Rhodium Encyclopedia Article

Rhodium

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Rhodium

Rhodium, a member of the platinum metal group, is an element denoted by the atomic symbol Rh. Its atomic number is 45 and its atomic weight is 102.9055. It is a silvery white metal that is typically found with other platinum metals.

It was discovered by William Hyde Wollaston in 1804. In his attempts to refine platinum into a workable form, Wollaston dissolved large amounts of crude ore into a solution of nitric acid and hydrochloric acid. Through processing the materials left from this, he discovered a metal similar to palladium, which he had found a year earlier. He named this new metal rhodium, due to the rosy hue of some of its compounds.

Rhodium has a lower density and higher melting point than does platinum, and it is often used as an alloy with which to harden platinum. Alloys of rhodium and platinum are used in thermocouple elements and in furnace construction. Because of rhodium's low electrical resistance and its ability to withstand corrosion, it is useful as an electrical contact material. Electroplated rhodium, which is very hard and highly reflective, is used as material for optical instruments. Rhodium is also used for jewelry and as a catalyst.