

the peculiarities of the process causing spontaneous mutation or by the differential action of selection for inversions on one hand, and against other aberration types on the other.

The widespread part played by inversions in the divergence of species is apparently reflected in phylogeny (as described in this work), the laws governing the distribution of inversions in populations and the fact that wild populations are saturated with chromosome aberrations.

N. P. DUBININ.  
N. N. SOKOLOV.  
G. G. TINIAKOV.

Institute of Experimental Biology,  
Moscow.

#### Origin of the Word 'Monolayer'

PROF. DONNAN asks in NATURE of May 30, p. 910, who originated the word 'monolayer'. I may say that I think I coined it, for my own use, in July 1924 (*Journal of Experimental Medicine*, 40, 133; 1924).

I had not seen it used before, and therefore explained, in the introduction to my paper, why I thought it advisable and convenient to shorten the cumbersome expression "monomolecular layer". But I should be glad to learn if someone else, unknown to me, was struck by the same idea.

P. LECOMTE DU NOÛY.

Institut Pasteur,  
Paris.

#### Points from Foregoing Letters

SIR ARTHUR EDDINGTON gives an outline of his theory on the interrelation between the mass of the proton and that of the electron. He states that the theory leads to values for the magnetic energy of the proton in agreement with those found experimentally by the Stern-Gerlach method (deviation of streams of protons in a non-homogeneous magnetic field).

From the fine structure observed by Dr. K. Murakawa in the lines  $\lambda 5678.1$  and  $\lambda 4060.2$  of the first spark spectrum of iodine, the fine structure intervals of the terms  $(^2D)6s^3D_2$  and  $(^2D)6p^3D_1$  have been deduced, and are found to deviate considerably from Landé's interval rule, which states that the successive separations of the components of a multiple term are nominally proportional to the larger value of the inner quantum numbers ( $I$ ) involved.

The essential difference in connexion with the recently expressed views on the nature of light consists, according to Dr. N. S. Japolsky, in that Sir J. J. Thomson introduces singularities (a 'core') into the photon, while he (Dr. Japolsky) not only avoids singularities in the light waves, but also tries to eliminate them from the 'material' corpuscles.

From the intensity ratio of components of the resonance lines of silver, Dr. D. A. Jackson and H. Kuhn deduce a nuclear spin of value  $\frac{1}{2}$  for the silver isotopes of mass 107 and 109. The authors also calculate a probable value for the magnetic moments.

Dr. W. N. Bond confirms Kellström's value of  $1834.7 \times 10^{-7}$  at  $23^\circ\text{C}$ . for the viscosity of air. In conjunction with Bäcklin and Flemberg's oil-drop data, this leads to a value of  $4.800 \times 10^{-10}$  for the electronic charge, in agreement with that obtained from X-ray-grating-crystal experiments.

The absorption of infra-red radiation of wavelength  $2.7\mu$  by certain specimens of fused quartz may be due, according to Prof. J. W. Ellis and W. K. Lyon, to the presence of traces of water or of carbon dioxide, which substances have absorption bands in or near that region.

The hypothesis that any of the four transitions: positive electron or positive proton  $\rightleftharpoons$  neutron or neutrino can occur provided any given transition is accompanied by a change in the reverse direction, is put forward by Prof. E. C. G. Stueckelberg. He

considers the four entities as different quantum states of one particle.

A spontaneously enlarged prostate in a dog is found by Dr. S. Zuckerman to have a structure identical with that of the same organ enlarged experimentally by treatment with the sex-hormone, oestrone. This supports the view that enlargement of the prostate, which may occur spontaneously in elderly men and aged dogs, may be due to oestrogenic stimulation.

On dilution of liquid sulphur trioxide with liquid sulphur dioxide, the relative intensity of certain lines in the Raman spectrum (wave numbers 530, 1068 and 1390, ascribed to single molecules,  $(\text{SO}_3)_1$ ) increases, while the intensity of other lines assumed to be due to double molecules,  $(\text{SO}_3)_2$ , decreases. This is taken by Prof. H. Gerding, W. J. Nijveld and G. Muller to confirm the view that liquid sulphur dioxide consists of several kinds of molecules. In the case of the solid, ice-like form of sulphur trioxide, the Raman spectrum indicates the presence of a great proportion of complex molecules  $(\text{SO}_3)_2$  with a smaller number of  $(\text{SO}_3)_1$ .

Prof. B. H. Porter points out that homogeneous films formed with the aid of aqueous dispersions of colloidal graphite may be used in the construction of  $\alpha$ -particle counters, guard rings, ionisation chambers, electrolytic condensers, etc., such films being conducting and easily applied.

S. S. Sarkar describes the physical characters of a boy of low stature with spirally curved hair belonging to the Bāgdi group, from the Rajmahal Hills of India. The head measurements support the view that the basis of the Indian negritos was originally broad-headed, and that there has been a change in head shape due to a large admixture with a primitive long-headed race, which is the dominant element among the aboriginal population in southern and central India.

A study of the chromosomes of various strains of fruit flies shows, according to Prof. N. P. Dubinin, N. N. Sokolov and G. G. Tiniakov, that the only common naturally occurring aberration is that due to inversion (in the order of the character-bearing genes). In *Drosophila melanogaster* the inversion occurs most frequently in each of the limbs of the second chromosome.