

## Topic Page: [Indium](#)

Definition: **indium** from *Dictionary of Energy*

*Chemistry.* a metallic element having the symbol In, the atomic number 49, an atomic weight of 114.82, a melting point of 156°C, and a boiling point of 2075°C; a soft, silver-white metal that occurs in zinc and other ores; used in alloys, semiconductor devices, and liquid crystal displays.



Image from: [Chemical elements are arranged according to their... in Philip's Encyclopedia](#)

### Summary Article: **indium**

From *The Columbia Encyclopedia*

(ĭn'dēĭm), a metallic chemical element; symbol In; at. no. 49; at. wt. 114.818; m.p. 156.6 degrees Celsius; b.p. about 2,080 degrees Celsius; sp. gr. 7.31 at 20 degrees Celsius; valence +1, +2, or +3. Indium is a soft, malleable, ductile, lustrous, silver-white metallic element; it crystallizes in a face-centered tetragonal structure. Its properties are similar to those of gallium, the element directly above it in Group 13 of the periodic table. Like gallium, it remains in the

liquid state over a wide range of temperatures. It wets glass and can be used to form a mirror surface that is more corrosion-resistant than, and reflects as well as, one of silver. It is also used in low-melting fusible alloys and as a protective plating for bearings and other metal surfaces. Although indium resists oxidation at room temperature, when heated above its melting point it ignites and burns with a violet flame; the oxide that is formed is used in glassmaking to give a yellow color. Indium reacts readily with the halogens and (when warm) with other nonmetals, e.g., phosphorus, selenium, and sulfur. It has trivalent compounds that are similar to those of gallium and aluminum. Indium salts color the Bunsen flame a deep blue-violet. Indium phosphide, arsenide, and antimonide are semiconductor materials used in photocells, thermistors, and rectifiers. Indium is found in very low concentrations in many ores and minerals; it was first found in zinc blende and is produced commercially as a byproduct of the smelting of zinc. Indium was discovered in 1863 by Ferdinand Reich and H. T. Richter, using spectroscopic analysis; it was named for a brilliant indigo line in its spectrum.

**APA**

Chicago

Harvard

MLA

Indium. (2018). In P. Lagasse, & Columbia University, *The Columbia encyclopedia* (8th ed.). New York, NY: Columbia University Press. Retrieved from <https://search.credoreference.com/content/topic/indium>



*The Columbia Encyclopedia*, © Columbia University Press 2018



*The Columbia Encyclopedia*, © Columbia University Press 2018

## APA

Indium. (2018). In P. Lagasse, & Columbia University, *The Columbia encyclopedia* (8th ed.). New York, NY: Columbia University Press. Retrieved from <https://search.credoreference.com/content/topic/indium>

## Chicago

"indium." In *The Columbia Encyclopedia*, by Paul Lagasse, and Columbia University. 8th ed. Columbia University Press, 2018. <https://search.credoreference.com/content/topic/indium>

## Harvard

Indium. (2018). In P. Lagasse & Columbia University, *The Columbia encyclopedia*. (8th ed.). [Online]. New York: Columbia University Press. Available from: <https://search.credoreference.com/content/topic/indium> [Accessed 15 November 2019].

## MLA

"indium." *The Columbia Encyclopedia*, Paul Lagasse, and Columbia University, Columbia University Press, 8th edition, 2018. *Credo Reference*, <https://search.credoreference.com/content/topic/indium>. Accessed 15 Nov. 2019.