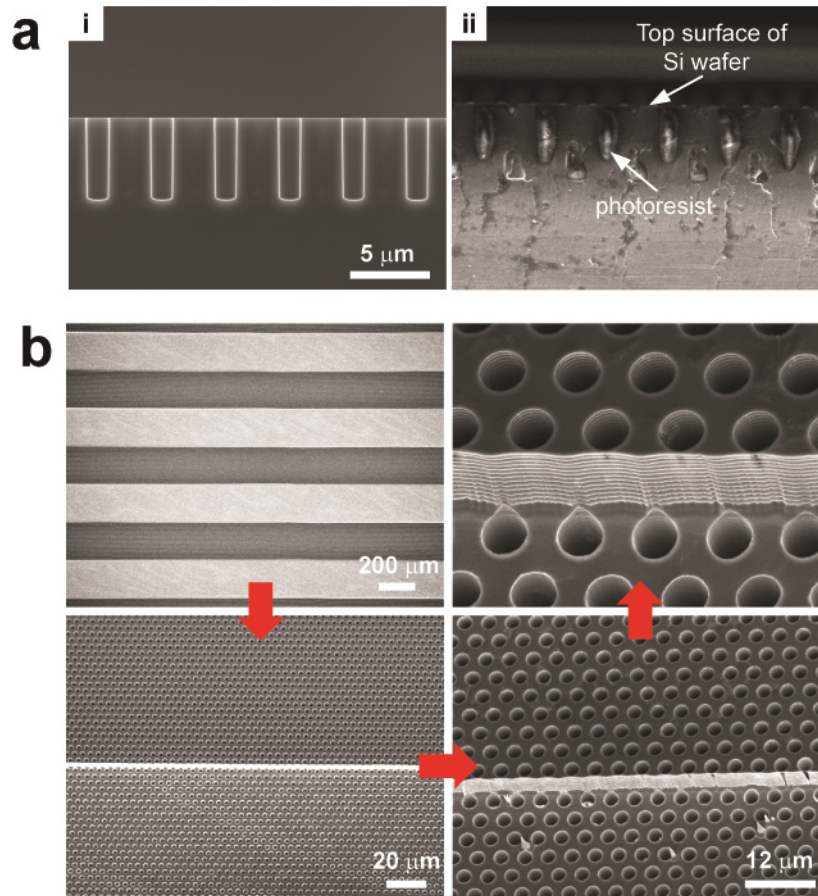


## Supporting Figure 1



**Supporting Figure 1.** (a) Cross-sectional SEM images showing the negative Si master after the first DRIE step with a regular array of cylindrical, vertical holes of a uniform depth across the Si substrate (i). ii shows the negative Si master after the second photolithography where exposed photoresist on the Si wafer was completely dissolved but photoresist filling the cylindrical holes were remained in the holes. (b) Tilted top-view SEM images showing the negative step-rigidity Si master with different magnifications as indicated.