SAINTE-CLAIRE DEVILLE, ÉTIENNE HENRI (1818-1881), French chemist, was born on the 11th of March 1818 in the island of St Thomas, West Indies, where his father was French consul. Together with his elder brother Charles he was educated in Paris at the Collège Rollin. In 1844, having graduated as doctor of medicine and doctor of science, he was appointed to organize the new faculty of science at Besançon, where he acted as dean and professor of chemistry from 1845 to 1851. Returning to Paris in the latter year he succeeded A. J. Balard at the École Normale, and in 1859 became professor at the Sorbonne in place of J. B. A. Dumas, for whom he had begun to lecture in 1853. He died at Boulogne-sur-Seine on the 1st of July 1881.

He began his experimental work in 1841 with investigations of oil of turpentine and tolu balsam, in the course of which he discovered toluene. But his most important work was in inorganic and thermal chemistry. In 1849 he discovered anhydrous nitric acid (nitrogen pentoxide), a substance interesting as the first obtained of the so-called “ anhydrides ” of the monobasic acids. In 1855, ignorant of what Wöhler had done ten years previously, he succeeded in obtaining metallic aluminium, and ultimately he devised a method by which the metal could be prepared on a large scale by the aid of sodium, the manufacture of which he also developed. With H. J. Debray (1827-1888) he worked at the platinum metals, his object being on the one hand to prepare them pure, and on the other to find a suitable metal for the standard metre for the International Metric Commission then sitting at Paris. With L. J. Troost (b. 1825) he devised **a** method for determining vapour densities at temperatures up to 1400° C., and, partly with F. Wöhler, he investigated the allotropic forms of silicon and boron. The artificial preparation of minerals, especially of apatite and isomor- phous minerals and of crystalline oxides, was another subject in which he made many experiments. But his best known contribution to general chemistry is his work on the phenomena of reversible reactions, which he comprehended under a general theory of “ dis- sociation.” He first took up the subject about 1857, and it was in the course of his investigations on it that he devised the apparatus known as the “ Deville hot and cold tube.”

His brother, Charles Joseph Sainte-Claire Deville (1814-1876), geologist and meteorologist, was born in St Thomas on the 26th of February 1814. Having attended at the École des Mines in Paris, he assisted Elie de Beaumont in the chair of geology at the Collège de France from 1855 until he succeeded him in 1874. He made researches on volcanic phenomena, especially on the gaseous emanations. He investigated also the variations of temperature in the atmosphere and ocean. He died at Paris on the 10th of October 1876.

His published works include: *Études géologiques sur les îles de Ténériffe et de Fogo* (1848); *Voyage géologique aux Antilles et aux Îles de Tênêriffe et de Fogo* (1848-1859); *Recherches sur les princi­paux phénomènes de météorologie et de physique générale aux Antilles* (1849); *Sur les variations périodiques de la température* (1866), and *Coup d'œil historique sur la géologie* (1878).

ST ELMO’S FIRE, the glow accompanying the slow discharge of electricity to earth from the atmosphere. This discharge, which is identical with the “ brush ” discharge of laboratory experiments, usually appears as a tip of fight on the extremities of pointed objects such as church towers, the masts of ships, or even the fingers of the outstretched hand: it is commonly accompanied by a crackling or fizzing noise. St Elmo’s fire is most frequently observed at low levels through the winter season during and after snowstorms.

The name St Elmo is an Italian corruption through *Sant'Ermo* of St Erasmus, a bishop, during the reign of Domitian, of Formiae, Italy, who was broken on the wheel about the 2nd of June 304. He has ever been the patron saint of Mediterranean sailors, who regard St Elmo’s fire as the visible sign of his guar­dianship. The phenomenon was known to the ancient Greeks, and Pliny in his *Natural History* states that when there were two lights sailors called them Castor and Pollux and invoked them as gods. To English sailors St Elmo’s fires were known as “ corposants ” (Ital. *corpo sαnlo).*

See Hazlitt’s edition of Brand’s *Antiquities* (1905) under “ Castor and Pollux.”

ST EMILION, a town of south-western France, in the depart­ment of Gironde, 2½ m. from the right bank of the Dordogne and 27 m. E.N.E. of Bordeaux by rail. Pop. (1906), town, 1091; commune, 3546. The town derives its name from a hermit who lived here in the 7th and 8th centuries. Picturesquely situated on the slope of a hill, the town has remains of ramparts of the 12th and 13th centuries, with ditches hewn in the rock, and several medieval buildings. Of these the chief is the parish, once collegiate, church of the 12th and 13th centuries. A Gothic cloister adjoins the church. A fine belfry (12th, 13th and 15th centuries) commanding the town is built on the terrace, beneath which are hollowed in the rock the ora- tory and hermitage of St Emilion, and adjoining them an ancient monolithic church of considerable dimensions. Remains of a monastery of the Cordeliers (15th and 17th centuries), of a building (13th century)known as the Palais Cardinal, and a square keep (the chief relic of a stronghold founded by Louis YIII.) are also to be seen. Disused stone quarries in the side of the hill are used as dwellings by the inhabitants. St Emilion is celebrated for its wines. Its medieval importance, due to the pilgrimages to the tomb of the saint and to the commerce in its wines, began to decline towards the end of the 13th century owing to the foundation of Libourne. In 1272 it was the first of the towns of Guyenne to join the confederation headed by Bordeaux.