Nagarjuna a great philosopher and scientist of early medieval period developed a new branch of Dhatuvada (alchemy) with two distinct aims; first to remove poverty from the World and second to help in achieving Moksha (salvation). For the first aim he developed ways and means to convert lower metals into higher metals e.g. iron into gold. He was successful in converting mercury into gold but perhaps it was not commercially viable or may be some other reasons that it was not publicized and few people still claim to possess this technology.

As long as second aim was concerned it was very successful and a new branch in Ayurveda therapeutics was added under the name of Rasa Shashtra which revolutionized its approach and new classes of disease specific herbo-mineral drugs was developed. It leads to reduction in bulk of the dose from gramms to milligrams, many fold enhancements in the potency. The drugs become more palatable and acceptable to patients, quick in action and very effective in curing disease.

Ayurveda emphasizes that metals as such are harmful to human body and should not be used internally. To make them harmless and very useful as drugs, it developed matter specific means and methods which make them free from harmful effects and convert into very useful drugs which can be used internally as well as externally for many ill health conditions without any side effect.

First of all Shodhana (purification) is done to remove impurity and harmful effects of the metals. For this purpose metal/mineral specific purification methods are evolved which make a metal free from harmful impurities. Even purified metals are not allowed to use till converted into Bhasma (anaerobic incineration).

For making Bhasma first the metals are grinded with specific herbs and made into bolus, which is wrapped in banana or other leaves and on it a thick paste such as dough is applied. It is then placed between two earthen saucers kept on each other oppositely. Thereafter its edges are sealed well by wrapping cloth and then applying a thick coat of mud and dried. This sealed ball containing drug is put in fire till it becomes red hot. On cooling, the wrappers of the ball are removed and drug is collected carefully and grinded into fine powder. Thus obtained Bhasma is tested for the formation of proper Bhasma; if fails in test again same process is repeated. Only proper Bhasma is allowed to use as drug.

First test for proper Bhasma is that it should become so light to float on water (Vātritara); the second is that it should be so fine that on rubbing between the thumb and index finger, its fine particles should trap in the ridges of the finger even after its wiping off (Rekhā Parana).

Sometimes mercury or gold etc is added as catalytic agent while preparing Bhasma with condition that on its formation, the whole amount of the agent should be recovered. Some other tests are also available such as non reaction of the Bhasma when heated with silver etc.

It is obvious from the foregoing that making Bhasma involves treatment of a metal with specific herbs, anaerobic incineration process etc which leads to change in all the physical character of the metal. For example compact solid becomes a fine powder, a heavy metal becomes lighter as it floats on water and yellow colored gold becomes red. The particles of Bhasma are so small that it traps in the fine ridges of the fingers. All these changes indicate that the metal is changed into nano particle or any other beneficial form which is free from the side effects attributed to its gross metal. Thus it is clear without any doubt that Bhasma is a mixture of nano particles of the metal.

In Ayurveda the adverse effects of improperly Bhasma and benefits of a properly prepared Bhasma are documented. This means the beneficial and non-beneficial aspects of Bhasma were well evaluated before putting their uses as drug. Further these properly prepared Bhasma are being used for centuries by Ayurvedic physicians without any side effect when prescribed in proper doses and duration.

The technology was so developed that crude method of administration of herbomineral preparation in form of subcutaneous injection was developed. For instance an unconscious patients suffering from fever in terminating stage was given Sachi-bharana rasa directly on scalp by making small incisions by a sterilized knife. Thus precious lives were saved by Ayurveda herbomineral preparations.

However there is continuous attack on Ayurveda for accusing that it is using heavy metals and thus spoiling the health. This attack is by the vested interest people who have no knowledge of the Ayurveda. It has resulted that some Ayurveda physicians start hesitating to use Bhasma which resulted in its low commercial production. Actually Bhasma is a technique which Ayurveda developed to convert metals and herbal powders into nano particles. Some Bhasma are considered as Yogavāti—a property by which they increase the potency or drug availability of the concomitantly administered herbal drugs.

Hence it is the time that the Ayurveda family whether researchers, academicians, research authority, Ayurveda Universities should wakeup to save such a wonderful therapeutic branch of Ayurveda and take up research projects to prove that properly prepared Bhasma have no side effects. To prove that Bhasma are in form of nano particles it requires very costly instruments and cooperation of experienced technicians/scientist. Therefore at one of the eminent centre may be provided with such facilities where the truth regarding the efficacy and safety of Ayurveda Bhasma may be revealed and advantages of such precise technology may be utilized with more confidently and specifically for the alleviation of suffering of the humanity which was dreamed by the great scholar and scientist, Nagarjuna, the father of modern chemistry.