

CO-ORDINATION COMPOUNDS

1.

DEGREE-II (H), PAPER-III, GROUP-B

LECTURE-9, 26/09/2020

IUPAC Nomenclature Of Coordination

Compounds Continued..

8. The name of anionic ligands end with the letter 'o'.
they are usually obtained by changing anion ending

-ide to -ido

-ite to -ito

-ate to -ato

But according to latest IUPAC conversion, all the anionic ligands names are obtained by replacing the last letter 'e' by 'o'.

* In case of ambidentate ligands, the atom which is bonded to the metal cation is specified by placing the symbol of the bonded atom after the name of the ligand separated by hyphen.

These ligands are also given specific names for each mode of attachment.

e.g. NO_2^-	$-\text{NO}_2^-$ (nitro - N or nitro)
	$-\text{ONO}^-$ (nitrito - O or nitrito)
SCN^-	$-\text{SCN}^-$, thiocyanato - S or thiocyanato
	$-\text{NCS}^-$, thiocyanato - N or isothiocyanato

Neutral ligands are given the same name as the parent molecule, though there are exceptionally some ligands which are given special names.

Neutral ligands	Names
N_2	dinitrogen
O_2	dioxygen
$\text{C}_2\text{H}_5\text{N}$	pyridine
bpy	bipyridyl
CH_3NH_2	methylamine
NH_2OH	hydroxylamine etc.

Ligands having special names: - -

Neutral ligands	Names
NH_3	ammine
CO	carbonyl
CS	thiocarbonyl
H_2O	aqua
NO	nitrosyl

9. The vowel ending the numerical prefix of the ligands will not be ignored while writing the name.

For example;

If there are four NH_3 , and three oxide ligands, then these are named as tetraammine and trioxide respectively.

'Mono' is an exception, mono toxide \rightarrow Monoxide

