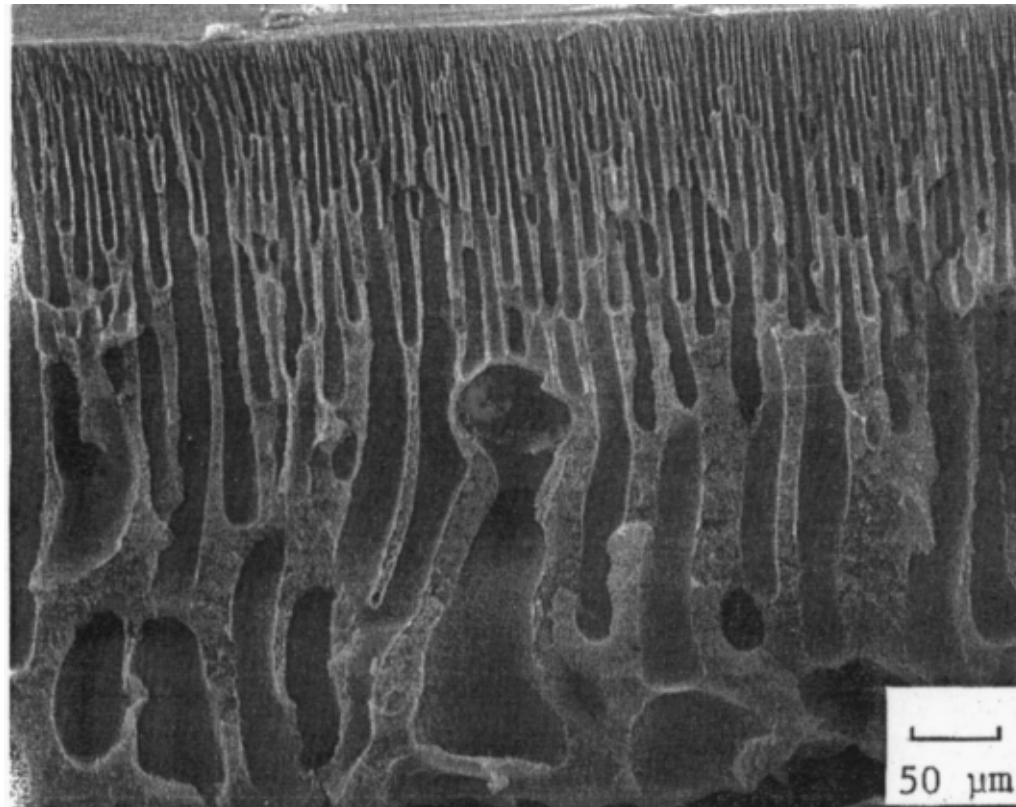
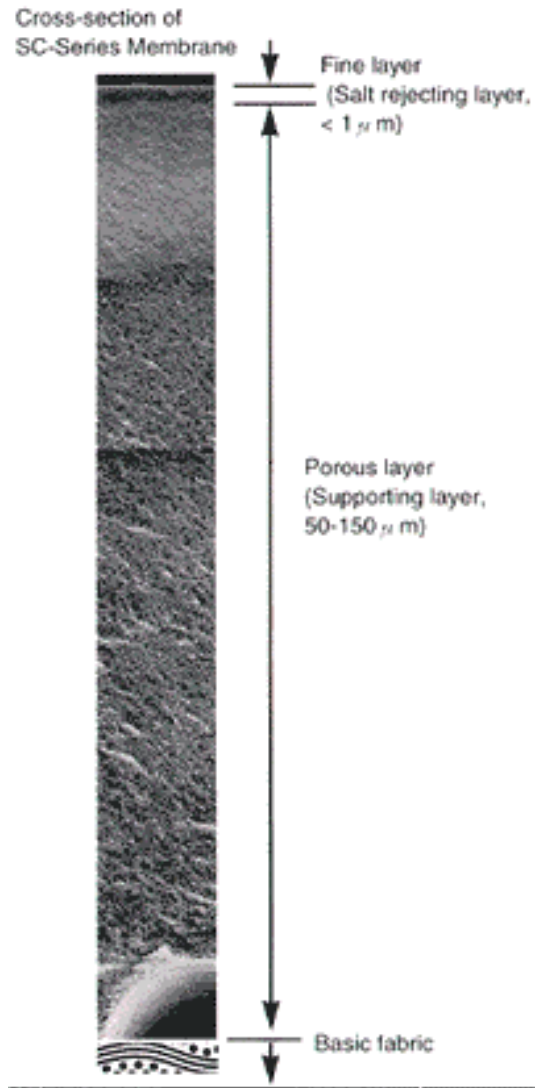


Membrane Separations

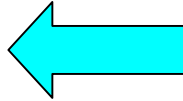


UF integral asymmetric membrane made of polypropylene.

