

# Famous Scientists in Plaster and Bronze

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The Oesper Collections actually consist of three separate collections: the Jensen-Thomas Apparatus Collection, which is housed in the Oesper Museum proper; the Oesper Book and Journal Collection; and the Oesper Print and Photo Collection – both of which are housed in the adjoining rare-book room. Though, as implied by its name, the primary focus of the latter collection is to acquire prints and photographs related to the history of chemistry, we also occasionally come upon pertinent oil paintings, busts and bas reliefs. Indeed, the history of European alchemy and chemistry includes a rich heritage of these art forms. Just how rich may be inferred from the recent book by Beyer and Behrends, which deals with the rich collection of paintings, busts and medallions relating to the history

of chemistry at just the University of Leipzig alone (1). Regrettably, a similar tradition of these art forms is largely missing from the history of American chemistry (2).

Busts and bas reliefs or medallions, in particular, were once considered as indispensable decoration for a properly designed chemical laboratory, as may be seen in the crude drawing (figure 1) of an idealized chemical laboratory as imagined by the American chemist, Campbell Morfit, in his 1849 book on laboratory technique and design, and which sports no less than four busts of famous chemists strategically placed about the room for suitable inspiration (3). Busts also served to link individuals to their personal academic lineages, as may be seen in the etching of the 19th-century Swedish chemist, Carl Mosander, shown in figure 2, in



Figure 1. Drawing from the 1849 book on laboratory technique and design by Campbell Morfit illustrating the ideal chemical laboratory, complete with a suitable collection of busts of famous chemists for proper inspiration.



Figure 2. Portrait of the Swedish chemist, Carl Mosander (1797-1858), posing with his blowpipe and a bust of Berzelius.

which he is signaling to the viewer his association with the heritage of his colleague and mentor, the great Swedish chemist, Jöns Jacob Berzelius, by posing with a bust of Berzelius in the background and a Berzelius blowpipe lamp and stand in the foreground.

Aside from a scientific society or university directly commissioning such a work of art in order to honor one of its distinguished members, how would a 19th- or early 20th-century laboratory or chemistry department, having Morfit's decorative tastes, have gone about acquiring the necessary busts and reliefs? As it turns out, it was in fact possible to purchase them directly from certain apparatus dealers. Thus the 1900 catalog of the Swiss firm of Auer and Sons of Zurich, which dealt in apparatus for both pharmacies and chemical laboratories, offered a choice four plaster busts (in two sizes and with either a white or bronze finish) of Asclepius, Hygeia, Hippocrates, and, rather improbably, Socrates, suitable for decorating a pharmacy (4). More to the point was the offering of the German firm of Franz Huguershoff of Leipzig whose 1910 catalog listed a choice of 14 busts of famous scientists, including Berzelius, Faraday, Franklin, Galvani, Helmholtz, Hofmann, Liebig, Linnaeus, Mitscherlich, Newton, Rose, Siemens, Volta, and Watt (5).

Since, as already noted, the acquisition of busts and reliefs by the Oesper Collections has been largely incidental, we own only about a dozen or so examples

and many of these are of small size (about 7-9 inches in height) in order to facilitate their possible integration with shelf displays. Nevertheless, several of them, as we shall see, are of some historical interest.

### Antiquity

Of course the art of memorializing famous men in the form of an appropriate herm or bust is quintessentially classical in nature and was first widely practiced by the ancient Greeks and Romans. The Oesper Collections contain two examples representing this period. The first (figure 3) is a small plaster bust reputed to be of the Greek physician, Hippocrates of Cos, who is widely considered as the father of modern medicine, and was originally part of a matching set designed for use as book ends.

