

them consist merely of the two last-mentioned simple minerals, and the feldspar tribe is then represented by anorthite.\* *Chrome iron ore* (oxyd of chromium and protoxyd of iron) is found in small quantity in all meteoric stones; *phosphoric acid* and *titanic acid*, which Rammelsberg discovered in the very remarkable stone of Juvenas, perhaps indicate *apatite* and *titanite*.

“Of the *simple substances* hitherto detected in the meteoric stones, there are 18 :† *oxygen, sulphur, phosphorus, carbon, silicium, aluminum, magnesium, calcium, potassium, sodium, iron, nickel, cobalt, chromium, manganese, copper, tin, and titanium*. The *proximate constituents* are, (a.) *metallic* : nickel-iron, a combination of phosphorus with iron and nickel, sulphuret of iron and magnetic pyrites; (b.) *oxydized* : magnetic iron ore and chrome iron ore; (c.) *silicates* : olivin, anorthite, labrador, and augite.”

In order to concentrate the greatest number of important facts separated from hypothetical conjectures, it still remains for me to develop the manifold analogies which some meteoric stones present as *rocks* with older, so-called trap rocks (dolerites, diorites, and melaphyren), with basalts and more recent lava. These analogies are so much the more striking, as “the metallic alloy of nickel and iron, which is constantly contained in certain meteoric masses,” has not hitherto been discovered in telluric minerals. The same distinguished chemist whose friendly communications I have made use of in these last pages, enters fully into this subject in a special treatise,‡ the results of which will be more appropriately discussed in the geological part of the Cosmos.

\* Shepard, in Silliman's *American Journal of Science and Arts*, ser. ii., vol. ii., 1846, p. 377; Rammelsberg, in Poggend., *Ann.*, bd. lxxiii., 1848, p. 377.

† Compare *Cosmos*, vol. i., p. 130.

‡ *Zeitschrift der Deutschen Geolog. Gesellschaft*, bd. i., p. 232. All the matter in the text from p. 224 to p. 226, which is between inverted commas, was taken from the manuscript of Professor Rammelsberg (May, 1851).