

stones, flints, granites, porphyries, agates, gypsums, clays, lava, pumice stone, with all metals and other minerals, are vitrifiable either by the fire of our furnaces, or that of mirrors; whereas marble, alabaster, stones, chalk, marl, and other substances which proceed from the residue of shells and madrepores, cannot be reduced into fusion by these means. Nevertheless I am persuaded, that if the power of our furnaces and mirrors were further increased, we should be enabled to put these calcareous matters in fusion; since there are a multiplicity of reasons to conclude, that at the bottom their substance is the same, and that glass is the common basis of all terrestrial matter.

By my own experiments I have found, that the most powerful glass furnaces is only a weak fire, compared with that of bellows furnaces; and that fire produced in the focus of a good mirror, is stronger than that of the most glowing fire of a furnace. I have kept iron ore for thirty-six hours in the hottest part of the glass furnace of Rouelle, in Burgundy, without its being melted, agglutinated, or even in any manner changed; whereas, in less than twelve hours this ore runs in a forge furnace. I have also melted, or volatilized, by a mirror many matters which neither the fire, nor reverberatory