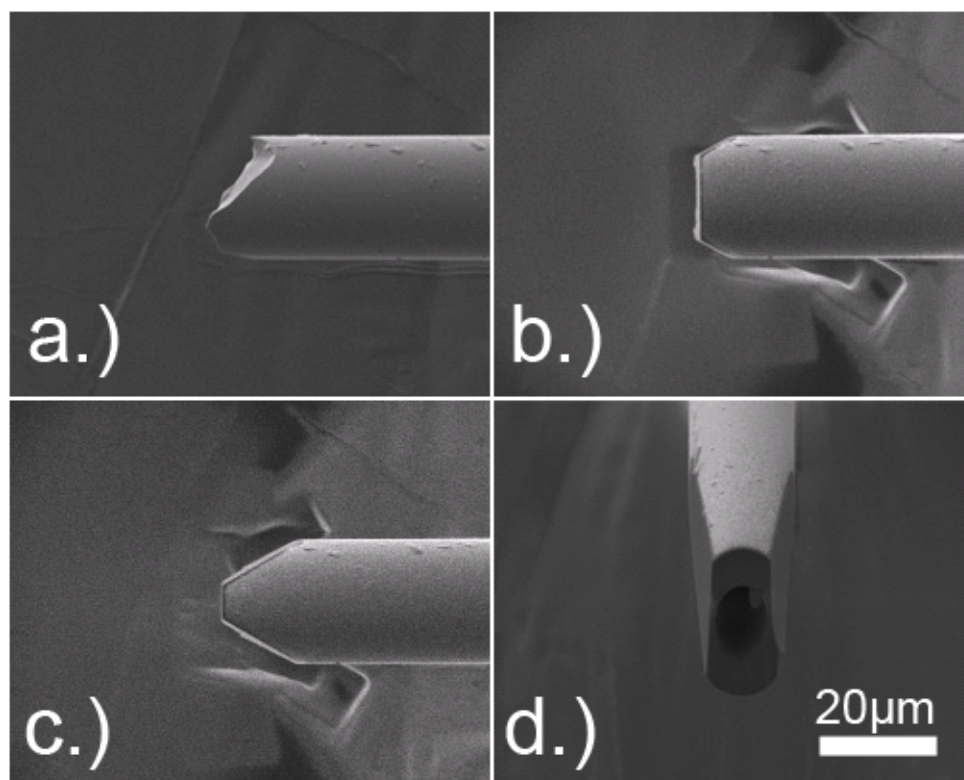




Supplementary Figure 1: Microinjection of a cell or embryo using a suction capillary and injection needle controlled by multiple-DOF micropositioners



Supplementary Figure 2: a.) Uncut needle extending into channel b.) Needle after 2 passes of femtosecond laser c.) Needle tip after 5 passes of femtosecond Laser



Supplementary Figure 3: Sharpening of needle tip in channel by Focused Ion Beam (FIB) a.) Unprocessed needle. b.)-c.) Needle sharpened using Focused Ion Beam d.) Frontal view of sharpened injection needle