

## polymer cyclization

Chemical reaction that leads to the formation of ring structures in or from polymer chains.

Notes:

1. Examples of cyclization along polymer chains are: (a) cyclization of polyacrylonitrile, (b) acetalization of poly(vinyl alcohol) with an aldehyde, (c) cyclization of polymers of conjugated dienes, such as polyisoprene or polybutadiene, leading to macrocycles.
2. Examples of cyclization of polymer molecules are: (a) cyclization of poly(dimethylsiloxane), (b) back-biting reaction during ionic polymerizations of heterocyclic monomers.

**Source:**

PAC, 2004, 76, 889 (*Definitions of terms relating to reactions of polymers and to functional polymeric materials (IUPAC Recommendations 2003)*) on page 893