

The doctrine of residual affinity has been long advocated by Armstrong; and the present writer has recently shown that it is a necessary consequence of the electrical theory of chemical affinity,<sup>1</sup> and that the structure of the resulting groupings, or compound aggregates, may be partially studied by means of floating magnets, somewhat after the manner of Alfred Mayer.<sup>2</sup>

It may be well here to explain to students that one of the lines of argument which lead to the conclusion that the water molecule, as it ordinarily exists, is really complex and massive, is based upon measurements of the Faraday dielectric constant for water; for this constant, or "specific inductive capacity," is found to be very large, something like 50 times that of air or free ether; whereas for glass it is only 5 or 6 times that of free space. The dielectric constant of a substance generally increases with the

<sup>1</sup> See *Nature*, vol. 70, p. 176, June 23, 1904.

<sup>2</sup> See an article on "Modern Views of Chemical Affinity" by the present writer in a magazine called *Technics*, for September 1904.