

[Forms of Matter.] P. P. VON WEIMARN (*Zeitsch. Chem. Ind. Kolloide*, 1908, 3, 305).—In reply to Münden (preceding abstract) the author states that the question of the identity of living and dead matter has not been considered by him. H. M. D.

Conservation of Weight. CONSTANTIN ZENGELIS (*Zeitsch. physikal. Chem.*, 1909, 65, 341—358. Compare Abstr., 1906, ii, 831).—It is shown by a number of different methods that many gases and vapours of solids can pass through glass even at the ordinary temperature.

In one set of experiments, substances such as stannic sulphide and iodic acid, were supported inside a glass beaker inverted on a glass plate, the junction between plate and beaker being closed by paraffin. On the outside of the beaker, at the same height as the material inside, a piece of silver foil was fixed, and the whole arrangement was surrounded by a large inverted beaker, also closed air-tight with paraffin. After some days, the silver foil showed evidence of the action of the solid, which must therefore have passed in the form of vapour through the glass. In another set of experiments, chlorine, bromine, and iodine were sealed up in separate flasks on the outside of which were fixed strips of silver foil, and the flasks were then enclosed in separate air-tight vessels. The silver outside the chlorine vessel showed signs of attack after fifty days, that of the bromine vessel in about the same time, but in the case of iodine there was distinct action in three days. The effect was much more rapid when the outer vessel was exhausted.

The rate of action is not proportional to the volatility of the substance, and, in some cases at least, is not markedly accelerated by a moderate rise of temperature. The effect is the more rapid the thinner the glass walls.

The author considers that Landolt's experiments, contrary to the latest views of Landolt himself (Abstr., 1908, ii, 366), afford evidence of a real loss of weight in certain chemical reactions, and that the loss of weight is due to the passage of vapours through the glass walls. The fact that there is no loss of weight when the inner surface of the vessel is coated with paraffin (Landolt) is in favour of this view.

G. S.

Are the Stoichiometric Laws Intelligible without the Atomic Hypothesis? FRANZ WALD (*Chem. Zeit.*, 1908, 32, 1249—1250, 1276—1279. Compare Abstr., 1908, ii, 367).—Polemical. A further reply to Kuhn (Abstr., 1908, ii, 826). W. H. G.

Combining Power of Metallic Atoms with Atoms of the Same Kind. LEOPOLD RÜGHEIMER (*Annalen*, 1908, 364, 51—63).—In a previous paper (compare Abstr., 1905, ii, 576), the author has pointed out that the tendency of atoms of metals to link together is very small even in non-ionised compounds; the only definite exception is tin triethyl, which, according to Ladenburg, has the formula Sn_2Et_6 (from vapour density determinations). The author has re-determined the molecular weight of this compound by the boiling-point method, ethyl ether being used as solvent. In the most dilute solution