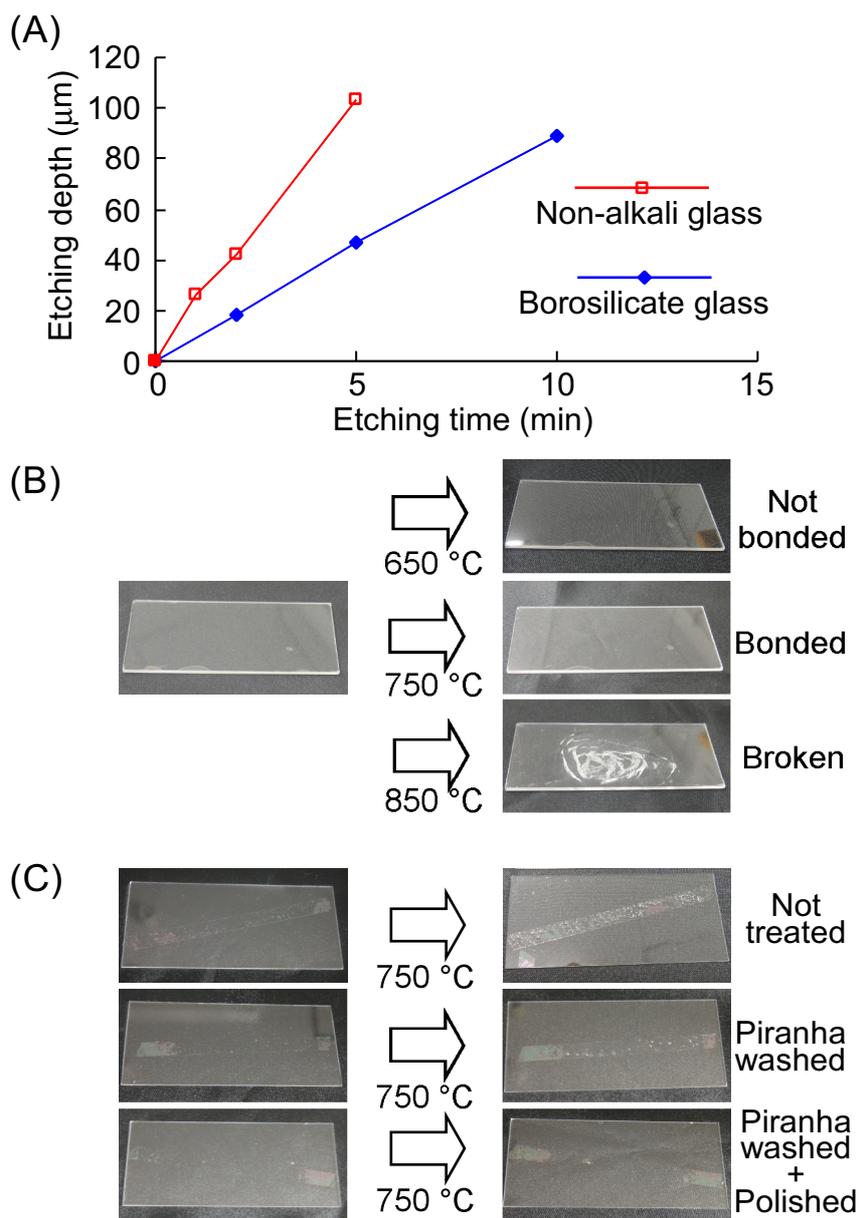


Suppl. Figure 1: Manual deformability check of the ultra thin glass sheet. (A) A photo of an overall experimental set up. PDMS sheets with ultra thin glass sheets were prepared as Figure 3, and attached to a glass slide, which was fixed vertically on a polystyrene dish lid. The system was then observed using a transverse microscope focusing on the center of the hole. The dish was fixed on the microscope stage, and a PDMS block was pushed by tweezers manually. (B) Figures showing the ultra thin glass attachment area on a piece of PDMS sheet and manual operation for the glass deformation. The upper figures show the top views, and the bottom figures shows the side view. (C) Actual microscopic pictures around the ultra thin glass sheet (6  $\mu\text{m}$  thickness) attached area before applying the force (left) and when maximally deformed (right).



Suppl. Figure 2: Supplemental data for microchip fabrication. (A) Etching depth of non-alkali glass slides against HF etching time. (B) Pictures of two-ply plane glass slides before (left) and after (right) heating at 650 °C, 750 °C, and 850 °C for 5 h. (C) Pictures of an ultra thin glass attached plane glass slide before (left) and after (right) heating at 750 °C for 5 h under three different cleaning conditions.