

iodine, but his opinion soon became modified, and he declared that nitrogen was not a single body, but consisted of hydrogen and Ozone, and it was supposed really to be a component of nitrogen; and his opinion was supported by Assam, who showed the identity of *atmospheric Ozone*, and Ozone produced by chemical action or decomposition: further investigation led to the opinion that it was a peroxyde of hydrogen.

Schonbein soon abandoned the opinion that Ozone was a component of nitrogen, and inclined to the opinion that it was a peroxyde of Hydrogen. Marignac and De la Rive demonstrated that Ozone could be formed without the presence of nitrogen. And Berzelius had already expressed an opinion that it was oxygen in a peculiar state.

At this period of its history, Fremy and Becquerel undertook a series of experiments illustrating the action of electricals upon oxygen, and proposed the name of *Toxygene Electrise* which seems to have been at that time also adopted by Schonbein. Its presence in the atmosphere and its special production, has placed it beyond doubt as a substance possessing peculiar chemical properties, although several methods have been adopted to produce it artificially, such as the action of sulphuric acid on bichromate of potash, and also on the peroxide of lead, the most simple and easy method is by the use of Phosphorus. The process generally adopted is by taking a stick of phosphorus, cleanly scraped, about half an inch long, and putting it into a large bottle which contains just sufficient water to half cover the phosphorus, and then slightly closing the mouth, and letting it stand for some time at a temperature not less than 60°F. Ozone soon begins to be formed as is shown by the rising of the whitish fumes from the phosphorus which at the same time begins itself to be luminous. In a few hours the quantity will be considerable, and the bottle is then to be emptied of its contents, washed out and closed for use or experiment. The necessary conditions are that the air should be at the ordinary atmospheric pressure and at the temperature of about 60°F; humid and cold air retards and will scarcely give rise to its formation, and if the atmosphere be subject to an increased pressure, Ozone is not formed except by an increase of temperature: the presence of certain gases also prevents its formation.

It is also obtained by the decomposition of water by galvanism, and it may be formed in pure and dry oxygen gas by passing through it the electric spark. It may be said also to be formed generally when chemical combination takes place in contact