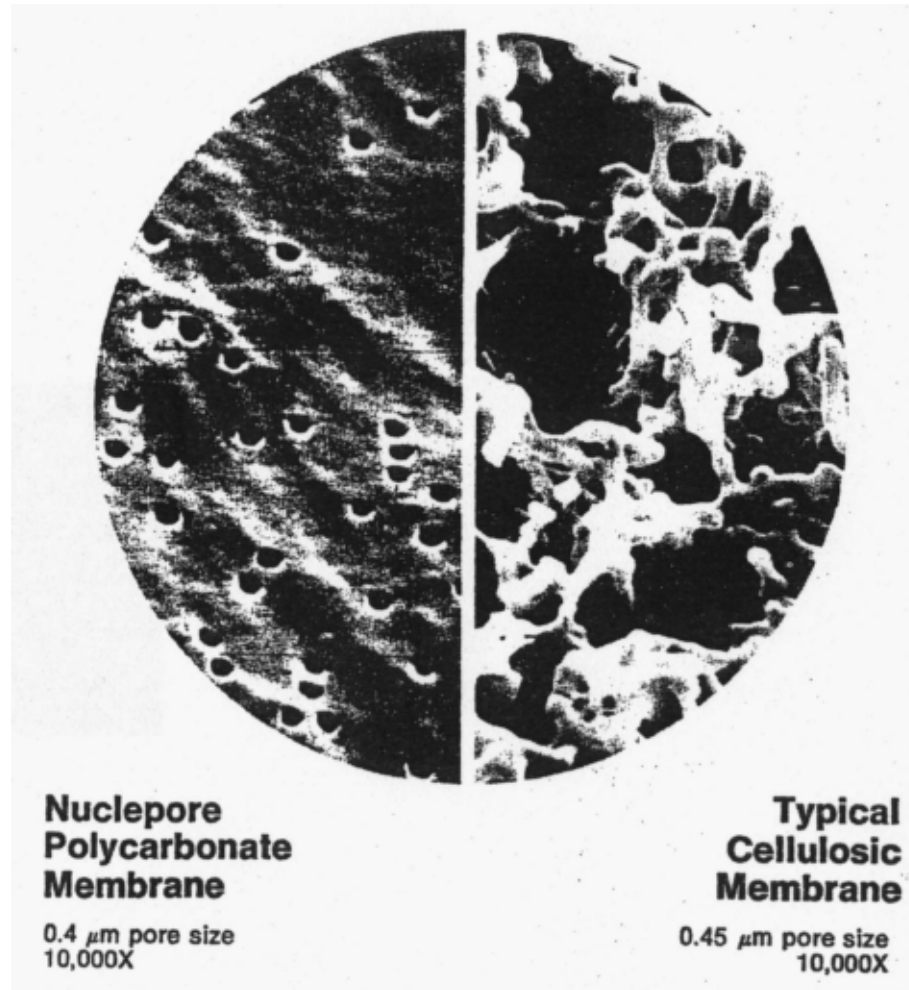


Membrane Separations



Polycarbonate with 0.4 μm pores (Nuclepore) and cellulose acetate with 0.45 μm pores.

Membrane Separations

- Material:

- Inorganic.

- Mainly made of metal oxides (ceramics) such as silica, alumina or oxides of Titanium, Zirconium or Magnesium.

- As well in glass, carbon or metal.

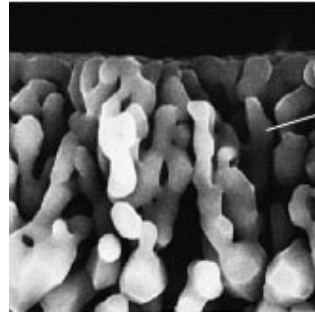
- Expensive (5 to 10 times).

- High chemical resistance and withstand high temperatures.

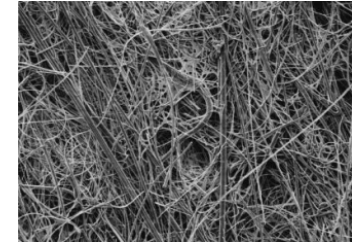
- Low selectivity.

- Fragile.

Alumina



Glass fiber



carbon

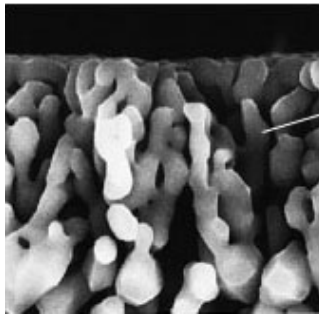


metal

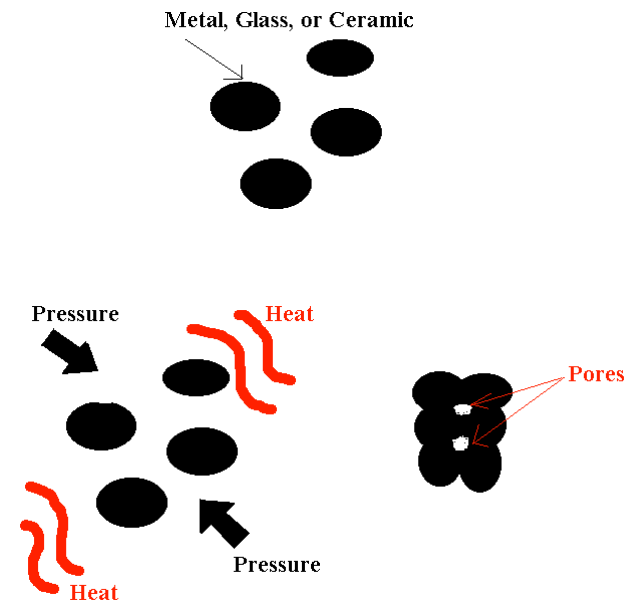
Membrane Separations

- Preparation of synthetic membranes:

