There is no field in which more laurels await the philosophical chemist than the geological one. I have said that all the calcareous nodules of the ichthyolite beds seem to have had originally their nucleus of organic matter. In nine cases out of ten the organism can be distinctly traced; and in the tenth there is almost always something to indicate where it lay — an elliptical patch of black, or an oblong spot, from which the prevailing color of the stone has been discharged, and a lighter hue substituted. Is the reader acquainted with Mr Pepys's accidental experiment, as related by Mr. Lyell, and recorded in the first volume of the *Geological Transactions*? It affords an interesting proof that animal matter, in a state of putrefaction, proves a powerful agent in the decomposition of mineral substances held in solution, and of their consequent precipitation. An earthen pitcher, containing several quarts of sulphate of iron, had been suffered to remain undisturbed and unexamined in a corner of Mr. Pepys's laboratory for about a twelvemonth. Some luckless mice had meanwhile fallen into it, and been drowned; and when it at length came to be examined, an oily scum, and a yellow, sulphureous powder, mixed with hairs, were seen floating on the top, and the bones of the mice discovered lying at the bottom; and it was found, that over the decaying bodies the mineral components of the fluid had been separated and precipitated in a dark-colored sediment, consisting of grains of pyrites and of sulphur, of copperas in its green and crystalline form, and of black oxide of iron. The animal and mineral matters had mutually acted upon one another; and the metallic sulphate, deprived of its oxygen in the process, had thus cast down its ingredients. It would seem that over the putrefying bodies of the fish of the Lower Old Red Sandstone the water had deposited in like manner the lime with which it was