The second (figure 4) is a small plaster bust of the Greek philosopher, Aristotle, whose philosophy influenced, for better or worse, alchemical and chemical thought for more than 1500 years. This was intended for sale to modern-day tourists and is regrettably a very poor rendering of the well-known full-sized Greek original. The accuracy of the bust of Hippocrates is also problematic. As noted in the superb study of Greek busts by Gisela Richter, the vast majority of surviv-

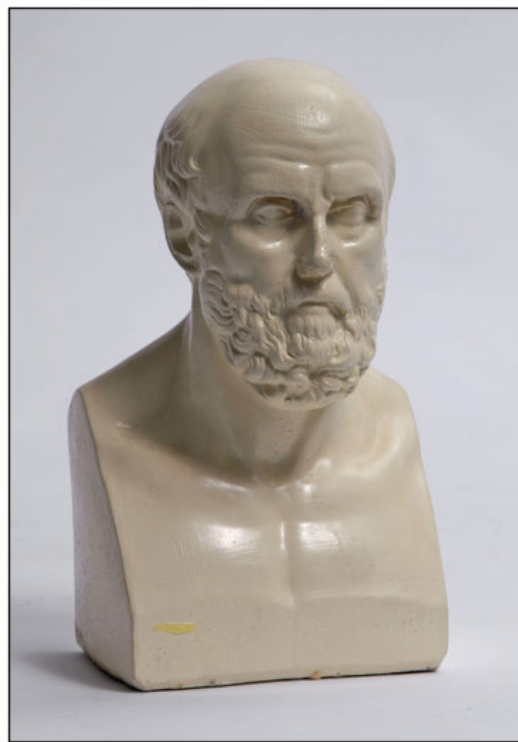


Figure 3. Small (4"x 7") plaster bust of the Greek physician, Hippocrates of Cos (c. 460-370 BC).



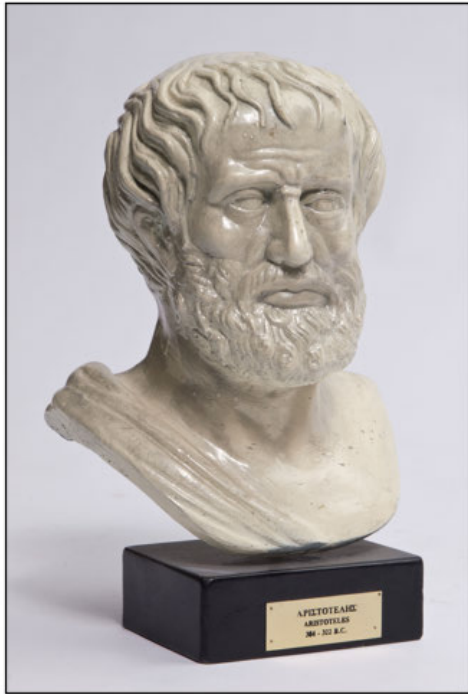


Figure 4. A small (5"x 8") plaster bust of the Greek philosopher, Aristotle (384-322 )BC).



Figure 5. Full-sized (15" x 22") plaster copy of Houdon's bust of American founding father and electrical scientist, Benjamin Franklin (1706-1790).

ing classical busts and herms remain unidentified and it has been a regrettable practice among past scholars to arbitrarily pick out a suitable unknown example whenever an expedient stand-in was needed for a missing image of some classical author or philosopher (6).

### **Eighteenth Century**

The Oesper Collections own three busts relating to 18th-century scientists. The first of these (figure 5) is a full-sized plaster copy of the well-known bust of the American diplomat and politician, Benjamin Franklin,

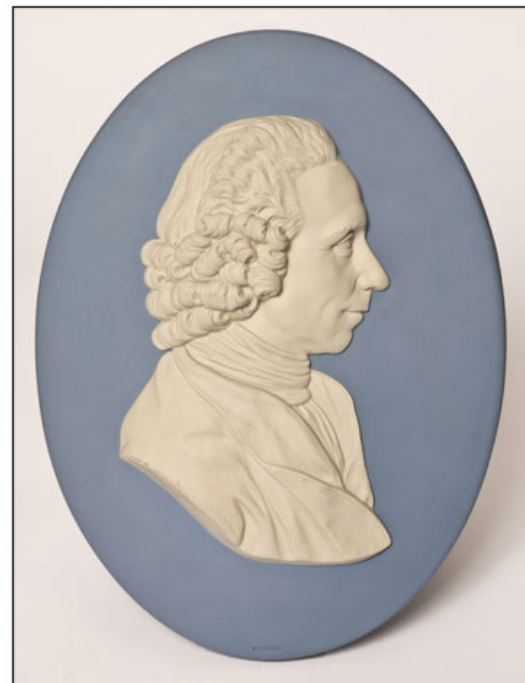


Figure 6. A modern (9"x 11.75") reproduction of Josiah Wedgwood's famous jasperware medallion of the British theologian and chemist, Joseph Priestley (1733-1804).

