

## **$\eta$ (eta or hapto)**

*in inorganic nomenclature*

An affix giving a topological indication of the bonding between a  $\pi$ -electron ligand and the central atom in a coordination entity. A right superscript numerical index indicates the number of ligating atoms in the  $\pi$ -electron system of the ligand which bind to the central atom. Examples:

1.  $[\text{Fe}(\text{CO})_3(\text{C}_4\text{H}_6\text{SO})]$ , tricarbonyl( $\eta^2$ -dihydrothiophene 1-oxide- $\kappa\text{O}$ )iron.
2.  $[\text{Cr}(\text{CO})_4(\text{C}_4\text{H}_6)]$ , tetracarbonyl( $\eta^4$ -2-methylene-1,3-propanediyl)chromium.

### ***Source:***

Red Book, p. 202

### ***See also:***

Blue Book, p. 465

PAC, 1994, 66, 1077 (*Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)*) on page 1120