The structures of the NaCl-type alkaline earths chalcogenides are analyzed on the basis of their fcc cation array which are compared with the structure of their parent metals as it has been reported for other compounds (1). The results are that, in most cases, the M-M distances in the compounds, reproduce the values observed in the pure metals.

In some cases, as in the sulfides and selenides of Ca and Sr, the coincidence is also in topology in such a way that the metal net is almost unlimited by the inclusion of the S or Se atoms. Thus, CaS, CaSe, SrS and SrSe can be described as S- and Se-stuffed elements as it was reported for CaF2 (2).

In the case of MTe (M=Ca, Sr, Ba), the cation fcc-array is formed by (002) planes of the respective bcc-metal, in such a way that second-nearest neighbors distances of the metal are reproduced in the compounds. The general trend is that small anions as O2- tend to reproduce distances of the high pressure metallic phases and that greater anions as Te2- tend to reproduce distances of the high temperature metallic phases.