by the famous French sculptor, Jean Antoine Houdon. Celebrated today as one of America's founding fathers, Franklin actually had a considerable reputation during his lifetime for his work on the physics of static electricity, where he is best remembered for his introduction of the concepts of positive and negative electrification and his advocacy of a single-fluid model of electrical phenomena, and in popular culture for his invention of the lightning rod and his famous kite experiment. Houdon's version of Franklin is easily recognizable as the same Franklin depicted in numerous period oil paintings and etchings.

Our second example (figure 6) is a limited edition modern replica of the famous Wedgwood jasperware

medallion of the British theologian and scientist, Joseph Priestley, which was donated to the Oesper Collections by Derek Davenport of Purdue University. Best known for his work in pneumatic chemistry and especially for his independent discovery of dioxygen gas in 1774, Priestley ended his career in exile in Northumberland, Pennsylvania. Since Josiah Wedgwood knew Priestley personally and both were members of the famous Lunar Society, there is little doubt that the medallion is a reasonably accurate representation of Priestley's actual appearance.

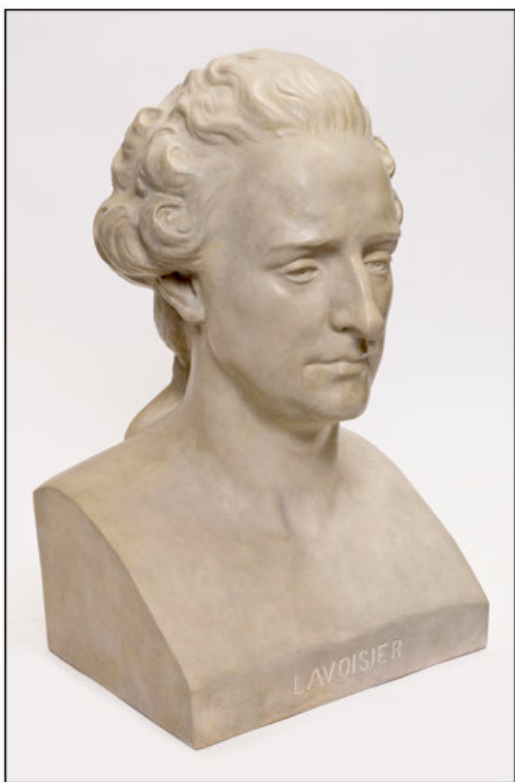


Figure 7. A recently acquired full-sized (13"- 21.7") plaster bust of the French chemist, Antoine Lavoisier (1743-1794).

Our third and final 18th-century example (figure 7) is a recently acquired plaster bust of the French chemist, Antoine Laurent Lavoisier, who is widely considered to be the father of modern chemistry. It was made by the Gipsformeri of the Staatliche Museum of Berlin sometime in the 1930s for the Gebrüder Micheli Company of Berlin, which specialized in the sale of decorative art work and especially of plaster and ceramic busts and reliefs. It is most likely either a copy or a twin of a similar bust found in the Deutsches Museum in Munich (figure 8).

Surprisingly no mention is made of either of these busts in Marco Beretta's recent study of Lavois-



Figure 8. Photograph of the matching Lavoisier bust as it appeared in the displays of the Deutsches Museum in 1925.

ier iconography, though they may be related to a marble bust in the Musée des Arts et Métiers in Paris by the French sculptor André Boisseau, which dates from 1870 (7). As demonstrated in Beretta's study, there is so much variation in the various prints, paintings, busts, and medallions purporting to represent Lavoisier, that, unlike the cases of Franklin and Priestley, it is difficult to determine just how accurate this representation really is.



Figure 9. So-called death mask of Lavoisier once owned by Fisher Scientific. Its current location is unknown.

