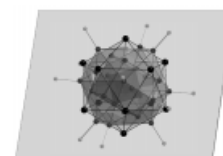


COVER PICTURE

The cover picture shows the penetrating polyhedra of copper and tellurium atoms that are found in the molecular structure of the mixed-valence copper telluride cluster $[\text{Cu}_{26}\text{Te}_{12}(\text{PEt}_2\text{Ph})_{12}]$ (copper atoms: blue; tellurium atoms: black; phosphorus atoms: green; organic groups omitted). Polyhedral substructures are



very often found in the cluster frameworks of small or middle-sized, phosphane-ligated copper chalcogenide clusters, since highly symmetric atomic arrangements play a key role in the formation of the most stable isomers. Another approach to meet the symmetry requirements is realized by large $[\text{Cu}_{2n}\text{E}_n(\text{PR}_3)_m]$ clusters ($\text{E} = \text{S}, \text{Se}, \text{Te}$) that adopt layer-type molecular structures when $2n$ is 70 or more. Hence, they denote the transition to the structural features of binary copper chalcogenide phases. The structural properties of copper sulfide, copper selenide and copper telluride clusters that were developed from single-crystal X-ray analyses, as well as the results of further physico-chemical or quantum-chemical investigations on these substances, are comprehensively discussed in the microreview by D. Fenske et al.

MICROREVIEW

Contents

279 S. Dehnen, A. Eichhöfer, D. Fenske*

Chalcogen-Bridged Copper Clusters

Keywords: Copper / Sulfur / Selenium / Tellurium / Clusters

