# Synthesis and Structure of a Tetranuclear Nickel Complex of a 40-Membered Macrocyclic Octaamine-Tetrathiophenolate Ligand

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The syntheses and characterization of tetranuclear Ni complexes $[(L^2)Ni_4][ClO_4]_4$ (**3**) and $[(L^2)Ni_4(NCS)_4]$ (**4**) of a 40-membered macrocyclic octaamine-tetrathiophenolate ligand $(L^2)^{4-}$ are described. Single-crystal X-ray structure analysis of **4** reveals well-separated molecules of the tetranuclear isothiocyanate complex $[(L^2)Ni^{II}_4(NCS)_4]$. The four $Ni^{II}$ centers are arranged in binuclear $[N_2Ni(\mu_2\text{-}SR)_2NiN_2(NCS)_2]$ subunits containing distorted square-planar $NiN_2S_2$ and distorted octahedral $NiN_2S_2(NCS)_2$ sites. The fact that the two isothiocyanate groups at the octahedral Ni site are in *trans* positions can be ascribed to the large ring size of the macrocycle.