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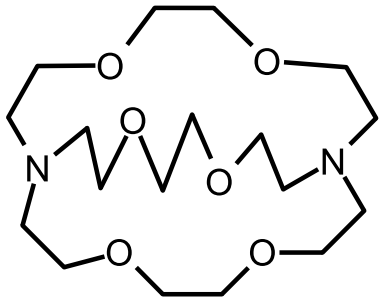
cryptand

Also contains definition of: cryptate

A molecular entity comprising a cyclic or polycyclic assembly of binding sites that contains three or more binding sites held together by covalent bonds, and which defines a molecular cavity in such a way as to bind (and thus 'hide' in the cavity) another molecular entity, the guest (a cation, an anion or a neutral species), more strongly than do the separate parts of the assembly (at the same total concentration of binding sites). The adduct thus formed is called a 'cryptate'. The term is usually restricted to bicyclic or oligocyclic molecular entities. Example:



Corresponding monocyclic ligand assemblies crowns are sometimes included in this group, if they can be considered to define a cavity in which a guest can hide. The terms 'podand' and 'spherand' are used for certain specific ligand assemblies. Coplanar cyclic polydentate ligands, such as porphyrins, are not normally regarded as cryptands.
See also: host

Source:
PAC, 1994, *66*, 1077 *(Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994))* on page 1102
PAC, 1995, *67*, 1307 *(Glossary of class names of organic compounds and reactivity intermediates based on structure (IUPAC Recommendations 1995))* on page 1329

