Structural Study of a Binuclear Zinc Complex of 2,6-Diacetylpyridine Bis{N(4)-dimethylthiosemicarbazone}, $[Zn(2,6Ac4DM)]_2 \cdot MeCN$

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Zinc, 2,6-Diacetylpyridine Bis{N(4)-dimethylthiosemicarbazone}, Electrochemical Synthesis

Zinc metal was oxidized in the presence of 2,6-diacetylpyridine bis{N(4)-dimethylthiosemicarbazone} ($2,6H_2Ac4DM$) in an acetonitrile solution, to produce a complex of the formula $[Zn(2,6Ac4DM)]_2 \cdot CH_3CN$. One of the zinc atoms is distorted octahedrally 6-coordinate and the coordination involves both pyridyl nitrogen atoms of the two ligands, the imine nitrogen atom and the thiolato sulfur atom of one thiosemicarbazone moiety of each ligand. The other zinc center is distorted tetrahedrally 4-coordinate with NS coordination of the two remaining thiosemicarbazone moieties. The complex crystallizes in the monoclinic space group C2/c with a = 14.952(2), b = 17.656(3), c = 15.553(4) Å, β = 111.456(16)°, V = 3821.5(13) Å^3 and Z = 4.