

48.  
Ostwald's  
journal.

1826 marks the revival of mathematical studies in Germany through the appearance of Crelle's journal; so the year 1887 saw the first number of Ostwald and Van't Hoff's 'Zeitschrift für physicalische Chemie.' From that period the physical properties of chemical substances, so long neglected, or only studied by isolated students, have received systematic, mathematical, and exact treatment, guaranteeing something like continuity and completeness, and leading on to the solution of the great remaining question, What is chemical affinity?

The eminent natural philosophers to whom is mainly due the foundation of this modern science, claim also to be gradually realising the idea which was suggested by the early representatives of the theory of energy—notably by Rankine and James Thomson—that of a general doctrine of energy, termed energetics; and they hold that this suggestion is only realisable by breaking with the conventional ideas which the older physical theories—the astronomical, atomistic, and kinetic views—have imposed upon our reasoning. They further hold that the gradual development of chemistry into an exact science necessarily requires the introduction of this broader view which they embrace, and that the older views—useful in their way—only suffice to comprehend certain restricted groups of natural phenomena, whereas in chemical changes, where all imaginable natural processes seem to come together, a larger and more independent theory is indispensable. It is interesting to note how very generally they trace this larger view to the long unnoticed labours of a natural philosopher in the New World, Professor Willard Gibbs of Yale.