

Topic Page: [Cadmium](#)

Definition: **cadmium** from *Dictionary of Energy*

Chemistry. a rare element having the symbol Cd, the atomic number 48, an atomic weight of 112.4, a melting point of 320.9°C, and a boiling point of 767°C. It is a white, ductile metal obtained from zinc ores, and is used as an anticorrosive and in making alloys. Compounds of cadmium are widely used as components of nickel cadmium batteries and as solar energy materials.

Summary Article: **cadmium**

From *The Columbia Encyclopedia*

(kăd'mēƏm) [from *cadmia*, Lat. for *calamine*, with which cadmium is found associated], metallic chemical element; symbol Cd; at. no. 48; at. wt. 112.411; m.p. 321 degrees Celsius; b.p. 765 degrees Celsius; sp. gr. 8.65 at 20 degrees Celsius; valence +2. Cadmium is a lustrous, silver-white, ductile, very malleable metal. It belongs to Group 12 of the periodic table, and resembles zinc in its chemical properties. Like zinc, it tarnishes in moist air. Cadmium oxide, a brown powder formed by burning the metal in air, is used in electroplating; it is also made by heating cadmium hydroxide. Cadmium forms a carbonate, a chloride, and several complex ions. Cadmium yellow (the sulfide) is a very durable yellow pigment used in paints. The major use of cadmium is as a coating that is electroplated on iron and steel to prevent corrosion; it is preferable to zinc for protection from alkalis. Cadmium is also used in so-called fusible metals, which are low-melting alloys such as Wood's metal, used in automatic fire sprinklers and alarm systems. Cadmium is used in alkaline nickel-cadmium electric storage cells, which have a greater storage capacity than an equal weight of lead-acid storage cells. It has also found some use in the control of nuclear reactions, since it absorbs neutrons. Cadmium does not occur uncombined in nature; greenockite, a cadmium sulfide mineral first found in Scotland, is the only commercial ore. Cadmium is obtained principally as a byproduct of the smelting and refining of ores of zinc, especially zinc sulfides, and of lead and copper. The element was discovered in 1817 by Friedrich Stromeyer.

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