

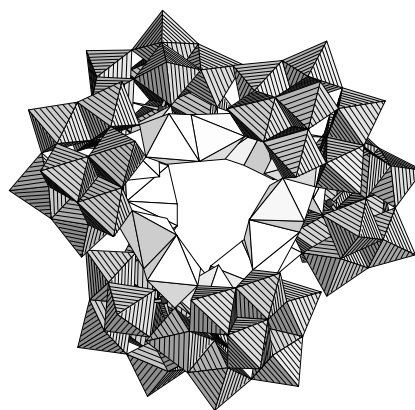
Molecular paneling through {Mo₂O₂S₂} coordination

Emmanuel Cadot

Institut Lavoisier, UMR 8637, CNRS. Université de Versailles Saint Quentin, 45 Avenue des Etats-Unis, 78035 Versailles CEDEX

*Corresponding author : Fax : (33) 01. 39. 25. 43.81
E.mail cadot@chimie.uvsq.fr

The early transition metal oxy-sulfide clusters based on the {M₂S₂O₂} (M=Mo or W) building unit constitute a novel, original and promising class of compounds ^{[1][CE1]]}. Such molecular materials, ranging in a sub-class of the transition metal oxides, so-called polyoxometalates are of both intrinsic and fundamental interests and their properties are potentially attractive in diverse fields such as analysis, biochemistry, catalysis and medicine



^{[2][CE2]}. The electrophilic properties of the oxothiocation [Mo₂O₂S₂]²⁺ toward nucleophilic lacunary polyoxotungstate anions were investigated. ^[3,4,5] Depending on subtle variations of the nature of the lacunary precursor, di, tri, tetra and hexa-units compounds were synthesized and characterized by single crystal X-ray diffraction and multinuclear NMR in solution. Fundamental criteria governing the stereochemistry of the self-assembly will be discussed with regard to the individual properties (geometry, symmetry, coordination requirement) of the reactive moieties.

References

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