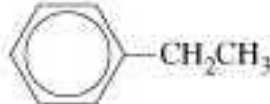


Gruppi funzionali

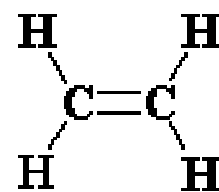
Alcani	$R-H$	$CH_3CH_2CH_2CH_2CH_2CH_3$
Alcheni	$\begin{array}{c} \diagup \\ C=C \\ \diagdown \end{array}$	$CH_2=CHCH_2CH_2CH_3$
Alchini	$-C\equiv C-$	$CH_3C\equiv CCH_2CH_2CH_2CH_2CH_3$
Alcoli	$R-OH$	$CH_3CH_2CH_2CH_2OH$
Etere	$R-O-R$	$CH_3-O-CH_2CH_2CH_3$
Ammina	$R-NH_2$	$CH_3CH_2CH_2-NH_2$
Aldeide	$\begin{array}{c} O \\ \\ R-C-H \end{array}$	$\begin{array}{c} O \\ \\ CH_3CH_2CH_2C-H \end{array}$
Chetone	$\begin{array}{c} O \\ \\ R-C-R \end{array}$	$\begin{array}{c} O \\ \\ CH_3CH_2CCH_2CH_2CH_3 \end{array}$
Acido carbossilico	$\begin{array}{c} O \\ \\ R-C-OH \end{array}$	$\begin{array}{c} O \\ \\ CH_3CH_2CH_2C-OH \end{array}$
Estere	$\begin{array}{c} O \\ \\ R-C-OR \end{array}$	$\begin{array}{c} O \\ \\ CH_3CH_2CH_2C-OCH_3 \end{array}$
Amide	$\begin{array}{c} O \\ \\ R-C-NH_2 \end{array}$	$\begin{array}{c} O \\ \\ CH_3CH_2CH_2C-NH_2 \end{array}$
Arene	$Ar-H^d$	

Polimeri

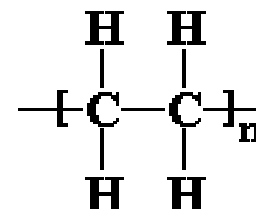
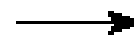
La parola “polimero” deriva dal greco = molte parti

Macromolecole: sostanze ad altissimo peso molecolare che hanno la stessa costituzione delle molecole semplici (*monomeri*) che le originano

1. Monomero
2. Unità monomerica
3. Unità ripetente
4. Grado di polimerizzazione

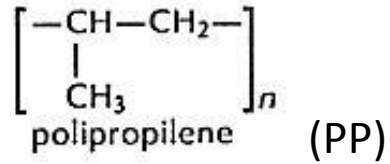
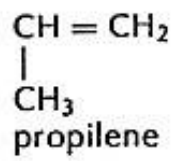


Etilene

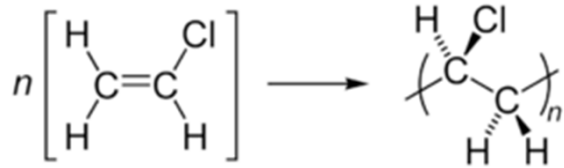


poli etilene

1. Naturali: cellulosa, amido, caseina, ecc.
2. Sintetici: prefisso “poli” al nome del monomero o dell’unità ripetente (polietilene, polipropilene, polistirene, cloruro di polivinile, ecc.). (PC, PE, PET, PP, PS, PVC, ecc.)

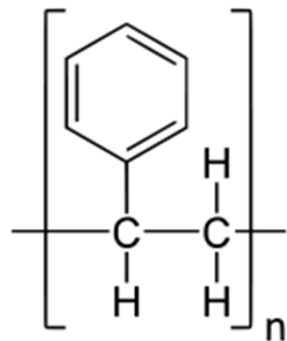


Metile: $-\text{CH}_3$



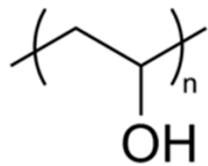
Cloro: $-\text{Cl}$

Polivinilcloruro (PVC)



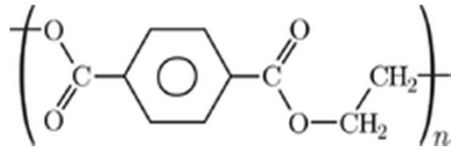
Benzene, fenile: $-\text{C}_6\text{H}_6$

Polistirene (PS)

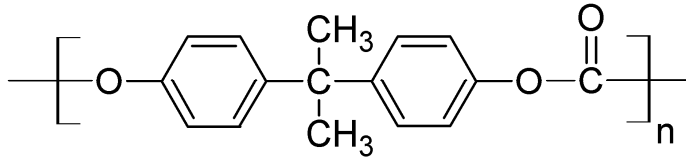


ossidrile: $-\text{OH}$

Polivinilalcol (PVA)

