NOTES ON INORGANIC CHEMISTRY.

AN account is given in the *Chemiker-Zeitung* of a dangerous accident occurring in the shipment of sodium peroxid. The material was destined for Japan and was in nine cases of sixty kilos each. It was contained in thin zinc boxes. In unloading, one of the first two cases exploded with a very loud report, a number of workmen were injured, several fatally, and a fire was caused. Serious consequences to the shipper may ensue, for the cases were merely labeled 'chemicals,' no evidence of the dangerous nature of their contents being furnished.

IN the manufacture of superphosphate for fertilizer, when apatite is used, large volumes of hydrofluoric acid are evolved, which contaminate the atmosphere very seriously, aside from being a commercial loss. A process has been devised by C. Elschner, which is described in the *Chemiker-Zeitung*, for the recovery and utilization of these gases in the form of fluorsilicic acid. This is used in the manufacture of artificial stone, and for hardening bath for both soft limestone and soft sandstone. A patent has also been issued for the utilization of fluorsilicic acid as a medium for preserving stable manure. The crude acid is absorbed by burnt and ground clay. This is dried again, pulverized and sprinkled upon the fresh manure in conjunction with a second powder consisting of either a mixture of sulfuric acid and kieselguhr or a ground bisulfate. It is claimed by the use of these powders all the valuable constituents of the manure are perfectly preserved.

A SERIES of articles on hydraulic cements by O. Rebuffat has appeared in the *Gazzetta*, from the laboratory of the School of Engineering at Naples. The natural puzzolana mortar is, when used under sea water, changed into a hydrated aluminum silicate containing little lime, and this silicate is very slightly influenced by the sea water. It seems to be much better to use the cement in the way generally used a few years ago that is, by grinding the puzzolana to an extremely fine powder rather than to mix it with sand. Artificial puzzolana can now rarely be made on terms which will enable it to compete with the natural product.

SOME time since Professor Fittica of Marburg announced that he had succeeded in transmuting phosphorus into arsenic. Professor Clemens Winkler seemed to be the only chemist who took Fittica's astounding claims seriously enough to refute them. Winkler showed that Fittica's results could indeed be obtained, but the arsenic was due, not to transmutation from phosphorus, but to impurity in the phosphorus. Fittica seems not to have availed himself of Winkler's offer of a specimen of phosphorus free from arsenic, with which to repeat his transmutation experiments. Now a rather extended paper by Fittica appears in the *Chemical News*, apparently translated from the *Chemiker Zeitung*, in which the author not only repeats his claim to have transmuted phosphorus into arsenic, but also claims, by varying the method, to obtain small quantities of antimony. He claims that Winkler's failure to obtain arsenic from pure phosphorus is due to his neglect to follow Fittica's method with exactness. A dozen years ago Fittica gave public utterance to the expression that at heart all chemists are still alchemists, in the sense of believing possible the transmutation of metals. Now he considers he has justified this expression.

A SERIES of experiments have been carried out by Alex. de Hemptinne for the purpose of determining whether in general an influence is exerted by magnetism on the equilibrium of a chemical reaction. These are described in the *Bulletin* of the Royal Belgian Academy. The reactions included the solution of iron in hydrochloric acid, the catalytic action of the hydrogen ion upon the saponification of methyl acetate and upon the inversion of sugar, and the union of hydrogen and chlorin. In all these cases the quantitative effect of a magnetic field was less than the probable error of experiment, so that it may be concluded that in these cases, at least, the influence of magnetism, if it exists at all, is very slight.

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CURRENT NOTES ON METEOROLOGY.

MONTHLY WEATHER REVIEW.

THE *Monthly Weather Review* for August (dated October 16, 1900) contains a number of articles of more than ordinary interest. A report on 'Meteorological Observations during the Burn-