

15/11/18

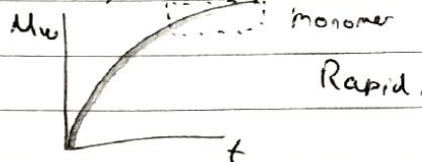
Hayes 101

Chain Growth Polymerisation

Ionic Processes.

(Cationic polymerisation of Vinyl Monomers

(Radical chain growth similar; initiation $\rightarrow$ stable byproduct)
Growth profile rad.



Polymer chains are entangled = physical properties

$\rightarrow$ correlates to M_w

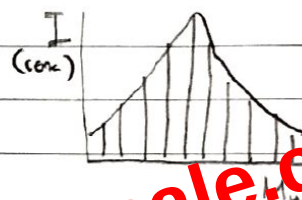
Radicals can recombine

or abstract an $-H \rightarrow$ disproportionation.

Polydispersity:

M_n - no. avg mol wt

M_w - wt avg mol wt



Gaussian Distribution

$\rightarrow$ each oligomer correlates

to the monomer

$D = \frac{M_w}{M_n} \rightarrow$ closer to 1 = narrower distribution.

Preview from Notesale.co.uk
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anionic Polymerisation

$\rightarrow$ high degree of steric control

$\rightarrow$ large range of polymerisations (ring opening; 1,3 - vinyl ic)

$\rightarrow$ Narrow choice of monomers

$\rightarrow$ Often limited in solution.

Cationic Polymerisations

Initiation occurs via addition of an electrophile to the vinyl monomer. - mineral acids, strong Lewis Acids

Alt. initiator - ionisable halides

Markovnikoff's rule about stability of carbocations

Mechanisms debatable!