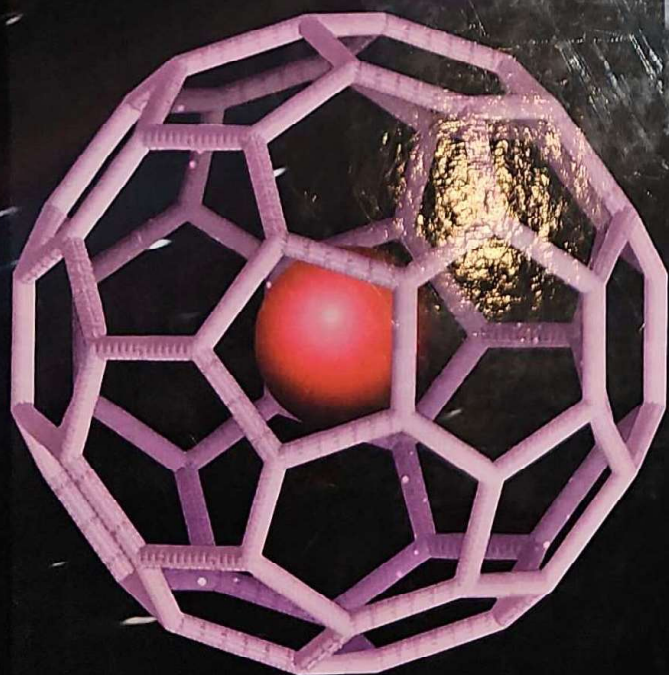


McGraw-Hill
Dictionary of
SCIENTIFIC
and
TECHNICAL
TERMS



Sixth Edition

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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 Stinfo 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, Sixth Edition

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Xu Peicheng Ex. 1017, p. 4

negative G parity, and positive charge parity (for the neutral meson). Also known as pion. Symbolized π . **2.** Any meson belonging to an isospin triplet with hypercharge 0, negative G parity, and positive charge parity (for the neutral meson). { 'pi 'mä,sän }

pi mode [ELECTR] Of a magnetron, the mode of operation for which the phases of the fields of successive anode openings facing the interaction space differ by pi radians. { 'pi ,möd }

pimple [MATER] A small, conical elevation on the surface of a plastic. [MED] A small pustule or papule. { 'pim·pəl }

pimple mound [GEOL] A low, flattened, roughly circular or elliptical dome consisting of sandy loam that is entirely distinct from the surrounding soil; peculiar to the Gulf coast of eastern Texas and southwestern Louisiana. { 'pim·pəl ,maund }

pimple plain [GEOL] A plain distinguished by the presence of numerous, conspicuous pimple mounds. { 'pim·pəl ,plän }

pi-mu atom See pionium. { 'pi 'myü 'ad·əm }

pin [DES ENG] **1.** A cylindrical fastener made of wood, metal, or other material used to join two members or parts with freedom of angular movement at the joint. **2.** A short, pointed wire with a head used for fastening fabrics, paper, or similar materials. [ELECTR] A terminal on an electron tube, semiconductor, integrated circuit, plug, or connector. Also known as base pin; prong. { 'pin }

pin [BOT] A fiber obtained from the large leaves of the pineapple plant. Also known as pineapple fiber. { 'pēn·yə }

pinacocyte [INV ZOO] A flattened polygonal cell occurring in the dermal epithelium of sponges, and lining the exhalant canals. { 'pin·ə·kō,sit }

pinacoid [CRYSTAL] An open crystal form that comprises two parallel faces. { 'pin·ə·kōid }

pinacoidal class [CRYSTAL] That crystal class in the triclinic system having only a center of symmetry. { 'pin·ə·kōid·əl 'klas }

pinacoidal cleavage [CRYSTAL] A type of crystal cleavage that is parallel to one of the crystal's pinacoidal surfaces. { 'pin·ə·kōid·əl 'klē·vij }

pinakiolite [MINERAL] $Mg_3Mn_3B_2O_{10}$ A black mineral composed of borate of magnesium and manganese; it is polymorphous with orthopinakiolite. { 'pə'näk·ē·ə,lit }

Pinales [BOT] An order of gymnospermous woody trees and shrubs in the class Pinopsida, including pine, spruce, fir, cypress, yew, and redwood; the largest plants are the conifers. { 'pi'nä·lez }

Pinatae See Pinopsida. { 'pi'näd·ē }

pin bar [MET] A small diameter, case-hardened steel rod used for making dowel pins. { 'pin ,bär }

pinboard [COMPUT SCI] A board or panel containing an array of uniform holes into which pins may be inserted to control the operation of equipment. { 'pin,börd }

pincer [INV ZOO] A grasping apparatus, as on the anterior legs of a lobster, consisting of two hinged jaws. { 'pin·sər }

pinch [ENG] The closing-in of borehole walls before casing is emplaced, resulting from rock failure when drilling in formations having a low compressional strength. [GEOL] Thinning of a rock layer, as where a vein narrows. [MIN ENG] See horseback; squeeze. { 'pinch }

pinch-and-swell structure [GEOL] A structural condition common in pegmatites and veins of quartz in metamorphosed rocks; the vein is pinched at frequent intervals, leaving expanded parts between. { 'pinch ən 'swel ,strək·chər }

pinch bar [DES ENG] A pointed lever, used somewhat like a crowbar, to roll heavy wheels. { 'pinch ,bär }

pinch effect [ELEC] Manifestation of the magnetic self-attraction of parallel electric currents, such as constriction of ionized gas in a discharge tube, or constriction of molten metal through which a large current is flowing. Also known as i,fekt }

pinch graft [MED] A small, full-thickness graft lifted from the donor area by a needle, and cut free with a razor. { 'pinch ,graft }

