Glossary of Terms Related to Solubility (IUPAC Recommendations 2008)

Heinz Gamsjäger, John W. Lorimer, Pirketta Scharlin, and David G. Shaw

Pure and Applied Chemistry, 2008
Vol. 80, No. 2, pp. 233–276
doi:10.1351/pac200880020233

Phenomena related to the solubility of solids, liquids, and gases with one another are of interest to scientists and technologists in an array of disciplines. The diversity of backgrounds of individuals concerned with solubility creates a potential for confusion and miscommunication and heightens the need for an authoritative glossary of terms related to solubility. This glossary defines 166 terms used to describe solubility and related phenomena. The definitions are consistent with one another and with IUPAC recommendations for terminology and nomenclature.

www.iupac.org/publications/pac/80/2/0233

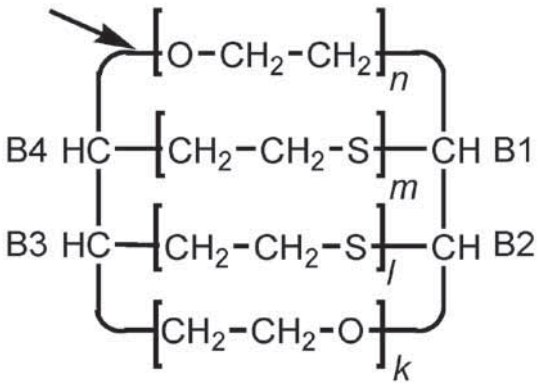
Structure-Based Nomenclature for Cyclic Organic Macromolecules (IUPAC Recommendations 2008)

W. Mormann and K.-H. Hellwich

Pure and Applied Chemistry, 2008
Vol. 80, No. 2, pp. 201–232
doi:10.1351/pac200880020201

A structure-based nomenclature system for monocyclic and polycyclic organic macromolecules is presented. Single-strand mono- and polycyclic macromolecules, as well as spiro macrocyclic compounds, are covered. However, rotaxanes and catenanes, which contain interlocked rings, and rings or ring systems formed by noncovalent bonds are excluded. Also, polypeptides and carbohydrate polymers are not included. The nomenclature of cyclic macromolecules is based on the existing nomenclature of regular and irregular macromolecules, which in turn is based on the nomenclature of organic chemistry, also published by IUPAC.

The procedure for naming a cyclic macromolecule consists of transforming it to an open-chain regular or irregular macromolecule in such a way that naming of units proceeds in descending order of seniority but otherwise follows the rules established for these types of macromolecules. For polycyclic macromolecules, the same principles are followed after the main ring, bridges, and branch units are identified and locants for branch units as well as bridges are assigned. The complete names are assembled by citing the component names and locants in the appropriate order according to the rules in this document. Wherever possible, examples for illustration of the naming procedure have been chosen from the literature.



Example 39

Name: [B1],[B4]-[poly(sulfanediylethylene)]-[B2],[B3]-[poly(sulfanediylethylene)]-cyclo[poly(oxyethylene)-[1:B1][2:B2]ethylene-poly(oxyethylene)-[1:B3][2:B4]ethylene]

or [B1],[B4]:[B2],[B3]-bis[poly(sulfanediylethylene)]-cyclo[poly(oxyethylene)-[1:B1][2:B2]ethylene-poly(oxyethylene)-[1:B3][2:B4]ethylene]

www.iupac.org/publications/pac/80/2/0201