

ACETYLE.

H. Ritter prepares the protochloride of acetylene by acting upon glacial acetic acid with perchloride of phosphorus, the proto-bromide is obtained in the same way; during its formation a quantity of oxy-bromide of phosphorus is generated, which can be separated in a pure state. Gladstone's oxy-bromide was not pure. It is crystalline fuses at 118°F , boils at 383°F , spec. grav.=2.822.

ALCOHOL VAPOURS.

Reinsch has observed that a spiral of copper wire fastened on to the wick of a spirit lamp, remains incandescent for two or three minutes after the flame has been extinguished. If a small piece of coke be placed in the spiral, the incandescence continues, and if the coke be removed the wire still continues to glow having apparently acquired some peculiar property by contact with the coke.

ALLOXANIC ACID.

Staedeler prepares the lime salt by saturating the mother liquor from the preparation of alloxan with chalk, crystals are formed which may be readily separated from the excess of chalk by suspension. It is advisable to use a considerable excess of chalk, and to purify the crystals by solution in boiling water, &c. The acid can be obtained from the lead salt.

METHYLOTETRASULPHURIC ACID.

By the action of fuming sulphuric acid on acetonitrile, Buckton and Hoffmann have obtained sulphacetic acid and a new body to which they have given the above name. Its composition is C^2H^4 , 4 SO^3 ; in the salts H^2 are replaced by M^2 .

NEW METALLIC ALLOY.

Mr. Francis Joseph Auger has invented a new alloy, which is remarkable in its resemblance to gold, not changing colour by use, and being dense, malleable, ductile, homogeneous, and sonorous to a marked degree. The following is his process: In a crucible the patentee first melts 100 parts of good copper, to which, whilst in a state of perfect fusion, he adds 17 parts of zinc, 6 parts of magnesite or substance of a like nature, though possibly differing in name, 3.60 parts of ammonia or salts of ammonia, 1.80 parts of quicklime or other calx, and nine parts of crude tartar. The crucible is covered, and the whole is made to come to a complete state of fusion, when the metal may be poured into moulds, or made into ingots. According to the ductility or shade of colour which may be desired in the metal, the proportions of the zinc and other added substances are varied. Tin may be substituted for zinc if the metal is sought to be more tenacious in character.

IMPROVED APPARATUS FOR PURIFYING AND CARBONISING GAS.

Mr. S. Rowlands, of Birmingham, has taken out a patent for a new mode of treating gas, consisting of a vessel or chamber, through which gas is made to pass, and brought into contact with a large surface of the liquid to the action of which it is intended to be subjected. In this chamber is a float of cork, or other light material, having a spiral channel, which gives it a slow rotary motion. When it is wished to impregnate coal gas with the vapour of naphtha, the vessel is partly filled with the liquid, which is kept in a state of agitation by the rotation of the float as it sinks. Other carbonaceous fluids may be employed with like effect.

H. C.