

Table 2.1 Properties of the group III precursors.


Element	Symbol	Melting Point (°C)	Boiling Point (°C)	Vapor Pressure			Liquid or Solid (15°C)
				a	b(k)	Torr (15°C)	
Al	TMAI	15.4	127	8.224	2134.83	6.477	S
Al	TEAl	-52.5	186	10.784	3625	0.016	L
Ga	TMGa	-15.8	55.8	8.07	1703	143.4	L
Ga	TEGa	-82.3	143	8.083	2162	3.768	L
In	TMIn	88.4	133.8	10.52	3014	1.134	S
In	TEIn	-32	184	8.93	2815	0.143	L

Table 2.2. List of the growth parameters for the LP-MOCVD.

1	Mass flow rate of different gases
2	Gas switching sequence
3	Growth temperature
4	Growth pressure
5	Rotation of susceptor
6	III/V, III/III and V/V ratio

Table 2.3 The requirements for the atmospheric pressure process.

1	Uniform composition
2	Uniform thickness
3	Uniform dopant concentration
4	Abrupt heterostructure interface
5	Good electrical and optical quality



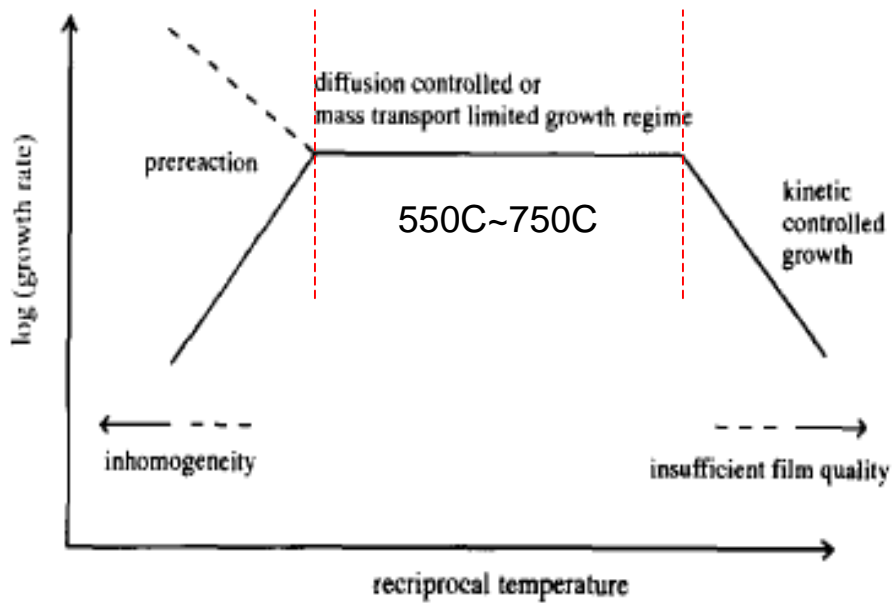


Fig. 2.1 Typical reciprocal temperature versus growth rate curve for the MOCVD processes.

