

main-chain scission

Chemical reaction that results in the breaking of main-chain bonds of a polymer molecule.

Note:

Some main-chain scissions are classified according to the mechanism of the scission process: hydrolytic, mechano-chemical, thermal, photo-chemical, or oxidative scission. Others are classified according to their location in the backbone relative to a specific structural feature, for example, α -scission (a scission of the C–C bond alpha to the carbon atom of a photo-excited carbonyl group) and β -scission (a scission of the C–C bond beta to the carbon atom bearing a radical), etc.

Source:

PAC, 2004, 76, 889 (*Definitions of terms relating to reactions of polymers and to functional polymeric materials (IUPAC Recommendations 2003)*) on page 892