

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

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On the cover: Representation of a fullerene molecule with a noble gas atom trapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. (Image copyright © Dr. Luann Becker. Reproduced with permission.)

Over the six editions of the Dictionary, material has been drawn from the following references: G. M. Garrity et al., *Taxonomic Outline of the Prokaryotes, Release 2*, Springer-Verlag, January 2002; D. W. Linzey, *Vertebrate Biology*, McGraw-Hill, 2001; J. A. Pechenik, *Biology of the Invertebrates*, 4th ed., McGraw-Hill, 2000; *U.S. Air Force Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, Department of Defense, 1967; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, National Aeronautics and Space Administration, 1965; *Glossary of Staff Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *ADP Glossary*, Department of the Navy, NAVSO P-3097; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology, White Sands Missile Range, New Mexico*, National Bureau of Standards, AD 467-424; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission.

**McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS,
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hormones and neurosecretory structures involved in the endocrine activity of the adenohypophysis, neurohypophysis, and hypothalamus. { [hī-pō-thə-lam-ə-nūr-ō-hī-pāf-ə'sē-əl 'sīstəm] }

hypothalamoneurohypophyseal tract [NEUROSCI] A bundle of nerve fibers connecting the supraoptic and paraventricular neurons of the hypothalamus with the infundibular stem and neurohypophysis. { [hī-pō-thə-lam-ə-nūr-ō-hī-pāf-ə'sē-əl 'trakt] }

hypothalamus [NEUROSCI] The floor of the third brain ventricle; site of production of several substances that act on the adenohypophysis. { [hī-pō'thal-ə-məs] }

hypotheca [INV ZOO] 1. The lower valve of a diatom frustule. 2. Covering on the hypococone in dinoflagellates. { [hī-pō'thē-kə] }

hypothernar [ANAT] Of or pertaining to the prominent portion of the palm above the base of the little finger. { [hī-pāth-ə-nār] }

hypothermal [GEOL] Referring to the high-temperature (300–500°C) environment of hypothermal deposits. { [hī-pō'thər-məl] }

hypothermal deposit [MINERAL] Mineral deposit formed at great depths and high (300–500°C) temperatures. { [hī-pō'thər-məl dī'pāz-ət] }

hypothermia [PHYSIO] Condition of reduced body temperature in homeotherms. { [hī-pō'thər-mē-ə] }

hypothesis [SCI TECH] 1. A proposition which is assumed to be true in proving another proposition. 2. A proposition which is thought to be true because its consequences are found to be true. [STAT] A statement which specifies a population or distribution, and whose truth can be tested by sample evidence. { [hī-pāth-ə-sēs] }

hypothesis testing [STAT] The branch of statistics which considers the problem of choosing between two actions on the basis of the observed value of a random variable whose distribution depends on a parameter, the value of which would indicate the correct action. { [hī-pāth-ə-sēs 'test-ɪŋ] }

hypothetical parallax See dynamic parallax. { [hī-pō'thed-ə-kəl 'par-ə-laks] }

hypothyroidism [MED] Condition caused by deficient secretion of the thyroid hormone. { [hī-pō'thī-rōi-diz-əm] }

hypotonia [MED] Decrease of normal tonicity or tension, especially diminution of intraocular pressure or of muscle tone. { [hī-pō'tō-nē-ə] }

hypotonic [PHYSIO] 1. Pertaining to subnormal muscle strength or tension. 2. Referring to a solution with a lower osmotic pressure than physiological saline. { [hī-pō'tān-ik] }

Hypotrichida [INV ZOO] An order of highly specialized protozoans in the subclass Spirotrichia characterized by cilli on the ventral surface and a lack of ciliature on the dorsal surface. { [hī-pō'trik-ə-də] }

hypotrochoid [MATH] A curve traced by a point rigidly attached to a circle at a point other than the center when the circle rolls without slipping on the inside of a fixed circle. { [hī-pō'trō-kōid] }

hypotype [SYST] A specimen of a species, which, though not a member of the original type series, is known from a published description or listing. { [hī-pō'tīp] }

hypovitaminosis [MED] Condition due to deficiency of an essential vitamin. { [hī-pō'vīd-ə-mə'hō-səs] }

hypovolemia [MED] Low blood volume. { [hī-pō,vā'le-mē-ə] }

hypovolemic shock [MED] Shock caused by reduced blood volume which may be due to loss of blood or plasma as in burns, the crush syndrome, perforating gastrointestinal wounds, or other trauma. Also known as wound shock. { [hī-pō,vā'le-mik 'shök] }

hypoxanthine [BIOCHEM] C₅H₄ON₄ An intermediate product derived from adenine in the hydrolysis of nucleic acid. { [hī-pō'zan,thēn] }

hypoxemia See hypoxia. { [hī-pāk'sē-mē-ə] }

hypoxia [ECOL] A condition characterized by a low level of dissolved oxygen in an aquatic environment. [MED] Oxygen deficiency; any state wherein a physiologically inadequate amount of oxygen is available to or is utilized by tissue, without respect to cause or degree. Also known as hypoxemia. { [hī-pāk-sē-ə] }