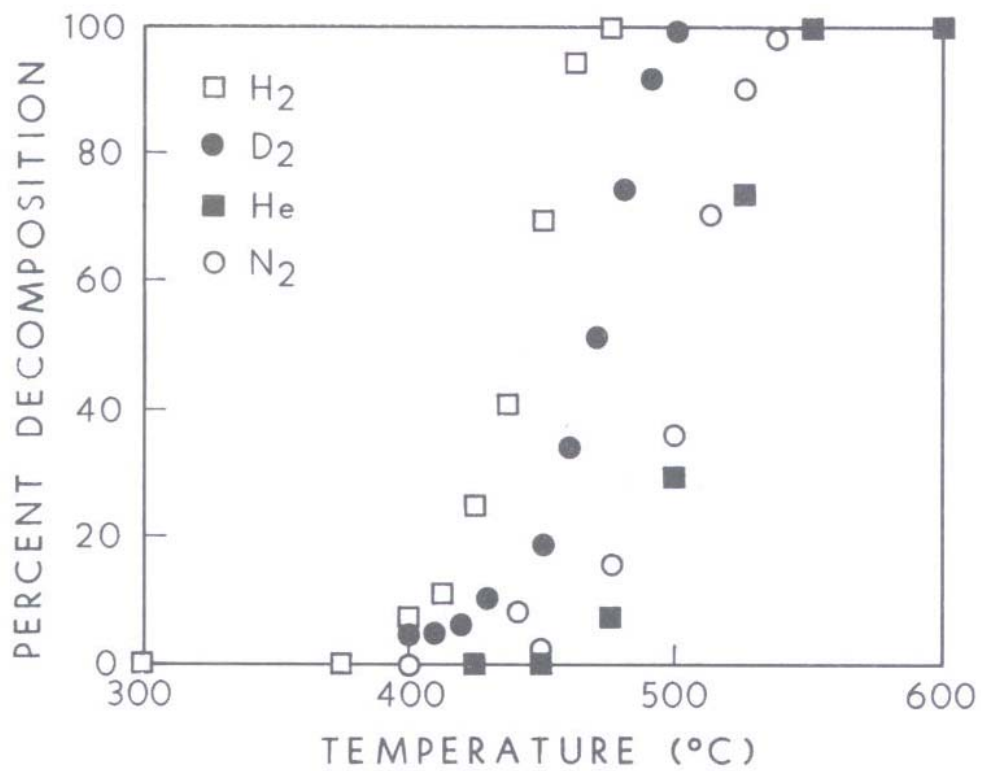


Fig. 2.2 The pyrolysis curves of the TEGa in different carrier gases.

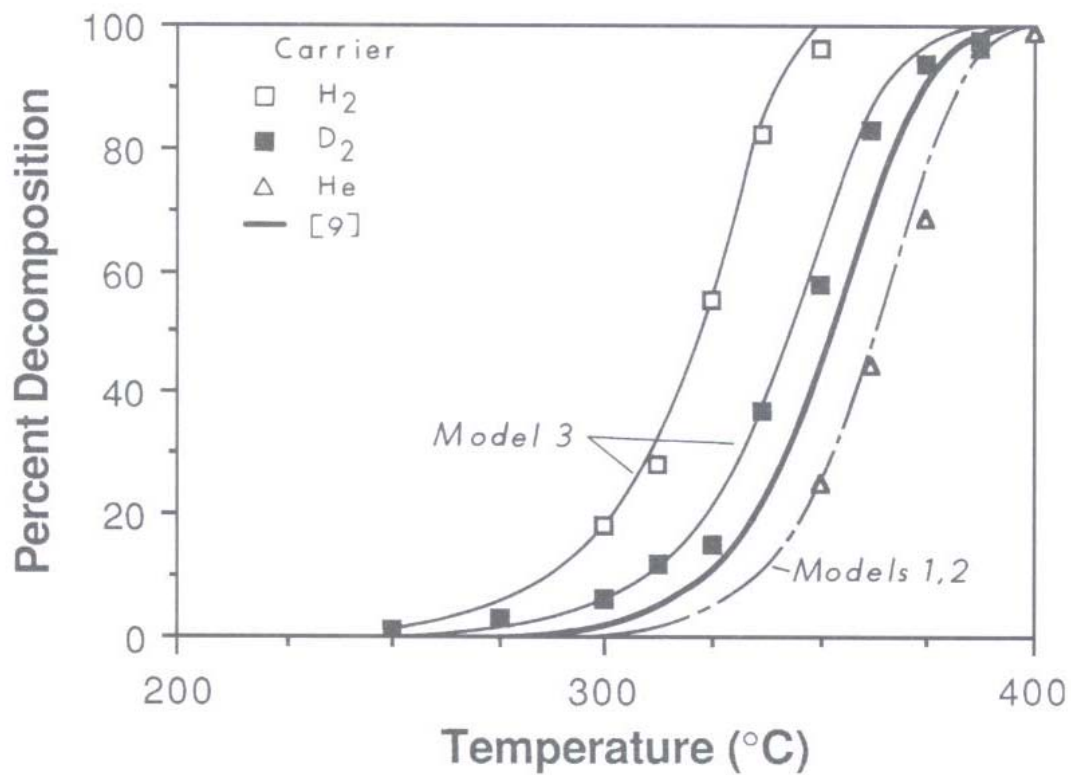


Fig. 2.3 The pyrolysis curves of the TMI in different carrier gases.