

a large drop in resistance. The estimated resistivities of the high pressure phases vary from 10^{-2} — 10^{-3} for ZnS to 10^{-5} for silicon, germanium and GaSb.

For all zinc blende compounds at atmospheric pressure the liquid is denser than the solid. Thus $\partial\rho/\partial T$ is negative, and melting of the sample at high pressure could be observed. It is believed, however, that in all cases except possibly GaAs, a solid-solid transition is obtained.

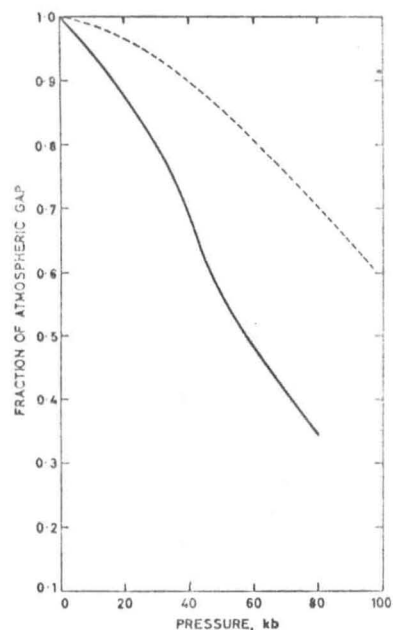


Fig. 2. Optical gap vs. pressure

selenium — iodine — — —

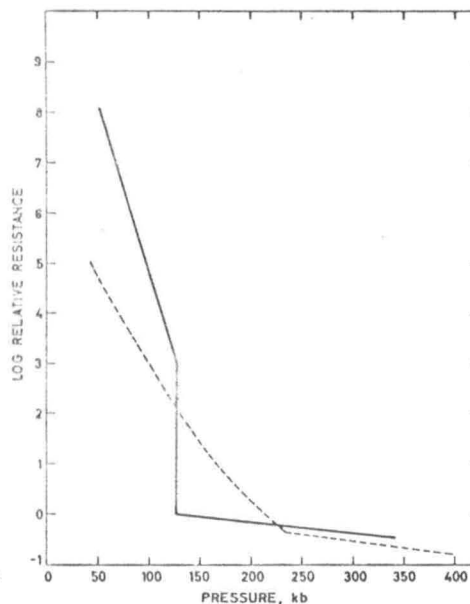
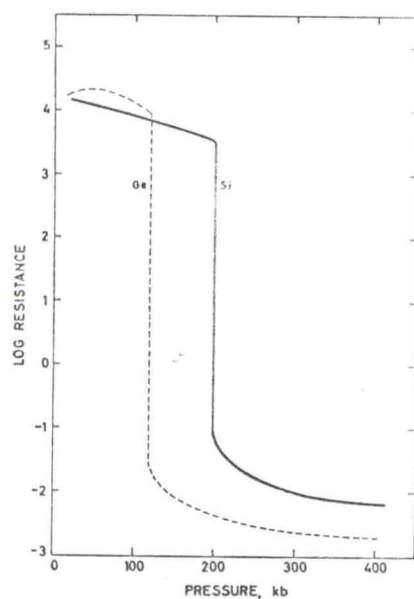


Fig. 3. Relative resistance vs. pressure



Resistance vs. pressure (Fig. 4, left)

Germanium (—) and silicon (---) (Fig. 5, right) III-V compounds
 curve 1 In As curve 2 GeSb
 curve 3 In P curve 4 GeAs

