

Paraffins or Methanes (Ethanes). The individual names of these all have the same ending and are also significant of composition, as a series of numerical indices are prefixed to a single terminal. The principle thus followed in naming homologous paraffins may well be followed in naming hydrogens. One of the happiest suggestions ever made was Hofmann's, that the terminal *ane* should be applied to all paraffins. In the chemist's mind, *ane* is now always associated with an initial series. Hofmann took the second great step in systematic nomenclature, the first being that taken by Lavoisier and his colleagues. Methyl, ethyl and propyl being well-established, good names, he preserved these and began numbering at the fourth term, tetrane.

4. Applying the Hofmann principle to the hydrogens we have the names

Hydrane, Deuthydrogen, Trithydrogen.

Maybe it will be found that the series ends here and that further addition of a proton gives rise to a complex which swallows its own tail, producing helium. Helium may not be like a whale but it is very like the closed complex benzene. Earthly chemists may be forgiven if they go so far as to imagine that not a few elements may come to be regarded as polyhelides, just as a large proportion of hydrocarbons are polybenzenes. It is permissible to be prophetic even at a christening party. Lord Rutherford would seem to forecast the possibility of a *prohelium*, in the second group, of weight 3—an elemental trimethylene.

5. Hydrogen, however, is not a name that is universally used. At least an alias, of a more general character, may be desirable. In all humility, I suggest the simple term *hydrane*. The analogy with methane will be obvious:—

	Alternative symbols		
Hydrane	H	H ^α	H
Deuthydrane	HH	H ^β	H ³
Trithydrane	HHH	H ^γ	H ³

With reference to the special symbols here introduced, we represent paraffins by complex structural formulæ, by special symbols such as CH₃.CH₃, why not hydranes? Recent observations (NATURE, Feb. 17) seem to indicate peculiarities in behaviour which justify, if they do not demand, the use of peculiar symbols.

6. Compounds might be named systematically as follows:

Hydranol (Hydrol)	}	H.O.H	
Hydranone (Hydrone)			
Deuthydranone (deuthydrone)	}	HH.O.HH	
Hemideuthydranone (hydrone)			
Hydranamine (hydramine)	}	NH ₃	
Deuthydranamine (deuthydramine)			
Di " "	}	NH.HH ₂	
Tri " "			N.HH ₃
Deuthydranomethane	}	CH ₃ .HH	
Dideuthydranomethane			
Tri " "			CH ₃ .HH ₂
Tetra " "			CH.HH ₃
		C.HH ₄	

7. If proton be the name given to the elemental unit H, the corresponding deuthydrogen or deuthydrane unit would be properly named if it were termed the *deuthydranon* or *deuthydron*. I would go a step further, however, and ask if it be not expedient to pay homage to Prout, whose prophetic contention that the elements are all of unitarian build has now been placed beyond doubt by Aston's refined measurements? Proton might well be changed into *prouton*. This would be of meaning to all who have knowledge of the history of our science.

8. The *neutron* creates a difficulty, as do all things not understood. We shall do well, perhaps, to await its better acquaintance, before attempting to place it by name. Subatomic chemistry seems to be entering upon a phase not unlike that to which we are accustomed in atomic, structural chemistry—as the evidence grows that distinct structural units, not protons alone, are concerned. The use of prefixes denoting energy differences may well prove to be desirable: *Cataprouton* might serve as an alias of neutron in this event. *Balliston* is another possibility, as it is a mere missile.

9. The argument applies equally to electrons, now that so-called positrons are claiming attention. Might not these be brought under the Faraday hat? Are such terms possible as an-, ano- or anodoelectron and cath-, catho- or cathodoelectron? At present, the *on* is a mere terminal, without special significance. An alternative would be to speak simply of l- and d-electrons, according to the twist given to them in the magnetic field.

10. One other task that we have long shirked may be considered here—the naming of elements in the alternative states of atom and molecule. Lavoisier drew a clear distinction between *oxygen*, the stuff in oxygen compounds, on one hand; and *oxygen gas*, on the other. We now symbolise the difference by writing O and O₂. Hydrogen and oxygen are the stuffs in water—why not use the names only with this significance and term the gases *Dishydrogen* and *Disoxygen*? We have no hesitation in speaking of dimethyl and diphenyl. Ozone then becomes tris-oxygen. Maybe the now conventional *ion* terminal makes such change unnecessary, though this is only applicable to hydrogen in salts. The long familiar term *radicle* also still holds the field. Probably to gether these terms will suffice: in any case, too many *radical* changes are undesirable.

Rubber-Growing Research in the U.S.S.R.

A DETERMINED attempt to make Russia independent of imported rubber in a few years' time is being made by investigating the possibility of home-grown rubber, and by the manufacture of 'synthetic rubber'; four factories are already engaged in the industrial production of the latter. Research on the growing of rubber is carried out at two rubber institutes working in conjunction with the Institute of Plant Industry. Expeditions have been sent out to search at home and abroad for suitable rubber-bearing plants, the indigenous flora having been particularly carefully surveyed.

The three most promising plants so far appear to be *Parthenium argentatum*, Gray, *Scorzonera taurisaghis*, and *Taraxacum gymnanthum*, D.C. The first-named, the guayule, brought from Mexico, has been the subject of several investigations¹. This plant has several varieties, differing in rubber content, resistance

to drought and cold, and also in the quantity and germination of seed produced; easy propagation by seed is important for the economical production of rubber from this type of plant.

