Influence of Non-electrolytes and Electrolytes on the Degree of Dissociation. MEYER WILDERMAN (*Zeit. physikal. Chem.*, 1903, **46**, 43—63).—In the case of gaseous dissociation, the introduction of an indifferent gas does not affect the degree of dissociation, and the author shows that the analogous statement is valid in the case of electrolytic dissociation. With the help of the freezing point method, it is shown that the presence of a non-electrolyte (glycerol) does not appreciably affect the degree of dissociation of either dichloroacetic or *o*-nitrobenzoic acid. Further, the molecular depression of glycerol has the same constant value in the presence of either acid.

The mutual influence of two electrolytes with a common ion is discussed, and expressions are deduced whereby it is possible to calculate the degree of dissociation of each electrolyte, and thence to calculate the depression of the freezing point which should be observed in a solution containing both electrolytes. These deductions are tested and confirmed by experiments in which the freezing points of solutions containing nitric and *o*-nitrobenzoic acids have been determined. J. C. P.

Experimental Law of Electric Transport of Dissolved Salts. AUGUSTE PONSOT (*Compt. rend.*, 1904, **138**, 192—194).—From theoretical considerations based on Chassy's work on "A New Electric Transport of Dissolved Salts" (*Thèse de Doctorat*, 1890), the author deduces the two laws: (1) When in a mixture of salts of the same acid one salt only is electrolysed, the total number of molecules transported depends only on the nature and concentration of this salt, and is independent of the presence and concentration of the non-electrolysed salts. (2) When two salts are electrolysed, the total number of molecules transported depends on the nature, the concentration, and the fraction of the equivalent electrolysed of each of them; it is independent of the salts of the same acid which are not electrolysed.

M. A. W.

Chemical Reactions at Very High Temperatures. CONSTANTIN ZENGELIS (*Zeit. physikal. Chem.*, 1903, **46**, 287—292).—The author shows that by the combustion of aluminium powder in a current of oxygen it is possible to reach temperatures comparable with that of the electric furnace. Thus he has been able to produce aluminium nitride and carbide, and to vaporise platinum, magnesia, and lime.

J. C. P.

Specific Heats of Aqueous Solutions. G. KALIKINSKY (*J. Russ. Phys. Chem. Soc.*, 1903, **35**, 1215—1238).—The author gives first of all an account of previous investigations on the specific heat of aqueous solutions, and then describes his own calculation, made with the view of discovering a connection between the molecular weight of a substance in solution and the specific heat of the solution.

The specific heat of a solution of x parts by weight of a substance in 100 of water may be expressed by the formula:

$$y = 1 - x/(100 + x) + c.x/(100 + x) \mp z.x/(100 + x),$$

where the specific of heat of water is taken as 1, and that of