Copy of a printed graph referenced as "Energy bonds in diamond"

Contributors

Fuller, Watson, 1935-

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own.

The argument above is easily generalized. If there are part[ly] [fil]led bands of electrons, the substance is a conductor: if there [are] [on]ly completely filled and completely empty bands, it is [an in]sulator.
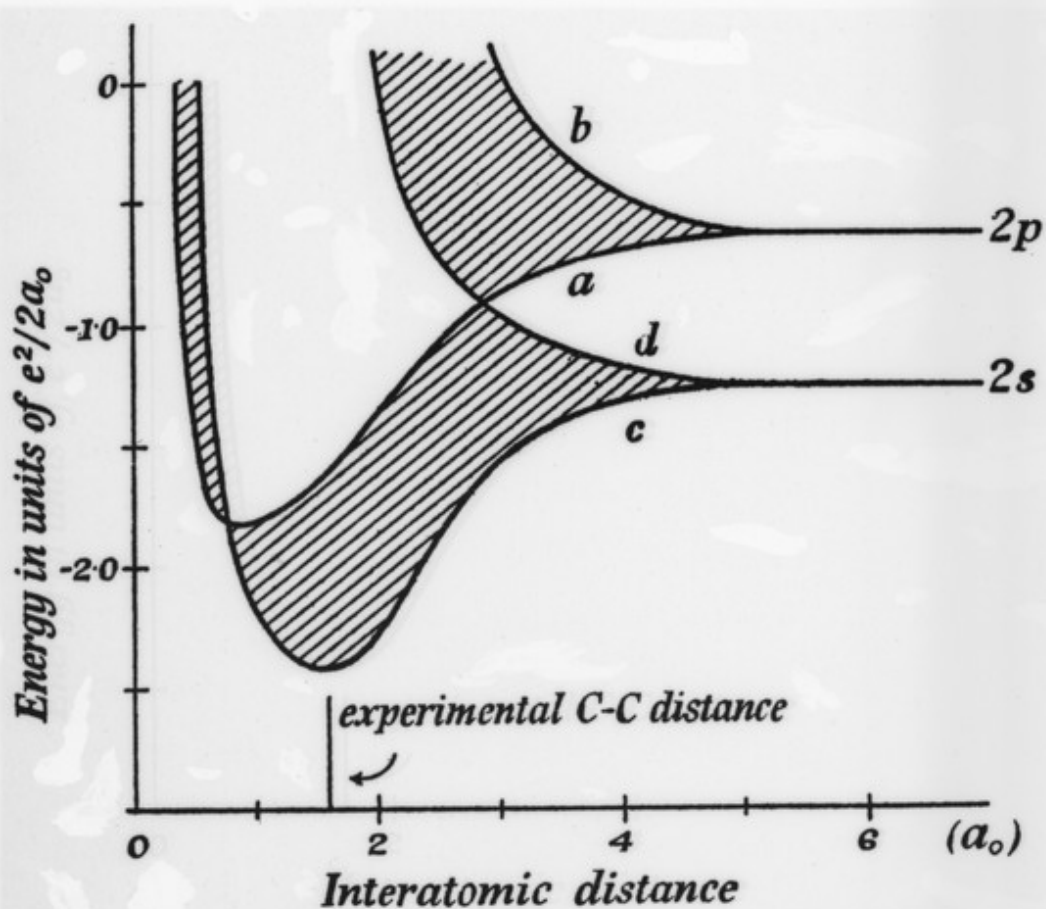
Energy bands in diamond (after Kimball). In addition to the shaded bands, there are bands of zero width following curves (a) and (b) of the figure.

We may illustrate this in terms of lithium and diamond, [of] which the first is a metal and the second an insulator. The b[and] [s]tructure of lithium has already been given in Fig. 4. The co[rres]ponding structure for diamond† is reproduced in Fig. 7. In [the] [c]ase of lithium there is only one valence electron per atom,