negative explicit temperature coefficient $(\partial E/\partial T)_V$ in terms of the large increase in the volume of the As_2Se_3 chains with temperature relative to the overall volume of the crystal is given by Mott.[11]

The large negative pressure coefficients of the optical gap in crystalline and amorphous As_2Se_3 gives reason to expect contributions to the valence levels involved in the optical transitions from electrons of *s*-like symmetry derived from As or Se 4*s* atomic states. An alternative argument could relate to the anisotropy of this material independent of the symmetry of the bands. Band structure calculations which are at present under way will be of value in determining the energy levels which give rise to the optical absorption edge.

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On a regardé l'effet d'une pression hydrostatique sur le spectre d'absorption optique d'échantillons cristallous ou amorphes de As_2Se_3 à 80°K et 274°K dans la limite de forts coefficients d'absorption optique (de 10^3 à 10^4 cm^{-1}). Dans le cas de As_2Se_3amorphe, on a évalué les contributions dépendant de la temperature au spectre d'absorption optique provenant de l'interaction electron–phonon ou de la dilatation du réseau.