

# STAMPS OF DEVELOPMENT

## POSTAGE STAMPS HIGHLIGHT HISTORY OF URANIUM

BY FATHI HABASHI

*Postage stamps have become a valuable means of communication, serving in many ways as imprints of history. Countries have used them for recording important events, honouring distinguished individuals and achievements, and highlighting significant developments. Many historical facts, sometimes obscure, can be found on stamps; some of them would be hard to find in a history or a science book. Often created by artists, stamps convey the world's cultural development in fields of music, painting, photography, sculpture, and the sciences.*

*A descriptive part of the world's stamp collection illustrates the development of resources in Nature, from gold to uranium. They depict the important roles that exploration and mining have played in the national development of many countries. A book recently published in Canada (see author footnote) features colour and enlarged replicas of about 900 stamps covering mining, mineral exploration, metallurgy, and metals. Featured here are selected stamps issued by various countries on the history of uranium, its exploration and mining, and nuclear science.*

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In the United States, a stamp issued in 1998 and entitled "Western Mining Prospector" pays tribute to the role miners played in the country's development. The opening of the western United States, for example, was to a great part due to the lonely miner who took one or two mules and a few days provisions to go exploring for gold or other minerals.



In 1977, South Africa issued a stamp entitled "Uranium Development" to mark 25 years of nuclear power plant development; the stamp shows the atom symbol.



Portugal issued a stamp in 1977 that focused attention on its uranium deposits.



Canada's mineral resources were highlighted in a 1946 stamps series that included the photographic picture of Great Bear Lake, Northwest Territories, showing where pitchblende was discovered by Gilbert A. LaBine (1890-1977) in 1930. These are the deposits from which, for many years, all of Canada's radium and uranium concentrates were produced. LaBine set up a refinery at Port Hope, Ontario to produce radium from pitchblende, but had a difficult time selling the product until nuclear weapons research during World War II created a demand for uranium. The federal government bought control of his company in 1942 and nationalized it two years later as Eldorado Mining and Refining. LaBine stayed as president until 1947. Today it has been privatized and is known as Cameco.



Another Canadian stamp on natural resources was issued in 1980. Entitled "Uranium Resources", it shows the crystal structure of uranium oxide, known in nature as uraninite and which has the fluorite structure. An ore deposit containing 0.2% uranium is usually considered as suitable for exploitation. In Canada, some deposits contain as much as 15% uranium.



Gabon issued a stamp in 1965 showing the operations at Mounana. It was there at the Oklo mine that the phenomenon of natural fission was discovered, as well as traces of naturally occurring plutonium.



In 1992, Poland issued a stamp entitled "Ra" for radium discovered by the Polish-French chemist Marie Curie in 1898. Another stamp was issued in 1993 entitled "Po" for polonium, the first



radioactive element discovered and isolated by Marie Curie. She named the element in honor of her home country, which was at that time partitioned between Russia, Prussia, and Austria.



San Marino issued a stamp honouring Madame Curie. Issued in 1982, it is entitled "RaA," which stands for radium-A,

the historic name for a polonium isotope. Both polonium and radium are decay products of uranium.

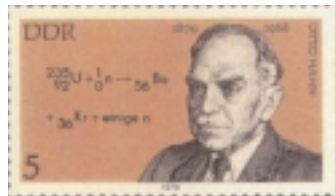


The former Czechoslovakia issued a stamp illustrating a radioactive atom to commemorate the historical Joachimsthal mine. A train wagon full of residues from uranium extraction at the mine was shipped to Madame Curie for research on radioactive elements.



In 1967, France paid tribute to Marie Curie (1867-1934) by issuing a stamp on the occasion of the 100th anniversary of her birth. The stamp shows her portrait next to the glass dish where she evaporated the radium chloride solution and saw it glowing in the dark because of its radioactivity.

Otto Hahn (1879-1968), the German chemist and Nobel Prize winner in 1944, is shown on a stamp issued in 1979 by the former German Democratic



Republic on the occasion of the 100th anniversary of his birth. The stamp shows Hahn and the uranium fission equation, a reaction he discovered in 1938 with his co-worker Fritz Strassmann that was the basis for the atomic bomb built few years later in the USA. Hahn also discovered the radioactive element protactinium in

1917 with his co-worker, the Austrian physicist Lisa Meitner (1879-1968).

Austria issued a stamp in 1978 paying tribute to Lisa Meitner on the occasion of the 100th anniversary of her birth; the stamp shows Meitner and Rutherford's model of an atom proposed in 1911. Protactinium was



recognized as the decay product of uranium-235 and as the parent of actinium which it forms by the emission of an alpha particle.

The Maldives issued a stamp that honoured the work of Glenn T. Seaborg (1912-1999), the American chemist, who with several other scientists is known for the discovery of the trans-uranium elements.



Besides the stamps featured here, the United Nations Postal Administration (UNPA) has issued stamps on atomic energy and the IAEA. See UNPA's Web pages at [www.un.org/Depts/UNPA](http://www.un.org/Depts/UNPA). Also see the Internet site at [www.zillionsofstamps.com](http://www.zillionsofstamps.com) for help in finding stamps and collections.