

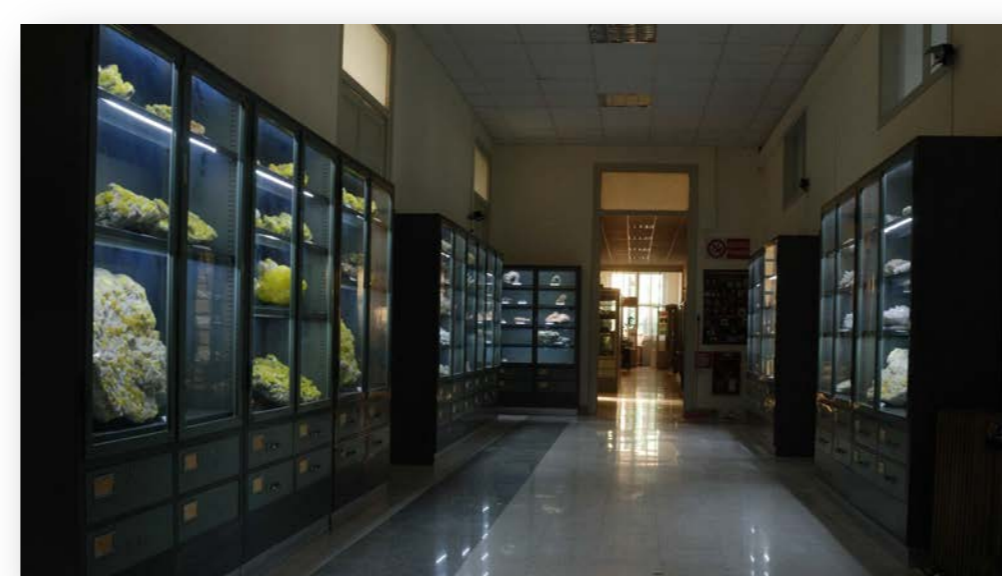
The scientific instruments of the historical Mineralogical Museum of Palermo: testimonies of almost two centuries of mineralogical and petrographic studies

Sergio Calabrese and Paolo Ferla

Dipartimento di Scienze della Terra e del Mare (DiSTeM) - Università degli Studi di Palermo

Via Archirafi 36

The scientific collections of the historic **Museum of Mineralogy** of Palermo are located at the second floor of via Archirafi 36 and are preserved by the Dipartimento di Scienze della Terra e del Mare (DiSTeM) of the University of Palermo. The historical edifice was designed by the architect Antonio Zanca and completed in the years 1933-1934. From the beginning, it has hosted the *Institute of Physics* at the ground and first floors, today entitled to the famous physicist Emilio Segrè, and the *Institute of Mineralogy* at the second floor, which keeps one of the richest and ancient collections of Sicilian minerals.



The historical Collections

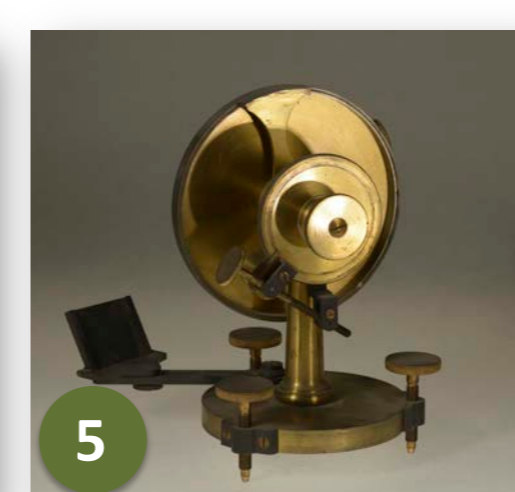
The museum heritage consists of more than 10,000 samples of rocks and minerals from all over the world and precious meteorites, including old and new collections donated by collectors and researchers. In addition to the geological samples, a large number of scientific instruments and didactic accessories are preserved there, among which instruments dating back to the second half of the nineteenth century.

The collection of scientific instruments covers the evolutionary pathway of two fundamental disciplines of earth science, mineralogy and petrography: from the measurements of the geometries of crystals through specific goniometers, to the complex observations of the internal structure of minerals through the use of microscopes and, subsequently, of x-ray instruments.

In the last years, more than one hundred instruments were studied, photographed and catalogued. The collection of instruments could be divided into four different sections: physical measurements, optical observations, x-ray investigations, and didactic tools. They include goniometers, precision balances, pycnometers, petrographic and mineralogical microscopes, X-ray instruments, and a large number of accessories. Along with these, a beautiful collection of specimens for didactic purposes, among which ancient wooden crystal models, atomic structures and a wooden Wulff-net for stereographic projections.

Legend

1. Voltmeter
2. Crystallographic Babinet Goniometer
3. Crystallographic Goniometer
4. Volta electroscopes
5. Wollanstone Goniometer
6. Jena microscope
7. Westphal balance
8. Abbe refractometer
9. Wulffing refractometer
10. Ionization chamber (and details)
11. Perucca ectromete



The discovery of Technetium

Finally, in 1937, in Palermo, via Archirafi 36, for the first time, man separated and identified the technetium! The discovery of the element 43 takes place thanks to two important scientists: the physicist Emilio Segrè and the chemist and mineralogist Carlo Perrier. Some of the scientific apparatus used by the two scientists are still preserved in the collections of the **Museum of Mineralogy** and in the **Historical Collection of Physics Instruments**, of the University of Palermo.

