

## **Copy of a printed diagram referenced as "On element of the diamond crystal"**

### **Contributors**

Fuller, Watson, 1935-

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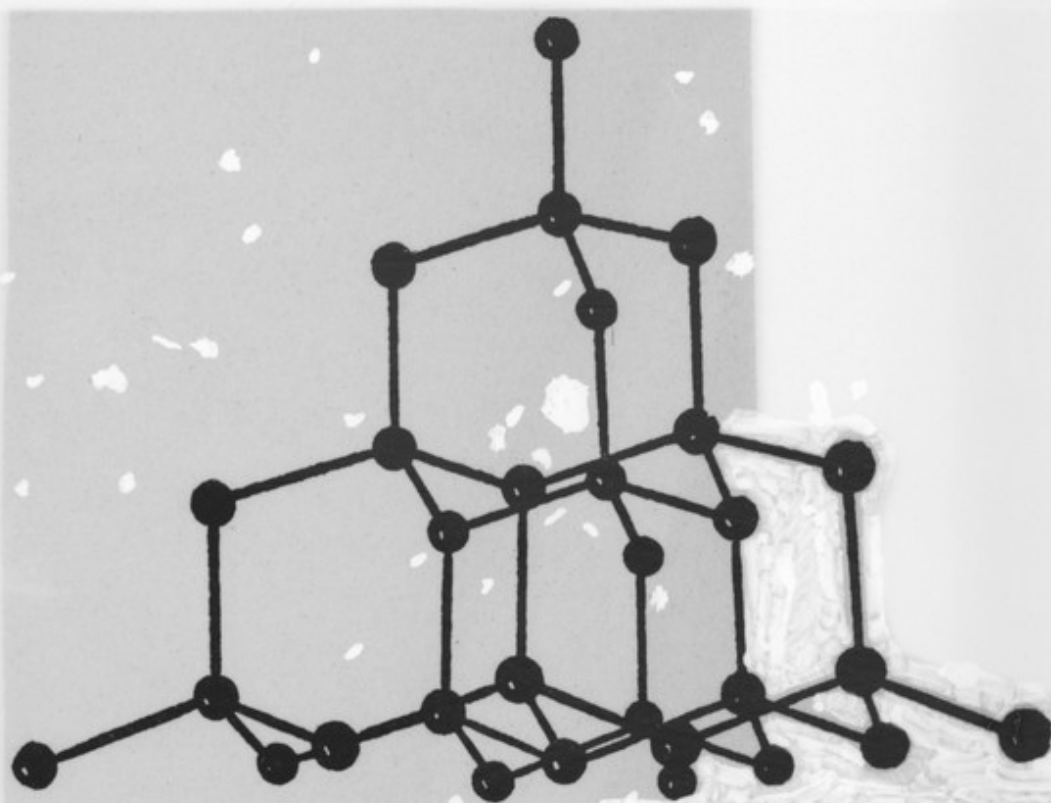


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id, to be contrasted with the random and constant  
ing association in the liquid.

## Covalent crystals

The second class of crystals is termed covalent, because the forces that operate to maintain the structure are almost identical to those already explained for covalent binding. If, for example



An element of the diamond crystal, in which each carbon atom is surrounded tetrahedrally by four others.

As we are told that a carbon atom, when hybridized in  $sp^3$  style, forms four strong bonds at a tetrahedral angle, we must not be surprised that carbon atoms arrange themselves in an infinite tetrahedral pattern, such as diamond (Fig. 3). It is obvious that the bond is effectively localized, just as in methane or a large polymer chain. Such solids are really little more than huge molecules.