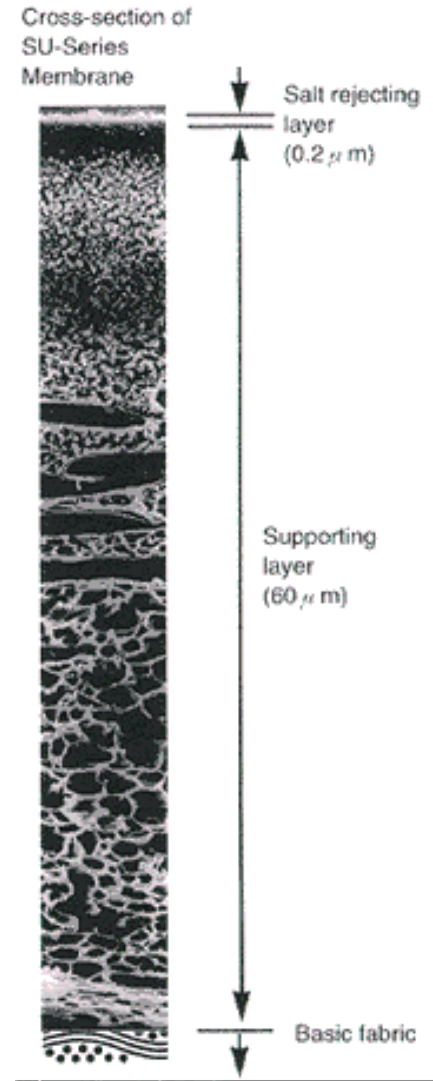
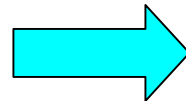
Membrane Separations



Cellulose acetate



Polyamide



RO composite membranes.

Membrane Separations

- Configuration and modules
 - Configuration: geometric form given to the synthetic membranes.
 - Module: name of the devices supporting one or several membranes (housing).

The module seals and isolates the different streams. The geometry and specific fluid movement through the confined space characterises each module. The type of flux, the transport mechanism and the membrane surface phenomena depend on the module design.

Membrane Separations

- Configuration:
 - Flat.
- The active layer is a flat.
- Synthesised as a continuous layer.
- Later, one can select a desired geometry (rectangle, circle,...) to be placed in the module.
- Used in two kind of modules: plate-and-frame and spiral wound.
- High surface area/volume ratio.