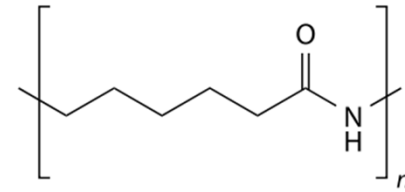


polietilentereftalato (PET)

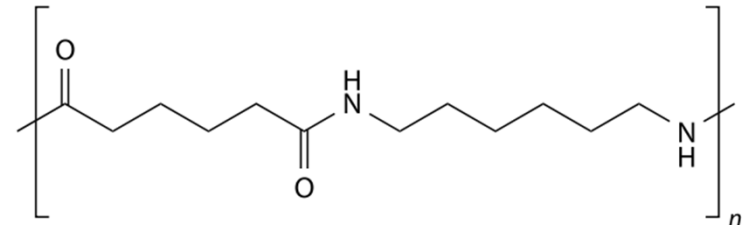


policarbonato (PC)

→ Addizione vs condensazione

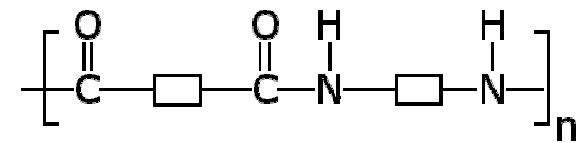
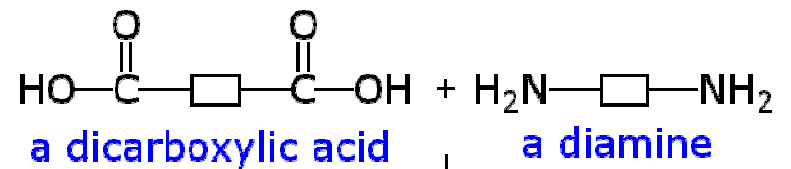


Nylon 6

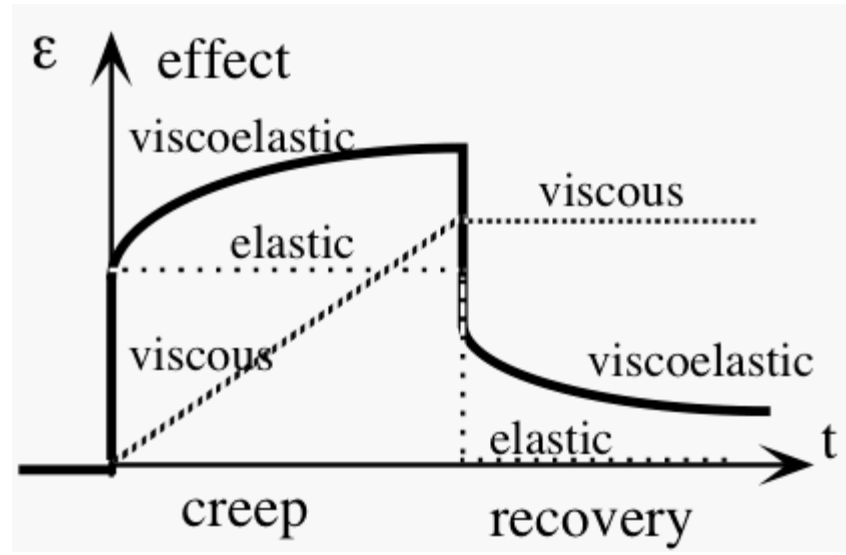


Nylon 6,6

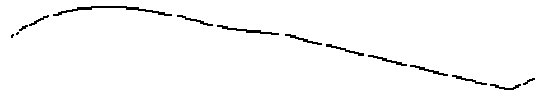
Nylon, poliammide (PA)



