

the animal and plant world were brought to light, yet organic chemistry, and with it physiology, remained far in the rear of the advancing knowledge of inorganic substances. The limitation of the attention to the inorganic part of chemistry was authorized, inasmuch as it was to furnish that knowledge which for all time would remain a certain basis.

In the second decade of our century chemistry again began to grow and to be the food of physiology. Organic chemistry remained as yet almost identical with animal and plant chemistry. The labors of Chevreul on the fats, of Prout, Tiedemann, and Gmelin on digestion, of Prevost and Dumas on the composition of the blood and the formation of urea, which belong to this period, wonderfully enriched our knowledge of life-processes. In 1828 Wöhler accomplished the synthetic formation of urea from cyanic acid, previously discovered by him, and ammonia. *For the first time, here was a substance, which had been previously known only as a normal product of the processes of life, formed out of its inorganic elements.*

Soon after, Berzelius and Liebig greatly increased the existing knowledge of organic substances. A theoretical war of thirty years' duration sprang up, but it proved fruitful in investigation, especially of the organic realm. Organic synthesis, together with the explanation of theoretical points; the rearrangement of groups on physical and chemical grounds; the mechanical theory of gases and vapors, which first gave a foundation for the estimation of the relative weight of molecules and the number of the atoms contained therein; the relation of atoms in molecules; and the theory of organic chemistry in its essentials, founded on the affinities of the carbon atoms—offering many points difficult of solution and still controverted—all was the fruit of this period.

It would be difficult to enumerate all the chemists to