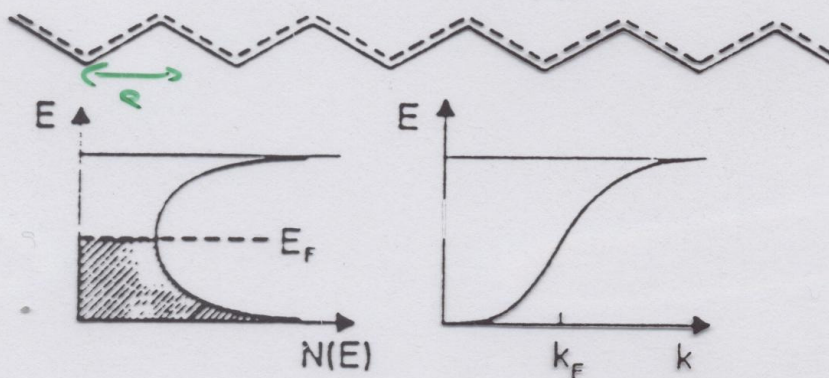
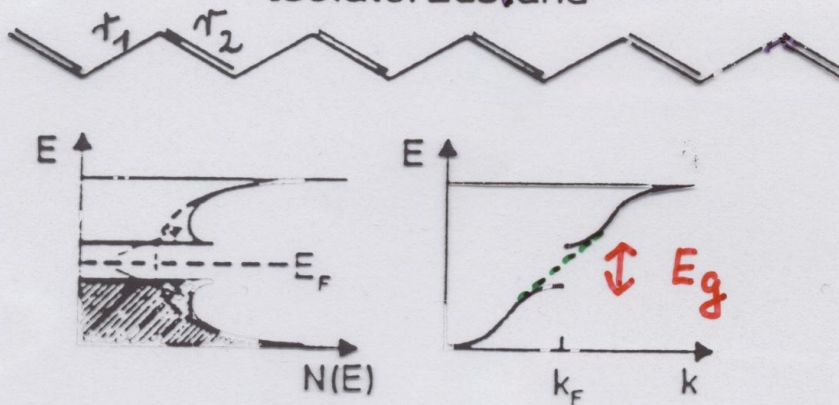


Peierls instability in 1D

metallischer Zustand



Isolatorzustand

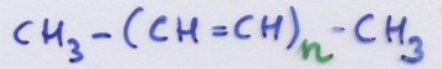
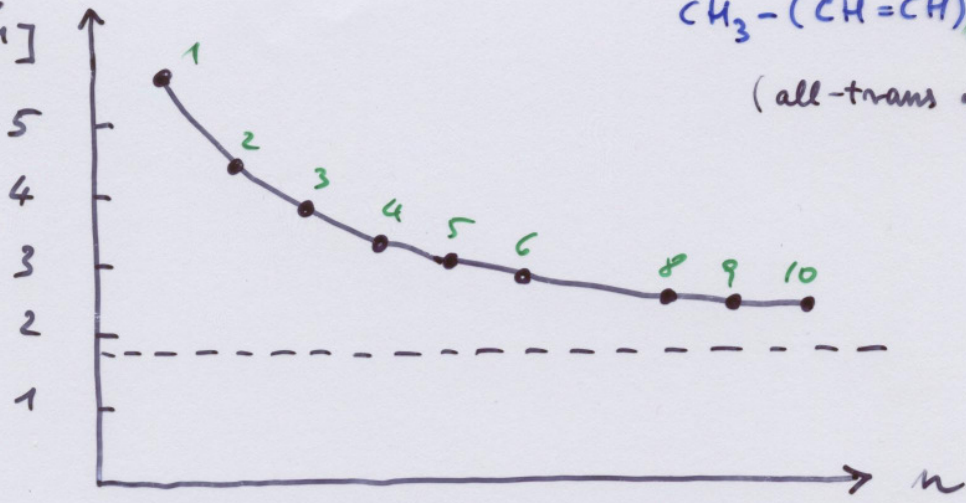


$$\Delta\tau = \tau_1 - \tau_2$$

$$\underline{E_g \sim \Delta\tau}$$

i) gap

ν_{max}
[10^4 cm^{-1}]

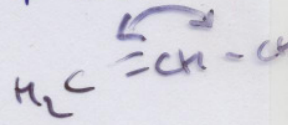


(all-trans ω, ω' dimethylpolyene)

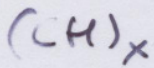
"double bond
resonance"
 $\Delta E \sim \frac{1}{n}$

Konjugált polimerekben

$E_g \approx 1.5 - 4 \text{ eV}$



ii) alternálás

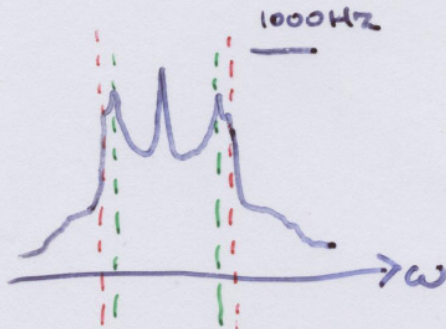
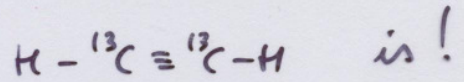


^{13}C NMR

(Yannoni, Clark)

Előállításnál:

kevés



$\Rightarrow \tau_1 = 1.44 \text{ \AA}$
 $\tau_2 = 1.36 \text{ \AA}$

Főhasonló dipól-dipól k.h. miatt