

## ABSTRACTS.

## GENERAL AND INORGANIC CHEMISTRY.

**On the Sulphides of Phosphorus.** E. DERVIN.

A mixture of sulphur with  $P_2S_3$  dissolved in carbon disulphide, when exposed to light, afforded  $PS_4$  or the  $P_3S_{12}$  of Rame. The same mixture heated in sealed tubes to  $180^\circ$ , yielded  $P_4S_{11} = P_2S_3$ ,  $2 PS_4$ . The effect of heat upon mixtures of  $P_2S_3$  with  $PS_3$  or  $PS_5$ , afforded  $PS_4$ , or, when the  $P_2S_3$  was in great excess,  $P_4S_{11}$ . Attempts to prepare  $PS_3$  by fusion were unsuccessful, and the author expressed doubts as to its existence as a definite compound. (*Bul. Soc. Chim.*, **41**, 433.) E. W.

**On the Sulphites and Bisulphites of Soda.** R. DE FORCRAND.

The results of thermo-chemical investigations on the pure crystallized sulphite (with 7aq.), and bisulphite or metasulphite  $Na_2S_2O_5$  (anhydrous). (*Bul. Soc. Chim.*, **41**, 436.) E. W.

**On Glyoxal Bisulphite of Soda.** R. DE FORCRAND.

Thermochemical examination of the compound which contains two molecules of the bisulphite to one of glyoxal. (*Bul. Soc. Chim.*, **41**, 441.) E. W.

**The Heat of Hydration of Salts.**—S. U. PICKERING.

The heat of hydration of an anhydrous salt has been taken heretofore as the difference between the heat of solution of the anhydrous salt and that of the hydrated salt. This difference includes both the heat of combination of the anhydrous salt with water and the heat set free on solidification of this water, since Persoz has shown that the water in hydrated salts is in the solid state. (*Chem. News*, **49**, 216.)

A. A. B.

**Note on the non-existence of Ammonium Hydrate.** D. TOMMASI.

$NH_4 OH$ , if it exists, must be very unstable.

The calculation of the heat of combination of the hydrate does not correspond with the amount found by actual experiment, as is the case with other alkaline and alkaline earth hydrates. The author consequently concludes that it does not exist. (*Bul. Soc. Chim.*, **41**, 444.) E. W.

**On the quantities of heat disengaged by the compression of solid bodies. W. SPRING.**

A criticism of the remark of M. Jannettaz, that the compression of solids generates considerable heat, and consequently that the formation of chemical compounds by pressure, is attributed rather to the heat developed than to the pressure itself. The author describes several experiments to show that this proposition is untenable. (*Bul. Soc. Chim.*, 41, 488.) E. W.

**On the quantities of Sulphides formed by successive compressions of their elements. W. SPRING.**

The results of successive compressions of mixtures of sulphur with silver, lead and copper are here given. The conclusion is that pressure determines the combination of solid substances with one another under certain conditions, the quantity of compound produced depends both on the size of the surfaces in contact and the duration of this contact. (*Bul. Soc. Chim.*, 41, p. 492.) E. W.