

Single Atom Bridged Porphyrin Dimers, and a Possible Carbon Sandwich

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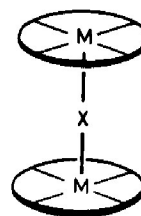
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Summary An orbital diagram constructed for $N_4M-X-MN_4$ where N_4 is a model for a porphyrin ring, M a transition metal, and X a monatomic bridge (O, N, or C) accounts for the electronic structure and bonding preferences of the $X = O$ and N species, and predicts a closed shell for the carbido bridged complex.

Two Schiff-base, porphyrin, or other macrocycle metal complexes may be linked at the metal through a single atom X , as illustrated schematically (1). The oxygen bridged dimers are well represented by $(Fe-salen)_2O$ or $(Fe-TPP)_2O$



(1)

