

which we touch it remain luminous for two or three minutes, as is observed in breaking the shell of the pholades. If we rub wood with the body of a medusa, and the part rubbed ceases shining, the phosphorescence returns if we pass a dry hand over the wood. When the light is extinguished a second time, it can no longer be reproduced, though the place rubbed be still humid and viscous. In what manner ought we to consider the effect of the friction, or that of the shock? This is a question of difficult solution. Is it a slight augmentation of temperature which favours the phosphorescence? or does the light return, because the surface is renewed, by putting the animal parts proper to disengage the phosphoric hydrogen in contact with the oxygen of the atmospheric air? I have proved by experiments published in 1797, that the shining of wood is extinguished in hydrogen gas, and in pure azotic gas, and that its light reappears whenever we mix with it the smallest bubble of oxygen gas. These facts, to which several others may be added, tend to explain the causes of the phosphorescence of the sea, and of that peculiar influence which the shock of the waves exercises on the production of light.

When we were between the island of Madeira and the coast of Africa, we had slight breezes and dead calms, very favourable for the magnetic observations, which occupied me during this passage. We were never weary of admiring the beauty of the nights; nothing can be compared to the transparency and serenity of an African sky. We were struck with the innumerable quantity of falling stars, which appeared at every instant. The farther progress we made towards the south, the more frequent was this phenomenon, especially near the Canaries. I have observed during my travels, that these igneous meteors are in general more common and luminous in some regions of the globe than in others; but I have never beheld them so multiplied as in the vicinity of the volcanoes of the province of Quito, and in that part of the Pacific ocean which bathes the volcanic coasts of Guatimala. The influence which place, climate, and season appear to exercise on the falling stars, distinguishes this class of meteors from those to which we trace stones that drop from the sky (aërolites), and which probably exist beyond the boundaries of our atmosphere. According to