He firſt pointed out a new way to prepare the ſalt of benzoin. In the ſame year he diſcovered that arſenic, freed in a particular manner from phlogiſton, partakes of all the properties of an acid, and has its peculiar af­finities to other ſubſtances.

In a Diſſertation on Flint, Clay, and Alum, he clearly overturned Beaume’s opinion of the identity of the ſiliceous and argillaceous earths. He publiſhed an Analyſis of the Human Calculus. He ſhewed alſo a mode of preparing mercurius dulcis in the humid way, and improved the proceſs of making the powder of Algaroth. He analyſed the mineral ſubſtance called *molybdena,* or flexible black lead. He diſcovered a beautiful green pigment. He ſhewed us how to decompoſe the air of the atmoſphere. He diſcovered that ſome neutral ſalts are decompoſed by lime and iron. He decompoſed plumbago, or the common black lead. He obſerved, with peculiar ingenuity, an acid in milk, which decompoſes acetated alkali; and in his experi­ments on the ſugar of milk, he diſcovered another acid, different in ſome reſpects from the above-mentioned acid and the common acid of ſugar. He accompliſhed the decompoſition of tungſtein, the component parts of which were before unknown, and found in it a pecu­liar acid earth united to lime. He publiſhed an ex­cellent diſſertation on the different forts **of** aether. He found out an eaſy way to preſerve vinegar for many years. His inveſtigation of the colouring matter in Pruſſian blue, the means he employed to ſeparate it, and his diſcovery that alkali, ſal ammoniac, and char­coal, mixed together, will produce it, are ſtrong marks of his penetration and genius. He found out a pecu­liar ſweet matter in expreſſed oils, after they have been boiled with litharge and water. He ſhewed how the acid of lemons may be obtained in cryſtals. He found the white powder in rhubarb, which Model thought to be ſelenite, and which amounts to one-ſeventh of the weight of the root, to be calcareous earth, united to the acid of ſorrel. This ſuggeſted to him the examination of the acid of ſorrel. He precipitated acetated lead with it, and decompoſed the precipitate thus obtained by the vitriolic acid, and by this proceſs he obtained the common acid of ſugar; and by ſlowly dropping a ſolution of fixed alkali into a ſolution of the acid of ſugar, he regenerated the acid of ſorrel. —From his examination of the acids contained in fruits and berries, he found not one ſpecies of acid alone, viz. the acid of lemon, but another alſo, which he denominated the malaceous acid, from its being found in the greateſt quantity in apples.

By the decompoſition of Bergman’s new metal (ſiderite) he ſhewed the truth of Meyer’s and Klaproth’s conjecture concerning it. He boiled the calx of ſiderite with alkali of tartar, and precipitated nitrated mer­cury by the middle ſalt which he obtained by this ope­ration; the calx of mercury which was precipitated was found to be united to the acid of pholphorus; ſo that he demonſtrates that this calx was phoſphorated iron. He found alſo, that the native Pruſſian blue Contained the ſame acid. He diſcovered by the ſame means, that the perlate acid, as it was called, was not an acid *fui generis,* but the phoſphoric united to a ſmall quantity of the mineral alkali. He ſuggeſted an im­provement in the proceſs for obtaining magnefia from Epsom ſalt; he adviſes the adding of an equal weight

of common ſalt to the Epſom ſalt, ſo that an equal weight of Glauber’s ſalt may be obtained: but this will not ſucceed unleſs in the cold of winter. Theſe are the valuable diſcoveries of this great philoſopher, which are to be found in the Tranſactions of the Royal So­ciety at Stockholm. Moſt of his eſſays have been pub­liſhed in French by Madame Picardet, and Monſ. Morveau of Dijon. Dr Beddoes alſo has made a very va­luable preſent to his countrymen of an Engliſh tranſlation of a greater part of Scheele’s diſſertations, to which he has added ſome uſeful and ingenious notes. The following diſcoveries of Scheele are not, we be­lieve, publiſhed with the reſt. He ſhewed what that ſubſtance is, which has been generally called ‘the earth of the fluor ſpar.’ It is not produced unleſs the fluor acid meet with ſiliceous earth. It appears from Scheele’s experiments to be a triple ſalt, conſiſting of flint, acid of fluor, and fixed alkali. Scheele proved alſo, that the fluor acid may be produced without any addition of the vitriolic or any mineral acid: the fluor is melted with fixed alkali, and the fluorated alkali is decompoſed by acetated lead. If the precipitate be mixed with charcoal dull, and expoſed in a retort to a ſtrong heat, the lead will be revived, and the acid of fluor, which was united to it, will paſs into the receiver poffeſſed of all its uſual properties. This ſeems to be an ingenious and unanſwerable proof of its exiſtence.

He obſerved, that no pyrophorus can be made un­leſs an alkali be preſent; and the reaſon why it can be prepared from alum and coal is, that the common alum always contains a little alkali, which is added in order to make it chryſtallize; for if this be ſeparated from it, no pyrophorus can be procured from it. His laſt diſ­ſertation was his very valuable obſervations on the acid of the gallnut. Ehrhart, one of Scheele’s moſt intimate friends, aſſerts, that he was the diſcoverer of both of the acids of ſugar and tartar. We are alſo indebted to him for that maſterpiece of chemical decompoſition, the ſeparation of the acid of phoſphorus from bones. This appears from a letter which Scheele wrote to Gahn, who has generally had the reputation of this great diſ­covery. This acid, which is ſo curious in the eye of the chemiſt, begins to draw the attention of the phyſician. It was firſt uſed in medicine, united to the mineral alkali, by the ingenious Dr Pearſon. The value of this addition to the materia medica cannot be better evin­ced than from the increaſe of the demand for it, and the quantity of it which is now prepared and ſold in London.

We may ſtamp the character of Scheele as a philo­ſopher from his many and important diſcoveries. What concerns him as a man we are informed of by his friends, who affirm, that his moral character was irreproachable. From his outward appearance, you would not at firſt fight have judged him to be a man of extraordinary abilities; but there was a quickneſs in his eye, which, to an accurate obſerver, would point out the penetra­tion of his mind. He mixed but little with the crowd of common acquaintance; for this he had neither time nor inclination, as, when his profeſſion permitted him, he was for the moſt part employed in his experimental inquiries. But he had a ſoul for friendſhip; nor could even his philoſophical purſuits withhold him from truly enjoying the ſociety of thoſe whom he could cſteem and love. Before he adopted any opinion, or a particular theory, he conſidered it with the greateſt attention; but