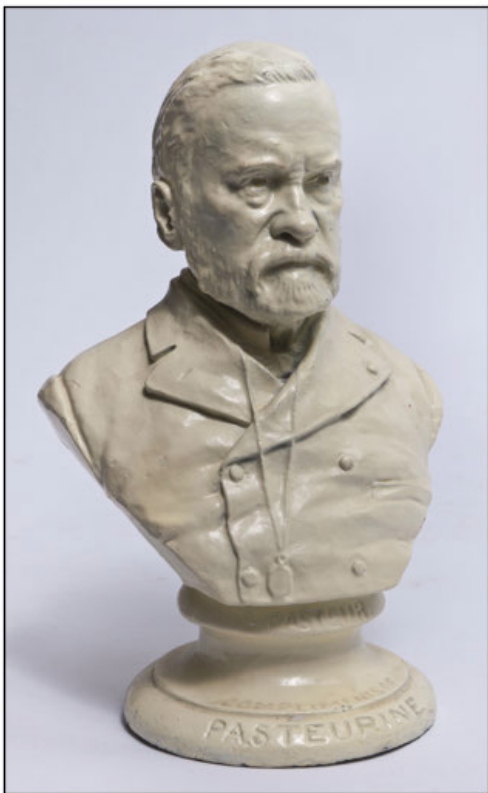


Figure 10. Small (5.75" - 9.5") plaster bust of the French chemist and microbiologist, Louis Pasteur (1822-1895).

In any case, it looks nothing like the so-called death mask of Lavoisier (figure 9) once owned by the Fisher Scientific Company of Pittsburgh, though one must wonder how it was possible to obtain the death mask of someone who was guillotined during the French revolution and whose body was disposed of in a mass grave (8). Like the busts in figures 7 and 8, no mention of this death mask is to be found in Beretta's monograph.

### Nineteenth Century

Moving on to 19th-century scientists, the Oesper Collections own two busts. The first (figure 10), of the French chemist and microbiologist, Louis Pasteur, was apparently given as a premium to advertise an American patent medicine known as *Pasteurine*. Manufactured by J. T. Milliken & Co. of St. Louis MO, the exact uses of this product are unknown but were presumably identical to and intended to compete with a much better known product called *Listerine*, which was named after Joseph Lister, the British inventor of antiseptics. Also originating in St. Louis, *Listerine* was the 1879 brain child of Dr. Jo-

seph Lawrence and Jordan Wheat Lambert and was originally marketed as a surgical antiseptic and later for use by dentists before finally ending up by 1914 as an over-the-counter mouthwash.

Best remembered today for his work in microbiology, including his introduction of the process of pasteurization for the preservation of both wine and milk, his refutation of the concept of spontaneous generation, his studies of the microbe origins of fermentation, and his studies of silkworm disease, sheep anthrax, and rabies, Pasteur also occupies a place of honor in the history of chemistry for his discovery of optical isomerism.

Our second 19th-century example (figure 11) is a small, hollow-cast, bronze bust of the Italian chemist, Stanislao Cannizzaro, which was donated to the Oesper Collections by Dr. Bert Ramsay of the Department of Chemistry at Eastern Michigan University in Ypsilanti. Cannizzaro is, of course, best known for his resolution of the problem of how to extract self-consistent atomic weights from molecular weights obtained via vapor density measurements – an insight which played a key role in initiating the second chemical revolution of 1855-1875.

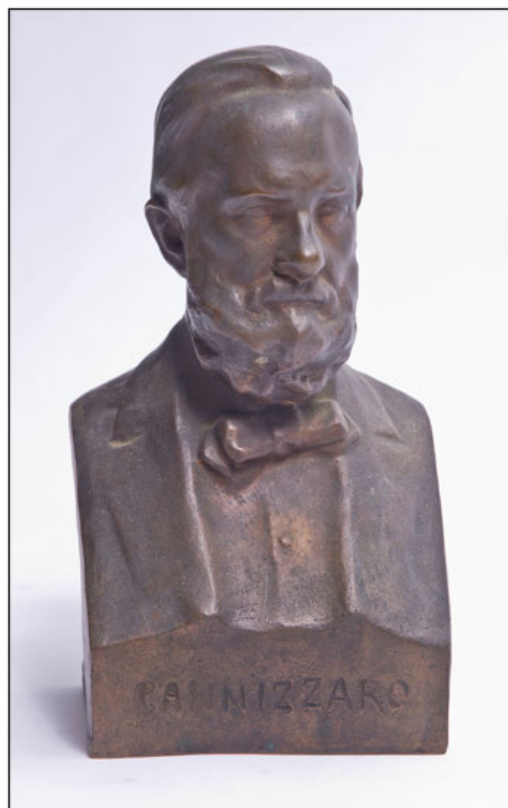


Figure 11. Small (4.25"x 8") hollow-cast bronze bust of the Italian chemist, Stanislao Cannizzaro (1826-1910).



