

as amygdalin, salicin, and arbutin, but will quickly die when the aromatic constituents of these glucosides are separately introduced. They found that plants are capable of transforming saligenin, benzyl alcohol, and vanillin into glucosides, saligenin, for example, being converted into salicin. They studied the effect of the inoculation of pyridine, piperidine, and pyrrole derivatives on the formation of alkaloids; they found that the amount of nicotine in the tobacco plant could be considerably increased by the introduction of dextrose. Their results lent support to the view that vegetable alkaloids have their origin in amino-acids, and that bases, such as lysine and ornithine, formed from amino-acids, are utilised by plants in the synthesis of alkaloids.

The chemical action of light has long been a special study with Italian chemists. Blessed with sunnier skies than we enjoy in these latitudes, they have had ampler opportunities than we possess to observe its effects, and, thanks to their long-continued and systematic work, a considerable body of information has been accumulated. Some of Ciamician's earliest observations had reference to this subject, and it continued to interest him to the end of his days. He noticed the conversion under its influence of quinone into quinol; of an alcoholic solution of nitrobenzene into aldehyde, aniline, and quinoline; and of *o*-nitrobenzaldehyde into *o*-nitrosobenzoic acid, the nature of the changes and the character of the products formed being affected by the vehicle in which the substances under examination were contained, and the refrangibility of the light-rays. Unsaturated compounds tended to polymerise. An aqueous solution of acetone yielded acetic acid and methane; maleic acid was converted into fumaric acid; vanillin, piperonal, salicylaldehyde, and cinnamaldehyde yield the corresponding acids; lævulic acid forms propionic acid; many cyclo-ketones are broken down and fatty acids and aldehydes formed; benzaldehyde is resinified, and may be condensed with many different compounds; solutions of benzophenone in aromatic hydrocarbons yield benzopinacolone, and the hydrocarbon undergoes condensation; camphor in dilute aqueous alcoholic solution yields acetaldehyde and campholenaldehyde; fenchone forms carbon monoxide and fenchone hydrate. Aromatic hydrocarbons in presence of water and oxygen are partly oxidised to the corresponding carboxylic acids. Pyrrole by prolonged exposure is completely decomposed, one of the products being succinimide, which may be regarded as the ketonic form of the quinol of pyrrole.

This is but a bald and imperfect summary of an intensely interesting and most important chain of observations, the full significance of which is scarcely yet realised. The potency of light has, of course, long been recognised, but no such evidence of its power to induce chemical action had hitherto been adduced as that afforded by Ciamician's work.

Ciamician was an accomplished, well-informed man, of great personal charm, whose influence on the chemistry of his epoch will long be felt. His merits were widely recognised. He was a foreign associate of the French Academy and an honorary

fellow, since 1911, of our Chemical Society. He was an occasional visitor to London, and personally known to some British chemists who will long cherish his memory as an earnest and single-minded follower of the science he has done so much to enlarge and adorn. T. E. THORPE.

WE regret to see the announcement of the death on Saturday, February 18, of SIR JOHN McCLURE, who for the past thirty years has been headmaster of Mill Hill School. Sir John McClure, who was born in 1860, received his education at Cambridge, where he took mathematics and law. From 1885-91 he acted as lecturer in astronomy and other scientific subjects under the Cambridge University Extension Syndicate, while from 1888-94 he was professor of astronomy at Queen's College, London. It was in 1891 that he received the appointment of headmaster at Mill Hill School, a post which he filled with conspicuous success for more than thirty years. The school, which was founded in 1807 for the education of Nonconformists when the older universities were not open to them, was reconstituted in 1869, and flourished for a time; but when Sir John McClure arrived in 1891 there were only sixty-one boys. He immediately set to work to develop and reconstruct the school, with the result that last year he was able to announce that the number of boys under his charge had grown to 361. Sir John McClure was also active in the cause of education outside his school. From 1904-13 he was honorary secretary of the Incorporated Association of Headmasters, and later became president, and it was mainly in recognition of these and similar services to education that he received the honour of knighthood in 1913.

ORIENTAL learning has suffered a grievous loss by the death, at the age of eighty years, of SIR ARTHUR NAYLOR WOLLASTON, K.C.I.E. Appointed to a post in the India Office at the age of sixteen, Wollaston served for forty-eight years in that Department. In 1898 he succeeded the late Mr. F. C. Danvers as registrar, and he was so successful in arranging the voluminous series of records that they became readily accessible to students. In this task he was succeeded by his pupil, Mr. W. Foster, who has done valuable work in calendaring the collection. Wollaston, in addition to his official duties, became an admirable Persian scholar, though he never had the good fortune to visit the East. He translated the Fables of Bidpai, and edited Sir Lewis Pelly's "Miracle Play of Hasan and Husain." But the work by which he will be best remembered is his great English-Persian Dictionary. At Walmer, where he resided for many years, he took an active share in the local administration.

THE death is announced of PROF. ERICH EBELER, professor of inorganic and analytical chemistry in the newly founded University of Frankfurt-on-Main. Prof. Ebler, who was forty-two years of age, was appointed only in 1920, after service with the Army in the field.