

culated intensities was obtained indicating that the proposed structure is correct. Further refinement of the parameters was not attempted.

A discussion of the chemical bonding in MoAs_2 must await further data. It should nevertheless at this stage be mentioned that the existence of a molybdenum arsenide with the NbAs_2 type structure was somewhat unexpected on the basis of our predictions from the general (8-N) rule. (For details reference is made to Furuseth and Kjekshus.⁶) The existence of MoAs_2 would for example have been satisfactorily accounted for by the general (8-N) rule assuming one unpaired d -electron on each Mo atom. Localized, unpaired d -electrons are inconsistent with MoAs_2 being diamagnetic.²

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A Note on the Synthesis of Selenourea

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The synthesis of selenourea from hydrogen selenide and cyanamide was first reported by Verneuil.¹ Later several

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modified procedures have been described (*cf.*, e.g. Houben-Weyl).²

With concentrated solutions of cyanamide being commercially available at low cost, the synthesis can now be performed quite simply. A preparation was carried out the following way.

Aluminum selenide from 140 g Se was coarsely ground and transferred to a 500 ml flask equipped with an inlet for nitrogen carrier gas, a separating funnel with pressure equalizer, and a gas outlet. Water was added through the funnel, quite slowly in the beginning in order to avoid overheating. The hydrogen selenide that formed was led (through Tygon tubing) into a wash bottle containing 125 ml of a 50 % cyanamide solution (supplied by American Cyanamid Company). The bottle with the reaction mixture was kept in a bath at about 40°C throughout the run. After about 2 h crystals started to separate. On completion of the run, which took a day, the mixture was cooled in ice and filtered under a nitrogen atmosphere. The product was washed with a little ice water and dried over P_2O_5 . Yield 90 g. Due to decomposition the melting point is difficult to establish. However, on the Kofler bench it appears to be around 235°C, somewhat higher than has been reported earlier.³ The dried product was analyzed for C, H, N. (Found: C 9.9; H 3.5; N 23.5. Calc. for SeCN_2H_2 : C 9.8; H 3.25; N 22.8). The substance has been kept in a refrigerator for an extended period of time with no apparent change other than a moderate darkening.

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