

## Rare-earth Information Center

# NEWS

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[\\* History of Rare Earths on Postage Stamps](#)

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### History of Rare Earths on Postage Stamps

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Postage stamps are excellent means of communication. They are created by artists and they have artistic value. They are used every day and can be found everywhere. Although it took over 200 years to discover and isolate the rare earths and the industry was established as a mature industry, there are only few stamps available that tell its story.

The story started in 1751 when a new mineral discovered in Sweden and described by the Swedish chemist Axel Cronstedt which he named as the heavy stone from the Bastnäs mine. In 1784 another Swedish chemist Tobern Bergman recognized the existence of an unknown earth in this mineral, but it was not until 1804 that the Swedish chemist Berzelius (1779-1848) (Figures 1 and 2) and independently the German chemist Martin Klaproth isolated this new earth and called it cerium oxide, naming the mineral "cerite" in honor of the newly discovered small planet ceres. Because Berzelius is also recognized as the first to use letters instead of symbols for the chemical elements, a stamp issued by Grenada in the Caribbean showing the chemist and the letters for the elements (Figure 3).



Figure 1



Figure 2



Figure 3

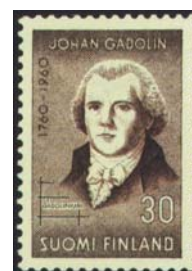


Figure 4

In 1788 a Swedish mineral collector by the name Axel von Arrhenius (1757-1824) discovered a remarkably heavy black stone in the feldspar quarry at Ytterby on the outskirts of Stockholm. The properties of this mineral were described by the Finish chemist Johan Gadolin (1760-1852) (Figure 4) in 1794 who simply referred to it as the "new stone"; he suspected in it the presence of an unknown earth to the extent of about 38%. Finland at that time was ruled by Sweden. This discovery was confirmed a year later by the Swedish chemist Anders Ekeberg who called the new earth "ytter earth". In 1801 Klaproth confirmed this discovery and named the mineral in which the ytter earth occurred "gadolinite" in honor of Gadolin who first analyzed the mineral. The Gadolin stamp was issued by Finland in 1960 on the occasion of the 200th anniversary of his birth.

Carl Auer von Welsbach (1858-1929), an Austrian chemist and industrialist (Figure 5), appears on two stamps. Educated at Vienna and Heidelberg, he conducted research on the rare earths. He showed that the oxide didymia was composed of two oxides of metals which he named praseodymin and neodymium. He invented the incandescent gas mantle and was the first to start a rare earth industry based on monazite sand. India has a large deposit of monazite sand from which the rare earths are separated on an industrial scale. Figure 7 gives a view of the plant.



Figure 5



Figure 6



Figure 7

A book published recently in Canada gives enlarged colored replicas of about 900 stamps in all areas of mining and metallurgy. The present article shows a small selection from this work.

F. Habashi, D. Hendricker, and C. Gignac, *Mining and Metallurgy on Postage Stamps*, Metallurgie Extractive Quebec, Sainte Foy, Canada 1999. Distributed by Laval University Bookstore "Zone", Quebec City G1K 7P4.