Scorzonera tau-saghis grows wild in Central Asia, and was first described by the staff of the Institute in 1931. It is a slow-growing perennial, very readily reproducing itself vegetatively, and is rich in best quality rubber. *Taraxacum*, a biennial, occurs in the south of the Crimea. Loman, Kotov and Teherkacov have described the last two². These indigenous plants have not been under observation so long as the guayule, but are considered very promising owing to the high quality of their rubber and the ease of separating it. The two native plants are also noteworthy for a low proportion of resin to rubber, and the fact that the rubber contained in them is in the form of fine threads; this form of occurrence has not been encountered previously by the investigators.

Experimental plantations of the first two plants named above are in existence, many of them large enough to enable the trials to be carried out on a commercial scale. It has been planned to have more than 500,000 hectares under rubber cultivation by 1937.

¹ Nickolaev, Astrov and others, *Bull. App. Bot.*, 22, 4; 1929; 2, 3, 1932, etc.

² *Nature* [translation of the Russian title], 2; 1933.

University and Educational Intelligence

CAMBRIDGE.—The governing body of King's College, having made provision for four additional fellowships open for competition to graduate members and research students of the University, offers for competition a fellowship in mathematics including theoretical physics to be associated with the names of the late Arthur Berry and Frank Ramsey. Further information can be obtained from the Provost, to whom applications should be made by November 1.

LONDON.—The title of reader in aeronautics in the University has been conferred on Dr. N. A. V. Piercy, East London College.

Prof. Karl Pearson has been appointed Heath Clark lecturer for the year 1934.

WALES.—The Council of University College, Aberystwyth, has accepted with regret the resignation of Principal Sir Henry Stuart Jones on the grounds of ill-health. Prof. Gwilym Owen, professor of physics, has been appointed acting-principal of the College for the remainder of the current session.

A memorial tablet to the late Principal J. H. Davies has been unveiled in the College quadrangle

RESEARCH in chemistry and physics will be heavily subsidised by the United States Federal Government if a bill lately introduced into the House of Representatives for the establishment of research fellowships should be passed into law. According to a Science Service report of January 19, the bill proposes that the Secretary of Commerce be given twenty million dollars for this purpose. Any citizen with a bachelor's degree who demonstrates, by examination, his suitability, would be put to work under a university professor. It is open to question whether the scheme is as sound as the Wisconsin plan (*NATURE*, 132, 977, Dec. 23, 1933), for relieving professors temporarily of all teaching duties in order to enable them to devote themselves to research.

Science News a Century Ago

Royal Society

On April 10, 1834, Mr. J. W. Lubbock, treasurer, in the chair, nineteen further candidates were elected into the fellowship, contrasting with to-day's limit of seventeen allowed in a whole year. Their names were:—Viscount Adair, Charles Ansell, Felix Booth, Lieut. Alexander Burnes, Francis Corboux, Sir William Folkes, James W. Freshfield, John Davies Gilbert, Edward Griffith, Edmund Halswell, Dr. William Henry, Robert Hudson, the Rev. William F. Lloyd, John Phillips, Capt. Walter N. Smee, William Spence, Henry S. Thornton, Dr. John Warburton, Horace H. Wilson.

Among the newly elected in the above list, some names suggest special reference. Felix Booth was a munificent patron of arctic and antarctic exploration. Lieut. (afterwards Sir) Alexander Burnes was a distinguished Indian officer who explored the Punjab, Afghanistan, and Bokhara, in 1830-33. Returning to England in 1833 he received a great welcome. In 1841 Burnes met with a tragic fate, being killed by Afghan insurgents. John Phillips, geologist, was a nephew of William Smith, the 'father of English geology'. In 1853 Phillips succeeded Strickland as deputy reader in geology at Oxford; three years later, on the death of Buckland, he was appointed to the professorship. William Spence, entomologist, collaborated in many publications with William Kirby, elected into the Society sixteen years earlier.

Death of John Fuller

On April 11, 1834, John Fuller of Rose Hill, Sussex, who founded the Fullerian professorships at the Royal Institution, died in Devonshire Place at the age of seventy-seven years. In 1777 he had succeeded to the estate of his uncle Rose Fuller, M.P. for Rye, and three years later was elected M.P. for Southampton, holding his seat until 1784. Made Sheriff for Sussex in 1797, in 1802 he was elected M.P. for the county after a contest lasting sixteen days and costing him £20,000 in addition to a purse of £30,000 subscribed by the county. He sat until 1812. On one occasion in 1810 Fuller made a scene in the House, was taken into custody and severely reprimanded by the Speaker. At Rose Hill he erected an observatory. He was buried on April 18, 1834, in the family vault at Brightling, Sussex.

James Bowman Lindsay

On April 11, 1834, the *Dundee Advertiser* published the following advertisement. "J. B. Lindsay resumes classes for cultivating the intellectual and historical portions of knowledge and instruction on April 14, 1834, in South Tay Street, Dundee. In a few weeks hence a course of lectures will be formed on frictional, galvanic, and voltaic electricity, magnetism, and electromagnetism. The battery, already powerful, is undergoing daily augmentation. The light obtained from it is intensely bright, and the number of lights may be increased without limit. A great number of wheels may be turned by electricity, and small weights raised over pulleys. Houses and towns will in a short time be lighted by electricity instead of gas, and heated by it instead of coal; and machinery will be worked by it instead of steam—all at a trifling expense. A miniature view of all these effects will be exhibited, besides a number of subordinate experiments, including the discoveries of Sir Humphry Davy." Lindsay was born in 1799 and died in 1862.