

against oxidation, the other remaining at least comparatively unaffected. In regard to the position occupied by the protecting group, the author's experiments with the sulpho derivatives of toluene indicate that the protected methyl group occupies the ortho position. Fittig* states that all ortho compounds are completely decomposed on treatment with chromic acid, and remarks that the experiments of Beilstein likewise show that the ortho substitution products of toluol are affected in the same manner, which would indicate that ortho compounds are *less* stable than those of the other series, a view which is of no assistance in the explanation of the *increased* stability of these compounds. The author regards as very probable the conclusion "that in all cases now on record, in which hydrocarbon residues are shown to be protected from oxidation by the presence of negative groups, the latter are in the ortho position with reference to the former; whereas, oxidizable residues, situated either in the meta or para position with reference to the negative groups, are, under the same circumstances, transformed, just as if the negative groups were not present," and proceeds to describe the investigations which lead him to this opinion.

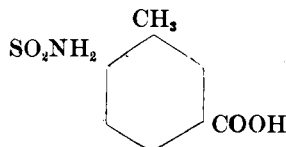
On the Oxidation of Xylenesulphamides, by IRA REMSEN and M. W. ILES.—In this unfinished communication, which is a notice of the investigations upon which the deductions mentioned in the preceding article are based, the authors describe the preparation of the sulphamides of xylene, and the oxidation products obtained therefrom. The xylene was first converted into sulphonic acids, and the corresponding amides were then prepared. Of these, three distinct modifications were obtained, two of which were divided from metaxylene, the third from paraxylene. The former, which are designated as α and β xylenesulphamides, fuse respectively at 137° and 97° ; the latter at 143° . On several occasions a compound corresponding to ortho-xylenesulphamide was also obtained. Upon oxidation, the amide is converted into a monobasic acid, fusing at 247.5° ; the β amide giving under the same circumstances very small quantities of an acid which was not further examined. The acid obtained from the α amide has the composition $C_8H_7SNO_4$, and is derived from the amide by the oxidation of one of the methyl groups,

The amide being $C_6H_3 \begin{cases} CH_3 \\ CH_3 \\ SO_2NH_2 \end{cases}$ The acid is $C_6H_3 \begin{cases} CH_3 \\ COOH \\ SO_2NH_2 \end{cases}$

and, as the amide is derived from metaxylene, the acid which would be formed from it by the oxidation of one methyl group, would be

* Zeitschr. f. Chem. N. F., vii, 179.

metatoluic acid; therefore, the new acid is sulphaminemetatoluic acid. It dissolves in hot water and alcohol, but is nearly insoluble in cold ether and chloroform and bisulphide of carbon. The authors have prepared numerous salts of this acid, which are easily soluble in water. Unsuccessful attempts were made to convert it into hydrochloric acid a fact which distinguishes it from the isomeric sulphamineparatoluic acid. In regard to the structure of the new acid, the relative positions of the methyl and carboxyl groups are those designed as meta, and the opinion is expressed that the relation of the sulphamine group is that shown by the following scheme :



In which case, the ortho methyl group of the amide has been protected and the para methyl, oxidized; and this is in accordance with well-known facts, and with the results of the authors' further experiments.

The sulphamine group SO_2NH_2 of sulphaminemetatoluic acid was converted into hydroxyl by fusing the potassium salt of the acid with caustic potassa. Analysis of the acid thus obtained gave the formula $\text{C}_8\text{H}_8\text{O}_3 + \frac{1}{2} \text{H}_2\text{O}$, the composition of an oxytoluic acid. This acid is readily soluble in hot water, in alcohol and ether, but insoluble in cold chloroform and bisulphide of carbon. It fuses after the loss of its water of crystallization, at $174^\circ - 175^\circ$ (corr.). Several salts were prepared and analyzed. They are mostly easily soluble in water, the copper salt, however, is but slightly soluble, and otherwise characteristic. The authors are still engaged in the study of the derivatives of this acid.

Report on Foreign and American Patents.

Foreign Patents.

Condensed from R. BIEDERMANN'S Report to the German Chemical Society, by H. ENDEMANN.

WALTER WELDON: *Manufacture of Soda and Potash by Leblanc's process.* (Engl. P., No. 133, Jan. 11th, 1878.)—Towards the end of the Leblanc process, when all sodium sulphide has been converted into carbonate, by the action of carbonate of lime, it frequently happens, especially if the temperature becomes very high, that a reaction takes place, in the course of which sodium sulphide again forms, of which crude soda contains about one per cent. To prevent this,