

Thus it is evident that the process possesses another advantage. In the course of such rearrangements no energy is lost. This conclusion is thoroughly confirmed by the studies of the energy transformations of metabolism. The body may carry on such processes as it will, in the greatest variety and complexity, rearranging and modifying its chemical structures to any extent, and there will never be an appreciable wastage of precious material or of equally precious energy in the process.

This process, as we have seen, is the characteristic reaction between water and the organic compounds. As such it is necessarily one of our chief concerns; its maximal fitness as a means of regulation, and otherwise, therefore assumes real importance in the present discussion.

II

INORGANIC CHEMISTRY

With the survey of organic chemistry we have exhausted the compounds of carbon;

mie"). These data are the most accurate now in existence which permit an estimate of the heat of hydrolysis of non-nitrogenous compounds. Numerous studies of protein derivatives from Fischer's laboratory prove that the facts are the same for these substances, and direct measurements confirm the measurements of heats of combustion.