

Fission of Heavy Nuclei

PROF. O. HAHN has written to me pointing out that the translation of a passage from a paper of Curie and Savitch (*J. Phys.*, Sept. 1938) in my recent article on "Fission of Heavy Nuclei" (*NATURE*, May 27) might possibly be misleading.

Curie and Savitch wrote: "Dans l'ensemble, les propriétés de R3,5h. sont celles du lanthane, dont il semble jusqu'ici qu'on ne puisse le séparer que par fractionnement." I omitted the final qualification in my translation: "On the whole, the properties of R3.5h. are those of lanthanum, from which it appears that until now it has not been separated." It seemed to me that the qualification in question ("except by fractionation") was unimportant from the point of view of the proof that R3.5h. was neither an isotope of actinium nor a trans-uranic element of the chemical type envisaged by Hahn, Meitner, and Strassmann. I did not wish to use the quotation for any other purpose than the establishing of these two conclusions.

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Darwin's Geological Collection from Tasmania

A VISITOR to Darwin's home, Down House, recently put a question as to the whereabouts of his geological collection from Tasmania, made during the voyage of the *Beagle*. (The specific reference was to brachiopods.) We were unable to answer, either from records in our possession or after inquiries elsewhere.

It is well known that the *Beagle* collections, geological, botanical, and zoological, were widely distributed, and it is felt by the Down House Committee of the British Association that as full a record as possible ought to be made of the present location of all the material which survives, and that the Association, as the custodian of Darwin's house, should make it. I shall be very grateful to the authorities of museums, laboratories, or other institutions, for information as to any Darwinian collection in their keeping.

O. J. R. HOWARTH.

(Secretary, British Association).

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Downe, Kent.

Points from Foregoing Letters

It has been suggested that some of the insoluble organic compounds which produce cancer do so after they are oxidized to water-soluble derivatives. J. W. Cook, R. Martin and E. M. F. Roe have prepared photo-oxides of 9 : 10-dimethyl-1 : 2-benzanthracene and of related compounds as a step towards testing this view.

E. Morelli and A. Dansi have found that the inhibitory power of carcinogenic hydrocarbons on transplantable tumours diminishes or disappears if they have been inoculated dissolved in fat of animals of the same species.

By using radioactive potassium as an indicator L. Hahn, G. Hevesy and O. Rebbe find that the bulk of the potassium ions present in the corpuscles is not replaced within the life-time of the corpuscles; about 8 per cent of the potassium ions present in the muscle cells were replaced within 24 hours by ions previously present in the plasma.

W. G. Campbell and J. C. McGowan point out the similarity between the Mitchell colour reaction of gallotannins on one hand and the chlorine-sodium sulphite colour reaction of hardwood lignin on the other.

A. Gurwitsch and L. Gurwitsch report new experiments on the spectral distribution of ultra-violet radiation emitted during certain chemical reactions. It is found that the presence of other substances (taking no part in the reaction itself) introduces new lines into the spectrum; these are presumably due to molecules being excited by the energy liberated in the reaction.

I. E. Knaggs and K. Lonsdale, from an analysis of crystalline benzil based on X-ray and magnetic measurements, have deduced that the molecule must be of a skew type. This agrees with the recent suggestion of C. C. Caldwell and R. J. W. le Fèvre, who have measured the dipole moment in various solvents.

Ian W. Wark describes a method of obtaining grease-free polished surfaces of metals and minerals. He also discusses a sensitive test for cleanliness, based

upon the fact that the angle of contact between an air bubble and a clean solid surface immersed in water is zero.

S. H. Chao and W. H. Taylor report that the experimental data obtained in an X-ray examination of selected orthoclase-microperthites are most easily explained if it is assumed that in both the observed structure types the potash feldspar is present as a monoclinic component; while in the low-soda type the soda feldspar lamellae are triclinic and twinned on the pericline law, in the high-soda type the soda feldspar lamellae are triclinic and twinned on the albite law.

J. G. Davis states that it is possible to conserve fresh milk for about a fortnight by the simple process of adjusting the pH to 5.2 and holding at a temperature of 36-38° F. The original fresh-milk flavour is retained in full.

W. T. J. Morgan and S. M. Partridge have succeeded in eliminating the phospholipin component of the antigenic complex of *B. dysenteriae* (Shiga) by utilizing the dissociating properties of the strongly polar solvent, formamide. The phospholipin-free material is fully antigenic in rabbits, thus indicating that the phospholipin component is not essential for the manifestation of antigenic properties.

T. S. Patterson points out that stereoscopic effect can be obtained by reversing the position (left for right) of ordinary stereoscopic pictures, and viewing the left picture by the right eye and vice versa. The stereoscopic image thus observed appears, however, to be only about half the normal size.

The centre of the ring-system of interference spectra seen in cases of conjunctivitis may be bright or dark. S. Melmore directs attention to the importance of distinguishing between them and notes that Prof. Kerr Grant's determination of the angular radius of the first order red ring is in agreement with his own for a dark-centred system.

The Secretary of the British Association asks for information as to the whereabouts of collections made by Darwin during the voyage of the *Beagle*.