a polyamide

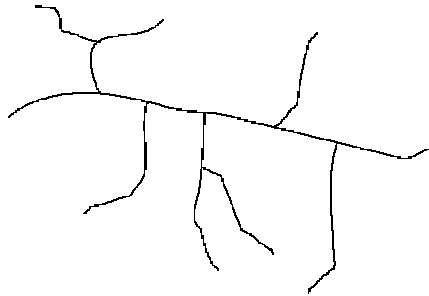


- Lineari



a linear polymer

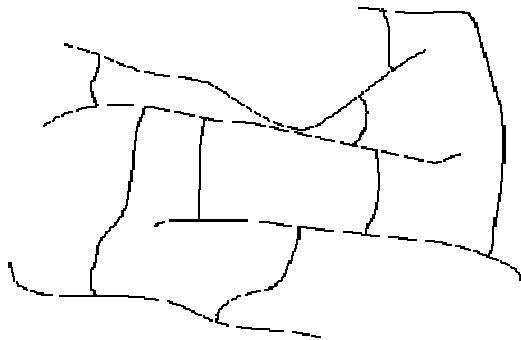
- Ramificati



a branched polymer

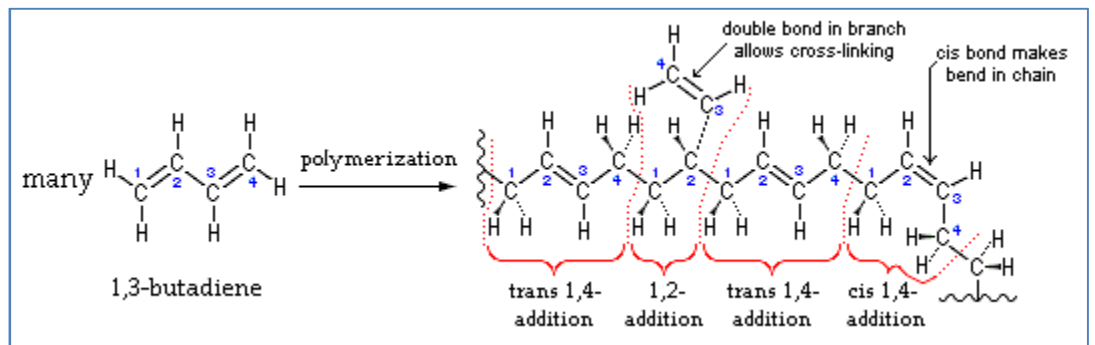
- reticolati

Elastomeri, gomme

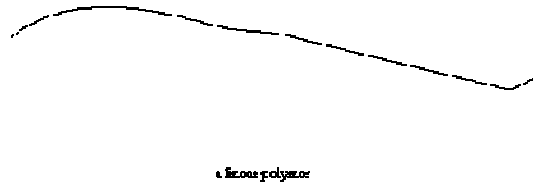


a crosslinked polymer

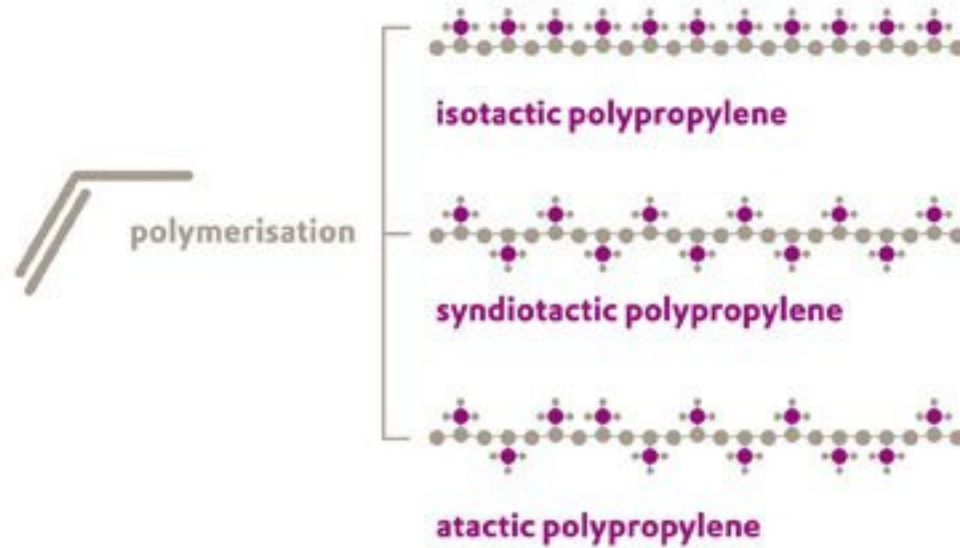
Es: butadiene



- Lineari

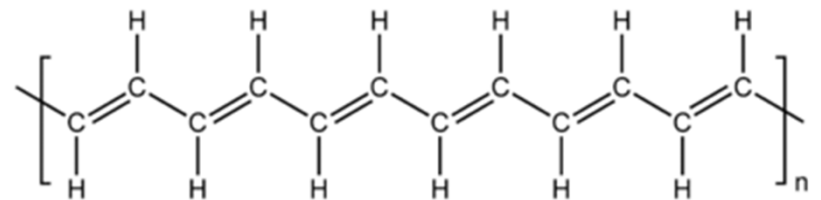
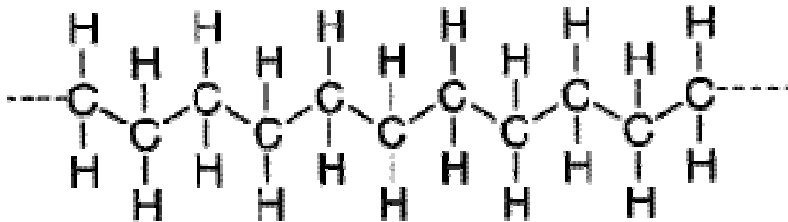


Regolarita':
Giulio Natta e "l'invenzione della plastica"



...una questione di urti efficaci...

Polietilene e Poliaccetilene: quale differenza?



... i “polimeri conduttori”



“Energia green da materiale green”

Fotovoltaico organico

