4.2.3 Summary to: 4.2 Other Semiconductor Growth Technologies

- Growing single crystals of compound semiconductors is far more difficult than for elemental semiconductors
  - Precise stoichiometry is important
  - Vapor pressures if the constituents at the melting point might be very different
  - New kinds of defects might be encountered
  - Polytypie might be encountered
- Major techniques are
  - Encapsulated **CZ**
  - Sublimation growth

GaAs:
150 mm wafers, encapsulation technique, disl. density (10^3 - 10^6) cm^{-2}

GaP, **InP**
as **GaAs** but smaller and more expensive

SiC:
100 mm wafers, sublimation technique, several polytypes available, "pipe" defects

Exercise 4.2-1

All Questions to 4.2