Sintering-fusion



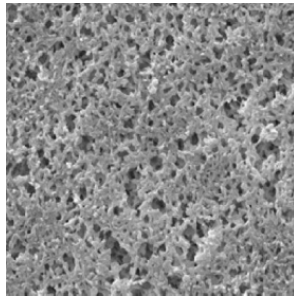
Alumina



Membrane Separations

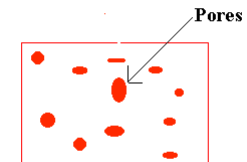
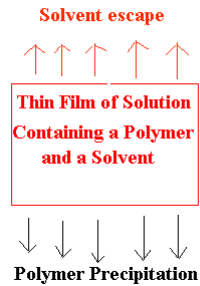
- Preparation of synthetic membranes:

Casting



Nylon

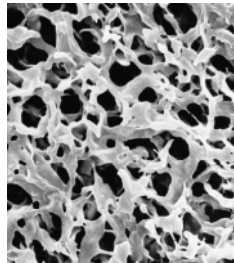
Thin Film of Solution
Containing a Polymer
and a Solvent



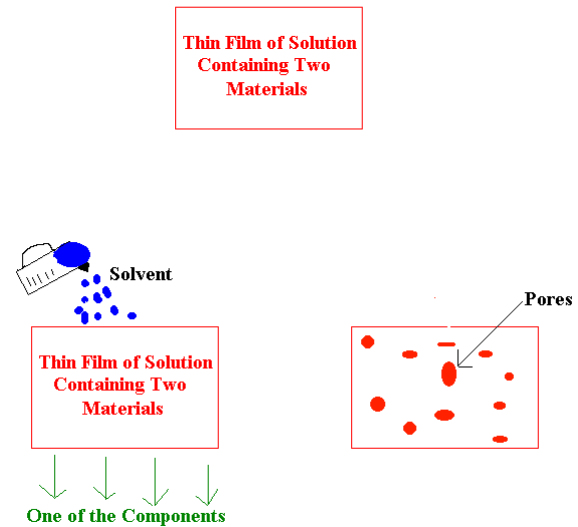
Membrane Separations

- Preparation of synthetic membranes:

Leaching



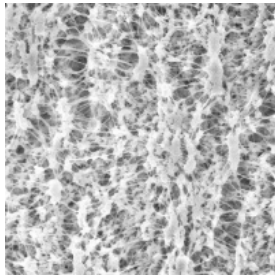
Polyvinylidene fluoride



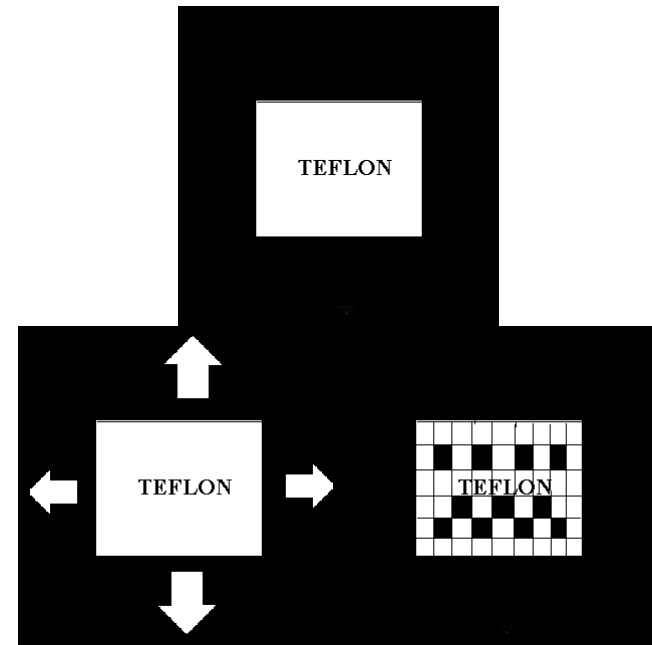
Membrane Separations

- Preparation of synthetic membranes:

Stretching



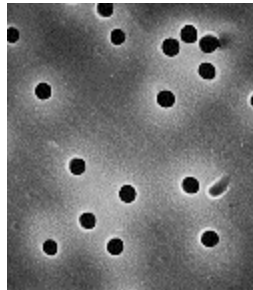
PTFE
(Polytetrafluoroethylene)



Membrane Separations

- Preparation of synthetic membranes:

Nucleation Track



Polycarbonate

