"RCA" CLEAN STEPS.

(i) $\text{H}_2\text{SO}_4, \text{H}_2\text{O}_2$ TO REMOVE ORGANICS.

(ii) 5:1:1 $\text{H}_2\text{O} - \text{NH}_4\text{OH} - \text{H}_2\text{O}_2$, 10-15 min.

(iii) Dilute HF 30 sec.

(iv) 6:1:1 $\text{H}_2\text{O} - \text{HCl} - \text{H}_2\text{O}_2$, 10-15 min.

(v) Rinse, Dry

II. VAPOR PHASE EPITAXY

Basic Steps

• Clean Si wafers placed in chamber, heated to 1000-1200 °C, control ambient.

• Flow source gas ($\text{SiCl}_4$, $\text{SiHCl}_3$, $\text{SiHCl}_2$, $\text{SiH}_4$) over heated wafers. + $\text{H}_2$ gas.

• Si atoms are deposited on the surface by a 5 step CVD process.

1.) Reactants transported to surface

2.) Reactants adsorbed on surface

3.) Chemical reaction on surface

4.) Reaction products desorb

5.) Products transported away from surface