the ether dissolved in carbon disulphide, while warming on the water bath. The resulting red viscous substance obtained was treated as in case of tetrabromophenyl ether. On distilling, a large amount of char was formed and the yield of tetrabromo-*p*-tolyl ether was small. It is a light yellow, viscous substance which crystallizes in radial aggregations on cooling *per se* and is quite identical in appearance with tetrabromo-*m*-tolyl ether. It boils at 310–330° under 40 mm. pressure. It is soluble in carbon disulphide and petroleum ether, but insoluble in alcohol and most ordinary organic solvents. On analysis it yielded 62.64 per cent. of bromine. Calculated for $(CH_3.C_6H_2Br_2)_2O$, 62.69 per cent. No compound with a higher per cent. of bromine could be prepared even with the aid of iodine as a carrier.

Bromine was gradually added to some *p*-tolyl ether heated, *per se*, to 150° in quantity to form the dibromo compound. On distillation a large amount of char resulted and there was obtained a small yield of dibromo-*p*-tolyl ether.

These two substances were boiled with water, caustic alkalies, water and calcium carbonate and sodium carbonate but no reaction could be obtained, which would indicate that the bromine had entered the nucleus.

Bromination of o-Tolyl Ether.—Since only a few grams of *o*-tolyl ether were obtained from the distillation of a kilogram of *o*-cresolate of aluminium, there was not sufficient material available for repeated attempts to prepare the bromine derivatives. The *o*-tolyl ether was undoubtedly much less pure than in case of the other ethers and the reactions were much less clear cut. Considerable char resulted on distilling the bromine derivatives and in one or two cases nothing but char was obtained. However, substances were obtained which contained bromine in amounts which corresponded more nearly to the dibromo and tetrabromo compounds than anything else, *e. g.*, in brominating the ether with a large excess of bromine in the presence of iodine there was obtained a substance which boiled at about 300° and which yielded results on analysis nearly 8 per cent. too low in bromine or the tetrabromo compound. However, while the reactions were not clear cut and the results unsatisfactory so far as obtaining pure compounds was concerned, it is evident that the bromine enters the nucleus and not the side chain, since on boiling for a long time with water, caustic alkalies, and water and calcium carbonate, the filtrate yielded no precipitate with silver nitrate.

VERMILION, S. D.

NOTE.

Note: Paraffin Hydrocarbons in Soils.—Through the kindness of Dr. F. B. Power, Director of the Wellcome Chemical Research Laboratories, of

London, we have been able to compare a sample of our hydrocarbon obtained from soils[1] with a sample of the same hydrocarbon obtained from vegetable sources. A mixture of the two substances melts at 68°, the same temperature as the melting point of either one alone. This establishes conclusively the identity of the two compounds.

OSWALD SCHREINER AND EDMUND C. SHOREY.

NEW BOOKS.

A Text Book of Organic Chemistry. By WILLIAM A. NOYES. Professor of Chemistry in the University of Illinois. Second Edition. New York: Henry Holt and Company. 537 pp. Price, $1.50.

The new edition of this introduction to organic chemistry is written along the same lines as its predecessor. The most unique feature of the text is the radical departure from the general method of treatment of the subject, and the dropping of the division of organic chemistry into fatty and organic compounds. An attempt has been made to bring the book up to date, and considerable new and interesting material has been added. Less material however is presented than in other introductory text books of organic chemistry.

The chapter on Compounds of Interest in Physiology and Pathology has been rewritten on the basis of the classification of proteins recently adopted by the American Society of Biological Chemists and the American Physiological Society.

Owing to the overwhelming and increasing mass of chemical data at the disposal of a writer it might be expected that some errors will appear in a text of this character. There is one misstatement however in this book to which the reviewer is compelled to call attention. He was certainly surprised to read on page 295 that "*uracil* the mother substance of uric acid has not been prepared." This pyrimidine was first synthesized by Fischer and Roeder in 1901 (*Ber. chem. Ges.*, **34**, 3751) and later by Wheeler and Merriam in 1903 (*Am. Chem. J.*, **29**, 478). The latest paper on the synthesis of this compound was published by Wheeler and Liddle in 1908 (*Am. Chem. J.*, **40**, 547).

The reviewer also desires to call attention to pages 306 and 307, where the author states that ethyl cyanate is formed by the action of cyanogen chloride on sodium ethylate and that the ester is decomposed by alkali giving alcohol and potassium cyanate. A student would naturally conclude from these statements that the oxygen esters of cyanic acid HNCO are capable of existence. The statement is evidently based on the statements in Beilstein's Handbuch, **1**, 1266–7, but the author has evidently overlooked the fact that Nef (*Ann.*, **287**, 310) examined the

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[1] THIS JOURNAL, **33**, 82.