Membrane Separations

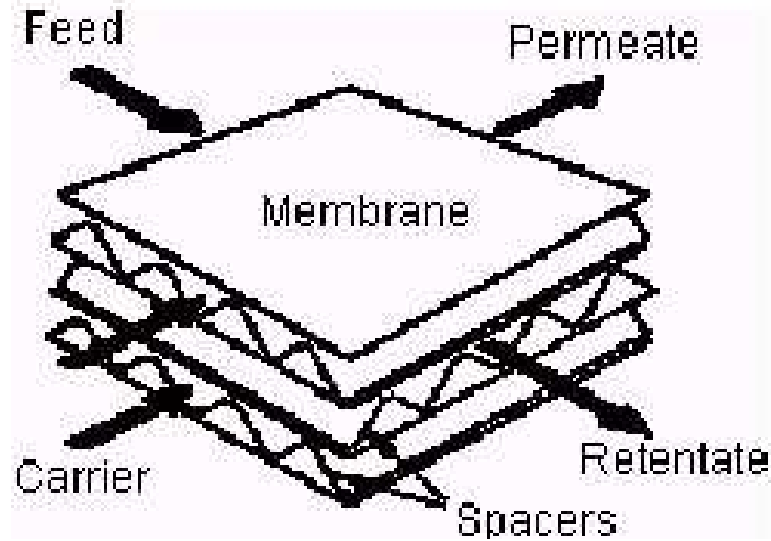
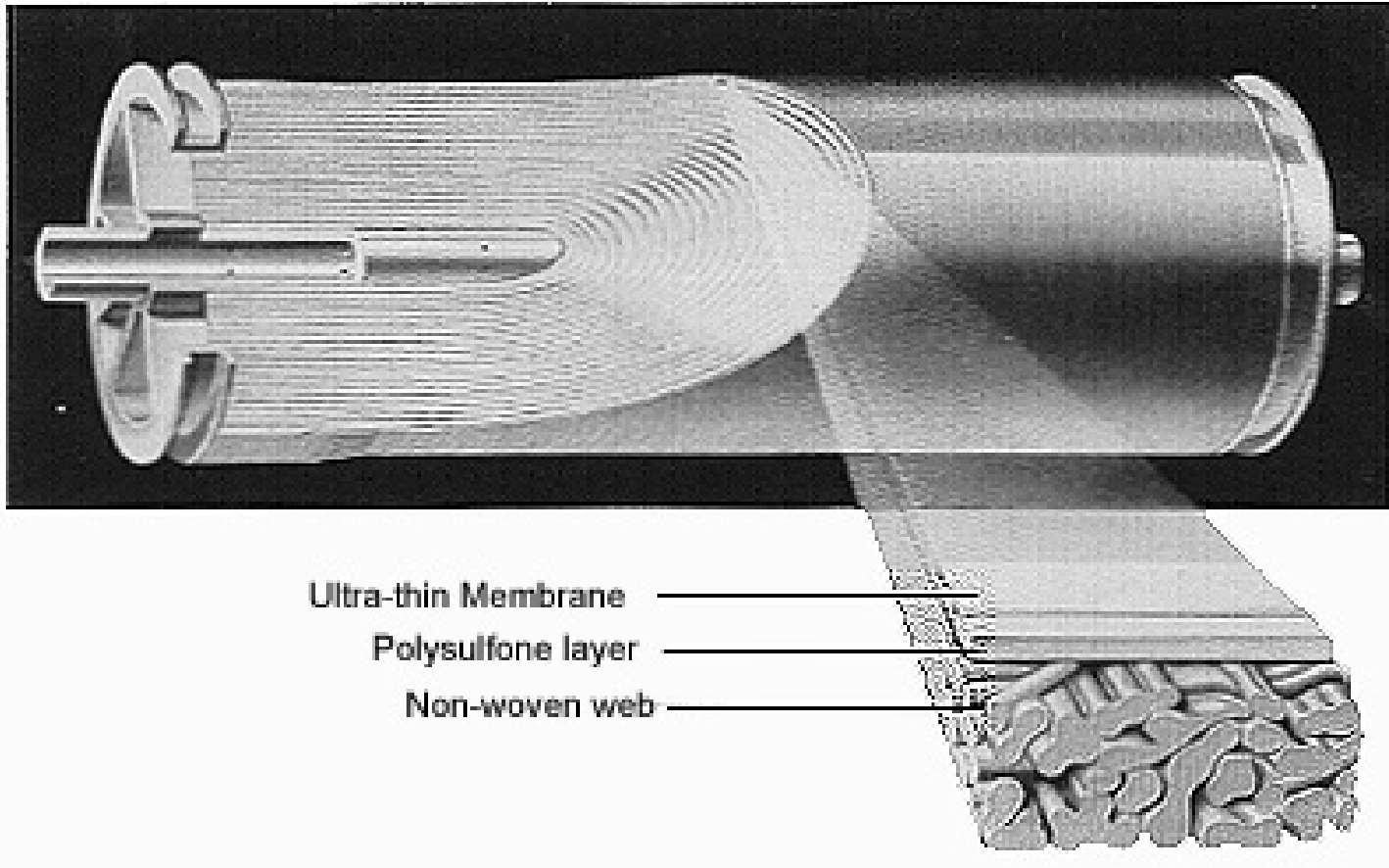


Plate-and-Frame Membrane System.

Consists of layers of membranes separated by corrugated structural sheets, alternating layers with feed material flowing in and retentate flowing out in one direction, while permeate flows out in the other direction.

Membrane Separations



Spiral-wound module.

