

versible transformation are above 0° ; starting from 27.12 percent of nickel, the transformation point for cooling lies below 0° , the value for 29.94 percent nickel lying below -78° . At 25.84 percent nickel, there occur points both of reversible and of irreversible transformation, the temperature at which the reversible change takes place rising with increasing percentage of nickel. *W. D. B.*

Solubility of benzophenone. *E. Derrien. Comptes rendus, 130, 721 (1900).*
— Isolated solubility determinations in about twenty solvents. *W. D. B.*

On the liquefaction of mixtures of carbon dioxide and sulphur dioxide. *F. Caubet. Comptes rendus, 130, 828 (1900).* — The author has determined the boiling-point and dew-point curves for a number of mixtures of carbon dioxide and sulphur dioxide. All mixtures show retrograde condensation.

W. D. B.

Poly-Component Systems

Action of hydrogen on antimony sulphide. *H. Pélabon. Comptes rendus, 130, 911 (1900).* — The author has studied the reaction $\text{Sb}_2\text{S}_3 + 3\text{H}_2 \rightleftharpoons 2\text{Sb} + 3\text{H}_2\text{S}$. At 440° both the antimony and the sulphide are solid and the ratio of the two gases is found to be independent of the absolute amount of the two solid phases. At 610° the sulphide of antimony is liquid and dissolves the metallic antimony. The ratio of the gases varies with the amount of antimony until so much is added that antimony separates as solid phase.

W. D. B.

Solubility of a mixture of salts having a common ion. *C. Touren. Comptes rendus, 130, 908, 1252 (1900).* — The author has determined isotherms for potassium nitrate and chloride, for potassium nitrate and bromide, and for potassium chloride and bromide in aqueous solutions. Equivalent quantities of potassium chloride and of potassium bromide have exactly the same effect on the solubility of the potassium nitrate. Potassium bromide and chloride give one continuous curve instead of two intersecting curves. The author is perfectly clear as to the theoretical significance of this.

W. D. B.

Note on partially miscible aqueous inorganic solutions. *J. S. Newth. Jour. Chem. Soc. 77, 775 (1900).* — Saturated potassium carbonate and strong aqueous ammonia form two liquid layers, and the temperatures at which these phases become identical vary with the amount of water present.

W. D. B.

Chemical reactions produced in a solution; vapor-pressure of the solvent. *A. Ponsot. Comptes rendus, 130, 782 (1900).* — A cyclical proof to show that, at constant pressure and temperature, a reversible reaction always increases the vapor-pressure of the solvent, provided the solvent takes no part in the reaction. This is interesting, of course, but one cannot help wondering whether it would hold true for the change of paraldehyde into acetaldehyde, for instance, or for the reaction between alcohol and acetic acid in benzene solution. It is very easy to overlook things even in the simplest thermodynamic proof.

W. D. B.

Limited chemical reactions in homogeneous systems. *A. Ponsot. Comptes rendus, 130, 829 (1900).* — The author shows that the equilibrium in a homogeneous gaseous mixture is independent of the nature and concentration of substances not entering into the reaction. He also claims that, at equilibrium, the