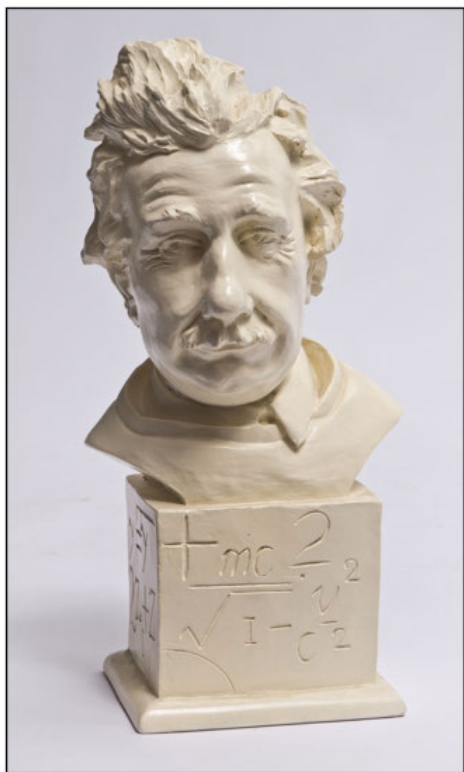


Figure 12. Small (3.5"x 9.25") plaster bust of the German-Jewish physicist, Albert Einstein (1879-1955).

## Twentieth Century

The Oesper Collections contain only one bust (figure 12) of a 20th-century scientist – that of the well-known German-Jewish physicist, Albert Einstein. Made for the home popular science market, it depicts a middle-aged Einstein with a selection of mathematical icons associated with his name engraved on the pedestal. Best known for his work on relativity theory and the photoelectric effect, Einstein's lesser known formulation of the law of photochemical equivalency also had important consequences for the development of 20th-century photochemistry.

## Miscellaneous

The Oesper Collections also contain a single bronze bas relief (figure 13), not of a specific scientist, but presumably of the muse of science, as it depicts a young woman in classical garb performing chemical experiments. It is not known when or where this was acquired by Oesper. It is signed in the lower left corner

"Huguenin" which may refer to the early 20th-century sculptor, André Huguenin-Dumittan.

## References and Notes

1. L. Beyer, R. Behrends, *De Artes Chemiae: Chemiker. und Chemie an der Alma mater Lipsiensis: Kunstschatze, Buchbestände und Archivdokumente der Universität Leipzig und anderer Sammlungen*, Passage Verlag: Leipzig, 2003.
2. An exception occurred some years ago when I was lecturing on the history of chemistry at St. Lawrence University in Canton, New York, and was taken to see the entrance to the old, circa 1930, chemistry building, which included stone statues of Dalton and Madame Curie situated on either side of the main entrance. Regrettably the building was no longer being used by the chemistry department.
3. C. Morfit, *Chemical and Pharmaceutic Manipulation*, Lindsay and Blakiston: Philadelphia, PA, 1849.
4. Auer et Cie, *Catalogue général d'accessoires de pharmacie, d'instruments de laboratoires pour la chimie, la physique, etc.*, Ruegg-Naegeli: Zurich, 1900, p. 91.
5. F. Huguershoff, *Illustrierte Preisliste über allgemeine chemische Apparate*, Leipzig, 1910, p. 30.
6. G. M. A. Richter, *The Portraits of the Greeks*, Cornell University Press: Ithaca, NY, 1984.
7. M. Beretta, *Imaging a Career: The Iconography of Antoine Laurent Lavoisier*, History of Science Publications: Canton, MA, 2001.
8. W. B. Jensen, "Did Lavoisier Blink?," *J. Chem. Educ.*, **2004**, *81*, 629.



Figure 13. Bronze bas relief (9.5"x 8.75") of the muse of science performing chemical experiments.