pinch grasp [IND ENG] A grasp by the human hand that involves the thumb and the facing side of the index finger at the knuckle; used to apply a large force to a small object. Also known as key grasp. { 'pinch ,grasp }

pinch-off See cutoff. { 'pinch,ɔf }

pinch-off blades [ENG] In blow molding, the part that presses the parison to seal it prior to blowing, and to allow easy cooling and removal of flash. { 'pinch,ɔf ,blädi }

pinch-off voltage [ELECTR] Of a field-effect transistor, the voltage at which the current flow between source and drain is blocked because the channel between these electrodes is completely depleted. { 'pinch,ɔf ,völ·tij }

pinch pass [MET] A cold rolling of sheet metal to effect a very small reduction in thickness and to produce a piece of accurate dimensions. { 'pinch ,pas }

pinch point [IND ENG] A point in a plant layout or on an automated guided vehicle such that the distance between the structures is so small that it represents a safety hazard to personnel. { 'pinch ,pɔint }

pinch resistor [ELECTR] A silicon integrated-circuit resistor produced by diffusing an n-type layer over a p-type resistor; this narrows or pinches the resistive channel, thereby increasing the resistance value. { 'pinch ri'zistər }

pinch roller [ELECTR] A small, freely turning wheel that presses the magnetic tape against the capstan in order to move the tape. { 'pinch ,röl·lər }

pinch trimming [MET] Trimming a tubular or hollow part by pinching the flange or lip over the cutting edge of a punch. { 'pinch ,trim·in }

pinch-tube process [ENG] A plastics blow-molding process in which the extruder drops a tube between mold halves, and the tube is pinched off when the mold closes. { 'pinch ,tüb ,prä·səs }

pincushion distortion [ELECTR] Distortion in which all four sides of a received television picture are concave (curving inward). [OPTICS] Aberration in which the magnification produced by an optical system increases with the distance of the object point from the optical axis, so that the image of a square has concave sides. { 'pin,kush·ən di,stör·shən }

pin diode [ELECTR] A diode consisting of a silicon wafer containing nearly equal p-type and n-type impurities, with additional p-type impurities diffused from one side and additional n-type impurities from the other side; this leaves a lightly doped intrinsic layer in the middle, to act as a dielectric barrier between the n-type and p-type regions. Also known as power diode. { 'pin 'di,öd }

pine [BOT] Any of the cone-bearing trees composing the genus *Pinus*; characterized by evergreen leaves (needles), usually in tight clusters of two to five. { 'pin }

pineal body [ANAT] An unpaired, elongated, club-shaped, knoblike or threadlike organ attached by a stalk to the roof of the vertebrate forebrain. Also known as conarium; epiphysis. { 'pin·ē·əl ,bäd·ē }

pineapple [BOT] *Ananas sativus*. A perennial plant of the order Bromeliales with long, swordlike, usually rough-edged leaves and a dense head of small abortive flowers; the fruit is a sorosis that develops from the fleshy inflorescence and ripens into a solid mass, covered by the persistent bracts and crowned by a tuft of leaves. { 'pi,nap·əl }

pineapple fiber See piña. { 'pi,nap·əl ,fri·bər }

pinene [ORG CHEM] $C_{10}H_{16}$ Either of two colorless isomeric unsaturated bicyclic terpene hydrocarbon liquids derived from sulfate wood turpentine; 95% of the alpha form boils in the range 156–160°C, and of the beta form boils in the range 164–169°C; used as solvents for coatings and wax formulations, as chemical intermediates for resins, and as lube-oil additives. Also known as nopinene. { 'pi,nēn }

pine needle oil [MATER] An essential oil derived from various pines; colorless to yellowish oil with balsamic aroma; soluble in alcohol; used in perfumes and medicines. Also known as Douglas fir oil; fir wood oil. { 'pin ,nēd·əl ,oil }

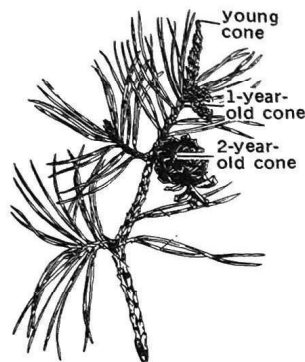
pinene hydrochloride See terpene hydrochloride. { 'pi,nēn ,hi·drä'klör,īd }

pine nut [BOT] The edible seed borne in the cone of various species of pine (*Pinus*), such as stone pine (*P. pinea*) and piñon pine (*P. cembroides* var. *edulis*). { 'pin ,nət }

pine oil [MATER] Any of a group of volatile essential oils with pinaceous aromas distilled from cones, needles, or stumps of various pine or other conifer species; used as solvents, emulsifying agents, wetting agents, deodorants, germicides, and sources of chemicals. { 'pin ,oil }

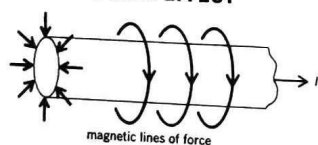
pine oleoresin [MATER] Fused solid blend of turpentine and resin. { 'pin ,olē·rē·zin }

PINALES



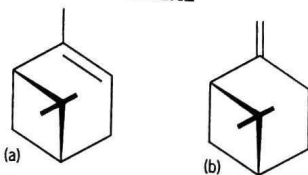
Branch of pine with leaves and ovulate cones. (From J. B. Hill et al., *Botany*, 3d ed., McGraw-Hill, 1960)

PINCH EFFECT



Example of pinch effect. Current *I*, uniformly distributed in cylindrical wire, gives rise to compression force indicated by arrows at left.

PINENE



Two principal terpenes of the oil of southern pines. (a) α -Pinene. (b) β -Pinene.

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