hypoxic encephalopathy [MED] Brain damage syndrome caused by hypoxia. { [hī-pāk-sik en-sef-ə'lāp-ə-thē] }

hyozygal [INV ZOO] In comatulids, the proximal-member of adjacent brachials in an articulation. { [hī-pō'zīg-əl] }

hypsicephalic [ANTHRO] Having a high forehead with a length-height index of 62.6 or more. { [hīp-sə-sə'fal-ik] }

hypsiconch [ANTHRO] Having high orbits with an orbital index of 89 or more. { [hīp-sə,kənç] }

hypsigranial [ANTHRO] Having a high skull with a length-height index of 75 or more. { [hīp-sə'krā-nē-əl] }

hypsidochocephalic [ANTHRO] Having a head that is high and narrow, high and long, or high, long, and narrow. { [hīp-sə,dāl-ə-kō-sə'fal-ik] }

hypsistenocephalic [ANTHRO] Having a very high and narrow head. { [hīp-sə,sten-ō-sə'fal-ik] }

Hypsithermal See Altithermal. { [hīp-sə'thərm-əl] }

hypsodont [VERT ZOO] Of teeth, having crowns that are high or deep and roots that are short. { [hīp-sə,dənt] }

hypsographic map [MAP] A chart showing topographic relief in reference to a given datum, usually sea level. { [hīp-sə'graf-ik 'map] }

hypsography [GEOGR] The science of measuring or describing elevations of the earth's surface with reference to a given datum, usually sea level. { [hīp-sə'grə-fē] }

hypsometer [ENG] 1. An instrument for measuring atmospheric pressure to ascertain elevations by determining the boiling point of liquids. 2. Any of several instruments for determining tree heights by triangulation. { [hīp-səm-əd-ər] }

hypsometric [ENG] Pertaining to hypsometry. { [hīp-sə'me-trik] }

hypsometric formula [GEOPHYS] A formula, based on the hydrostatic equation, for either determining the geopotential difference or thickness between any two pressure levels, or for reducing the pressure observed at a given level to that at some other level. { [hīp-sə'me-trik 'fōr-myə-lə] }

hypsometric map [MAP] In topographic surveying, a map giving elevations by contours, or sometimes by means of shading, tinting, or batching. { [hīp-sə'me-trik 'māp] }

hypsometric tinting [MAP] A technique of showing relief on maps and charts by coloring, in different shades, those parts which lie between different levels. Also known as altitude tints. { [hīp-sə'me-trik 'tɪnt-ɪŋ] }

hypsometric tints See gradient tints. { [hīp-sə'me-trik 'tɪns] }

hypsometry [ENG] The measuring of elevation with reference to sea level. { [hīp-səm-ə-trē] }

hypsophobia [PSYCH] An abnormal fear of being at a great height. { [hīp-sə'fō-bē-ə] }

hypural [VERT ZOO] Of or pertaining to the bony structure formed by fusion of the hemal spines of the last few vertebrae in most teleost fishes. { [hī'pyūr-əl] }

Hyracodontidae [PALEON] The running rhinoceroses, an extinct family of perissodactyl mammals in the superfamily Rhinoceroidea. { [hī-rə-kō'dənt-ə,dē] }

Hyracoidea [VERT ZOO] An order of ungulate mammals represented only by the conies of Africa, Arabia, and Syria. { [hī-rə'kōid-ē-ə] }

hyster- [MED] A combining form that denotes a relation to or a connection with the uterus. [PSYCH] A combining form indicating a relation to hysteria. { [hīst-ər] }

hysterectomy [MED] Surgical removal of all or part of the uterus. { [hīst-ər-ə-ktō-mē] }

hysteresimeter [ENG] A device for measuring hysteresis. { [hīst-ər-ə'sim-əd-ər] }

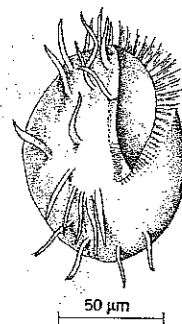
hysteresis [ELECTR] An oscillator effect wherein a given value of an operating parameter may result in multiple values of output power or frequency. [ELECTROMAG] See magnetic hysteresis. [NUCLEO] A temporary change in the counting-rate-voltage characteristic of a radiation counter tube, caused by its previous operation. [PHYS] The dependence of the state of a system on its previous history, generally in the form of a lagging of a physical effect behind its cause. { [hīst-ər-ē-sēs] }

hysteresis clutch [MECH ENG] A clutch in which torque is produced by attraction between induced poles in a magnetized iron ring and the control field. { [hīst-ər-ē-sēs 'klətç] }

hysteresis coefficient [PHYS] A constant, characteristic of a particular material, in a formula for hysteresis loss. { [hīst-ər-ē-sēs,kō-ī'fīsh-ənt] }

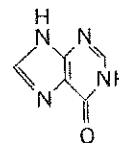
hysteresis damping [MECH] Damping of a vibration due to energy lost through mechanical hysteresis. { [hīst-ər-ē-sēs 'dām-pɪŋ] }

HYPOTRICHIDA



Euplotes, an example of Hypotrichida.

HYPOXANTHINE



Structural formula of hypoxanthine.