(E) ADVANCED VAPOR PHASE EPI.

- Goal is to have good thickness and uniformity with low defect density.

TWO APPROACHES

(i) RAPID THERMAL PROCESSING.

- LRP (LIMITED REACTION PROCESSING)
- WAFERS ARE HEATED BY LAMPS.

* Short times used limit redistribution of dopants
- However growth rates are difficult to control.

(ii) ULTRA HIGH VACUUM UPE. (UHV CVD)

- Used to reduce H₂O and O₂ which in turn results in lower process temps.

* T < 800°C
- Allows for batch loading.
- Dep rate is <10 Å/min.
- Temp is too low for N⁺ B.C.
* Dep. uniformity is 2%.