

Answer on Question #71542 - Chemistry - Inorganic Chemistry

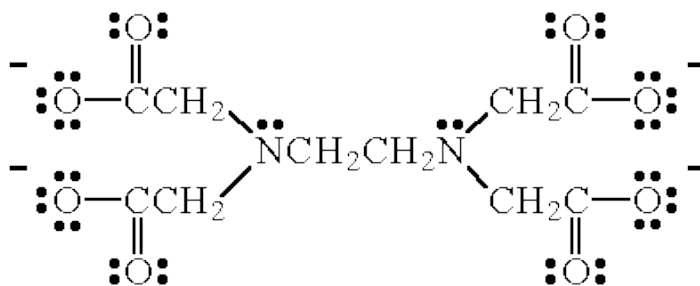
Question:

Hello,

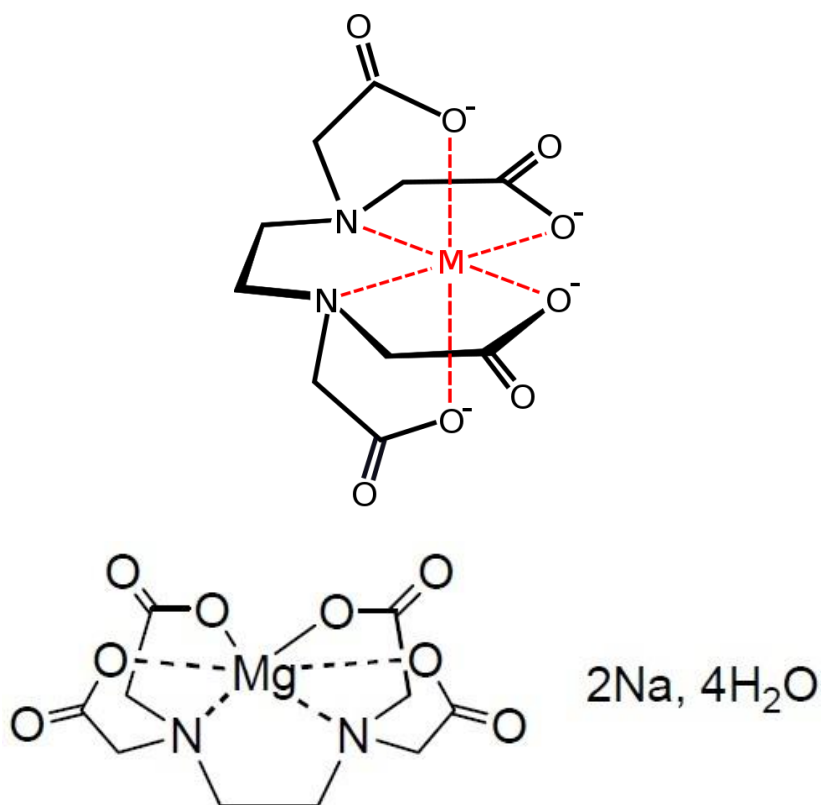
Can you kindly explain fully the hybridization of magnesium disodium edetate complex

Solution:

EDTA or ethylenediaminetetraacetic acid binds a total of 6 places (4 oxygens and 2 nitrogens) to the ion in solution.



EDTA can bind altogether six times, for example, in the equation above with metal (Example Mg²⁺), so it is a very good molecule for displacing other ligands.



In this case, the coordination number of Magnesium will be 6. Hybridization of Magnesium will be $2s^2 2p^6$ or sp^3 ; The nitrogen hybridization will be the same as in ammonia, i.e. sp^3 .