

## Societies and Academies

## Paris

Academy of Sciences (*C.R.*, 208, 1061-1124,

April 3, 1939).

A. GUILLIERMOND and R. GAUTHERET: The so-called reducing power of the chondriosomes towards Janus green.

M. GODCHOT and M<sup>lle</sup>. G. CAUQUIL: Application of the Raman effect to the study of some cyclanones.

G. DEDEBANT and P. WEHRLÉ: Turbulent diffusion.

L. GLANGEAUD and M<sup>me</sup>. Y. BONNICHON: Dynamic causes of the variations of turbidity and of solid deposit in the maritime Garonne and the Gironde in the course of the tides.

A. PROCA: The fundamental length relating to the elementary particles.

J. ROUBAUD-VALETTE: Possibility of constructing the wave equations relating to particles of multiple spin of  $\frac{1}{2}(h/2\pi)$ .

J. GUASTALLA: Very dilute films of some proteins; attempt to determine the molecular masses. A weighed quantity of protein is deposited on water in a surface manometer, and the film is compressed and its area measured.

J. GILLOD: A new method of stabilization of an electrometer lamp.

B. KWAL: A phenomenon observed with a Rutherford-Geiger tube-counter submitted to relatively strong radiation.

G. BECK and P. HAVAS: Dissymmetry of the rupture of uranium.

M<sup>lle</sup>. N. GOLDOVSKI: Solution potential: the case of aluminium in presence of different gases.

P. SÜE: Thermal equilibrium between Nb<sub>2</sub>O<sub>4</sub> and H<sub>2</sub>O.

Y. DEUX: Isomerization of phenyl-1 vinyl-2 epoxy-1.2 butane in phenylvinylethylacetaldehyde, and dehalogenation of the corresponding iodohydrate in phenyl-3 hexene-1 one-4.

O. SACKUR: Action of organo-magnesium derivatives on chloro-1 cyclohexylmethylketone and chloro-1 cyclohexylphenylketone; secondary replacement of chlorine by pinacolic transposition.

M<sup>me</sup>. P. RAMART-LUCAS: Structure and absorption of hydroxylated colouring matters of triphenylmethane; existence of isomeric forms of hydroxy-fuchsones.

M<sup>lle</sup>. D. BIQUARD: Contribution to the spectral study of  $\beta$ -tetralone and  $\beta$ -indanone.

J. EKSTEIN: Influence of temperature on the plasticity and the rupture of crystals. A discussion based on the probability of abnormally large displacements of the position of equilibrium of one or more atoms.

J. NOETZLIN: Volcanism and nuclear chemistry. It is suggested that volcanism is due to localized accumulation of neutrons which are enabled to set up nuclear disruption with release of energy much as occurs in the disruption of uranium.

M<sup>lle</sup>. M. JOUVENEL-MARCILLAC: Meiosis in *Raphanus sativus*.

G. MANGENOT: Rootlet development and colchicine. Giant cells with single nuclei which are polyploid to a high degree are formed.

R. COMBES and M<sup>lle</sup>. M.-T. GERTRUDE: Contribution to the study of the biochemical possibilities of a plant species. Submitting *Veronica Anagallis*

to illuminations down to one sixth of normal, to high altitude and to immersion produces changes in its chemical make-up; thus reducing glucides vary from 0.77 to 10.23, soluble nitrogen compounds from 0.15 to 1.44, and so on.

G. DELOFFRE: Wound phenomena of nuclear growth in the lupin.

M. ROSE and J. BERTHELOT: Production of experimental tumours in higher plants by inoculation with the venom of the cobra *Naja tripudians*.

H. DES ABBAYES: Geographical distribution of the lichens *Cladonia alpestris* and *C. rangiferina*, and the true identity of *Lichen giganteus* Bory.

P. REY: Effect of removal of the principal lobe of the hypophysis on the annual cycle of the male sexual cells of *Bufo vulgaris*.

M<sup>lle</sup>. S. THÉVENET: Viscosity of solutions of serum albumin in media of different hydrogen ion concentration. Viscosity is a minimum at about the iso-electric point.

A. BOUTARIC and M<sup>lle</sup>. M. ROY: Study of the variation of optical activity of protein solutions in alkaline media.

M. FRÈREJACQUE: Presence of *d*-arabitol in *Fistulina hepatica*.

## Washington, D.C.

National Academy of Sciences (*Proc.*, 25, 55-111, Feb. 15, 1939).

E. W. SINNOTT: Growth and differentiation in living plant meristems. Seeds of some of the smaller grasses are made to germinate on moist paper on microscope slides, and the root tips observed under a water-immersion lens. The meristem cells can be observed directly at regular intervals of time. The cells are in regular longitudinal rows, and new walls are generally transverse, tending to join the side wall half-way between the nearest cross-walls. 'Sliding growth' was not observed. Root-hairs are usually early differentiated.

E. D. CHAPLE: Quantitative analysis of the interaction of individuals. The separate actions of two interacting individuals alternating with their silences or inactions were recorded; an improved apparatus for this purpose is being made.

O. STRUVE, K. WURM and L. G. HENYEV: Astrophysical consequences of metastable levels in hydrogen and helium.

E. B. WILSON and JANE WORCESTER: Resolution of six tests into three general factors.

W. J. CROZIER: Temperature and the critical intensity for response to visual flicker (2).

J. BARDEEN and J. H. VAN VLECK: Expressions for the current in the Bloch approximation of 'tight binding' for metallic electrons.

G. E. HUTCHINSON, E. S. DEEVEY, jun. and ANNE WOLLACK: Oxidation-reduction potentials of lake waters and their ecological significance. Data for some North American lakes suggests that when the water half a metre above the deepest mud has a potential of 0.4 volt, the mud has a *Tanytarsus* fauna; when the potential is below 0.3 volt, a true *Chironomus* fauna is found.

J. F. RITT: Ideals of differential polynomials.

M. READE and E. F. BECKENBACH: Generalizations to space of the Cauchy and Morera theorems.

G. H. PEEBLES: An equivalence theorem for series of orthogonal polynomials.

E. KASNER and J. DE CICCIO: Curvature element transformations which preserve integrable fields.