

"electrified air" had a purifying effect on decomposing vegetable and animal matter, and he employed it as a disinfectant to fœtid ulcers. Later, Dr. John Davy recognised this principle in the atmosphere, and arranged a formula for the preparation of chemical tests to be employed in detecting it. A few years later, Schonbein, Professor of chemistry at Balse, drew the attention of scientists to remarkable properties of this substance, to which he gave the name it bears, Ozone, from the Greek word, signifying to smell or emit an odor.

Schonbein showed that it was a substance possessing the property of entering most readily, like Oxygen, into chemical combination, and also that the odor emitted by the electrical machine when in action was due to it, and not, as had been supposed, to the peculiar action of electricity on the olfactory nerves. He proved that it could be produced without the aid of electricity. He found the gas was contained in the oxygen evolved at the positive pole during the decomposition of water by the voltaic pile. And he believed that oxygen could be split up or transformed—half into oxygen in a negatively polar state, or Ozone, and half into oxygen in a positively polar condition, or Antozone, which I may make the subject of a future paper.

The theory that Ozone is allotropic or condensed oxygen is now most universally believed. Professor Tyndall thinks that ozone is an aggregation of atoms of oxygen into molecules.

"If the difference between ozone and its parent oxygen are great," says Dr. Fox.* "They are not more if so striking, as are those between the three allotropic modifications of Carbon—viz. lamp-black, graphite or plumbago, and the diamond—or as the widely-dissimilar forms of vitreous and red Phosphorus, the former, when dry, igniting at the temperature of a summer's day, whilst its brick-red modification can be carried with safety in the waistcoat pocket. Draper of New York has shown that Chlorine, a gas which bears the closest analogy with Ozone, on account of the powerful bleaching, disinfecting, deodorizing, and other powers common to both, may exist in an active and passive condition. In the former state it would appear to possess all its well-known properties, and in the latter even its most energetic affinities disappear. As Ozone, then, is an active allotropic form of Oxygen, so Chlorine would seem to be an active allotropic condition of passive Chlorine.

"Thanks to the researches of Andrews, Tait, and Soret, a reply to the question with which this chapter commences—"What is Ozone?"—can now be given with confidence. Our present knowledge enables us to conclude that Ozone is simply a con-

* Ozone and Antozone, their History, &c. Cor. B. Fox, M.D., &c., &c.