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AN INSTANCE OF TRIVALENT CARBON: TRIPHENYLMETHYL.

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V. TRIPHENYLMETHYL, $(C_6H_5)_3{=}C.$

The experimental evidence presented above forces me to the conclusion that we have to deal here with a free radical, triphenylmethyl, $(C_6H_5)_3{=}C.$ On this assumption alone do the results described above become intelligible and receive an adequate explanation. The action of zinc results, as it seems to me, in the mere abstraction of the halogen, leaving the free radical,

$$(C_6H_5)_3C.Cl + Zn = (C_6H_5)_3C + ZnCl.$$

The radical so formed is apparently stable, for it can be kept both in solution and in the dry crystalline state for weeks. The radical refuses to unite with another one of its kind, and thus forms a distinct exception to all similar reactions. It might be said that, perhaps, it does polymerize to hexaphenylethane, $(C_6H_5)_3C{-}C(C_6H_5)_3$, but this hydrocarbon is so unstable that mere exposure to air is sufficient to break it down. Such an assumption seems to me less tenable than that of a free radical.

This work will be continued and I wish to reserve the field for myself.

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