fallacy of accepting Regnault's linear law for the total heat and latent heats of evaporation of steam as a basis from which to determine the specific heats and other properties in superheated steam. Useful expressions for the products of the cooling effects and specific heat at constant pressure in steam were given, which would be of use for purposes of comparison with actual experiment. Two alternatives were offered in the paper for the true facts in saturated steam—either Regnault's results on the latent heats of steam can no longer be accepted, or the data deduced from experiments in the superheated condition must be rejected, as they cannot be made to agree.—On a new species of *Sepia* and on other shells collected by Dr. R. Koettlitz in Somaliland, by W. E. Hoyle and R. Standen. The new species of *Sepia* (*S. koettlitzi*) was collected at Zeila, nearly opposite Aden. It is most closely allied to *S. singalensis*, Goodrich, from which it differs in having the chitinous margin on the dorsal surface much narrower, and in the inner cone being flattened and (if anything) rather concave and not convex.

PARIS.

Academy of Sciences, December 10.—M. Maurice Lévy in the chair.—M. Painlevé was elected a member in the section of geometry in the place of the late M. Darboux.—Examination of the habits of bees from the double point of view of mathematics and experimental physiology, by M. Abraham Netter. It has been usually held by entomologists that four of the habits of bees are intentional. The author contests this view, and attempts to show that all the movements of bees, without exception, are of the nature of reflexes, the bees being really small living machines working entirely automatically.—Observations of the Leonids and Bielids made at Athens, by M. D. Eginitis. The observations were much interfered with by the weather. On the 14th November only six meteors were seen, on the 15th thirty-six, on the 16th fifteen only. On November 23 and 24 only thirty-three Bielids were seen, mostly of the fifth and sixth magnitude.—Observations of the sun made at the Observatory of Lyons with the Brunner equatorial during the third quarter of 1900, by M. J. Guillaume. The results of the observations are summarised in three tables showing the number of spots, their distribution in latitude, and the distribution of the faculæ in latitude respectively.—Observations of the Leonids made at Rome on November 14 and 15, by M. Rodriguez. Since no observations of the Leonids were reported by M. Janssen, an account is given of the meteors seen at the Vatican Observatory. Details of 107 Leonids are given, for 17 of which the direction during the time of observation was ascertained.—On limited and integrable functions, by M. Léopold Tejér.—On Neumann's method of the arithmetic mean, by M. W. Stekloff.—On the molecular specific heat of gaseous dissociable compounds, by M. Ponsot. Under constant volume or constant pressure the molecular specific heat of a gaseous compound at infinite dilution is lower than that of the mixture of its elements obtained by dissociation.—On the concentration at the electrodes in a solution, with special reference to the liberation of hydrogen by electrolysis of a mixture of copper sulphate and sulphuric acid, by M. H. J. S. Sand. A formula is developed from theoretical considerations for the concentration of a solution of a single salt round the electrodes after passing a current for a given time. In the case of a mixture the formula gives two limiting values between which the experimental values must lie, and the results of electrolysis of solutions of copper sulphate and sulphuric acid in all cases lie between these extreme values.—On the spectra of samarium and gadolinum, by M. Eug. Demarçay. A discussion of the results obtained on these spectra by M. Exner. The wave-lengths are given for the substance regarded by the author as the purest samarium hitherto obtained.—Action of steam and mixtures of hydrogen and steam upon molybdenum and its oxides, by M. Marcel Guichard. Hydrogen completely reduces the oxides of molybdenum to the metal at a temperature below 600° C. Steam, on the other hand, does not commence to oxidise the metal until a temperature of nearly 700° C. is reached. Oxidation of molybdenum either in steam or in mixtures of hydrogen and steam never gives rise to oxides other than MoO_2 and MoO_3.—Remarks on the note of M. Lemoult entitled "Relations between the chemical constitution of the triphenylmethane dyestuffs and the absorption spectra of their aqueous solutions," by M. Charles Carmichel.—On the primitive form of a crystallised body, by M. Fréd. Wallerant.—Quinone, the active principle of the venom of *Iulus terrestris*, by MM. Béhal and Phisalix. It is shown that the active principle of the poison of *Iulus terrestris* contains a quinone, most probably ordinary quinone.—The venom of the *Scolopendra*, by M. S. Jourdain.—On the osmotic pressure of the blood and internal liquids in the cartilaginous fishes, by M. E. Rodier.—Some results of the Belgian Antarctic expedition, by M. L. Kœhler.—On the endogenous formation of the fungus isolated in cancerous tumours, by M. M. Bra.

DIARY OF SOCIETIES.

THURSDAY, DECEMBER 20.

LINNEAN SOCIETY, at 8.—On the Structure and Habits of the *Ammocharidas*: Arnold T. Watson.—The Flora of Vavau, one of the Tonga Islands: J. H. Burkill.—Warning Colours in Insects: Prof. E. B. Poulton, F.R.S.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Lecture on the Electrical Engineers (R.E.) in South Africa: Lieut.-Colonel Crompton.

CHEMICAL SOCIETY, at 8.—On the Union of Hydrogen and Chlorine: J. W. Mellor.

FRIDAY, DECEMBER 21.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Use of Geometrical Methods in investigating Mechanical Problems: C. E. Inglis.

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