

### **polyelectrolyte network**

Polymer network containing ionic or ionizable groups in a substantial fraction of its constitutional units.

Notes:

- 1) A polyelectrolyte network is sometimes called a crosslinked polyelectrolyte. Use of the latter term is not recommended unless the polyelectrolyte network is formed by the crosslinking of existing polyelectrolyte macromolecules rather than by non-linear polymerisation
- 2) In contrast to a polyelectrolyte, a polyelectrolyte network is always insoluble, although swelling or contraction can occur when it is immersed in a solvent.
- 3) A polyelectrolyte network in contact with a solution of a salt is able to exchange counter-ions (cations or anions) with ionic species in the solution and act as an ion exchanger. Therefore, a polyelectrolyte network is frequently described as an ion-exchange polymer.

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