

the earth amounts to not less than 35,000,000,000,000,000 tons. Quite as significant of the solvent power of water is the variety of elements whose presence in sea water can be demonstrated, thus proving that the total store of them is in any case enormous. They include hydrogen, oxygen, nitrogen, carbon, chlorine, sodium, magnesium, sulphur, phosphorus, which are easily demonstrated; further, arsenic, cæsium, gold, lithium, rubidium, barium, lead, boron, fluorine, iron, iodine, bromine, potassium, cobalt, copper, manganese, nickel, silver, silicon, zinc, aluminium, calcium, and strontium.<sup>1</sup>

Equally striking is the evidence in regard to the first stages of this geological process. Under the action of water, aided, to be sure, in many cases by dissolved carbonic acid, every species of rock suffers slow destruction. All substances yield *in situ* to the solvent work of water, and the dissolved parts may all be found in the great final reservoir, the ocean. It has been proved that nearly every one of the substances which are thus set in motion upon the face of the earth are placed under contribution by life, for biochemical analysis reveals them as constituents of living organisms, absorbed either

<sup>1</sup> Arrhenius, "Kosmische Physik."