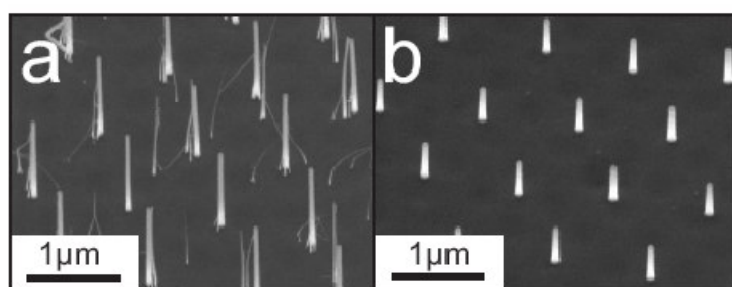


Supplementary figure 1:

GaP nanowire array by soft nano imprint lithography. **(a)** Pattern of Au dots after lift-off process, prior to the growth of nanowires. **(b)** Nanowire array without suitable cleaning step prior to growth resulting in extra “grass-like” wire growth between the patterned array. These extra undesired nanowires occur by using King's Water, HNO<sub>3</sub>, HF, or Br<sub>2</sub>/MeOH. **(c)** and **(d)** Nanowire array with a piranha cleaning step and 700°C anneal before growth



Supplementary figure 2:

Influence of annealing steps prior to growth. **(a)** 550°C anneal step **(b)** 700°C anneal step. All samples are pre-treated with a piranha etch.